Timor-Leste
Demographic and Health Survey
2009-10

National Statistics Directorate
Ministry of Finance
Democratic Republic of Timor-Leste
Dili, Timor-Leste

ICF Macro
Calverton, Maryland, U.S.A.

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This report summarizes the findings of the 2009-10 Timor-Leste Demographic and Health Survey (TLDHS) carried out by the National Statistics Directorate of the Ministry of Finance. ICF Macro provided financial and technical assistance for the survey through the USAID-funded MEASURE DHS program, which is designed to assist developing countries to collect data on fertility, family planning, and maternal and child health. Financial support was provided by USAID, the Government of Australia (AusAID), the Government of Ireland (Irish AID), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the United Nations Development Fund (UNDP), and the World Health Organization (WHO). UNFPA supported the survey with administrative, logistical, and technical assistance. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of USAID or donor organizations.

Additional information about the 2009-2010 TLDHS may be obtained from the National Statistics Directorate, P.O. Box 10, Timor-Leste; Telephone: (977-1) 670-3339527; Internet: www.dne.mof.gov.tl.

Additional information about the MEASURE DHS program may be obtained from MEASURE DHS, ICF Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, U.S.A.; Telephone: 1-301-572-0200; Fax: 1-301-572-0999; Email: reports@measuredhs.com.

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FOREWORD

The 2009-10 Timor-Leste Demographic and Health Survey (TLDHS) is the first national level population and health survey conducted as part of the global Demographic and Health Surveys (DHS) program supported by USAID, but the second Demographic and Health survey in the country. The first DHS was done in 2003 under the guidance of ACIL Australia Pty Ltd, University of Newcastle and the Australian National University. The TLDHS 2009-10 is implemented by the National Statistics Directorate of the General Directorate for Policy Analysis and Research of the Ministry of Finance, under the aegis of the Ministry of Health.

The 2009-10 TLDHS supplements and complements the information collected through the censuses, updates the available information on population and health issues, and provides guidance in planning, implementing, monitoring and evaluating Timor-Leste's health programs. Further, the results of the survey assist in monitoring the progress made towards meeting the Millennium Development Goals (MDGs) and other international initiatives.

The 2009-10 TLDHS includes topics related to fertility levels and determinants; family planning; fertility preferences; infant, child, adult and maternal mortality; maternal and child health; nutrition; malaria; domestic violence; knowledge of HIV/AIDS and women's empowerment. The 2009-10 TLDHS for the first time also includes anemia testing among women age 15-49 and children age 6-59 months. As well as providing national estimates, the survey also provides disaggregated data at the level of various domains such as administrative district, as well as for urban and rural areas. This being the third survey of its kind in the country (after the 2002 MICS and the 2003 DHS), there is considerable trend information on demographic and reproductive health indicators.

This survey is the result of concerted effort on the part of various individuals and institutions, and it is with great pleasure that we would like to acknowledge the work put in to produce this very important and useful document. The participation and cooperation that was extended by the members of the Steering Committee in the different phases of the survey is greatly appreciated.

On behalf of the Government of Timor-Leste, we the Ministers of Finance and of Health, would like to extend our appreciation for the technical support by ICF Macro International and financial support from our development partners namely; the United States Agency for International Development (USAID), the Government of Australia (AusAID), the Government of Ireland (Irish Aid), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the United Nations Development Fund (UNDP) and the World Health Organization (WHO).

This report contains enormous valuable information that when used correctly and consistently will undoubtedly improve the lives of many of our people. It is now time for program managers and policy makers to use the information to enable us to achieve our health and social targets as set by the Government.

Nelson Martins
Minister for Health

Emilia Pires
Minister for Finance

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The 2009-10 Timor-Leste Demographic and Health Survey (TLDHS) with the main objective to generate demographic, health and social indicators, was conducted between August 2009 and January 2010. It is the second DHS to be carried out in the country since independence. Preliminary results were launched in April 2010. This report is the main output from the DHS project and will be followed by other thematic analyses depending on the program needs of the country. The 2009-10 TLDHS is a classic example of a project involving many interested groups; the Ministry of Health as the main users, the National Statistics Directorate as the implementer and a consortium of development partners who have provided both technical and financial/administrative support to implement the survey.

As a result of the huge demand for data from the TLDHS, its success was accomplished through the concerted efforts of many organizations, institutions, government ministries and individuals who assisted in a variety of ways to plan, prepare, collect, process, analyze and publish the results. The Government through the Director of National Statistics Directorate under the General Directorate of Policy Analysis and Research in Ministry of Finance wishes to thank them all for their inputs into this noble process.

We express our deep sense of appreciation to the technical experts from ICF Macro, the National Statistics Directorate staff who worked on the project, UNFPA for mobilizing the resources to cover local costs and administrative support; and to members of the Steering Committee who provided critical inputs at all levels. Additionally, we would like to thank the various technical experts in the fields of population and health for their valuable input in the various phases of the survey. Their expertise was invaluable during the finalization of the questionnaires, training of field staff, reviewing the draft tables and finalizing the report. Our gratitude goes to the national staff who worked during data collection, data capture and cleaning. More importantly, all the Timorese who provided the data during interviews deserve special thanks for their patience and willingness to provide the requisite information.

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We sincerely hope that the information in this report will be fully utilized in the national development planning process by all stakeholders for the welfare of the Timorese people.

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SUMMARY OF FINDINGS

The 2009-10 Timor-Leste Demographic and Health Survey (TLDHS) is the second national-level population and health survey conducted in Timor-Leste and the first conducted as part of the global Demographic and Health Surveys (DHS) program. The sample for the survey was selected independently in every stratum, through a two-stage selection process, to provide estimates for each of the 13 districts and for both urban and rural areas of the country. The 2009-10 TLDHS was designed to cover a nationally representative sample of residential households, taking into account nonresponse; to obtain completed interviews of women age 15-49 in every selected household; and to obtain completed interviews of men age 15-49 in every third selected household.

Each household selected for the TLDHS was eligible for interview with the Household Questionnaire, and a total of 11,463 households were interviewed. All eligible women age 15-49 in the selected households and all eligible men age 15-49 in every third household were interviewed with the Women's and Men's Questionnaires, respectively. A total of 13,137 women age 15-49 and 4,076 men age 15-49 were interviewed. Data collection took place over a six-month period, from early August 2009 to early February 2010.

The survey obtained detailed information on fertility, fertility preferences, marriage, sexual activity, awareness and use of family planning methods, breastfeeding practices, nutritional status of women and young children, childhood mortality, maternal and child health, awareness and behavior regarding HIV and AIDS, and other sexually transmitted infections (STIs). In addition, the 2009-10 TLDHS collected information on domestic violence, malaria and use of mosquito nets, and anemia testing and anthropometric measurements for women and children.

The survey was implemented by the National Statistics Directorate of the Directorate General for Analysis and Research of the Ministry of Finance, under the aegis of the Ministry of Health (MOH) of Timor-Leste.

Technical support was provided by ICF Macro, and financial support was provided by USAID, the Government of Australia (AusAID), the Government of Ireland (Irish AID), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the United Nations Development Fund (UNDP), and the World Health Organization (WHO). UNFPA supported the survey with administrative, logistical, and technical assistance. A steering committee was formed to be responsible for coordination, oversight, advice, and decision-making on all major aspects of the survey. The steering committee was composed of representatives from various ministries and key stakeholders, including the MOH, National Statistics Directorate, USAID, and international nongovernmental organizations (INGOs).

FERTILITY

Fertility Levels and Trends. The total fertility rate for Timor-Leste for the three years preceding the survey is 5.7 births per woman and is the highest in South East Asia and in Asia (together with Afghanistan) (PRB, 2010) but below the levels of Africa. At this level, it is estimated that the population will increase from its current size of 1.2 million to 1.9 million by the year 2025 and to 3.2 million by the year 2050.

Fertility Differentials. As expected, fertility is considerably higher in rural areas than in urban areas. Rural women have on average about one child more than urban women (6.0 compared with 4.9 births per woman). As the age-specific fertility rates (ASFRs) show, the pattern of high rural fertility is prevalent in all age groups. The rural-urban difference in fertility is most pronounced for women age 20-24 (236 births per 1,000 women in rural areas versus 187 births per 1,000 women in urban areas). There are considerable differentials in fertility among districts, with fertility ranging from a low of 4.4 births per woman in Covalima to a high of 7.2 births per woman in Ainaro. The level of fertility is inversely related to women's educational attainment, decreasing rapidly from 6.1 births among women with no education to 2.9 births among women with more than secondary education. Fertility is also inversely associated with wealth quintile. Women in the lowest wealth quintile have an average of 7.3 births,

about three children more than women in the highest quintile (4.2 births).

Unplanned Fertility. Despite a marked increase in the level of contraceptive use over the past eight years, the 2009-10 TLDHS data indicate that unplanned pregnancies are not uncommon. Overall, 86 percent of births are wanted, 12 percent of births in the country are mistimed (wanted later), and 2 percent are unwanted. Data from the 2003 DHS show that there has been little change in the status of planning for children, with 86 percent of births in the five years preceding the survey planned and 11 percent mistimed. Unwanted births declined from 4 percent in 2003 to 2 percent in 2009-10.

Fertility Preferences. There is considerable desire among currently married Timorese to control the timing and number of births. Thirty-five percent of currently married women would like to wait two or more years before the next birth, and 36 percent do not want to have another child, or are sterilized. About one in ten (9 percent) of currently married women would like to have a child soon (within two years). In addition, 17 percent are undecided about whether to have a child or not. The proportion of currently married women who want no more children more than doubled in the last seven years, from 17 percent as reported in the 2003 DHS to 36 percent in the 2009-10 TLDHS.

Currently married women and men prefer about six children. Data from the 2003 DHS show that the ideal number of children preferred by currently married women has changed little over the last seven years.

FAMILY PLANNING

Knowledge of Contraception. Findings from the 2009-10 TLDHS show that 78 percent of currently married women and 66 percent of currently married men in Timor-Leste know of at least one modern method of family planning. The most widely known modern contraceptive methods among currently married women are injectables (70 percent) and the pill (58 percent). Currently, married men are most likely to know of the male condom (54 percent) and injectables (46 percent). Twenty-seven percent of currently married men mentioned knowledge of a traditional method compared with 22 percent of currently married women.

Over the past seven years there has been a considerable increase in the overall knowledge of contraceptive methods in the country.

Use of Contraception. More than one in five currently married women (22 percent) is using a method of family planning, with 21 percent using a modern contraceptive method. This indicates that modern contraceptive methods are highly favored over either natural family planning methods or other traditional methods. One percent of women report currently using a traditional method. The rhythm method is slightly more popular than withdrawal.

Injectables are by far the most popular modern method, and they are used by 16 percent of currently married women. Two percent of women use the pill, and about 1 percent of women each use the IUD or implants, or they are sterilized. Most women who are sterilized are over age 30. Injectables are popular among women age 20-44.

Trends in Contraceptive Use. There has been a marked increase in the use of contraception by currently married women since 2002. Use of modern methods doubled in the five years between 2002 and 2007 and rose by nearly 50 percent in the three years between 2007 and the 2010. The increase in use of modern methods contributed to a three-fold increase in overall contraceptive use, from 7 percent to 21 percent, in a matter of 7 to 8 years.

Differentials in Contraceptive Use. Women in urban areas (30 percent) are more likely to use a family planning method than rural women (20 percent), reflecting wider availability and easier access to methods in urban than in rural areas. Contraceptive use varies by district with much of the difference due to the use of injectables. Use of a modern method among currently married women is highest in Covalima (43 percent) and lowest in Baucau (8 percent). Current use varies markedly between women who have some education and those who have none, however, there is little variation among educated women by specific level of education. Wealth has a positive effect on women's contraceptive use, with modern contraceptive use increasing markedly as household wealth increases, from 15 percent among currently married women in the lowest wealth quintile to 32 percent among those in the highest wealth quintile.

Source of Modern Methods. Forty-five percent of all users are served by community health centers, 20 percent by health posts, 17 percent by government and referral hospitals, 3 percent by integrated community health services (SISCa), and 2 percent by mobile clinics. In the private medical sector, most users are served by private hospitals/clinics (8 percent of all users). Most contraceptives sold in private hospitals/clinics are provided through the Timor-Leste Contraceptive Retail Sales Company.

Unmet Need for Family Planning. About one in three currently married women has an unmet need for family planning, with 21 percent having an unmet need for spacing and 10 percent having an unmet need for limiting. Twenty-two percent of women have a met need for family planning. If all currently married women who say they want to space or limit their children were to use a family planning method, the contraceptive prevalence rate would increase to 53 percent from the current 22 percent. Currently, only 42 percent of the family planning needs of currently married women are being met.

MATERNAL HEALTH

Antenatal Care. Antenatal care from a skilled birth attendant, that is, from a doctor, nurse, midwife, or assistant nurse, is very common in Timor-Leste, with 86 percent of women reporting receipt of such care. The majority of women received care from a nurse or midwife (80 percent). Four percent of women received care from a doctor, and less than 2 percent received care from an assistant nurse. One percent of women received care from a traditional birth attendant. Thirteen percent of women did not receive care from a health provider for their last birth in the five years preceding the survey. Antenatal care from a skilled provider is lowest in Ermera (71 percent) and highest in Dili (96 percent).

There has been a significant improvement in the proportion of women receiving antenatal care from a skilled provider—an increase of 41 percent, from 61 percent in the 2003 DHS to 86 percent in the 2009-10 TLDHS.

Neonatal tetanus is a leading cause of neonatal death in developing countries where a high proportion of deliveries occur at home or in places where hygienic conditions may be poor. Tetanus toxoid (TT) vaccinations are given to pregnant women to prevent neonatal tetanus. The survey results show that three-quarters of mothers with a live birth in the five years preceding the survey received two or more tetanus toxoid injections during their last pregnancy, and four-fifths were protected for their last birth.

Mothers in Manatuto are most likely to have received two or more tetanus toxoid injections (92 percent) and to have had their last birth protected against neonatal tetanus (95 percent) compared with mothers in all other districts; tetanus toxoid coverage is lowest among mothers in Ermera and Ainaro.

With regard to antimalarial indicators, the results show that overall, 39 percent of all women and 45 percent of pregnant women slept under some sort of net the night before the interview. Thirty-seven percent of all women and 43 percent of pregnant women slept under an ever-treated net, and 34 percent and 41 percent, respectively, slept under an ITN. In households that own at least one ITN, a substantially larger proportion of women slept under an ITN the night before the survey (77 percent of all women and 84 percent of pregnant women).

Delivery Care. Just over one in five births are delivered in a health facility, with the vast majority delivered in a public (21 percent) rather than in a private (1 percent) facility. The majority of births (78 percent) are delivered at home. Delivery in a health facility is most common among young mothers (25 percent), mothers of first-order births (31 percent), and mothers who have had at least four antenatal visits (31 percent). Half (53 percent) of the children in urban areas are born in a health facility, compared with only 12 percent in rural areas. Delivery in a health facility also varies by district, with facility delivery in Dili being much more likely than in any other district (63 percent). Less than 10 percent of births in Ermera, Oecussi, and Ainaro are delivered in a health facility.

Thirty percent of births are delivered by a skilled provider (doctor, nurse, assistant nurse, or midwife), with a nurse or midwife being the most common skilled provider. Three percent of deliveries are performed by a doctor, and less than 1 percent are performed by an assistant nurse. Nearly one-fifth of deliveries are carried out by traditional birth attendants (18 percent). Women receive assistance from a relative or some other person for nearly one in two births (49 percent), while 3 percent of births take place without any type of assistance at all.

Postnatal Care. The majority of women (68 percent) did not receive a postnatal check. Among those who received postnatal care, 16 percent received it in less than four hours after delivery, 5 percent received care within 4 to 23 hours, and 3 percent received care within the first two days. Seven percent received postnatal care 3 to 41 days following delivery.

Maternal Mortality. Maternal mortality in Timor-Leste is high relative to many developed countries. Respondents reported 120 maternal deaths in the seven years preceding the survey. The maternal mortality rate, which is the annual number of maternal deaths per 1,000 women age 15-49, for the period zero to six years preceding the survey, is 0.96. Maternal deaths accounted for 42 percent of all deaths to women age 15-49; in other words, more than two in five Timorese women who died in the seven years preceding the survey died from pregnancy or pregnancy-related causes. The maternal mortality ratio, which measures the obstetric risk associated with each live birth for the seven years preceding the survey is 557 deaths per 100,000 live births (or alternatively, about 6 deaths per 1,000 live births). The 95 percent confidence interval places the true MMR for 2009-10 anywhere between 408 and 706.

CHILD HEALTH

Childhood Mortality. Under-5 mortality for the most recent period (0-4 years before the survey or, roughly, during the calendar years 2005-2009) is 64 deaths per 1,000 live births. This means that 1 in 16 children born in Timor-Leste dies before the fifth birthday. Seventy percent of deaths among children under age 5 occur during the first year of life: infant mortality is 45 deaths per 1,000 live births. During infancy, the risk of neonatal deaths and postneonatal deaths is 22 and 23 per 1,000 live births, respectively.

Data from the TLDHS for the three five-year periods preceding the survey indicate a decline in childhood mortality. This is consistent with comparison of the TLDHS 2009-10 mortality data with the 2003 DHS survey results, which shows a substantial (23 percent) improvement in child survival. For example, under-5 mortality declined from 83 per 1,000 live births during the period 1999-2003 to 64 per 1,000 live births during the period 2005-2009. This decline is caused principally by a decrease in the infant mortality rate, from 60 deaths per 1,000 for the zero to four years preceding the 2003 DHS to 45 per 1,000 during the same period prior to the 2009-10 TLDHS.

Childhood Vaccination Coverage. Fifty-three percent of Timorese children age 12-23 months are fully immunized, and 23 percent received no vaccinations. Forty-seven percent of children age 12-23 months are fully vaccinated by 12 months of age. The percentage of children fully vaccinated nearly tripled from 18 percent in 2003.

Seventy-seven percent of children received the BCG vaccination, 75 percent received the first DPT dose, and 75 percent received the first polio dose. Coverage for all three vaccinations declines with subsequent doses; 66 percent of children received the recommended three doses of DPT, and 56 percent received three doses of polio. These figures reflect dropout rates (which represent the proportion of children who received the first dose of a vaccine but who did not get the third dose) of 12 percent for DPT and 25 percent for polio, respectively. This is a huge improvement from 2003 when the dropout rates for DPT and polio were 45 and 62 percent, respectively. Sixty-eight percent of children received the measles vaccine. Hepatitis B coverage varies slightly from DPT coverage, although they have been given together in a tetravalent vaccine since 2007. This difference is likely due to the inclusion of a small number of children who received the DPT vaccine before the tetravalent vaccine was introduced.

Childhood Illness and Treatment. Among children under 5 years of age, 2 percent had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey. Seven in ten children with symptoms of ARI (71 percent) were taken to a health facility or provider, and 45 percent were prescribed antibiotics.

One-fifth of children (19 percent) under 5 years of age were reported to have had fever in the past two weeks. Seventy-three percent of children with a fever were taken to a health facility or provider for treatment. Six percent of children under age 5 with fever in the two weeks preceding the survey were given antimalarial drugs, and 36 percent received antibiotics.

Sixteen percent of all children under the age of 5 had diarrhea in the two weeks before the survey, and 1 percent had diarrhea with blood. Overall, 72 percent of children with diarrhea were taken to a health provider for treatment of diarrhea. Seventy-eight percent of children with

diarrhea were treated either with oral rehydration salts (ORS) (71 percent) or recommended home fluids (RHF) (40 percent). Ten percent of children were given increased fluids. Overall, 79 percent of children under age 5 with diarrhea were treated with ORS, RHF, or increased fluids. Six percent of children with diarrhea were treated with antibiotics, home remedies were given to 18 percent of children with diarrhea, and 13 percent of children with diarrhea were given no treatment at all. Six percent of children with diarrhea received zinc only.

NUTRITION

Nutritional Status of Children. Fifty-eight percent of children under age 5 are stunted, and 33 percent are severely stunted. Nineteen percent of children under age 5 are wasted, and 7 percent are severely wasted. The weight-for-age indicator shows that 45 percent of children under age 5 are underweight, and 15 percent are severely underweight. In addition, 5 percent of Timorese children under age 5 are overweight.

There has been a slight rise in the level of stunting, wasting, and underweight over the past 6 years. Stunting increased from 49 percent to 53 percent, wasting increased from 12 percent to 17 percent, and underweight increased from 46 percent to 52 percent.

Breastfeeding Practices. Breastfeeding is nearly universal in Timor-Leste, with 97 percent of children born in the five years preceding the survey having been breastfed at some time. On average, four in five children are breastfed within the first hour of birth (82 percent), and 96 percent are breastfed within one day of birth. Thirteen percent of children are given a pre-lacteal feed, that is, something other than breast milk, during the first three days of life. The percentage of children who are breastfed early has increased in the past six years, the increase being more pronounced for children breastfed within one hour of birth. There has been a rise in the percentage of children breastfed within one hour of birth by about 74 percent, from 47 percent in the 2003 DHS to 82 percent in 2009-10 TLDHS.

Contrary to WHO's recommendations, however, only about half (52 percent) of children under age 6 months are exclusively breastfed in Timor-Leste. The 2009-10 TLDHS results also indicate that the proportion of children receiving complementary foods in a timely fashion is encouraging, with 78 percent of children age 6-8 months receiving complementary foods. The practice of bottle-feeding with a nipple is not widespread in Timor-Leste.

Intake of Vitamin A. Ensuring that children age 6-59 months receive enough vitamin A may be the single most effective child survival intervention. Deficiencies in this micronutrient can cause blindness and can increase the severity of infections such as measles and diarrhoea. Nearly four-fifths (79 percent) of last-born children age 6-35 months consumed vitamin A-rich foods, and 52 percent of young children consumed foods rich in iron in the 24-hour period before the survey. One in two children (51 percent) age 6-59 months received a vitamin A supplement in the six months before the survey. This is an improvement over the last five years.

Along with vitamin A deficiency, the prevalence of worm infestation has been high in Timor-Leste. Thirty-five percent of children age 6-59 months received deworming tablets in the six months preceding the survey.

Prevalence of anemia. Iron-deficiency anemia is a major threat to maternal health and child health. More than one in three (38 percent) Timorese children age 6-59 months old are anemic, with 25 percent mildly anemic, 13 percent moderately anemic, and less than 1 percent severely anemic. Children in Manatuto district have the highest prevalence of anemia (68 percent), and children in Ermera district have the lowest prevalence (15 percent).

Nutritional Status of Women. Overall, 15 percent of women are shorter than 145 cm. Women in rural areas are much shorter on average than women in urban areas, with 17 percent falling below the 145 cm cutoff compared with only 9 percent of women in urban areas. Women living in Dili are least likely to be below 145 cm (7 percent), while women in Ermera are most likely (31 percent).

Twenty-seven percent of women were found to be malnourished with BMI <18.5 indicating that malnutrition among women is a serious public health concern in Timor-Leste. About 5 percent of Timorese women are overweight or obese.

Women's nutritional status has improved over the years. The proportion of malnourished women (BMI <18.5) has decreased by 29 percent in the past decade, from 38 percent in the 2003 DHS to 27 percent in the 2009-10 TLDHS.

However, the level of chronic energy deficiency among nonpregnant women is still high, with more than one-quarter of women having a BMI less than 18.5. The mean BMI has increased only slightly over the years from 19.5 in the 2003 DHS to 20.2 in the 2009-10 TLDHS.

A mother's nutritional status during pregnancy is important both for the child's intrauterine development and for protection against maternal morbidity and mortality. Night blindness is an indicator of severe vitamin A deficiency, and pregnant women are especially prone to experience it. More than nine in ten mothers (94 percent) consumed vitamin A-rich foods, and more than one-half (53 percent) consumed iron-rich foods in the 24 hours preceding the survey. Fifty-five percent of women received vitamin A postpartum, an improvement from the 23 percent of women who received vitamin A postpartum reported in the 2003 TLDHS.

Iron supplementation during pregnancy has been a key health initiative in Timor-Leste since 2003. The proportion of women who took iron supplements during pregnancy has risen from 43 percent in 2003 to 61 percent in 2009-10. However, 37 percent of women did not take any iron supplements during their most recent pregnancy. Further, only 16 percent of women took the recommended dose of iron supplements for 90 days or more during their pregnancy. In addition, 13 percent of women received deworming medication during pregnancy, 31 percent received supplementary food while pregnant with their last birth, and 29 percent received supplementary food while breastfeeding their last-born child.

Thirteen percent of mothers reported having difficulty seeing at night but, when this figure is adjusted to include only those mothers who had no difficulty seeing in the daytime, only 2 percent of mothers suffered from night blindness during their most recent pregnancy in the last five years. This is a decrease from the 13 percent of mothers reported with night blindness in the DHS 2003 survey.

Iron deficiency anemia is one of the most common nutritional problems in Timor-Leste. Overall 21 percent of Timorese women age 15-49 are anemic, with 18 percent mildly anemic, 4 percent moderately anemic, and less than 1 percent severely anemic. However, pregnant women are more likely to be anemic (28 percent) than women who are breastfeeding (25 percent) and women who are neither pregnant nor breastfeeding (19 percent).

HIV AND AIDS

Knowledge of HIV and AIDS. Forty-four percent of women and 61 percent of men have heard of HIV and AIDS. Women are most aware that the chances of getting the HIV virus can be reduced by limiting sex to one uninfected partner who has no other partners (36 percent). In addition, 26 percent mention that abstaining from sexual intercourse will prevent the transmission of HIV. Among men, the most commonly known prevention method is also limiting sex to one uninfected partner who has no other partners (49 percent). Knowledge of condoms and the role that they can play in preventing the transmission of HIV is much less common among women than among men (30 percent versus 45 percent). Fewer women and men (27 percent and 42 percent, respectively) are also aware that both using condoms and limiting sex to one uninfected partner can reduce the risk of getting the HIV virus.

Many Timorese adults lack accurate knowledge about the ways in which the HIV virus can and cannot be transmitted, with women being much less knowledgeable than men. Only 33 percent of women and 46 percent of men know that a healthy-looking person can have the HIV virus. One in four women and two in five men know that HIV cannot be transmitted by mosquito bites, or that a person cannot become infected by sharing food with a person who has HIV or sharing clothes with a person who has HIV. About twice as many men as women (28 percent and 15 percent, respectively) say that a healthy looking person can have the virus and reject the two most common local misconceptions (that HIV can be transmitted by mosquito bites and by sharing food).

Attitudes towards People Living with HIV and AIDS. Knowledge and beliefs affect how people treat those they know to be living with HIV or AIDS. In the 2009-10 TLDHS, a number of questions were posed to respondents to measure their attitudes towards people living with HIV or AIDS (PLWA). Twice as many women as men (55 percent and 26 percent, respectively) state that they would be willing to care for a family member with the AIDS virus in their home. Eighty-four percent of women and 87 percent of men say that they would not want to keep secret that a family member was infected with the AIDS virus, while 44 percent of women

and 28 percent of men say that a female teacher with AIDS should be allowed to continue teaching. A relatively lower proportion of women and men (34 percent and 22 percent, respectively) say they would buy fresh vegetables from a shopkeeper with AIDS. The percentage expressing accepting attitudes on all four measures is low: 11 percent among women and 3 percent among men.

HIV-Related Behavioral Indicators. Just over 1 percent of men age 15-49 reported having had two or more sexual partners during the 12 months prior to the survey, with men reporting a mean number of just under two partners in their lifetime. Among men with two or more partners in the 12 months preceding the survey, 19 percent used a condom at last sex. Five percent of men reported that they had engaged in paid sex in the year before the survey, and among those who paid for sex, only 26 percent reported using a condom the last time they paid for sex.

DOMESTIC VIOLENCE

The 2009-10 TLDHS included a series of questions that focus on specific aspects of domestic and interpersonal violence, including acts of physical, sexual, and emotional violence. Due to ethical considerations, only one woman was administered the domestic violence module in each selected household, and the violence module was not administered if privacy could not be obtained.

Approximately one-third of women (38 percent) have experienced physical violence since age 15. One percent of women experienced physical violence often, while 28 percent experienced physical violence sometimes in the past 12 months. Urban women are more likely than rural women to have experienced physical violence since the age of 15 (49 percent compared with 35 percent). This is corroborated by the fact that more than half of the women in Dili district, which is primarily urban, reported experiencing physical violence since the age of 15 years. Women in Manufahi (76 percent) are most likely to report having ever experienced physical violence. Experience of physical violence in the past 12 months is highest among women in Manufahi (65 percent) and lowest in Ainaro (8 percent). Among ever-married women who have ever experienced physical violence, 74 percent reported that a current husband or partner committed the physical violence against them, while 6 percent reported that they experienced physical violence by a former husband/partner. Other perpetrators commonly reported by ever-married women were mother/stepmother (34 percent) and father/stepfather (26 percent), sisters and brothers (11 percent), and other relatives (6 percent).

About 3 percent of women have experienced sexual violence, with the proportion of women who have experienced sexual violence ranging from less than 1 percent in Viqueque to 7 percent in Baucau, Lautem, and Aileu. For 16 percent of women who ever experienced sexual violence, the first experience of such violence occurred at age 15-19; 6 percent first experienced sexual violence at age 10-14; and less than 1 percent first experienced sexual violence before age 10. One in ten women who experienced sexual violence first experienced it at age 20-49. The main perpetrators of sexual violence against ever-married women are current husbands/ partners (71 percent) or former husbands/partners (9 percent).

The findings from the survey also indicate that overall, 4 percent of women in Timor-Leste experienced physical violence during pregnancy.

Violence by husbands against wives is not the only form of spousal violence; women may sometimes be the perpetrators of violence. Six percent of married women report that they have initiated physical violence against their current or most recent husbands, while 5 percent say that they have committed such violence in the 12 months preceding the survey.

About one in five women (24 percent) who experience violence seek help. Women who experience both physical and sexual violence (50 percent) are most likely to seek help. Seven percent of women who experienced violence in Manufahi sought help, compared with one in two women in Covalima (51 percent).

MILLENNIUM DEVELOPMENT GOAL INDICATORS

Millennium Development Goal Indicators

Timor-Leste 2009-10

Indicator	Sex		
	Male	Female	Total
1.8 Prevalence of underweight children under five years of age	45.5	43.8	44.7
2.1 Net attendance ratio in primary school[1]	70.3	77.4	71.1
2.3 Literacy rate of 15-24 year-olds	86.1	84.1	na
3.1 Ratio of girls to boys in primary, secondary and tertiary education	na	na	93.3
4.1 Under five mortality rate[2]	85	76	64
4.2 Infant mortality rate[2]	59	53	45
4.3 Percentage of 1 year old children immunized against measles	69.0	66.5	67.8
5.1 Maternal mortality ratio[3]	na	na	557
5.2 Percentage of births attended by skilled health personnel	na	na	29.9
5.3 Contraceptive prevalence rate[4]	na	22.3	na
5.4 Adolescent birth rate[5]	na	51	na
5.5 Antenatal care coverage			
At least one visit	na	87.5	na
Four or more visits	na	55.1	na
5.6 Unmet need for family planning	na	30.8	na
6.2 Condom use at last high-risk sex[6]	13.2	*	na
6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS	19.7	12.2	na
6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years	0.82	0.68	0.75
6.7 Percentage of children under five sleeping under ITN	40.7	41.4	41.0
6.8 Percentage of children under five with fever treated with appropriate antimalarial drugs	6.4	5.1	5.7
	Urban	Rural	Total
7.8 Percentage of population with sustainable access to an improved water source	88.2	56.6	64.0
7.9 Percentage of population with access to improved sanitation	65.9	35.8	43.0

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Net attendance ratio measured in the TLDHS approximates MDG indicator 2.1, Net enrollment ratio.
[2] Expressed in terms of deaths per 1,000 live births
[3] Expressed in terms of maternal deaths per 100,000 live births
[4] Percentage of currently married women using any method of contraception
[5] Equivalent to the age-specific fertility rate for women age 15-19, expressed in terms of births per 1,000 women age 15-19.
[6] High-risk sex is defined as sexual intercourse with a non-marital, non-cohabiting partner. Expressed as a percentage of men and women age 15-24 who had high-risk sex in the past 12 months.

TIMOR-LESTE

Banda Sea
Dili
Liquiçá
Ermera
Bobonaro
Oecussi
Covalima
Ainaro
Manufahi
Aileu
Manatuto
Baucau
Lautem
Viqueque
INDONESIA
Timor Sea
N
0
50
100
200
300
kilometers

INTRODUCTION 1

1.1 HISTORY, GEOGRAPHY, AND ECONOMY

1.1.1 History

Timor-Leste is a small country in Southeast Asia. It occupies primarily the eastern half of the island of Timor, with West Timor being part of the Republic of Indonesia. Timor-Leste includes the nearby islands of Ataúro and Jaco, and also Oecussi, an exclave in Indonesian West Timor. The first inhabitants are thought to be descended from Australoid and Melanesian people. Contact between the Portuguese and the island of Timor began in the early 16th century, with trade and eventual colonization occurring in the middle of the century. In 1859, the western portion of the island was ceded to the Dutch. During World War II, Japan occupied Timor-Leste from 1942 to 1945. Portugal resumed colonial authority after the Japanese defeat.

The country declared independence from Portuguese rule on November 28, 1975, but was invaded and occupied by Indonesian forces just nine days later on December 7, 1975. It was incorporated into Indonesia in July 1976 as a province known as Timor-Timur. Between 1974 and 1999, there were an estimated 102,800 conflict-related deaths (approximately 18,600 killings and 84,200 "excess" deaths from hunger and illness), the majority of which occurred during the Indonesian occupation (UNESCO, 2009).

On August 30, 1999, in a UN-sponsored referendum, an overwhelming majority of the Timorese people voted for independence from Indonesia. Immediately following the referendum, however, anti-independence Timorese militias organized with support from the Indonesian military and began a punitive "scorched-earth" campaign. The majority of the country's infrastructure was destroyed, including homes, irrigation and water supply systems, schools, and nearly all of the country's electrical grid. The militias killed approximately 1,400 Timorese and forcibly pushed 300,000 people into West Timor as refugees (CIA, 2010). On September 20, 1999, the International Force for East Timor (INTERFET) began deploying to the country and brought the violence to an end. Following a transitional period administered by the United Nations under the United Nations administration in East Timor (UNTAET), Timor-Leste was internationally recognized as an independent country on May 20, 2002. The country became officially known as the Democratic Republic of Timor-Leste. Kay Rala Xanana Gusmão became the first president, and Mari Alkatiri assumed the role of first prime minister.

The relationship between the armed forces and the police remained fragile, while the authority of the state faced multiple challenges. In early 2006, following claims of discrimination within the military of Timor-Leste, nearly 600 military personnel deserted their barracks and were eventually relieved of duty. In April, riots broke out in Dili among rival groups within the military and police. Renewed fighting between the pro-government troops and disaffected Falentil troops broke out in May 2006 and resulted in further destruction of property. Forty people were reported as killed, and more than 20,000 residents fled their homes to internally displaced persons camps outside of the city (Head, 2006). In July 2006, after calls for his resignation, Prime Minister Alkatiri stepped down and was replaced by Jose Ramos-Horta. Following the most recent presidential elections held in April 2007, Jose Ramos-Horta became the president on May 20, 2007 and Kay Rala Xanana Gusmão was sworn in as the Prime Minister on August 8, 2007 (Wikipedia, 2010).

1.1.2 Geography

Timor-Leste is variously known as Timor-Timur, *timur* meaning "east" in Malay; Timor-Leste, *leste* meaning "east" in Portuguese; and Timor Lorosa'e, *Lorosa'e* meaning "rising sun" in Tetum. The island of Timor is part of the Malay Archipelago and is the largest and easternmost of the Lesser Sunda Islands. To the north of the mountainous island are the Ombai Strait and Wetar Strait, to the south is the Timor Sea, which separates the island from Australia, and to the west lies the Indonesian province of East Nusa Tenggara. The highest point of Timor-Leste is Mount Tatamailau at 2,963 meters. The island of Timor is located at coordinates between 8°50′S and 125°55′E, and the country covers a total area of 14,919 square kilometers (National Statistics Directorate, 2006).

The local climate is tropical and generally hot and humid, characterized by distinct rainy and dry seasons. Timor-Leste is divided into 13 administrative districts, 65 sub-districts, and 442 *Sucos* and 2,225 *aldeias*. The 13 districts are Ainaro, Alieu, Baucau, Bobonaro, Covalima, Dili, Ermera, Lautem, Liquiçá, Manatuto, Manufahi, Oecussi, and Viqueque.

Thirty percent of the population lives in the urban areas, and the rest live in rural areas (NSD, 2010). Dili is the capital. It is the largest city and the main port. The second-largest city is the eastern town of Baucau. Dili has the only functioning international airport, though there is also an airstrip in Baucau that is used for domestic flights.

Several languages are spoken in the country. Tetum is the most common language in Timor-Leste and is the first official national language. Portuguese, spoken by fewer people, is the other official language. English and Indonesian are working languages.

1.1.3 Economy

Timor-Leste's economy is one of the poorest in the world (CIA, 2010). During colonization and even before then, Timor-Leste was best known for its sandalwood. In late 1999, about 70 percent of the economic infrastructure of Timor-Leste was destroyed by Indonesian troops and anti-independence militias. Some 300,000 people fled westward. Over the next three years, a massive international program led by the United Nations and manned by civilian advisers, peacekeepers, and police officers led to substantial reconstruction in the country (CIA, 2010).

Timor-Leste still suffers from the aftereffects of the conflict. The country faces great challenges in continuing to rebuild infrastructure and strengthen the civil administration. One promising long-term project has been the joint development with Australia of petroleum and natural gas resources in the southeastern waters off Timor. Following independence, Timor-Leste negotiated the Timor Sea Treaty with Australia. This treaty replaced a previous agreement, the Timor Gap treaty, brokered between Indonesia and Australia in 1989. The Timor Sea Treaty established the Joint Petroleum Development Area (JPDA), which is administered jointly by both countries. Under the terms of the treaty, Timor-Leste receives 90 percent of the revenue from petroleum production in the JPDA, and Australia receives the remaining 10 percent.

Agriculture and fishery are the backbone of the Timorese economy, and coffee plantations have been of major significance. In 2007, a poor harvest led to deaths from starvation in several parts of the country, and 11 districts required food supplies through international aid.

The 2007 Timor-Leste Survey of Living Standards reported that nearly 50 percent of the Timorese lived below the national poverty line, estimated at $0.88 per capita per day. Based on a recent survey-to-survey imputation calculation, the incidence of poverty in the country is predicted to have declined by 9 percentage points between 2007 and 2009 (MOF, 2010). Timor-Leste's Human Development Index for 2010 is 0.502—positioning the country at 120 out of 169 countries and areas (UNDP, 2010). This is an increase of 17 percent from 0.428 in 2005. During the same period, Timor-Leste's life expectancy at birth increased by over 2 years.

The government of Timor-Leste has laid out the Fourth Constitutional Government Program for 2007-2012 as the country's development strategy for the current five years. It defines the long-term development goals in terms of reducing poverty and promoting the equitable growth and life of the Timorese population. The Office of the Prime Minister is preparing the Strategic Development Plan to address the national priorities for the country over the period 2011-2030.

1.2 POPULATION

The first census following independence was conducted in 2004, and the second census was completed in August 2010. According to the 2004 Census, the population of Timor-Leste is 923,198 and the annual growth rate is 5.3 percent (NSD, 2006). The population increased by 24 percent over the last 15 years, growing from 747,547 in 1990 to 923,198 in 2004 (NSD, 2006). The population is currently estimated at 1,066,582 with an annual growth rate of 2.4 percent between the 2004 Census and the 2010 Census (NSD, 2010). According to the 2004 Census, life expectancy was estimated at 59 years, and increased to 62 years according to the 2010 Census.

1.3 POPULATION AND REPRODUCTIVE HEALTH POLICIES AND PROGRAMS

Shortly after the country gained independence, the Ministry of Health initiated the first National Health Policy Framework (NHPF) for 2002-12, which prioritizes the health needs of the Timorese people and emphasizes the importance of understanding the social determinants of health within the local cultural context. The NHFP seeks to "provide quality of health for the East Timorese by establishing and developing a cost-effective and needs-based health system which will specially address the health issues and problems of women, children, and other vulnerable groups, particularly the poor, in a participatory way" (MOH, 2002a).

The NHPF serves as the basis for the formulation of the National Health Promotion Strategy (NHPS) and the National Reproductive Health Strategy (NRHS), which is an outcome of the 1994 International Conference on Population and Development (ICPD) held in Cairo (MOH, 2004a). The primary objectives of the NRHS are:

- to substantially increase the level of knowledge in the general population on issues related to sexuality and reproductive health;
- to promote family planning in order to stabilize the population growth rate and reduce the incidence of unintended, unwanted, and mistimed pregnancies;
- to ensure that all women and men have access to basic reproductive health care services, health promotion, and information on issues related to reproduction;
- to reduce the level of maternal mortality and morbidity;
- to reduce the level of prenatal and neonatal mortality and morbidity;
- to reduce the burden of STIs/HIV;
- to meet changing reproductive health needs over the life cycle and to improve the health status of people of reproductive age.

Family planning is one of the major components of the Timor-Leste planned development activities under the First Development Plan, 2002-2007. The Timor-Leste Family Planning and Maternal and Child Health project (FP/MCH) functions under the Ministry of Health. The Ministry of Health endorsed the National Family Planning Policy for Timor-Leste in March 2004. The primary objective of this policy is to address population growth and provide guidance on the development and implementation of family planning programs and activities in Timor-Leste (MOH, 2004b).

The FP/MCH project began in 2002, and since then it has gradually involved all 13 districts of Timor-Leste. Family planning services have become an integral part of government health services. Currently, temporary modern family planning methods (male condoms, contraceptive pills, and injectables) are provided by peripheral health workers and volunteers on a regular basis through national, regional, zonal, and district hospitals; primary health care centers/health centers; and health

posts and sub-health posts. Services such as implants and IUD insertions are available only at a limited number of hospitals, health centers, and selected health posts where trained personnel are available. Depending on the district, sterilization services are provided at some static sites in the 13 districts through scheduled "seasonal" or mobile outreach services. A number of local nongovernmental organizations (NGOs) and international nongovernmental organizations (INGOs) also are currently involved in the delivery of family planning services at the grass roots level.

1.4 OBJECTIVES OF THE SURVEY

The principal objective of the 2009-10 Timor-Leste Demographic and Health Survey (TLDHS) was to provide current and reliable data on fertility and family planning behavior, child mortality, adult and maternal mortality, child nutritional status, the utilization of maternal and child health services, and knowledge of HIV/AIDS. The specific objectives of the survey were to:

- collect data at the national level that will allow the calculation of key demographic rates;
- analyze the direct and indirect factors that determine the levels and trends in fertility;
- measure the level of contraceptive knowledge among women and men, and measure the level of practice among women by method, according to urban or rural residence;
- collect quality data on family health, including immunization coverage among children, prevalence and treatment of diarrhea and other diseases among children under age 5, and maternity care indicators, including antenatal visits, assistance at delivery, and postnatal care;
- collect data on infant and child mortality and on maternal and adult mortality;
- obtain data on child feeding practices, including breastfeeding, and collect anthropometric measures to use in assessing the nutritional status of women and children;
- collect information on knowledge of tuberculosis (TB), knowledge of the spread of TB, and attitudes towards people infected with TB among women and men;
- collect data on use of treated and untreated mosquito nets, persons who sleep under the nets, use of drugs for malaria during pregnancy, and use of antimalarial drugs for treatment of fever among children under age 5;
- collect data on knowledge and attitudes of women and men about sexually transmitted infections and HIV/AIDS, and evaluate patterns of recent behavior regarding condom use;
- collect information on the sexual practices of women and men; their number of sexual partners in the past 12 months, and over their lifetime; risky sexual behavior, including condom use at last sexual intercourse; and payment for sex;
- conduct hemoglobin testing on women age 15-49 and children age 6-59 months in a sub-sample of households selected for the survey to provide information on the prevalence of anemia among women of reproductive age and young children;
- collect information on domestic violence

This information is essential for informed policy decisions, planning, monitoring, and evaluation of programs on health in general, and on reproductive health in particular, at both the national and district levels. A long-term objective of the survey is to strengthen the technical capacity of government organizations to plan, conduct, process, and analyze data from complex national population and health surveys. Moreover, the 2009-10 TLDHS provides national and district-level estimates on population and health that are comparable to data collected in similar surveys in other developing countries. The first Demographic and Health Survey (DHS) in Timor-Leste was done in 2003. Unlike the 2003 DHS, however, the 2009-10 TLDHS was conducted under the worldwide MEASURE DHS program, funded by the United States Agency for International Development (USAID) and with technical assistance provided by ICF Macro. Data from the 2009-10 TLDHS allow for comparison of information gathered over a longer period of time and add to the vast and growing international database on demographic and health variables.

1.5 ORGANIZATION OF THE SURVEY

The TLDHS 2009-10 was implemented by the National Statistics Directorate of the Directorate General for Analysis and Research of the Ministry of Finance, under the aegis of the Ministry of Health (MOH) of Timor-Leste.

Technical support was provided by ICF Macro, and financial support was provided by USAID, the Government of Australia (AusAID), the Government of Ireland (Irish AID), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the United Nations Development Fund (UNDP), and the World Health Organization (WHO). UNFPA supported the survey with administrative, logistical, and technical assistance.

A steering committee was formed to be responsible for coordination, oversight, advice, and decision making on all major aspects of the survey. The steering committee was composed of representatives from various ministries and key stakeholders, including the MOH, National Statistics Directorate, USAID, and international NGOs.

1.6 SAMPLE DESIGN

The primary focus of the 2009-10 TLDHS was to provide estimates of key population and health indicators, including fertility and mortality rates, for the country as a whole and for urban and rural areas separately. In addition, the sample was designed to provide estimates of most key variables for the 13 districts.

1.6.1 Sampling Frame

The TLDHS used the sampling frame provided by the list of census enumeration areas (EAs) with population and household information from the 2004 Population and Housing Census (PHC). Administratively, Timor-Leste is divided into 13 districts. Stratification is achieved by separating each of the 13 districts into urban and rural areas. In total, 26 sampling strata were created. Samples were selected independently in every stratum, through a two-stage selection process. Implicit stratification was achieved at each of the lower administrative levels by sorting the sampling frame before sample selection, both according to administrative units and also by using a probability proportional-to-size selection at the first stage of sampling. The implicit stratification also allowed for the proportional allocation of sample points at each of the lower administrative levels.

1.6.2 Sample Selection

At the first stage of sampling, 455 enumeration areas (116 urban areas and 339 rural areas) were selected with probability proportional to the EA size, which is the number of households residing in the EA at the time of the census. A complete household listing operation in all of the selected EAs is the usual procedure to provide a sampling frame for the second-stage selection of households. However, a complete household listing was only carried out in select clusters in Dili, Ermera, and Viqueque, where more than 20 percent of the households had been destroyed. In all other clusters, a complete household listing was not possible because the country does not have written boundary maps for clusters. Instead, using the GPS coordinate locations for structures in each selected cluster as provided for by the 2004 PHC, households were randomly selected using their Geographic Information System (GIS) location identification in the central office. A map for each cluster was then generated, marking the households to be surveyed with their location identification. The maps also contained all the other households, roads, rivers, and major landmarks for easier location of selected households in the field. To provide statistically reliable estimates of key demographic and health variables and to cater for nonresponse, 27 households each were selected.

The survey was designed to cover a nationally representative sample of 12,285 residential households, taking into account nonresponse; to obtain completed interviews of 11,800 women age 15-49 in every selected household; and to obtain completed interviews of 3,800 men age 15-49 in every third selected household.

1.7 QUESTIONNAIRES

Three questionnaires were administered in the TLDHS: the Household Questionnaire, the Woman's Questionnaire, and the Man's Questionnaire. These questionnaires were adapted from the standard MEASURE DHS core questionnaires to reflect the population and health issues relevant to Timor-Leste based on a series of meetings with various stakeholders from government ministries and agencies, NGOs, and international donors. The final draft of each questionnaire was discussed at a questionnaire design workshop organized by NSD on March 10, 2009, in Dili. These questionnaires were then translated and back translated from English into the two main local languages−Tetum and Bahasa—and pretested prior to the main fieldwork to ensure that the original meanings of the questions were not lost in translation.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. For children under age 18, survival status of the parents was determined. The main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, ownership of various durable goods, and ownership of mosquito nets. Additionally, the Household Questionnaire was used to record height and weight measurements for women age 15-49 and children under age 5, and to list hemoglobin measurements for women age 15-49 and children age 6-59 months.

The Woman's Questionnaire was used to collect information from women age 15-49. These women were asked questions on the following topics:

- Background characteristics (education, residential history, media exposure, etc.)
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal, delivery, and postnatal care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Woman's work and husband's background characteristics
- Awareness and behavior regarding AIDS and other sexually transmitted infections (STIs)
- Maternal mortality
- Domestic violence

The Man's Questionnaire was administered to all men age 15-49 living in every third household. The Man's Questionnaire collected much of the same information found in the Woman's Questionnaire but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health, nutrition, maternal mortality, or domestic violence.

1.8 HEMOGLOBIN TESTING

In one-third of the households selected for the 2009-10 TLDHS, women age 15-49 and children age 6-59 months were tested for anemia. Anemia testing was only carried out if consent was provided by the respondent and, in the case of a minor, by the parent or guardian. The protocol for hemoglobin testing was approved by the Ministry of Health in Timor-Leste.

Hemoglobin testing is the primary method for diagnosis of anemia. In the 2009-10 TLDHS, testing was done using the HemoCue system. A consent statement was read to the eligible woman and to the parent or responsible adult of young children and women age 15-17. This statement explained the purpose of the test, informed prospective subjects and/or their caretakers that the results would be made available as soon as the test was completed, and requested permission for the test to be carried out.

Before the blood was taken, the finger was wiped with an alcohol prep swab and allowed to air-dry. Then the palm side of the end of one finger was punctured with a sterile, nonreusable, self-retractable lancet. A drop of blood was collected with a HemoCue microcuvette and placed in a HemoCue photometer where the results were displayed. For children age 6-11 months who were particularly undernourished and thin, a heel puncture was made to draw a drop of blood. The results were recorded in the Household Questionnaire, as well as on a brochure, given to each woman, parent, or responsible adult, which explained what the results meant.

1.9 PRETEST, TRAINING, AND FIELDWORK

1.9.1 Pretest

For the pretest, 10 interviewers were recruited to interview in the two local languages. The training for the pretest and fieldwork took place from April 27 to May 23, 2009. Both rural and urban households were selected for the pretest in three districts (Bobonaro, Viqueque, and Dili). Based on the findings of the pretest, the Household, the Woman's, and the Man's Questionnaires were further refined in both of the local languages.

1.9.2 Training

The National Statistics Directorate (NSD), in close coordination with the MOH, recruited and trained 101 persons for the fieldwork to serve as supervisors, field editors, male and female interviewers, quality control staff, and reserves. They participated in the main training held in Dili from July 13 – August 8, 2009. Staff from MOH, NSD, and ICF Macro led the four-week training course, which was conducted mainly in Tetum and included lectures, presentations, practical demonstrations, and practice interviewing in small groups as well as several days of field practice. The participants also received anthropometric training and training in hemoglobin testing.

After the training on how to complete the Household, Woman's, and Man's Questionnaires was completed, all trainees were given written and oral tests to gauge their understanding of the TLDHS questionnaires and interviewing techniques. On the basis of their scores on the exam and overall performance in the classroom and during field practice, 88 trainees were selected to participate in the main fieldwork. From the group, 10 of the best trainees were selected as quality control staff, 13 of the best male trainees were selected as supervisors, and 13 of the best female interviewers were identified as field editors. The remaining 52 trainees were selected to be interviewers. All selected field staff were trained in anthropometric measurement taking.

After completing the interviewers' training, the field editors and supervisors were trained for an additional three days on how to supervise the fieldwork and edit questionnaires in the field, in order to ensure data quality. The participants also received training on hemoglobin testing.

1.9.3 Fieldwork

Data collection began on August 10, 2009, by 13 teams consisting of three female interviewers, one male interviewer, a male supervisor, and a female field editor. Fieldwork was completed on February 7, 2010. Fieldwork supervision was coordinated at NSD; 6 quality control teams made up of one male and one female member each, monitored data quality. Additionally, close contact between NSD and the teams was maintained through field visits by senior staff, members of the steering committee, and ICF Macro staff. Regular communication was also maintained through cell phones.

1.10 DATA PROCESSING

The processing of the TLDHS results began soon after the start of fieldwork. Completed questionnaires were returned periodically from the field to the NSD data processing center in Dili, where they were entered and edited by 13 data processing personnel who were specially trained for this task. The data processing personnel included a supervisor, a questionnaire administrator, 2 office editors, and 13 data entry operators. The concurrent processing of the data was an advantage because field check tables could be generated to monitor various data quality parameters while the teams were still in the field. As a result, specific feedback was given to the teams to improve performance. The data entry and editing phase of the survey was completed by the end of February 2010.

1.11 RESPONSE RATES

Table 1.1 shows household and individual response rates for the 2009-10 TLDHS. A total of 12,128 households were selected for the sample, of which 11,671 were found to be occupied during data collection. Of these existing households, 11,463 were successfully interviewed, giving a household response rate of 98 percent.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Timor-Leste 2009-10

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	3,012	9,116	12,128
Households occupied	2,851	8,820	11,671
Households interviewed	2,745	8,718	11,463
Household response rate[1]	96.3	98.8	98.2
Interviews with women age 15-49			
Number of eligible women	3,625	10,171	13,796
Number of eligible women interviewed	3,233	9,904	13,137
Eligible women response rate[2]	89.2	97.4	95.2
Interviews with men age 15-49			
Number of eligible men	1,183	3,238	4,421
Number of eligible men interviewed	1,015	3,061	4,076
Eligible men response rate[2]	85.8	94.5	92.2

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

In these households, 13,796 women were identified as eligible for the individual interview. Interviews were completed with 13,137 women, yielding a response rate of 95 percent. Of the 4,421 eligible men identified in the selected sub-sample of households, 4,076 or 92 percent were successfully interviewed. Response rates were higher in rural than urban areas, with the rural-urban difference in response rates more marked among eligible men than among eligible women. The tabulations in the rest of the report discuss in detail the main demographic and health findings from interviews with these eligible women and men.

HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

2

This chapter presents descriptive summaries of the social, economic, and demographic characteristics of households sampled for the survey. The basic characteristics of the sampled population (i.e., age, sex, education, and place of residence) coupled with the socioeconomic conditions of the households form the basis of the background information used to analyze most key demographic and health indices in this report. This information is crucial for the interpretation of key demographic and health indicators. From these indicators, meaningful policies and programs for interventions are drawn, and the representativeness of the survey is measured.

One focus of this chapter is to describe the environment in which men, women, and children live. This description presents the general characteristics of the population, such as the age-sex structure, literacy and education, household arrangements (headship, size), and housing facilities (sources of water supply, sanitation facilities, dwelling characteristics, and household possessions). A distinction is made between urban and rural areas because many of these indicators differ depending on place of residence.

In the 2009-10 TLDHS, a household is defined as a person or a group of persons, related or unrelated, who live together in the same house or compound, share the same housekeeping arrangements, and eat together as a unit. The Household Questionnaire was used to collect information on all usual residents and visitors who spent the night preceding the survey in the household. This mode of data collection allows the analysis of either the de jure (usual) residents of the household or the de facto household population (all individuals who spent the night preceding the interview in the household, including visitors).

Wherever possible, the 2009-10 TLDHS data are compared with data from other surveys conducted in the country, such as the 1997 Indonesia DHS (CBS et al., 1998), the 2002 Multiple Indicator Cluster Survey (MICS) (UNICEF, 2003), the 2003 DHS (MOH et al., 2004), and the 2007 Timor-Leste Survey of Living Standards (TLSLS) (NSD, 2007). However, when comparing the 2009-10 TLDHS with other surveys, caution should be exercised in interpreting the results because the sample size, design, study population, period of coverage, and methods of estimation of key indicators may differ and therefore not be exactly comparable.

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

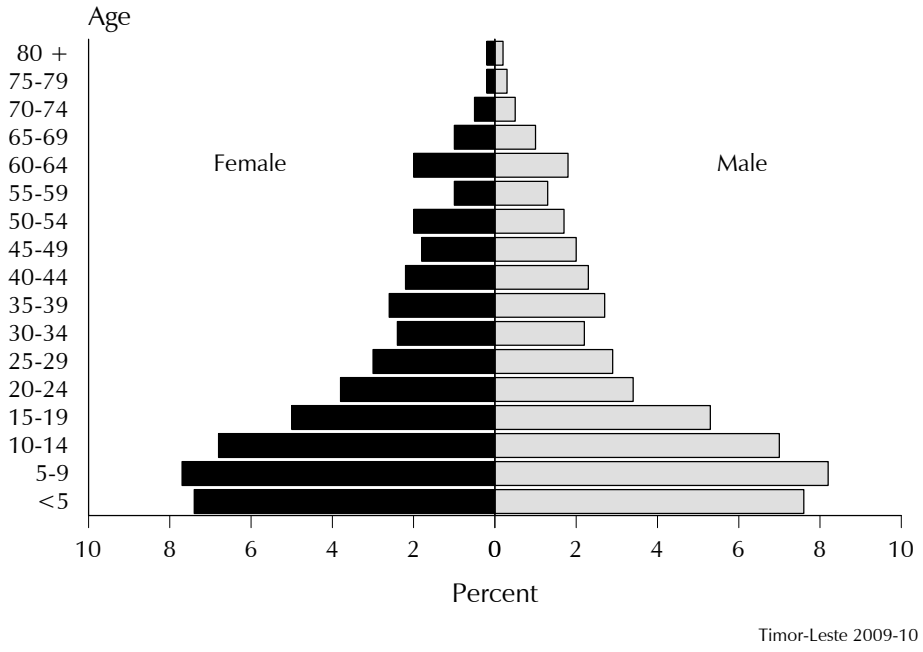
Age and sex are important variables in analyzing demographic trends. Table 2.1 and Figure 2.1 present the distribution of the de facto household population in the 2009-10 TLDHS survey by five-year age groups, according to sex and urban-rural residence. The age structure is typical of a young population characterized by high fertility. This type of population structure imposes a heavy burden on the social and economic assets of a country. Although the results of the 2009-10 TLDHS indicate that 45 percent of the population is under age 15, this percentage represents a small improvement over the results of the 2003 survey in which 51 percent of the population was under age 15. About four percent of the population is in the older age groups (age 65 or older), and this percentage has not changed since 2003.

Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Timor-Leste 2009-10

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	14.8	14.7	14.8	15.3	15.0	15.2	15.2	15.0	15.1
5-9	16.1	15.0	15.6	16.3	15.7	16.0	16.3	15.6	15.9
10-14	12.7	13.0	12.8	14.4	13.9	14.1	14.0	13.7	13.8
15-19	11.1	11.0	11.1	10.4	9.7	10.1	10.6	10.0	10.3
20-24	8.4	10.0	9.2	6.2	6.9	6.6	6.8	7.6	7.2
25-29	7.4	7.7	7.6	5.1	5.5	5.3	5.7	6.0	5.8
30-34	5.4	5.7	5.5	4.0	4.6	4.3	4.3	4.8	4.6
35-39	6.2	5.1	5.6	5.1	5.3	5.2	5.4	5.3	5.3
40-44	4.7	4.7	4.7	4.6	4.3	4.4	4.6	4.4	4.5
45-49	3.6	3.4	3.5	4.1	3.6	3.8	3.9	3.6	3.8
50-54	3.2	3.3	3.3	3.4	4.2	3.8	3.3	4.0	3.7
55-59	2.1	1.5	1.8	2.6	2.3	2.5	2.5	2.1	2.3
60-64	1.9	2.0	2.0	4.1	4.6	4.3	3.6	4.0	3.8
65-69	1.1	1.2	1.1	2.3	2.3	2.3	2.0	2.1	2.0
70-74	0.6	0.7	0.6	1.0	1.2	1.1	0.9	1.1	1.0
75-79	0.3	0.2	0.3	0.6	0.4	0.5	0.5	0.4	0.4
80+	0.3	0.6	0.4	0.5	0.5	0.5	0.4	0.5	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	8,072	7,618	15,689	25,555	25,647	51,202	33,626	33,265	66,891

Figure 2.1 Population Pyramid



Timor-Leste 2009-10

2.2 HOUSEHOLD COMPOSITION

The size and composition of households and the sex of the head of household are important factors affecting the welfare of the household. Table 2.2 shows the information collected in the 2009-10 TLDHS on the sex of the head of household and the mean household size. More than four in five (88 percent) households are headed by males, while one-eighth (12 percent) of households are headed by females. The percentage of female-headed households is higher in rural areas (13 percent) than in urban areas (11 percent).

The mean household size in Timor-Leste is 5.8 persons, with households in urban areas only marginally larger (5.9 persons) than those in rural areas (5.8 persons). Three percent of all households are single-person households, and the proportion of single-person households does not differ much between urban and rural areas. A sizeable proportion of households (15 percent) have 9 or more usual members, with urban households slightly more likely to be large than rural households.

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under 18, according to residence, Timor-Leste 2009-10

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	88.8	87.4	87.7
Female	11.2	12.6	12.3
Total	100.0	100.0	100.0
Number of usual members			
0	0.1	0.0	0.0
1	2.9	3.2	3.1
2	6.2	6.8	6.7
3	9.4	9.4	9.4
4	14.4	12.4	12.9
5	16.0	14.6	14.9
6	15.3	15.4	15.4
7	11.1	13.5	13.0
8	8.8	10.2	9.9
9+	15.8	14.4	14.7
Total	100.0	100.0	100.0
Mean size of households	5.9	5.8	5.8
Percentage of households with orphans and foster children under 18			
Foster children[1]	18.0	17.6	17.7
Double orphans	1.4	1.7	1.6
Single orphans[2]	7.6	10.1	9.5
Foster and/or orphan children	21.6	23.6	23.1
Number of households	2,695	8,768	11,463

Note: Table is based on de jure household members, i.e., usual residents.
[1] Foster children are those under age 18 living in households where neither their mother nor their father is a de jure resident.
[2] Single orphans includes children with one dead parent and an unknown survival status of the other parent.

2.2.1 Children's Living Arrangements and Orphanhood

The 2009-10 TLDHS also collected information on the presence of foster children and orphans in the households. Foster children are defined here as children under age 18 living in households with neither their mother nor their father present; orphans are children with one or both parents dead. Foster children and orphans are of concern because they may be at increased risk of neglect or exploitation when their mothers or fathers are not present to assist them. Table 2.2 also shows that 23 percent of the households have orphans or foster children under age 18. The proportion of households in Timor-Leste with orphans or foster children is high and reflects the political turmoil in the country over the past two decades. Rural households are slightly more likely to have orphans or foster children than urban households. Eighteen percent of households have foster children, 10 percent have at least one single orphan (either parent is dead), and 2 percent have at least one double orphan (both parents are dead).

Detailed information on living arrangements and orphanhood for children under age 18 is presented in Table 2.3.1. Of the 34,411 children under age 18 reported in the 2009-10 TLDHS, about 82 percent live with both parents. About 7 percent live with their mother but not their father, with 4 percent living with their mother only even though their father is alive. About 2 percent live with their father but not their mother, with less than 1 percent living with their father even though their mother is alive. Nine percent of children under age 18 live with neither of their natural parents. Table 2.3.1 also provides data on the extent of orphanhood. Less than 1 percent of children under age 18 have lost both parents, while 7 percent have lost either their mother or father.

The percentage of children not living with a biological parent increases with age from 4 percent of children age 0-4 years to 19 percent of children age 15-17 years. The highest proportion of children not living with a parent is in Bobonaro and Covalima (12 percent each), and the lowest is in Lautem and Oecussi (7 percent each). By wealth status, the proportion of children under age 18 not living with a natural parent rises from 8 percent among those in the lowest two wealth quintiles to 12 percent among those in the highest wealth quintile.

Table 2.3.1 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent				Missing information on father/ mother	Total	Percentage not living with a biological parent	Percentage with one or both parents dead[1]	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead					
Age														
0-4	88.6	5.5	1.5	0.5	0.3	3.0	0.3	0.2	0.2	0.0	100.0	3.7	2.5	10,075
<2	89.7	6.7	1.3	0.2	0.1	1.6	0.2	0.1	0.1	0.0	100.0	2.0	1.8	3,876
2-4	87.9	4.7	1.6	0.6	0.4	3.9	0.3	0.3	0.2	0.0	100.0	4.7	2.9	6,198
5-9	84.5	3.3	2.5	0.8	1.3	5.9	0.6	0.7	0.5	0.0	100.0	7.6	5.6	10,672
10-14	77.0	2.3	4.7	1.1	2.4	8.9	1.1	1.4	1.0	0.0	100.0	12.4	10.6	9,284
15-17	68.4	2.5	6.3	1.2	2.5	13.0	1.6	2.4	2.0	0.1	100.0	19.1	14.9	4,381
Sex														
Male	81.7	3.7	3.3	0.8	1.5	6.6	0.8	0.9	0.7	0.0	100.0	9.0	7.2	17,607
Female	81.5	3.4	3.2	0.9	1.4	6.9	0.8	1.0	0.7	0.0	100.0	9.5	7.2	16,804
Residence														
Urban	81.8	3.2	2.9	1.3	0.9	7.5	0.7	1.0	0.7	0.1	100.0	9.8	6.2	7,890
Rural	81.6	3.7	3.4	0.7	1.6	6.6	0.8	0.9	0.7	0.0	100.0	9.0	7.5	26,521
District														
Aileu	85.8	1.6	3.3	0.1	1.8	5.4	0.3	1.1	0.6	0.0	100.0	7.5	7.2	1,424
Ainaro	77.2	5.7	3.9	1.3	2.7	6.4	1.2	0.7	0.8	0.0	100.0	9.1	9.4	2,041
Baucau	83.0	2.6	2.7	0.1	1.6	7.2	0.7	1.2	0.7	0.1	100.0	9.9	7.0	3,921
Bobonaro	77.1	3.8	4.4	1.3	1.7	9.0	0.7	1.2	0.8	0.0	100.0	11.7	8.8	3,175
Covalima	77.9	4.8	4.4	0.4	0.8	7.9	1.1	1.2	1.4	0.0	100.0	11.7	8.9	1,981
Dili	85.3	2.0	2.3	1.4	0.8	6.4	0.5	0.8	0.5	0.1	100.0	8.2	4.9	5,279
Ermera	77.4	7.2	3.3	1.5	1.3	6.6	0.9	0.9	0.8	0.0	100.0	9.2	7.3	4,429
Lautem	82.9	3.7	4.4	0.5	1.6	4.9	0.6	0.9	0.5	0.0	100.0	6.9	8.0	2,546
Liquiçá	81.2	3.8	3.0	0.8	1.9	6.9	0.6	1.0	0.7	0.0	100.0	9.3	7.2	2,042
Manatuto	85.0	1.7	2.9	0.5	0.8	7.3	0.4	0.7	0.6	0.0	100.0	9.0	5.5	1,553
Manufahi	80.1	4.5	2.1	1.5	1.2	8.5	1.0	0.5	0.6	0.0	100.0	10.6	5.4	1,305
Oecussi	86.4	1.7	3.2	0.1	1.4	4.4	1.2	0.9	0.6	0.0	100.0	7.1	7.3	2,260
Viqueque	82.3	2.3	3.5	0.1	1.9	7.3	0.6	0.9	1.0	0.0	100.0	9.9	8.0	2,455
Wealth quintile														
Lowest	82.7	3.3	4.5	0.4	1.5	5.3	0.9	0.5	0.9	0.0	100.0	7.6	8.3	7,204
Second	81.6	3.6	4.0	0.8	2.6	5.3	0.5	1.1	0.7	0.0	100.0	7.5	8.8	6,857
Middle	83.1	4.2	2.8	0.6	1.2	5.5	0.8	1.0	0.8	0.0	100.0	8.1	6.6	6,788
Fourth	79.5	3.7	3.1	1.2	1.2	8.6	1.1	1.0	0.7	0.0	100.0	11.4	7.0	6,772
Highest	81.1	3.2	1.9	1.1	0.8	9.3	0.5	1.2	0.6	0.1	100.0	11.6	5.1	6,790
Total <15	83.6	3.7	2.8	0.8	1.3	5.9	0.6	0.7	0.5	0.0	100.0	7.8	6.1	30,031
Total <18	81.6	3.6	3.3	0.8	1.5	6.8	0.8	1.0	0.7	0.0	100.0	9.2	7.2	34,411

Note: Table is based on de jure members, i.e., usual residents.
[1] Includes children with father dead, mother dead, both dead, and one parent dead but missing information on survival status of the other parent.

2.2.2 School Attendance by Survivorship of Parents

Children who are orphaned may be at a greater risk of dropping out of school because of lack of financial and psychological support. The TLDHS included information to monitor such situations and collected information on school attendance of children age 10-14 by parental survival, which is presented in Table 2.3.2. The data confirm that children age 10-14 whose parents are both dead are less likely to be attending school (66 percent) than children whose parents are both living, with the child residing with at least one parent (87 percent). The overall ratio of school attendance of the former group to the latter group is 0.75. Further breakdown by background characteristics was not possible due to the low number of orphans.

Table 2.3.2 School attendance by survivorship of parents

For de jure children 10-14 years of age, the percentage attending school by parental survival, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage attending school by survivorship of parents: Both parents deceased	Number	Both parents alive and living with at least one parent	Number	Ratio[1]
Sex					
Male	71.4	50	87.5	3,790	0.82
Female	(58.8)	40	86.9	3,685	(0.68)
Residence					
Urban	(77.8)	20	89.4	1,627	(0.87)
Rural	62.3	70	86.6	5,847	0.72
Total	65.8	91	87.2	7,474	0.75

Note: Table is based only on children who usually live in the household. Figures in parentheses are based on 25-49 unweighted cases.
[1] Ratio of the percentage with both parents deceased to the percentage with both parents alive and living with a parent

2.3 EDUCATIONAL ATTAINMENT OF HOUSEHOLD MEMBERS

Timor-Leste is beginning to rebuild itself and move forward as an independent nation following years of unrest and instability created by Indonesian rule, UN governance, and internal conflict. Education is important to this effort because it helps individuals make informed decisions that have a positive impact on their health and well-being. The educational system was completely disrupted from 1999 until 2000, with more than 90 percent of the schools damaged and no longer functional (UNESCO, 2009; Fleischhacker and Uhlin, 2004). Indonesian teachers left the country, and the textbooks and the school curricula were no longer relevant under a new government. Schools were vandalized and destroyed yet again after the 2006 crisis. Renewed efforts have since been under way to reconstruct the educational system in the country.

The country has gone through three different systems of education. The Portuguese introduced a western curriculum during the colonial period (1511-1975). Portuguese was the medium of instruction in schools; however, the vast majority of Timorese had limited access to education. Only a few elite Timorese men, primarily those who supported the Portuguese and who carried out administrative functions of the country, were educated (Fleischhacker and Uhlin, 2004). The basic compulsory education comprised nine years in the Portuguese system, with the first cycle (*1º Ciclo*) lasting four years (age 6 -9), the second cycle (*2º Ciclo*) lasting two years (age 10-12), and the third cycle (*3º Ciclo*) lasting three years (age 13-15). The first cycle is equivalent to primary education (*escolas básicas*), while the second and third cycles combined are equivalent to secondary (*secundárias*) education (AngloINFO, 2010).

During the Indonesian occupation, education was made accessible to the public. Indonesian teachers devoted themselves to promoting education in the country, with Bahasa Indonesia as the medium of instruction in schools. The Indonesian education system included six years of primary education, three years of lower secondary education (SMP), and three years of upper secondary education (SMA). In addition, higher education through a university was divided into Sarjana (S1) comprising four years, Pasca Sarjana (S2) comprising 2 years, and PhD (S3) comprising two years. There were also two years of pre-primary education, or kindergarten, known as *Taman Kanak-Kanak*.

The current system of education, which began in October 2008, consists of 6 years of basic or primary education (from age 6-11 for grades 1 through 6; 3 years of pre-secondary education (from age 12-14 for grades 7 through 9); and an additional three years of secondary education (from age 15-17 for grades 10 through 12). Secondary education is organized through two modalities (1) general secondary education, preparing students for university education, and (2) technical professional secondary education, preparing students for entry into the labor market (UNESCO, 2009).

The Early Childhood Care and Education (ECCE) is not compulsory in Timor-Leste and is not considered a part of the formal educational system, although the National Education Policy 2007-2012 recognizes the importance of preschool education (UNESCO, 2009).

The impact of these three different systems of formal education in the country is reflected in the educational attainment of women and men interviewed in the 2009-10 TLDHS.

Early studies have reported that primary school enrolment among children changed little between 1999 and 2007, growing from 65 percent to 74 percent (UNESCO, 2009). In 2007 only 47 percent of children had completed primary school. The government set as a target the completion of primary school by all children by 2015 (NSD, 2007).

Table 2.4.1 shows the percent distribution of the de facto female household population age 6 and older by highest level of education attended or completed and according to background characteristics. Thirty-seven percent of women have never been to school, about 30 percent have some primary education, 5 percent completed only primary school, 26 percent have some secondary education or have completed secondary school, and about 2 percent have more than secondary school education.

Table 2.4.1 Educational attainment of the female household population

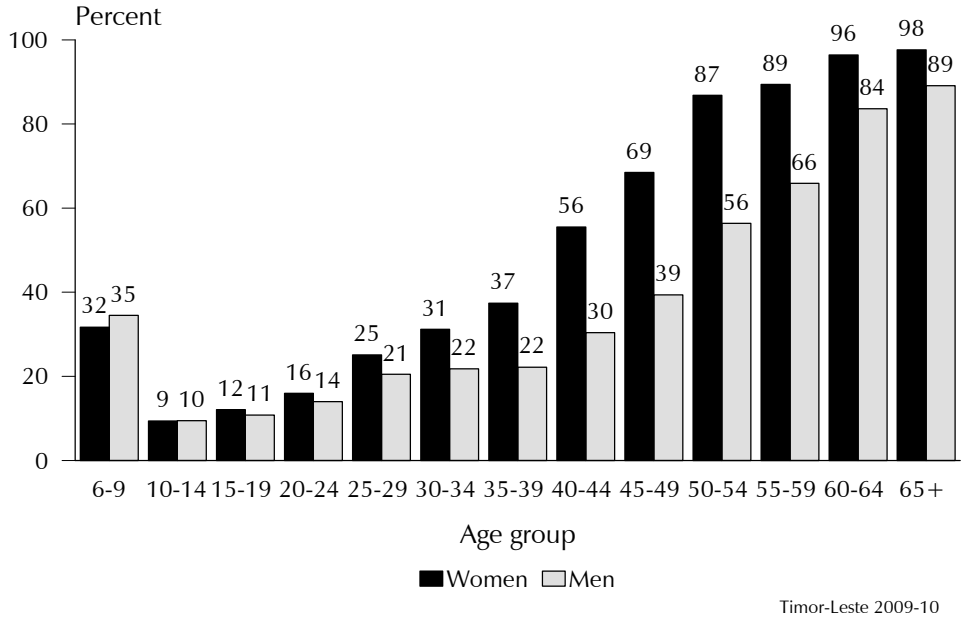
Percent distribution of the de facto female household populations age 6 and over by highest level of schooling attended or completed and median grade completed, according to background characteristics, Timor-Leste 2009-10

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6-9	31.7	67.9	0.1	0.2	0.0	0.0	0.1	100.0	4,243	0.2
10-14	9.4	67.8	1.7	21.2	0.0	0.0	0.0	100.0	4,560	3.4
15-19	12.1	15.1	4.1	64.6	3.4	0.6	0.0	100.0	3,329	7.0
20-24	16.0	12.5	7.5	33.1	24.4	6.5	0.0	100.0	2,538	8.6
25-29	25.1	13.5	10.8	20.6	24.9	5.0	0.0	100.0	2,000	6.3
30-34	31.2	13.2	13.9	17.6	18.9	5.1	0.0	100.0	1,601	5.4
35-39	37.4	15.8	12.3	17.1	14.9	2.5	0.0	100.0	1,751	4.4
40-44	55.5	15.2	7.5	8.9	10.8	2.0	0.0	100.0	1,451	0.0
45-49	68.5	15.9	5.2	4.8	3.4	2.1	0.2	100.0	1,186	0.0
50-54	86.8	8.3	1.5	1.7	1.1	0.5	0.1	100.0	1,334	0.0
55-59	89.4	6.5	1.0	1.6	0.7	0.3	0.5	100.0	701	0.0
60-64	96.4	2.2	0.8	0.1	0.3	0.0	0.2	100.0	1,325	0.0
65+	97.6	1.7	0.1	0.2	0.2	0.0	0.2	100.0	1,325	0.0
Residence										
Urban	21.9	28.4	4.1	24.1	15.6	5.8	0.2	100.0	6,259	4.9
Rural	42.0	30.3	4.8	17.4	5.0	0.5	0.0	100.0	21,095	1.0
District										
Aileu	36.1	32.8	4.6	21.2	4.7	0.4	0.0	100.0	1,140	1.8
Ainaro	47.9	26.9	2.5	16.9	4.9	0.9	0.0	100.0	1,554	0.1
Baucau	38.1	30.4	3.6	20.4	6.7	0.7	0.1	100.0	3,195	1.7
Bobonaro	44.7	29.5	4.9	15.8	4.5	0.7	0.1	100.0	2,687	0.7
Covalima	32.8	31.0	5.5	23.4	6.4	0.8	0.1	100.0	1,701	2.3
Dili	16.1	27.9	4.1	25.0	18.7	7.8	0.3	100.0	4,239	5.9
Ermera	51.9	28.2	3.4	13.3	3.1	0.1	0.0	100.0	3,331	0.0
Lautem	30.3	33.5	6.4	22.2	7.1	0.5	0.0	100.0	1,803	2.7
Liquiçá	42.3	31.2	4.0	16.3	5.7	0.5	0.0	100.0	1,665	1.0
Manatuto	34.2	30.6	5.4	19.9	8.9	1.0	0.0	100.0	1,299	2.3
Manufahi	39.4	29.3	4.0	20.4	6.0	0.7	0.2	100.0	1,100	1.6
Oecussi	45.4	30.6	9.8	11.2	2.6	0.5	0.0	100.0	1,698	0.2
Viqueque	40.2	31.0	4.6	18.0	5.3	0.9	0.0	100.0	1,943	1.4
Wealth quintile										
Lowest	52.3	31.1	4.4	10.8	1.3	0.1	0.0	100.0	5,397	0.0
Second	46.5	31.6	4.3	14.8	2.7	0.1	0.0	100.0	5,488	0.3
Middle	41.9	29.2	5.1	18.6	4.8	0.4	0.0	100.0	5,564	1.1
Fourth	31.3	29.9	5.2	23.7	8.4	1.5	0.1	100.0	5,500	2.9
Highest	14.8	27.6	4.1	26.7	19.9	6.7	0.2	100.0	5,405	6.2
Total	37.4	29.9	4.6	18.9	7.4	1.7	0.1	100.0	27,354	1.8

Note: Total includes 10 cases with information missing on age.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

The data show that the proportion of women with no education has declined by age, suggesting some improvement in education over the years. During the Portuguese era, the proportion of women who were educated was low. As seen in Figure 2.2, there has been a steady increase in the percentage of the population who has ever attended school in each sequential age cohort. Rapid increases in school attendance among women start in the cohort of women who were age 50-54 at the time of the survey. At the time of the Indonesian invasion in 1975, these women were age 16-20.

Figure 2.2 Percentage of Women and Men with No Education, by Age Group



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Increases in secondary education have also been substantial: 10 percent of women age 45-49 have attended any secondary school or higher compared with 69 percent of women age 15-19. It is also important to note that 32 percent of girls age 6-9 have no education; however, many of the girls in this age group may not yet have attained the official age required to start school by the start of the ongoing school year.

Education varies by place of residence. The proportion of women with no education is almost twice as high in rural (42 percent) as in urban areas (22 percent). Conversely, three times as many urban women as rural women have completed secondary school (16 percent compared with 5 percent).

Women's educational attainment varies by district. More than half of the female population in Ermera has no education compared with 16 percent in Dili. As expected, women in households belonging to the highest wealth quintile are least likely to be uneducated (15 percent) compared with those in the lowest quintile (52 percent).

Table 2.4.2 shows that 30 percent of men have never been to school, 39 percent have had some primary education or have completed primary education, 29 percent have had some secondary or have completed secondary education, and 3 percent have more than secondary education. Men exhibit a trend similar to that for women with regard to the level of educational attainment over the years (Figure 2.2). Differences in educational attainment among men by background characteristics are similar to those discussed for women.

Table 2.4.2 Educational attainment of the male household population

Percent distribution of the de facto male household populations age 6 and older by highest level of schooling attended or completed and median grade completed, according to background characteristics, Timor-Leste 2009-10

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6-9	34.5	65.2	0.1	0.1	0.0	0.0	0.0	100.0	4,532	0.1
10-14	9.5	71.2	1.6	17.7	0.0	0.0	0.0	100.0	4,695	3.1
15-19	10.8	19.6	3.6	62.1	3.1	0.7	0.2	100.0	3,559	6.7
20-24	14.0	12.4	6.2	34.8	25.3	7.3	0.1	100.0	2,276	11.7
25-29	20.5	16.3	7.7	15.1	30.3	10.1	0.0	100.0	1,908	8.1
30-34	21.8	15.0	11.3	12.3	28.5	11.0	0.1	100.0	1,459	7.1
35-39	22.2	16.5	11.7	17.6	23.6	8.0	0.3	100.0	1,807	5.9
40-44	30.4	18.9	8.2	12.9	25.1	4.4	0.1	100.0	1,546	5.1
45-49	39.4	23.9	7.3	10.1	16.2	3.1	0.0	100.0	1,327	2.4
50-54	56.4	26.1	5.0	4.5	6.8	1.3	0.1	100.0	1,117	0.0
55-59	65.9	21.3	5.3	3.4	2.4	1.7	0.0	100.0	843	0.0
60-64	83.6	11.5	2.7	0.8	1.0	0.4	0.1	100.0	1,196	0.0
65+	89.1	8.8	0.8	0.7	0.4	0.0	0.2	100.0	1,311	0.0
Residence										
Urban	16.5	31.8	4.2	21.7	17.3	8.3	0.3	100.0	6,629	5.2
Rural	33.8	35.0	4.6	17.3	8.0	1.3	0.0	100.0	20,947	2.0
District										
Aileu	32.2	35.8	6.2	17.0	7.2	1.5	0.0	100.0	1,182	2.1
Ainaro	38.8	33.2	3.4	17.1	6.5	1.0	0.0	100.0	1,580	1.5
Baucau	29.3	36.8	3.4	18.7	10.3	1.4	0.1	100.0	3,135	2.4
Bobonaro	36.2	34.2	5.1	15.0	8.2	1.3	0.0	100.0	2,572	1.8
Covalima	23.7	36.2	5.9	20.7	11.7	1.8	0.1	100.0	1,731	3.2
Dili	13.0	30.4	4.1	21.8	20.0	10.4	0.3	100.0	4,622	6.0
Ermera	42.9	31.6	4.2	16.2	4.7	0.4	0.0	100.0	3,299	0.9
Lautem	21.5	37.8	4.3	22.4	12.2	1.9	0.0	100.0	1,828	3.4
Liquiçá	31.1	37.6	4.2	17.8	6.9	2.3	0.0	100.0	1,724	2.3
Manatuto	28.6	35.2	4.9	17.9	11.1	2.1	0.1	100.0	1,222	2.9
Manufahi	31.1	30.3	6.2	21.8	8.7	1.6	0.2	100.0	1,153	3.0
Oecussi	42.5	34.5	5.8	11.1	4.3	1.9	0.0	100.0	1,618	0.6
Viqueque	30.2	37.2	3.3	18.2	8.9	2.3	0.0	100.0	1,910	2.3
Wealth quintile										
Lowest	44.5	34.6	4.4	12.8	3.3	0.5	0.0	100.0	5,391	0.4
Second	37.9	35.3	4.4	16.0	5.8	0.5	0.1	100.0	5,462	1.4
Middle	33.8	34.8	5.3	17.2	7.8	1.1	0.1	100.0	5,448	2.0
Fourth	23.3	34.8	4.7	22.3	12.5	2.4	0.0	100.0	5,479	3.7
Highest	10.1	31.9	3.6	23.0	21.1	10.1	0.2	100.0	5,797	6.4
Total	29.6	34.2	4.5	18.3	10.2	3.0	0.1	100.0	27,576	2.7

Note: Total includes 2 cases with information missing on age.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Males are more likely to be educated than females at all levels of education, with the exception of completion of primary education where there is little difference. The median number of years of schooling completed is about one year higher for males (2.7 years) than females (1.8 years). There has been improvement in the proportion of the population with no education since the 2003 DHS survey. The proportion of females with no education decreased from 47 percent in 2003 to 37 percent in 2009-10. Similarly, the proportion of males with no education decreased from 37 to 30 percent. The male-female gap in educational attainment has narrowed slightly over the years.

The 2009-10 TLDHS collected information on school attendance for the population age 5-24 that allows the calculation of net attendance ratios (NARs) and gross attendance ratios (GARs) (see Table 2.5). The NAR for primary school is the percentage of the primary-school-age (age 6-11) population that is attending primary school. The NAR for secondary school is the measure of the secondary-school-age (age 12-17) population that is attending secondary school. By definition, the NAR cannot exceed 100 percent. The GAR however, measures participation at each level of schooling among persons age 5-24. The GAR is almost always higher than the NAR for the same level because the GAR includes participation by those who may be older (because they may have started school late, repeated one or more grades, or dropped out and returned) or may be younger than the official age range for that level.

Table 2.5 presents data on the NAR and GAR for the de facto household population by level of schooling and sex, according to place of residence, region, and wealth quintile. Seventy-one percent of children age 6-11, who should be attending primary school, are currently doing so. The net enrolment rate for primary school was reported to be 77 percent in the 2007 TLSLS.

Table 2.5 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Timor-Leste 2009-10

Background characteristic	Net attendance ratio				Gross attendance ratio			
	Male	Female	Total	Gender Parity Index	Male	Female	Total	Gender Parity Index
PRIMARY SCHOOL								
Residence								
Urban	77.1	79.8	78.3	1.04	100.9	101.5	101.2	1.01
Rural	68.3	69.9	69.1	1.02	100.6	99.3	99.9	0.99
District								
Aileu	72.0	76.0	73.9	1.06	113.8	119.6	116.6	1.05
Ainaro	64.3	67.2	65.7	1.04	103.9	94.5	99.3	0.91
Baucau	72.8	73.4	73.1	1.01	103.3	101.6	102.5	0.98
Bobonaro	71.2	74.0	72.6	1.04	102.9	98.7	100.8	0.96
Covalima	82.6	83.5	83.0	1.01	113.7	108.7	111.3	0.96
Dili	75.0	76.8	75.8	1.02	91.5	93.9	92.6	1.03
Ermera	56.4	57.2	56.8	1.01	89.2	88.4	88.8	0.99
Lautem	80.0	80.9	80.4	1.01	108.1	115.0	111.2	1.06
Liquiçá	62.7	65.1	63.8	1.04	105.5	101.2	103.5	0.96
Manatuto	77.5	79.9	78.7	1.03	103.8	104.1	104.0	1.00
Manufahi	75.6	76.1	75.8	1.01	108.4	102.4	105.4	0.95
Oecussi	58.5	63.6	60.9	1.09	87.0	93.5	90.1	1.07
Viqueque	71.4	74.6	72.9	1.04	105.5	102.1	103.9	0.97
Wealth quintile								
Lowest	56.9	62.2	59.4	1.09	90.2	94.4	92.2	1.05
Second	68.2	67.7	67.9	0.99	103.9	100.6	102.3	0.97
Middle	69.7	72.1	70.9	1.03	105.1	102.5	103.9	0.98
Fourth	75.9	77.6	76.7	1.02	105.3	102.9	104.1	0.98
Highest	82.0	82.1	82.0	1.00	100.2	98.7	99.5	0.98
Total	70.3	72.1	71.1	1.03	100.6	99.8	100.2	0.99
SECONDARY SCHOOL								
Residence								
Urban	57.7	61.2	59.4	1.06	89.6	94.5	92.0	1.05
Rural	38.6	43.6	41.0	1.13	62.0	62.6	62.3	1.01
District								
Aileu	32.3	46.4	39.8	1.44	61.6	69.5	65.8	1.13
Ainaro	38.9	48.0	43.2	1.23	57.2	64.1	60.5	1.12
Baucau	44.4	50.6	47.4	1.14	69.0	68.2	68.6	0.99
Bobonaro	36.1	42.3	39.2	1.17	60.8	65.5	63.2	1.08
Covalima	48.6	62.0	55.0	1.28	78.7	91.8	85.0	1.17
Dili	59.3	64.3	61.7	1.08	90.2	97.3	93.7	1.08
Ermera	33.4	29.7	31.6	0.89	59.6	47.5	53.7	0.80
Lautem	53.6	49.5	51.6	0.92	78.3	72.3	75.5	0.92
Liquiçá	35.4	37.1	36.2	1.05	59.1	57.8	58.5	0.98
Manatuto	48.7	57.4	53.4	1.18	73.5	71.8	72.5	0.98
Manufahi	48.1	53.6	50.7	1.12	74.5	77.7	76.0	1.04
Oecussi	25.0	26.5	25.8	1.06	38.9	44.1	41.6	1.13
Viqueque	41.4	48.1	44.6	1.16	65.6	69.2	67.3	1.05
Wealth quintile								
Lowest	27.8	28.5	28.1	1.03	45.2	41.3	43.3	0.91
Second	32.4	35.9	34.1	1.11	56.3	54.1	55.3	0.96
Middle	38.4	46.1	42.3	1.20	63.5	66.9	65.2	1.05
Fourth	52.2	57.0	54.6	1.09	83.6	83.9	83.8	1.00
Highest	63.5	70.3	66.7	1.11	92.6	102.7	97.4	1.11
Total	43.0	47.5	45.2	1.10	68.4	69.7	69.1	1.02

[1] The NAR for primary school is the percentage of the primary-school age (6-11 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (12-17 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.

[2] The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.

[3] The Gender Parity Index for primary school is the ratio of the primary school NAR(GAR) for females to the NAR(GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR(GAR) for females to the NAR(GAR) for males.

The GAR at the primary school level is 100 percent. The distribution shows that both the NAR and GAR are much lower at the secondary school level: 45 percent of students age 12-17 who should be attending secondary school are in school (NAR). The GAR for secondary school is 69 percent. A UNESCO report in 2008 estimated that the GER (gross enrollment ratio) in secondary school in 2005 was 53 percent (UNESCO, 2009).

The results show that the NARs for females and males are similar in primary school. In secondary school, the NAR for females (48 percent) is only slightly higher than for males (43 percent), suggesting that there is not much of a gender gap in school attendance in Timor-Leste. The GAR at primary level is slightly higher for males than females, however, indicating relatively higher over-age or under-age attendance among males compared with attendance among females.

School attendance ratios at both the primary and secondary levels are lower in rural than in urban areas. For instance, the NAR at the primary school level in rural areas is 69 percent compared with 78 percent in urban areas. Similarly, the GAR at the secondary school level is 62 percent in rural areas, compared with 92 percent in urban areas. Regional differences are obvious for the NAR and GAR at the primary school levels, with attendance ratios being notably lower in Ermera and Oecussi compared with all other districts. The GAR at the secondary school level is especially low for Oecussi (42 percent).

There is a strong relationship between household economic status and school attendance that can be seen at both the primary and secondary levels and among males and females. For example, the NAR for primary school increases from 59 percent among students from poorer households (lowest wealth quintile) to 82 percent among pupils from richer households (highest wealth quintile).

The Gender Parity Index (GPI) represents the ratio of the NAR (or GAR) for females to the NAR (or GAR) for males. It is presented in Table 2.5 at both the primary and secondary levels and offers a summary measure of gender differences in school attendance rates. A GPI of less than 1 indicates that a smaller proportion of females than males attends school. In Timor-Leste, the GPI for the GAR is almost 1 (0.99) for primary school attendance and slightly higher than 1 (1.02) for secondary school attendance, indicating the virtual non-existence of a gender gap in education in the country.

2.3.1 Grade Repetition and Dropout Rates

According to UNESCO, 16 percent of children in Timor-Leste repeat grades, 25 percent drop out, and only 46 percent reach Grade 6 (UNESCO, 2009). At the pre-secondary level the completion rate is 49 percent, and among all children age 12 to 14 years in the country, only 28 percent of them complete the pre-secondary level, indicating a considerable number of dropouts.

The 2009-10 TLDHS also assessed grade repetition and dropout rates. Table 2.6 presents these rates for the de facto household population age 5-24 who attended primary school in the previous school year. Repetition and drop-out rates describe the flow of pupils through the educational system. Repetition rates indicate the percentage of pupils who attended a particular class during the previous school year who are repeating that grade in the current school year; that is, they attended the same grade during the 2009-10 academic year as they had attended during the 2008-09 year[1]. Dropout rates show the percentage of pupils who attended class during the 2008-09 academic year but who did not attend school the following year. Repetition and dropout rates approach zero when pupils nearly always progress to the next grade at the end of the school year. They often vary across grades, indicating points in the school system where pupils are not regularly promoted to the next grade or they decide to drop out of school.

[1] The TLDHS covered the academic years 2007-08 as previous and 2008-09 as current for households interviewed in academic year 2008-09. Similarly, for households interviewed in 2009-10 the current academic year was considered as 2009-10 and the previous as 2008-09. The tabulation takes this into account.

Table 2.6 Grade repetition and dropout rates

Repetition and dropout rates, for the de facto household population age 5-24 who attended primary school in the previous school year, by school grade, according to background characteristics, Timor-Leste 2009-10

Background characteristic	School grade					
	1	2	3	4	5	6
	REPETITION RATE[1]					
Sex						
Male	2.0	0.6	0.4	0.7	0.5	0.2
Female	1.4	0.7	0.3	0.3	0.6	0.1
Residence						
Urban	2.4	0.6	0.1	0.8	1.6	0.3
Rural	1.6	0.7	0.4	0.4	0.2	0.1
District						
Aileu	0.8	0.8	0.6	0.0	0.0	0.9
Ainaro	1.0	0.0	0.0	0.8	0.0	0.0
Baucau	0.5	0.0	1.4	0.0	0.0	0.0
Bobonaro	1.7	1.1	0.7	0.9	0.0	0.0
Covalima	2.3	0.5	0.0	0.0	0.4	0.0
Dili	1.7	0.5	0.0	0.7	2.1	0.0
Ermera	2.9	1.1	0.7	0.0	1.3	0.0
Lautem	2.5	1.9	0.3	1.6	0.0	0.0
Liquiçá	2.6	0.3	0.0	2.3	0.5	1.9
Manatuto	0.0	0.6	0.0	0.0	0.0	0.0
Manufahi	0.5	0.0	0.0	0.0	0.0	0.0
Oecussi	2.1	0.7	0.0	0.0	0.0	0.0
Viqueque	1.6	0.5	0.0	0.0	0.0	0.0
Wealth quintile						
Lowest	1.2	0.2	0.8	0.3	0.5	0.3
Second	1.4	0.7	0.0	0.3	0.0	0.0
Middle	2.4	0.5	0.7	1.0	0.4	0.0
Fourth	2.2	1.4	0.0	0.4	0.0	0.2
Highest	1.5	0.5	0.3	0.6	1.6	0.2
Total	1.7	0.6	0.4	0.5	0.5	0.1
	DROPOUT RATE[2]					
Sex						
Male	1.1	1.0	2.2	2.4	2.6	4.1
Female	1.4	2.0	2.2	2.2	2.2	4.4
Residence						
Urban	3.5	1.1	3.3	6.2	3.4	10.1
Rural	0.6	1.6	1.9	1.2	2.2	2.4
District						
Aileu	0.4	0.0	0.0	0.0	0.6	0.9
Ainaro	0.0	0.4	0.0	0.0	1.4	0.7
Baucau	0.0	0.5	0.0	0.0	0.0	1.1
Bobonaro	0.0	0.0	0.3	0.0	0.0	0.0
Covalima	2.5	1.6	3.8	3.5	3.3	8.8
Dili	7.2	8.9	12.2	13.7	14.6	15.9
Ermera	0.0	0.0	0.0	0.0	0.0	0.0
Lautem	0.0	0.0	0.0	0.0	0.0	2.8
Liquiçá	0.0	0.0	0.9	0.0	0.0	0.0
Manatuto	0.8	0.8	0.6	0.0	0.0	0.8
Manufahi	1.1	0.0	0.7	0.7	0.0	2.6
Oecussi	0.0	0.0	0.0	0.0	0.7	2.2
Viqueque	0.0	0.5	0.0	0.8	0.7	0.5
Wealth quintile						
Lowest	0.5	0.2	0.9	1.3	0.7	2.5
Second	0.1	0.6	0.2	0.4	1.2	1.4
Middle	0.6	0.8	0.6	0.0	0.4	1.2
Fourth	1.5	1.4	2.5	1.6	3.0	5.3
Highest	3.6	4.9	6.5	8.2	6.6	8.7
Total	1.2	1.5	2.2	2.3	2.4	4.3

[1] The repetition rate is the percentage of students in a given grade in the previous school year who are repeating that grade in the current school year.
[2] The dropout rate is the percentage of students in a given grade in the previous school year who no longer attend school.

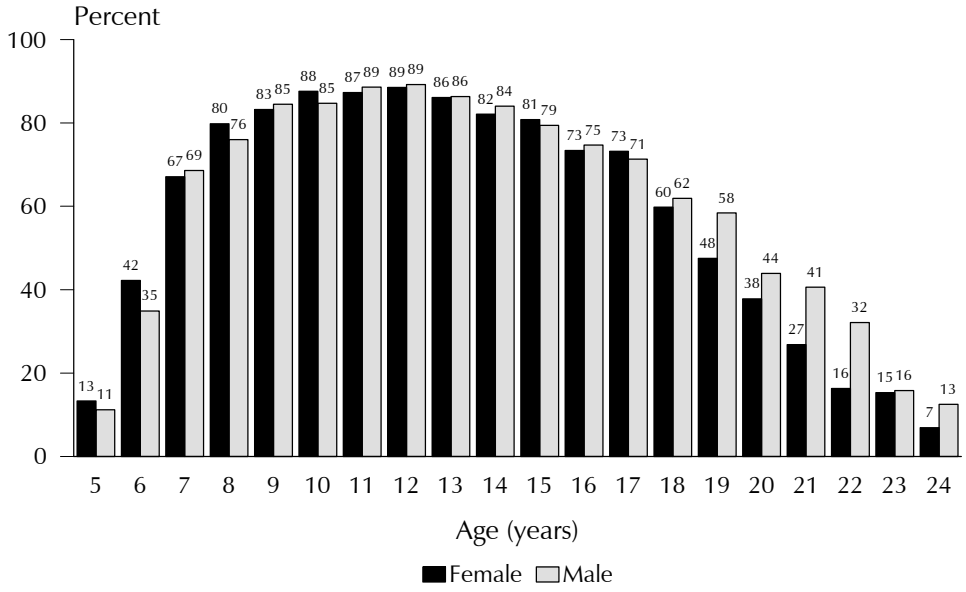
For both sexes the repetition rate is higher in grade 1 than in grades 2 through 6. In grade 1 the repetition rate is 2 percent for males, compared with 1 percent for females, but in grade 2 the repetition rate for females is slightly higher than that for males. There are small variations by urban-rural residence in almost all grades, except in grade 5 where urban residents have a higher repetition

rate (2 percent) than their rural counterparts (0.2 percent). Larger differentials are observed by districts, especially in grade 1. While as high as 3 percent of pupils in the Ermera, Lautem, and Liquiçá districts, respectively, repeat grade 1, there is no grade repetition in grade 1 in Manatuto. In grade 6 only, pupils in Liquiçá (2 percent) and Aileu (1 percent) repeat the grade.

In general, dropout rates are higher than repetition rates for all grades. Dropout rates across grades are similar (1 to 2 percent), except for grade 6 (4 percent). Males and females have similar dropout rates for almost all grades. It is interesting to note that the dropout rates are higher at all levels in urban areas than in rural areas, except for grade 2. There are wide regional variations in dropout rates. Dropout rates are markedly higher in Dili than in all other districts, and this may be attributed to the displacement of the population, particularly in Dili, due to the political strife and subsequent instability in years 2006-2008.

Figure 2.3 shows the age-specific attendance rates (ASAR) for the de facto household population, age 5-24, by sex. The ASAR shows participation in schooling at any level, from primary through higher education. The closer the ASAR is to 100, the higher the participation of a given age population at that level. A little more than 66 percent of children who are age 7 attend school. School attendance rises markedly up to age 12, remains high up to age 13, and then gradually declines. There are no marked differences in the proportion of males and females attending school up to age 18, after which there are substantially higher proportions of males than females attending school.

Figure 2.3 **Age-specific Attendance Rates of the de facto Population 5 to 24 Years**



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2.4 HOUSING CHARACTERISTICS

There is a strong correlation between the socioeconomic condition of households and the vulnerability of their members, especially children, to common diseases. The amenities and assets available to households are important in determining the general socioeconomic status of the population. The 2009-10 TLDHS included questions on household access to electricity, sources of drinking water, types of sanitation facilities, flooring materials, and ownership of durable goods.

The availability of and accessibility to improved drinking water may, to a large extent, minimize the prevalence of waterborne diseases among household members, especially young children. The source of drinking water is important because potentially fatal diarrheal diseases, such as typhoid, cholera, and dysentery, are common in Timor-Leste. Table 2.7 shows the percent

distribution of households by main source of drinking water, time taken to collect drinking water, person in the household who usually collects drinking water, and treatment of water, according to residence.

Table 2.7 Household drinking water

Percent distribution of households and de jure population by source, time to collect, and person who usually collects drinking water; and percentage of households and the de jure population by treatment of drinking water, according to residence, Timor-Leste 2009-10

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source						
Piped water into dwelling/yard/plot	38.1	11.7	17.9	38.8	12.2	18.5
Public tap/standpipe	25.1	27.1	26.6	24.5	28.1	27.3
Tube well or borehole	10.3	3.2	4.9	10.6	3.1	4.9
Protected dug well	3.1	4.9	4.5	3.1	4.6	4.3
Protected spring	4.1	8.4	7.4	4.2	8.4	7.4
Rainwater	0.0	0.2	0.1	0.0	0.1	0.1
Non-improved source						
Unprotected dug well	4.6	7.0	6.5	4.9	6.7	6.3
Unprotected spring	5.8	32.6	26.3	5.7	32.1	25.8
Tanker truck/cart with small tank	0.2	0.5	0.5	0.3	0.5	0.5
Surface water	0.7	3.3	2.7	0.7	3.2	2.6
Bottled water, improved source for cooking/washing[1]	7.7	0.1	1.9	6.9	0.1	1.7
Bottled water, non-improved source for cooking/washing[1]	0.1	0.0	0.0	0.1	0.0	0.0
Other	0.2	1.0	0.8	0.2	0.9	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using any improved source of drinking water	88.4	55.6	63.3	88.2	56.6	64.0
Time to obtain drinking water (round trip)						
Water on premises	78.3	38.1	47.5	78.8	38.6	48.1
Less than 30 minutes	13.7	26.3	23.3	13.0	26.1	23.0
30 minutes or longer	7.4	34.4	28.1	7.4	34.2	27.9
Don't know/missing	0.7	1.2	1.1	0.8	1.1	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Person who usually collects drinking water						
Adult female 15+	13.4	42.3	35.5	13.1	41.8	35.0
Adult male 15+	3.7	7.4	6.5	3.0	6.5	5.7
Female child under age 15	3.2	8.5	7.2	3.7	9.4	8.0
Male child under age 15	0.8	2.5	2.1	1.1	2.6	2.2
Other	0.5	1.3	1.1	0.3	1.1	0.9
Water on premises	78.3	38.1	47.5	78.8	38.6	48.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Water treatment prior to drinking[2]						
Boiled	74.9	84.0	81.9	75.8	85.3	83.0
Bleach/chlorine	4.4	1.9	2.5	5.2	2.0	2.8
Strained through cloth	58.0	62.0	61.0	58.6	62.6	61.6
Ceramic, sand, or other filter	0.1	0.2	0.2	0.1	0.2	0.2
Solar disinfection	0.0	0.1	0.0	0.0	0.0	0.0
Other	9.8	6.4	7.2	8.1	6.1	6.6
No treatment	22.2	15.1	16.8	21.6	13.9	15.7
Percentage using an appropriate treatment method[3]	77.4	84.5	82.8	78.1	85.8	84.0
Number	2,695	8,768	11,463	15,852	51,134	66,985

[1] Because the quality of bottled water is not known, households using bottled water for drinking are classified as using an improved or non-improved source, according to their water source for cooking and washing.
[2] Respondents may report multiple treatment methods, so the sum of treatment may exceed 100 percent.
[3] Appropriate water treatment methods include boiling, bleaching, straining, filtering, and solar disinfecting.

Overall, 63 percent of households obtain their drinking water from an improved source. Eighteen percent of households have access to piped water in their dwelling, yard, or plot, while 27 percent access drinking water from a public tap. Nine percent of households get their drinking water from a tube well or borehole or a protected dug well, and 7 percent have access to protected spring

water. Thirty-six percent of households use non-improved sources of drinking water. There is a big difference between urban and rural households in access to improved sources of drinking water (88 and 56 percent, respectively).

The major source of drinking water for rural households is unprotected springs (33 percent). Twenty-seven percent of rural households use a public tap or standpipe as their main source of drinking water. Access to piped drinking water has increased since 2003 when 38 percent of the households had access to it compared with 45 percent in 2009-10.

Nearly one in two households has access to drinking water on the premises, just under one in four takes less than 30 minutes, and three in ten take 30 minutes or longer to get to and return from their nearest source of drinking water. Not surprisingly most urban households have water on their premises or take less than 30 minutes to access their water source.

Table 2.7 also provides information on the person who usually collects drinking water. Adult females age 15 and older are most likely to collect drinking water for the household if it is not on the premises (36 percent), followed by female children and adult men (7 percent each).

Seventeen percent of households do not treat their water prior to drinking. The most common treatment methods are boiling (82 percent) and straining through cloth (61 percent). In the 2009-10 TLDHS, it was possible for households to report more than one method of treatment.

An improved toilet facility is considered the most efficient and hygienic method of human waste disposal. Table 2.8 shows the percent distribution of households by type of toilet facility, according to residence. Overall, 41 percent of households use improved, not shared, toilet facilities. There are marked differences by urban-rural residence. Sixty-five percent of urban households and 34 percent of rural households use improved toilet facilities that are not shared with other households. However, 37 percent of households have no toilet facilities, a situation that is more common in rural areas (45 percent) than in urban areas (14 percent).

Table 2.8 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Timor-Leste 2009-10

	Households			Population		
Type of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility	**65.3**	**33.9**	**41.3**	**65.9**	**35.8**	**43.0**
Flush/pour flush to piped sewer system	14.7	6.9	8.7	15.6	7.3	9.3
Flush/pour flush to septic tank	33.6	4.5	11.4	31.5	4.9	11.2
Flush/pour flush to pit latrine	9.4	8.8	9.0	10.4	8.8	9.2
Ventilated improved pit (VIP) latrine	4.1	2.8	3.1	4.7	3.0	3.4
Pit latrine with slab	3.3	10.1	8.5	3.5	11.0	9.2
Composting toilet	0.2	0.8	0.6	0.2	0.8	0.7
Non-improved facility	**34.7**	**66.1**	**58.6**	**34.2**	**64.2**	**57.1**
Any facility shared with other households	16.7	6.2	8.6	17.0	6.2	8.7
Flush/pour flush not to sewer/ septic tank/pit latrine	0.6	0.5	0.5	0.6	0.5	0.5
Pit latrine without slab/open pit	1.1	2.4	2.1	1.0	2.6	2.3
Bucket	0.6	0.4	0.4	0.6	0.4	0.5
Hanging toilet/hanging latrine	0.2	0.1	0.1	0.2	0.1	0.1
No facility/bush/field	13.5	44.7	37.4	12.7	43.0	35.8
Other	2.0	11.8	9.5	2.1	11.4	9.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,695	8,768	11,463	15,852	51,134	66,985

Table 2.9 presents the distribution of households by household characteristics, according to residence. Overall, 38 percent of households in Timor-Leste have electricity; four-fifths (83 percent) of households in urban areas have electricity, compared with about one in four (24 percent) households in rural areas. The 2009-10 TLDHS findings show that the proportion of households with electricity has increased over the past five years, growing from 26 percent in 2003.

Table 2.9 Household characteristics

Percent distribution of households and de jure population by housing characteristics and percentage using solid fuel for cooking; and among those using solid fuels, percent distribution by type of fire/stove, according to residence, Timor-Leste 2009-10

Housing characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	83.4	24.0	38.0	84.4	24.8	38.9
No	16.6	76.0	62.0	15.6	75.2	61.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth, sand	27.1	70.4	60.2	26.1	69.2	59.0
Dung	0.5	0.7	0.7	0.5	0.7	0.7
Wood/planks	1.4	1.6	1.5	1.5	1.4	1.4
Palm/bamboo	1.5	2.1	1.9	1.4	1.8	1.7
Parquet or polished wood	0.2	0.1	0.2	0.2	0.1	0.1
Vinyl or asphalt strips	0.0	0.0	0.0	0.0	0.0	0.0
Ceramic tiles	14.8	1.2	4.4	13.6	1.3	4.2
Cement	53.9	23.7	30.8	56.1	25.3	32.6
Carpet	0.2	0.1	0.1	0.3	0.1	0.1
Other	0.3	0.1	0.1	0.3	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	11.9	16.2	15.2	8.6	12.6	11.7
Two	31.7	35.3	34.5	28.8	32.8	31.8
Three or more	56.2	47.9	49.8	62.4	54.1	56.1
Missing	0.3	0.6	0.5	0.2	0.5	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Place for cooking						
In the house	13.5	10.4	11.1	12.8	8.8	9.7
In a separate building	78.9	85.8	84.2	80.0	87.7	85.9
Outdoors	7.4	3.8	4.6	6.9	3.5	4.3
Other	0.0	0.0	0.0	0.0	0.0	0.0
Missing	0.1	0.0	0.0	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
Electricity	8.2	0.3	2.2	7.1	0.3	1.9
LPG/natural gas/biogas	1.7	0.1	0.5	1.2	0.0	0.3
Kerosene	8.9	0.5	2.5	8.0	0.4	2.2
Coal/lignite	0.0	0.0	0.0	0.0	0.0	0.0
Charcoal	0.3	0.3	0.3	0.4	0.3	0.3
Wood	80.7	98.8	94.5	83.0	98.9	95.2
Straw/shrubs/grass	0.2	0.1	0.1	0.3	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking[1]	81.2	99.1	94.9	83.7	99.3	95.6
Number of households	2,695	8,768	11,463	15,852	51,134	66,985
Type of fire/stove among households using solid fuel[1]						
Closed stove with chimney	1.0	0.2	0.3	0.9	0.1	0.3
Open fire/stove with chimney	0.6	0.4	0.4	0.7	0.4	0.4
Open fire/stove with hood	14.9	14.1	14.2	16.0	15.4	15.6
Open fire/stove without chimney or hood	83.0	83.4	83.3	82.0	82.2	82.2
Other	0.5	1.9	1.6	0.5	1.8	1.5
Missing	0.0	0.1	0.1	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population using solid fuel	2,189	8,691	10,880	13,268	50,773	64,041

LPG = Liquid petroleum gas
[1] Includes coal/lignite, charcoal, wood/straw/shrubs/grass, agricultural crops, and animal dung

The type of flooring material used in dwellings is a proxy indicator of the socioeconomic status of a household as well as a potential source of exposure to disease-causing agents. Most households in Timor-Leste have rudimentary or natural flooring made of earth, sand, or mud mixed with dung. Finished floors made of tiles, cement, polished wood, and carpet are seen in just over one in three households (36 percent). However, over the past five years there has been a small increase in the percentage of households with finished floors, (28 percent in 2003 compared with 36 percent in 2009-10). Rural households are much more likely to have earth and sand floors (70 percent) than urban households (27 percent). The second most common flooring material in rural areas is cement (24 percent). About 15 percent of urban households have ceramic floors, and less than 2 percent have palm/bamboo floors.

The number of rooms used for sleeping indicates the extent of crowding in households. Overcrowding increases the risk of contracting infectious diseases like acute respiratory infections and skin diseases, which particularly affect children. In the 2009-10 TLDHS, about half of the households had three or more rooms for sleeping; 35 percent had two rooms, and 15 percent had one room. Households in rural areas are less likely than those in urban areas to have three or more rooms for sleeping (48 and 56 percent, respectively).

The presence and extent of indoor pollution is dependent on whether food is cooked inside the house, the type of fuel used for cooking, and whether households have a chimney or hood to ventilate cooking fumes. One in ten households (11 percent) cooks inside the house, 84 percent cook in a separate building, and 5 percent cook outdoors. This pattern was observed in both urban and rural areas. The majority of households in Timor-Leste use solid fuels (primarily wood) for cooking (95 percent). Although nearly all households in rural areas use wood for cooking (99 percent), 81 percent of urban households use wood. Urban households are also much more likely to use kerosene (9 percent) and electricity (8 percent) for cooking. The data also indicate that among households that use solid fuel for cooking, more than four in five do not use a chimney or hood (83 percent), and there is no marked difference between urban and rural areas. A closed fire or stove with a chimney is used by less than 1 percent of households in Timor-Leste.

2.5 HOUSEHOLD DURABLE GOODS

Information was collected in the 2009-10 TLDHS on the availability of household durable goods, such as household effects, means of transportation, and ownership of agricultural land and farm animals. Table 2.10 shows that 40 percent of households own a mobile telephone, 35 percent own a radio, 23 percent own a television, and 9 percent own a refrigerator. Urban households are much more likely than rural households to own these goods. For example, 49 percent of urban households own a radio, compared with 30 percent of rural households. Mobile telephones are available in 74 percent of households in urban areas and 30 percent of rural households, while 60 percent of urban households have a television and only 11 percent of households in rural areas have a television.

The most common means of transportation in the country is a motorcycle or scooter, owned by 13 percent of households, and another 11 percent of households own a bicycle, 9 percent own an animal-drawn cart, and 4 percent own a car or truck. Less than 1 percent of households own a boat with a motor. In general, urban households are much more likely to own a means of transport than rural households.

Table 2.10 Household durable goods

Percentage of households and de jure population possessing various household effects, means of transportation, agricultural land, and livestock/farm animals by residence, Timor-Leste 2009-10

	Households			Population		
Possession	Urban	Rural	Total	Urban	Rural	Total
Household effects						
Radio	49.0	30.1	34.5	49.6	32.1	36.2
Television	60.4	10.9	22.5	62.1	12.1	23.9
Mobile telephone	73.5	29.8	40.1	75.6	33.3	43.3
Non-mobile telephone	1.5	0.3	0.6	1.8	0.4	0.7
Refrigerator	30.6	2.2	8.9	29.7	2.5	8.9
Means of transport						
Bicycle	24.1	6.9	11.0	26.2	7.7	12.0
Animal drawn cart	15.2	7.6	9.4	16.9	8.4	10.4
Motorcycle/scooter	32.4	7.5	13.4	33.5	8.5	14.4
Car/truck	12.3	1.4	3.9	11.8	1.5	4.0
Boat with a motor	0.6	0.7	0.7	0.8	0.7	0.7
Ownership of agricultural land	42.7	91.6	80.1	45.4	92.0	81.0
Ownership of farm animals[1]	70.6	93.4	88.1	74.3	94.1	89.4
Number	2,695	8,768	11,463	15,852	51,134	66,985

[1] Cattle, cows, bulls, horses, donkeys, goats, sheep, or chickens

Four in five households (80 percent) own agricultural land, and 88 percent have farm animals. Table 2.10 shows that rural households are more than two times as likely to own agricultural land as urban households (92 and 43 percent, respectively). Similarly, 93 percent of rural households own farm animals, compared with only 71 percent of urban households.

2.6 WEALTH QUINTILES

The wealth quintile provides information on the economic status of households in a surveyed country. Wealth quintiles provide a consistent measure of combined indicators of household income and expenditures. The wealth quintile, as constructed, uses information on household ownership of various consumer items, ranging from household assets like a television, means of transport like a bicycle, and ownership of land and farm animals, to dwelling characteristics, such as source of drinking water, sanitation facilities, and type of building materials used in the construction of houses.

Each asset is assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores are standardized in relation to a normal distribution with a mean of zero and standard deviation of one. Each household is then assigned a score for each asset, and the scores are summed for each household; individuals are ranked according to the total score of the household in which they reside. The sample is then divided into quintiles from one (lowest) to five (highest). A single asset index is developed for the whole sample; separate indices are not prepared for the urban and rural populations.

The 2009-10 TLDHS provides an opportunity to examine the distribution of the population in Timor-Leste by household economic status. Table 2.11 shows the percent distribution of the de jure population by wealth quintiles, according to residence and districts. Fifty-eight percent of the urban population is in the highest wealth quintile, compared with only 9 percent of the rural population. The rural population is more likely to be in the lowest three lowest quintiles. Dili is by far the wealthiest district in the country, with 71 percent of its population in the highest quintile. Nearly one in two households in Oecussi is in the poorest wealth quintile, and more than three in five households in Ainaro, Oecussi, and Viqueque are in the lowest two quintiles.

Table 2.11 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, according to residence and region, Timor-Leste 2009-10

Residence/ region	Wealth quintile					Total	Number of population
	Lowest	Second	Middle	Fourth	Highest		
Residence							
Urban	4.5	6.1	9.3	22.2	57.8	100.0	15,852
Rural	24.6	24.2	23.3	19.2	8.7	100.0	51,134
District							
Aileu	20.6	27.9	25.1	18.2	8.2	100.0	2,785
Ainaro	30.9	32.2	19.7	12.1	5.2	100.0	3,830
Baucau	26.9	28.9	19.3	13.4	11.5	100.0	7,590
Bobonaro	15.2	19.7	26.1	27.8	11.1	100.0	6,323
Covalima	17.2	17.7	23.1	25.1	16.8	100.0	3,993
Dili	0.4	2.1	6.5	20.1	71.0	100.0	10,905
Ermera	9.8	30.2	31.9	21.5	6.6	100.0	8,132
Lautem	28.0	16.7	20.4	24.5	10.4	100.0	4,547
Liquiçá	15.7	18.8	25.3	25.1	15.2	100.0	4,082
Manatuto	22.2	10.9	22.5	27.7	16.8	100.0	3,088
Manufahi	28.3	25.1	18.1	16.6	12.0	100.0	2,699
Oecussi	46.6	17.1	14.4	14.2	7.6	100.0	4,281
Viqueque	35.3	25.5	17.4	13.0	8.7	100.0	4,730
Total	19.9	19.9	20.0	19.9	20.3	100.0	66,985

2.7 BIRTH REGISTRATION

Birth registration by definition means ensuring that the birth of a child is officially registered with the state (UNICEF, 2007). The Convention on the Rights of the Child (UN General Assembly, 1989) states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Parents are required to give their children a name and to register the child because the child has a right to know who his or her parents are and to have a nationality through registration in accordance with national laws and international standards. Studies have shown that in Timor-Leste, parents preferred to register the name and identity of their children through baptism (UNICEF, 2007). Although there was an attempt to register vital events, such as births, deaths, and marriages, prior to 1999, the ensuing violence and destruction left little record of such registration.

Since Timor-Leste has gained independence, UNICEF and Plan International have been instrumental in promoting birth registration in Timor-Leste. In 2000, the United Nations Transitional Administration in East Timor (UNTAET) set up the first civil registration administration in Timor-Leste. This was followed by the establishment of the Central Civil Registry within the Ministry of Internal Affairs, whereby births, marriages, and deaths were registered. The responsibility of vital registration was then shifted to the Ministry of Justice under the Division of Civil Registry and Notary in 2002. Since 2003 UNICEF has supported the efforts of the Ministry of Justice to run mobile registration campaigns in the districts (UNICEF, 2005). Further, Plan International has collaborated with UNICEF in two districts to promote universal birth registration and by 2007 had facilitated birth registration of about 90,000 children in Timor-Leste (Plan, 2009; Cody, 2009).

The 2009-10 TLDHS collected information on the percentage of children under age 5 whose births were officially registered with the civil authority. Excluded were registrations with the church during baptism.

Table 2.12 shows the percentage of children under age 5 whose births were officially registered and the percentage with a birth certificate at the time of the survey, by background characteristics. Not all children reported as registered had a birth certificate at the time of the survey, so some certificates may have been lost or never issued.

The births of 55 percent of children under age 5 have been registered: 41 percent have a birth certificate, and 15 percent do not have a birth certificate. Data from the 2003 DHS showed that 53

percent of children under age 5 were reported to have been registered (hospital record, village record, proof of birth, and birth certificate), but only 9 percent had a birth certificate. The significant increase in the number of children with a birth certificate is probably due to the mobile registration campaigns launched by the Ministry of Justice in the districts.

Nearly two-thirds of children age 2-4 years have been registered (65 percent), compared with two-fifths of children below age 2 (40 percent). About 14-16 percent of all these children do not have a birth certificate. There is no substantial variation in birth registration by sex of child. Rural children are more likely to be registered (57 percent) than urban children (50 percent). Most children in Manufahi are registered (91 percent), in contrast with children living in Viqueque, Covalima, Dili, and Liquiçá, where 40 percent or fewer are registered. The percentage of children registered ranges from a low of 50 percent among those in the lowest wealth quintile to a high of 59 percent among those in the middle wealth quintile.

Table 2.12 Birth registration of children under age 5

Percentage of de jure children under age 5 whose births are registered with the civil authorities, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of children whose births are registered			Number of children
	Had a birth certificate	Did not have a birth certificate	Total registered	
Age				
<2	26.7	13.5	40.1	3,876
2-4	49.1	15.5	64.6	6,198
Sex				
Male	40.5	14.4	54.8	5,112
Female	40.5	15.0	55.5	4,962
Residence				
Urban	37.7	12.0	49.7	2,341
Rural	41.3	15.5	56.8	7,734
District				
Aileu	50.7	18.4	69.1	370
Ainaro	33.0	26.9	59.9	596
Baucau	46.5	20.4	66.9	1,057
Bobonaro	55.9	4.1	60.0	954
Covalima	30.9	5.8	36.7	471
Dili	31.4	8.9	40.3	1,615
Ermera	63.4	3.4	66.8	1,279
Lautem	37.1	9.3	46.3	801
Liquiçá	27.9	12.4	40.3	583
Manatuto	45.8	22.1	67.8	460
Manufahi	43.7	47.6	91.3	384
Oecussi	26.9	33.3	60.2	789
Viqueque	21.6	12.6	34.3	715
Wealth quintile				
Lowest	30.9	19.1	50.0	2,164
Second	40.3	14.0	54.3	2,006
Middle	44.4	14.4	58.9	2,048
Fourth	43.9	13.1	56.9	1,961
Highest	43.8	12.4	56.1	1,895
Total	40.5	14.7	55.2	10,075

CHARACTERISTICS OF RESPONDENTS 3

This chapter describes the demographic and socioeconomic profile of respondents interviewed in the 2009-10 TLDHS. This information is useful in the interpretation of findings and in understanding the results presented later in the report. The survey collected basic information on respondents' age, level of education, marital status, religion, ethnicity, and wealth status. In addition, information was collected on respondents' exposure to mass media and literacy status, employment status, occupation, and type of earnings. Additional information collected includes knowledge and attitudes concerning tuberculosis and use of tobacco.

For the first time, the 2009-10 TLDHS gathered information from all women and men irrespective of their marital status, in contrast with the 2003 DHS, which sampled only ever-married women and men. The discussion in this report therefore refers to both unmarried and married women and men. In addition, tables in this report show detailed information for men age 15-49, so that characteristics associated with women in the same age group may be compared.

Throughout this report, numbers in the tables reflect weighted numbers. In most cases, percentages based on 25 to 49 unweighted cases are shown in parentheses. Percentages based on fewer than 25 unweighted cases are suppressed and replaced with an asterisk to caution readers when interpreting data that a percentage based on fewer than 50 cases may not be statistically reliable[1].

3.1 CHARACTERISTICS OF SURVEY RESPONDENTS

A description of the background characteristics of the 13,137 women age 15-49 and 4,076 men age 15-49 interviewed in the 2009-10 TLDHS is shown in Table 3.1.

More than half of the respondents (56 percent of women and 55 percent of men) are under age 30. In general, the proportion of women and men in each age group declines as age increases (with the exception of women and men in the age group 35-39), reflecting the comparatively young age structure of the population in Timor-Leste. Three-fifths of women (60 percent) and just over half of men (53 percent) are currently married or living together. Thirty-six percent of women in the sample have never married compared with 46 percent of men. On the other hand, women are more likely to be divorced, separated, or widowed than men (4 percent compared with 1 percent).

The place of residence is a background characteristic that determines access to services and exposure to information pertaining to reproductive health and other aspects of life. The majority of respondents reside in rural areas: nearly one in five respondents lives in Dili, and about one in ten lives in Baucau and Ermera. Respondents are least likely to reside in Manufahi.

Women are disadvantaged in terms of educational attainment. This is observed at all levels of education. The male-female difference is especially obvious among those with no education and those with secondary or higher levels of education. Nearly three in ten women have no education compared with one in five men. Similarly, 48 percent of women have secondary or higher levels of education compared with 55 percent of men.

The vast majority of respondents are Roman Catholic (98 percent), while 1 to 2 percent of women and men are Protestant.

[1] For mortality rates, parentheses are used if based on 250 to 499 children exposed to the risk of mortality in any of the component rates, and suppressed if based on fewer than 250 children exposed to the risk of mortality in any of the component rates.

Table 3.1 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Timor-Leste 2009-10

Background characteristic	Women			Men		
	Weighted percent	Weighted	Unweighted	Weighted percent	Weighted	Unweighted
Age						
15-19	23.9	3,144	3,243	24.4	994	1,009
20-24	17.8	2,343	2,323	15.8	643	643
25-29	14.4	1,897	1,877	14.4	586	575
30-34	11.7	1,534	1,478	10.8	439	437
35-39	12.8	1,684	1,722	13.6	553	544
40-44	10.6	1,388	1,358	11.3	462	460
45-49	8.7	1,146	1,136	9.8	400	408
Marital status						
Never married	35.6	4,675	4,706	45.8	1,865	1,869
Married	57.8	7,588	7,548	48.8	1,988	1,993
Living together	2.4	318	329	4.2	170	159
Divorced/separated	1.8	231	219	0.4	18	18
Widowed	2.5	325	335	0.8	35	37
Residence						
Urban	26.2	3,439	3,233	27.0	1,102	1,015
Rural	73.8	9,698	9,904	73.0	2,974	3,061
District						
Aileu	4.2	554	1,036	4.4	181	298
Ainaro	4.7	619	841	5.3	217	296
Baucau	10.7	1,408	1,007	10.2	415	297
Bobonaro	9.6	1,262	1,062	8.7	357	319
Covalima	5.9	781	989	5.8	236	297
Dili	18.8	2,466	1,227	19.5	797	403
Ermera	11.7	1,542	1,082	12.1	491	355
Lautem	6.6	864	1,023	7.6	308	366
Liquiçá	6.1	801	1,069	6.2	252	315
Manatuto	4.6	603	1,135	4.7	190	366
Manufahi	3.6	470	791	3.4	137	228
Oecussi	6.7	884	1,000	5.8	235	271
Viqueque	6.7	882	875	6.4	260	265
Education						
No education	29.3	3,854	3,922	19.4	791	798
Primary	22.9	3,005	3,112	25.7	1,046	1,070
Secondary	44.4	5,829	5,804	49.3	2,009	2,025
More than secondary	3.4	449	299	5.7	230	183
Religion						
Roman Catholic	97.7	12,840	12,833	98.2	4,003	4,006
Muslim	0.2	22	20	0.3	14	5
Protestant	1.9	253	264	1.3	53	56
Hindu	0.2	21	18	0.1	4	6
Other	0.0	1	2	0.1	3	3
Total 15-49	100.0	13,137	13,137	100.0	4,076	4,076

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.

3.2 EDUCATIONAL ATTAINMENT AND LITERACY

Tables 3.2.1 and 3.2.2 show the distribution of respondents by educational attainment, according to background characteristics. Twenty-nine percent of women age 15-49 have never been to school, 14 percent have some primary education, 9 percent have completed primary education, 29 percent have some secondary education, and 19 percent have completed secondary or a higher level of education. Older women and those who reside in rural areas are most likely to have no education. The urban-rural difference in the level of education is pronounced among those who have completed secondary or higher levels of schooling. For example, women in urban areas are more than three times as likely as those in rural areas to have completed secondary education or a higher level of education (39 percent and 12 percent, respectively).

Table 3.2.1 Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-24	13.4	13.3	6.9	47.8	15.5	3.0	100.0	7.7	5,487
15-19	11.8	13.4	6.5	61.6	6.4	0.3	100.0	7.4	3,144
20-24	15.6	13.2	7.6	29.3	27.8	6.5	100.0	8.6	2,343
25-29	24.7	13.3	11.5	19.9	25.4	5.3	100.0	6.3	1,897
30-34	30.5	13.4	13.4	17.9	19.3	5.4	100.0	5.5	1,534
35-39	37.9	15.2	12.3	16.9	15.0	2.7	100.0	4.4	1,684
40-44	54.8	15.1	7.2	9.9	10.6	2.4	100.0	a	1,388
45-49	68.3	16.2	4.7	5.0	3.9	1.9	100.0	a	1,146
Residence									
Urban	14.5	10.1	5.8	30.6	28.8	10.2	100.0	11.2	3,439
Rural	34.6	15.4	10.0	27.9	11.2	1.0	100.0	5.0	9,698
District									
Aileu	31.4	15.3	9.6	32.6	10.3	0.8	100.0	5.3	554
Ainaro	39.9	10.7	5.9	28.5	13.4	1.7	100.0	4.8	619
Baucau	27.1	15.6	7.0	31.5	17.4	1.5	100.0	6.0	1,408
Bobonaro	39.6	14.6	10.1	24.3	10.1	1.3	100.0	4.1	1,262
Covalima	21.7	15.1	10.5	36.4	14.6	1.7	100.0	6.6	781
Dili	10.5	9.8	5.2	29.5	31.7	13.3	100.0	12.5	2,466
Ermera	49.3	12.9	8.2	21.6	7.6	0.2	100.0	1.2	1,542
Lautem	20.2	13.6	12.8	38.2	14.2	1.0	100.0	6.5	864
Liquiçá	33.5	19.1	7.9	27.1	11.6	0.8	100.0	4.5	801
Manatuto	24.5	15.9	8.9	30.5	18.9	1.4	100.0	6.0	603
Manufahi	27.2	14.4	8.1	34.3	14.5	1.5	100.0	6.0	470
Oecussi	41.0	17.6	18.4	16.6	5.5	0.9	100.0	3.4	884
Viqueque	32.1	15.4	9.5	29.7	11.8	1.6	100.0	5.2	882
Wealth quintile									
Lowest	49.0	19.1	10.3	18.0	3.4	0.1	100.0	0.9	2,314
Second	40.8	17.8	9.8	24.6	6.8	0.2	100.0	3.3	2,468
Middle	33.2	14.5	10.4	30.4	10.8	0.7	100.0	5.2	2,590
Fourth	22.7	13.1	9.2	34.4	17.5	3.0	100.0	7.0	2,687
Highest	8.0	7.4	5.4	33.0	35.1	11.1	100.0	13.1	3,077
Total	29.3	14.0	8.9	28.6	15.8	3.4	100.0	5.7	13,137

[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level
a = Omitted because less than 50 percent of women had any education before reaching the beginning of the age group.

Educational attainment is directly related to the economic status of respondents. An analysis of education by wealth quintile indicates that women in the highest wealth quintile are most likely to complete secondary or a higher level of education. For example, nearly one in two women in the highest wealth quintile has completed secondary or higher education, compared with less than 4 percent of women in the lowest wealth quintile.

A similar pattern in educational attainment is found among men (Table 3.2.2). However, men are more educated than women in all categories. One in five men has never had formal schooling, one in five has some primary education, one in thirteen has completed primary school, three in ten have some secondary education, and more than one in four men has completed secondary or higher education.

Women have completed a median of 6 years of schooling compared with 7 years for men.

Table 3.2.2 Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Highest level of schooling						Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-24	11.7	13.9	6.6	48.7	16.9	2.1	100.0	7.6	1,636
15-19	10.8	15.7	7.1	59.7	6.3	0.5	100.0	7.3	994
20-24	13.2	11.2	5.9	31.8	33.3	4.6	100.0	12.2	643
25-29	20.4	19.9	6.9	12.4	31.3	9.2	100.0	7.7	586
30-34	19.1	18.6	9.1	16.3	28.5	8.4	100.0	7.6	439
35-39	20.0	17.2	12.7	17.9	20.8	11.5	100.0	6.1	553
40-44	29.2	18.2	8.9	13.2	24.7	5.9	100.0	5.3	462
45-49	37.5	27.0	8.3	10.2	13.3	3.8	100.0	2.3	400
Residence									
Urban	9.3	11.4	5.9	27.6	31.0	14.9	100.0	13.1	1,102
Rural	23.2	19.7	9.0	28.2	17.7	2.2	100.0	5.7	2,974
District									
Aileu	17.9	17.7	11.1	31.2	19.7	2.4	100.0	6.6	181
Ainaro	29.7	16.7	7.0	31.0	14.0	1.6	100.0	5.4	217
Baucau	15.7	22.7	7.4	27.3	24.6	2.3	100.0	7.1	415
Bobonaro	28.9	16.8	8.5	25.2	18.2	2.4	100.0	5.5	357
Covalima	12.5	14.7	12.7	32.4	23.0	4.7	100.0	7.9	236
Dili	7.1	10.7	6.0	24.5	34.3	17.4	100.0	13.9	797
Ermera	37.1	20.9	6.9	23.4	11.0	0.7	100.0	3.7	491
Lautem	11.0	9.2	9.0	42.0	24.3	4.6	100.0	8.3	308
Liquiçá	17.5	24.4	6.6	30.5	18.1	2.9	100.0	6.0	252
Manatuto	17.8	20.1	8.2	28.0	23.1	2.8	100.0	6.6	190
Manufahi	20.0	14.3	7.9	37.7	16.6	3.6	100.0	6.9	137
Oecussi	29.1	27.3	13.7	18.2	7.9	3.7	100.0	4.0	235
Viqueque	19.0	21.7	8.4	28.7	18.1	4.1	100.0	6.0	260
Wealth quintile									
Lowest	32.3	22.0	10.7	26.2	8.2	0.5	100.0	4.2	728
Second	26.6	21.8	10.6	26.4	14.2	0.4	100.0	5.1	781
Middle	23.3	20.3	9.5	29.6	15.2	2.0	100.0	5.6	786
Fourth	15.0	17.5	5.8	30.2	27.4	4.1	100.0	8.1	849
Highest	4.0	8.0	5.2	27.4	36.9	18.5	100.0	14.1	932
Total 15-49	19.4	17.5	8.2	28.0	21.3	5.7	100.0	7.1	4,076

[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Literacy is widely acknowledged as benefiting the individual and the society and is associated with a number of positive outcomes for health, nutrition, and the overall well-being of both men and women. In the 2009-10 TLDHS, literacy was determined by the respondents' ability to read all or part of a sentence. During data collection, interviewers carried a set of cards on which simple sentences were printed in five of the major languages. These cards were used to test a respondent's reading ability. Only those who had never been to school and those who had not completed the primary level were asked to read the cards in the language they were most likely able to read. Those who had attended secondary school or received higher education were assumed to be literate.

Table 3.3.1 indicates that more than two-thirds of women in Timor-Leste (68 percent) are literate. The literacy status varies by place of residence. Four-fifths of women residing in urban areas are literate compared with three-fifths of their rural counterparts. The level of literacy by age shows a consistent decrease with increasing age. This suggests that the younger generations have had more opportunity to learn to read than the older generations. Eighty-six percent of women age 15-19 are literate compared with 29 percent of women age 45-49.

Table 3.3.1 Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Pre-secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of women
Age										
15-19	68.3	11.2	6.6	13.9	0.0	0.0	0.0	100.0	86.1	3,144
20-24	63.6	9.5	8.3	18.5	0.0	0.1	0.0	100.0	81.4	2,343
25-29	50.6	10.9	10.3	27.9	0.1	0.2	0.0	100.0	71.8	1,897
30-34	42.7	14.3	10.1	32.8	0.0	0.1	0.0	100.0	67.1	1,534
35-39	34.6	12.0	12.5	40.9	0.1	0.0	0.0	100.0	59.0	1,684
40-44	22.9	9.6	10.3	56.8	0.1	0.2	0.0	100.0	42.8	1,388
45-49	10.8	8.9	9.5	70.3	0.0	0.3	0.1	100.0	29.3	1,146
Residence										
Urban	69.6	8.0	6.1	16.1	0.0	0.1	0.0	100.0	83.8	3,439
Rural	40.0	12.0	10.4	37.4	0.1	0.1	0.0	100.0	62.4	9,698
District										
Aileu	43.6	11.6	9.8	35.0	0.0	0.0	0.0	100.0	65.0	554
Ainaro	43.5	5.1	9.2	42.2	0.0	0.0	0.1	100.0	57.8	619
Baucau	50.4	12.1	6.9	30.7	0.0	0.0	0.0	100.0	69.3	1,408
Bobonaro	35.6	10.8	11.6	41.4	0.1	0.4	0.0	100.0	58.0	1,262
Covalima	52.7	10.6	10.9	25.6	0.0	0.1	0.1	100.0	74.2	781
Dili	74.5	7.9	6.7	10.7	0.0	0.1	0.0	100.0	89.2	2,466
Ermera	29.5	5.5	12.2	52.5	0.2	0.1	0.0	100.0	47.2	1,542
Lautem	53.4	14.4	10.3	21.8	0.0	0.1	0.0	100.0	78.1	864
Liquiçá	39.5	11.0	12.3	37.1	0.0	0.0	0.1	100.0	62.8	801
Manatuto	50.8	14.5	8.4	26.3	0.0	0.0	0.0	100.0	73.7	603
Manufahi	50.3	11.6	8.4	29.6	0.0	0.1	0.0	100.0	70.3	470
Oecussi	23.0	20.6	8.0	48.3	0.0	0.1	0.0	100.0	51.6	884
Viqueque	43.1	15.3	8.2	33.1	0.1	0.1	0.0	100.0	66.6	882
Wealth quintile										
Lowest	21.6	14.9	10.0	53.2	0.1	0.2	0.0	100.0	46.5	2,314
Second	31.6	11.2	12.2	44.9	0.1	0.0	0.0	100.0	55.1	2,468
Middle	41.9	11.8	10.4	35.6	0.1	0.1	0.0	100.0	64.2	2,590
Fourth	55.0	10.5	9.3	25.2	0.0	0.1	0.0	100.0	74.7	2,687
Highest	79.1	7.4	5.2	8.1	0.0	0.1	0.1	100.0	91.8	3,077
Total	47.8	10.9	9.2	31.9	0.0	0.1	0.0	100.0	68.0	13,137

[1] Refers to women who attended pre-secondary school or higher and women who can read a whole sentence or part of a sentence

Not surprisingly, literacy is highest in Dili, the most urban district in the country, with nine in ten women being literate. Less than one in two women in Ermera is literate, however.

There is also a significant difference in literacy levels by women's wealth status, with literacy rising from a low of 47 percent among women in the lowest wealth quintile to a high of 92 percent among women in the highest wealth quintile. This reaffirms the positive association between economic status and literacy.

Men are more likely to be literate than women (Table 3.3.2). Four-fifths of Timorese men age 15-49 are literate. The gap in urban-rural literacy among men is smaller than the gap among women, suggesting that men in rural areas are better able to access learning than women. The level of literacy ranges from a low of 56 percent of men in Oecussi to a high of 92 percent of men in Dili. Nearly all men (95 percent) in the highest wealth quintile are literate.

Table 3.3.2 Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Pre-secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Total	Percentage literate[1]	Number of men
Age									
15-19	66.4	13.4	6.9	13.2	0.2	0.0	100.0	86.6	994
20-24	69.7	8.8	6.8	14.6	0.0	0.0	100.0	85.4	643
25-29	52.8	12.8	12.9	21.3	0.0	0.1	100.0	78.6	586
30-34	53.2	16.6	10.7	19.5	0.0	0.0	100.0	80.5	439
35-39	50.2	17.3	9.1	23.4	0.0	0.0	100.0	76.6	553
40-44	43.7	14.2	11.7	30.1	0.0	0.3	100.0	69.6	462
45-49	27.2	20.0	12.2	40.6	0.0	0.0	100.0	59.4	400
Residence									
Urban	73.4	9.6	5.5	11.2	0.2	0.1	100.0	88.6	1,102
Rural	48.1	15.9	11.0	25.0	0.0	0.1	100.0	75.0	2,974
District									
Aileu	53.3	9.0	13.1	24.6	0.0	0.0	100.0	75.4	181
Ainaro	46.6	14.7	8.4	29.6	0.0	0.7	100.0	69.7	217
Baucau	54.2	20.8	8.1	17.0	0.0	0.0	100.0	83.0	415
Bobonaro	45.8	19.5	14.4	20.2	0.0	0.0	100.0	79.8	357
Covalima	60.0	4.6	17.1	18.3	0.0	0.0	100.0	81.7	236
Dili	76.2	9.5	5.8	8.2	0.2	0.0	100.0	91.6	797
Ermera	35.0	6.8	18.0	40.1	0.0	0.0	100.0	59.9	491
Lautem	70.8	14.2	3.5	11.5	0.0	0.0	100.0	88.5	308
Liquiçá	51.5	19.5	4.9	24.1	0.0	0.0	100.0	75.9	252
Manatuto	53.9	25.8	1.4	18.9	0.0	0.0	100.0	81.1	190
Manufahi	57.8	8.9	8.5	24.7	0.0	0.0	100.0	75.3	137
Oecussi	29.9	22.7	3.3	43.8	0.0	0.2	100.0	55.9	235
Viqueque	50.9	18.2	15.1	15.8	0.0	0.0	100.0	84.2	260
Wealth quintile									
Lowest	35.0	18.2	11.0	35.8	0.0	0.0	100.0	64.2	728
Second	41.1	16.7	13.0	29.1	0.0	0.2	100.0	70.7	781
Middle	46.9	16.5	12.7	23.9	0.0	0.0	100.0	76.1	786
Fourth	61.6	13.5	7.5	17.3	0.0	0.1	100.0	82.6	849
Highest	82.8	7.7	4.6	4.7	0.2	0.0	100.0	95.1	932
Total 15-49	54.9	14.2	9.5	21.3	0.0	0.1	100.0	78.6	4,076

[1] Refers to men who attended pre-secondary school or higher and men who can read a whole sentence or part of a sentence

3.3 ACCESS TO MASS MEDIA

Access to information through the media is essential to increasing people's knowledge and awareness of what is taking place around them, which may eventually affect their perceptions and behavior. In the 2009-10 TLDHS, exposure to media was assessed by asking respondents if they listened to a radio, watched television, or read newspapers or magazines at least once a week. This information is useful for program managers and planners engaged in determining which media may be most effective for disseminating health information to targeted audiences. The detailed results are presented in Tables 3.4.1 and 3.4.2 by background characteristics.

Media exposure in Timor-Leste is relatively low, with just over one in ten women and men exposed to all three specified types of mass media. Just over one-third of women are exposed to the radio, and a similar proportion is exposed to television at least once a week. Exposure to the radio and television is slightly higher among men, with two-fifths of men exposed to the radio and the television. Just over one-fifth of women and men read a newspaper at least once a week.

Media exposure declines with age among women, but the relationship is less clear among men. Young women under 24 years of age are more likely to be exposed to the mass media than older women, presumably in part because of their higher level of education. There is also a wide gap in exposure to mass media by place of residence. For example, the proportion of newspaper readers is

Table 3.4.1 Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Timor-Leste 2009-10

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number of women
Age						
15-19	32.7	40.5	40.0	15.5	38.5	3,144
20-24	27.0	40.2	41.9	15.2	41.8	2,343
25-29	21.8	38.6	39.3	12.7	44.9	1,897
30-34	18.3	38.5	34.5	11.7	49.5	1,534
35-39	15.3	30.6	30.6	7.8	55.2	1,684
40-44	11.9	31.0	29.5	7.1	56.4	1,388
45-49	7.3	24.3	23.1	5.1	65.8	1,146
Residence						
Urban	36.7	76.4	59.5	27.5	15.4	3,439
Rural	16.5	22.0	27.4	6.3	59.2	9,698
District						
Aileu	20.5	15.3	31.3	5.1	57.8	554
Ainaro	11.9	10.7	18.3	3.4	74.3	619
Baucau	16.4	23.7	31.2	8.0	57.4	1,408
Bobonaro	17.1	29.6	32.7	8.6	51.1	1,262
Covalima	23.5	36.1	43.3	8.6	38.3	781
Dili	42.2	87.9	67.8	33.3	6.6	2,466
Ermera	17.3	10.5	19.1	2.7	67.5	1,542
Lautem	12.0	29.0	21.9	4.2	60.8	864
Liquiçá	22.9	29.4	42.0	11.5	45.1	801
Manatuto	26.7	36.3	32.4	16.7	52.3	603
Manufahi	24.9	30.0	50.1	10.2	37.6	470
Oecussi	7.8	29.2	18.4	4.9	63.7	884
Viqueque	11.6	21.6	15.8	3.6	67.1	882
Education						
No education	0.4	13.2	16.0	0.1	76.5	3,854
Primary	12.5	27.1	28.1	3.8	55.6	3,005
Secondary	37.2	52.0	49.8	20.3	28.0	5,829
More than secondary	67.1	91.0	74.7	55.6	4.3	449
Wealth quintile						
Lowest	7.1	8.3	10.3	1.4	81.6	2,314
Second	12.3	10.6	17.3	2.2	71.1	2,468
Middle	16.2	16.5	29.9	4.2	57.9	2,590
Fourth	22.3	42.1	43.4	10.1	35.6	2,687
Highest	44.7	89.4	68.2	35.3	5.6	3,077
Total	21.8	36.3	35.8	11.8	47.7	13,137

significantly higher among urban women (37 percent) than among their rural counterparts (17 percent). About one in three women and men in Dili are exposed to all three media sources at least once a week. Media exposure among women is lowest in Ermera where less than 3 percent of women are exposed to all three media sources at least once a week. Men in Liquiçá, Ermera, and Bobonaro are least likely to be exposed to all three sources of media at least once a week. Not surprisingly, media exposure is highly related to the educational level as well as the economic status of the respondent. Exposure to mass media is highest among women with secondary or a higher level of education and among those who are in the highest wealth quintile. The lower level of exposure to media among poor respondents may be because they are less likely to own a radio or television and, therefore, are less likely to be consistently exposed to these media sources. A similar relationship is observed between media exposure among men and their education and wealth.

Table 3.4.2 Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Timor-Leste 2009-10

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number of men
Age						
15-19	18.0	45.7	42.0	9.2	38.7	994
20-24	22.3	48.8	52.3	15.0	32.6	643
25-29	24.5	43.6	47.8	13.4	35.7	586
30-34	24.4	40.4	43.2	12.5	39.9	439
35-39	22.9	39.6	40.5	14.9	44.5	553
40-44	21.7	34.4	41.9	12.9	46.5	462
45-49	12.1	27.3	34.9	4.9	51.1	400
Residence						
Urban	36.8	74.0	59.4	25.9	13.9	1,102
Rural	14.9	29.3	37.8	6.6	50.1	2,974
District						
Aileu	21.8	27.7	46.5	10.2	42.6	181
Ainaro	13.6	16.3	32.5	4.7	58.5	217
Baucau	29.0	35.3	40.5	9.0	36.2	415
Bobonaro	10.1	32.7	43.9	3.9	42.8	357
Covalima	12.0	35.7	43.3	7.0	43.6	236
Dili	43.0	80.4	62.3	31.0	9.7	797
Ermera	12.0	10.7	22.0	3.6	70.5	491
Lautem	10.5	36.8	26.2	4.6	53.0	308
Liquiçá	7.2	38.0	39.8	4.1	47.6	252
Manatuto	11.1	53.5	83.2	8.8	14.2	190
Manufahi	18.3	46.5	60.3	8.9	29.1	137
Oecussi	23.7	43.8	46.4	15.2	40.4	235
Viqueque	15.5	32.2	24.2	12.5	63.5	260
Education						
No education	0.2	15.8	21.1	0.0	71.1	791
Primary	10.6	28.9	35.5	4.2	51.9	1,046
Secondary	28.9	53.4	54.0	16.4	26.1	2,009
More than secondary	67.3	80.9	67.5	47.2	6.5	230
Wealth quintile						
Lowest	9.3	19.4	21.2	3.1	67.3	728
Second	12.1	18.4	30.1	2.9	59.0	781
Middle	12.3	23.8	39.8	4.9	49.2	786
Fourth	21.9	45.3	50.9	9.7	31.0	849
Highest	43.2	89.0	69.3	34.0	4.6	932
Total 15-49	20.8	41.4	43.7	11.9	40.3	4,076

3.4 EMPLOYMENT

3.4.1 Employment Status

The 2009-10 TLDHS asked respondents a number of questions regarding their employment status, including whether they were working in the seven days preceding the survey and, if not, whether they had worked in the 12 months before the survey. The results for women and men are presented in Tables 3.5.1 and 3.5.2. At the time of the survey, about two-fifths of women were currently employed, and less than one percent was not employed but had worked sometime during the past 12 months.

The proportion of women currently employed increases with age. Current employment is lowest among women age 15-19 (23 percent) and highest among those age 45-49 (58 percent). Women who are divorced, separated, or widowed are more likely to be currently employed than other women. Women who have three or more children are more likely to be currently employed than those with two or fewer children. Less than one-third of women in urban areas were currently working compared with two-fifths of women in rural areas. The higher rural rate of employment reflects the importance of farm work and perhaps a shortage of income, but the distinction between paid and

Table 3.5.1 Employment status: Women

Percent distribution of women age 15-49 by employment status, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of women
	Currently employed[1]	Not currently employed			
Age					
15-19	22.7	0.3	77.0	100.0	3,144
20-24	31.1	0.5	68.4	100.0	2,343
25-29	38.2	0.7	61.1	100.0	1,897
30-34	44.3	0.5	55.0	100.0	1,534
35-39	48.6	0.4	50.9	100.0	1,684
40-44	56.7	0.9	42.2	100.0	1,388
45-49	58.1	0.5	41.2	100.0	1,146
Marital status					
Never married	28.7	0.4	70.9	100.0	4,675
Married or living together	43.1	0.6	56.2	100.0	7,906
Divorced/separated/widowed	65.2	1.0	33.8	100.0	556
Number of living children					
0	30.3	0.4	69.2	100.0	5,178
1-2	38.8	0.4	60.7	100.0	2,350
3-4	45.8	0.6	53.3	100.0	2,554
5+	47.9	0.7	51.4	100.0	3,055
Residence					
Urban	30.2	0.8	68.8	100.0	3,439
Rural	42.0	0.4	57.5	100.0	9,698
District					
Aileu	66.0	0.6	33.4	100.0	554
Ainaro	29.7	0.0	70.3	100.0	619
Baucau	26.1	0.2	73.7	100.0	1,408
Bobonaro	44.1	0.1	55.8	100.0	1,262
Covalima	41.6	0.2	58.2	100.0	781
Dili	28.8	1.2	69.8	100.0	2,466
Ermera	43.3	0.1	56.6	100.0	1,542
Lautem	17.5	0.5	82.0	100.0	864
Liquiçá	37.4	0.2	62.4	100.0	801
Manatuto	36.4	0.2	63.4	100.0	603
Manufahi	47.7	0.1	52.0	100.0	470
Oecussi	84.9	2.0	13.1	100.0	884
Viqueque	33.3	0.4	66.0	100.0	882
Education					
No education	51.6	0.6	47.8	100.0	3,854
Primary	43.6	0.5	55.9	100.0	3,005
Secondary	27.9	0.4	71.6	100.0	5,829
More than secondary	42.7	1.2	56.0	100.0	449
Wealth quintile					
Lowest	49.1	0.5	50.3	100.0	2,314
Second	42.0	0.5	57.4	100.0	2,468
Middle	41.1	0.5	58.4	100.0	2,590
Fourth	33.7	0.7	65.7	100.0	2,687
Highest	31.6	0.6	67.6	100.0	3,077
Total	38.9	0.5	60.5	100.0	13,137

[1] "Currently employed" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

unpaid work may not be especially meaningful in a society with high rates of subsistence living. Current employment rises from 18 percent among women in Lautem to 85 percent among women in Oecussi. Current employment is highest among women with no education and lowest among women with secondary education. Current employment varies inversely with wealth quintile, rising from 32 percent among women in the wealthiest households to 49 percent among women in the poorest households.

Table 3.5.2 Employment status: Men

Percent distribution of men age 15-49 by employment status, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of men
	Currently employed[1]	Not currently employed			
Age					
15-19	65.7	2.8	31.6	100.0	994
20-24	78.8	2.9	18.3	100.0	643
25-29	88.6	3.1	8.3	100.0	586
30-34	95.2	1.4	3.4	100.0	439
35-39	95.6	1.2	3.2	100.0	553
40-44	94.9	2.3	2.8	100.0	462
45-49	95.7	1.2	3.1	100.0	400
Marital status					
Never married	71.4	3.1	25.5	100.0	1,865
Married or living together	95.7	1.6	2.7	100.0	2,158
Divorced/separated/widowed	90.3	0.0	9.7	100.0	53
Number of living children					
0	73.0	3.0	24.0	100.0	2,009
1-2	95.8	1.5	2.7	100.0	638
3-4	96.1	1.6	2.4	100.0	720
5+	95.3	1.7	3.0	100.0	709
Residence					
Urban	65.4	4.4	30.2	100.0	1,102
Rural	91.6	1.5	6.9	100.0	2,974
District					
Aileu	84.5	0.4	15.1	100.0	181
Ainaro	86.7	1.5	11.8	100.0	217
Baucau	94.7	0.9	4.4	100.0	415
Bobonaro	85.6	5.2	9.2	100.0	357
Covalima	90.3	0.8	8.9	100.0	236
Dili	60.3	4.3	35.3	100.0	797
Ermera	99.4	0.1	0.5	100.0	491
Lautem	89.2	1.9	8.9	100.0	308
Liquiçá	91.3	5.5	3.2	100.0	252
Manatuto	95.1	2.4	2.5	100.0	190
Manufahi	74.9	1.2	23.9	100.0	137
Oecussi	95.8	0.4	3.8	100.0	235
Viqueque	81.0	1.2	17.9	100.0	260
Education					
No education	95.1	1.3	3.7	100.0	791
Primary	90.2	2.1	7.7	100.0	1,046
Secondary	77.9	2.9	19.2	100.0	2,009
More than secondary	80.9	0.9	18.3	100.0	230
Wealth quintile					
Lowest	91.8	0.9	7.3	100.0	728
Second	92.8	1.1	6.1	100.0	781
Middle	90.0	1.9	8.1	100.0	786
Fourth	82.6	2.9	14.5	100.0	849
Highest	69.1	4.1	26.8	100.0	932
Total 15-49	84.5	2.3	13.2	100.0	4,076

[1] "Currently employed" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

The proportion currently employed is much higher among men than women (Table 3.5.2). The majority of men age 15-49 (85 percent) were employed at the time of survey. The percentage of currently employed men rises with age, from 66 percent among men age 15-19 to 96 percent among men age 45-49. Never-married men, men with no children, urban men, those living in Dili, those with a secondary education, and those in the highest wealth quintile are least likely to be currently employed.

3.4.2 Occupation

Respondents who were currently employed or who had worked in the 12 months preceding the survey were asked further about their occupation. The results are presented in Tables 3.6.1 and 3.6.2, which show data on employed women and men, respectively, by occupation and according to background characteristics. Agriculture is the dominant sector of the economy of Timor-Leste, and most employed persons work in the agricultural sector. Specifically, 61 percent of employed women and 67 percent of employed men are engaged in agricultural jobs. Tables 3.6.1 and 3.6.2 further show that 22 percent of women and 14 percent of men are employed in sales and service.

The survey indicates that 6 percent of employed women are manual workers (skilled and unskilled), while 7 percent are engaged in the professional, technical, and managerial fields. The type of occupation varies greatly by gender. Women are less likely than men to be highly educated or to have attended vocational or technical schools. Therefore, their employment in the professional, technical, and managerial sector is somewhat low compared with that of men (7 percent compared with 11 percent).

Table 3.6.1 Occupation: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Professional/ technical/ managerial	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of women
Age									
15-19	1.5	14.6	0.3	5.5	6.3	71.3	0.5	100.0	725
20-24	5.8	22.8	0.0	7.2	4.4	58.9	1.0	100.0	740
25-29	8.5	26.7	0.2	6.7	4.9	52.0	1.0	100.0	737
30-34	8.5	25.9	0.5	6.7	4.2	52.8	1.5	100.0	687
35-39	7.1	22.4	0.4	5.3	3.5	60.5	0.8	100.0	826
40-44	8.3	21.1	0.2	5.5	2.4	62.1	0.4	100.0	800
45-49	5.6	19.3	0.2	4.9	1.6	68.4	0.1	100.0	671
Marital status									
Never married	5.7	18.2	0.0	6.4	4.1	64.4	1.3	100.0	1,360
Married or living together	6.8	23.4	0.3	5.9	4.2	58.7	0.6	100.0	3,458
Divorced/separated/ widowed	6.5	21.0	0.5	4.2	0.3	67.4	0.0	100.0	368
Number of living children									
0	6.0	18.4	0.0	6.6	4.4	63.4	1.2	100.0	1,592
1-2	7.5	26.6	0.4	6.9	3.4	55.0	0.2	100.0	922
3-4	8.4	26.0	0.3	6.1	4.3	53.9	1.0	100.0	1,187
5+	4.9	19.3	0.3	4.5	3.4	67.1	0.4	100.0	1,484
Residence									
Urban	15.2	44.8	0.2	10.2	7.5	19.2	2.9	100.0	1,067
Rural	4.3	15.9	0.3	4.9	2.9	71.6	0.2	100.0	4,119
District									
Aileu	3.2	7.5	0.0	2.4	6.9	79.8	0.1	100.0	369
Ainaro	9.4	10.2	0.0	3.2	2.6	74.6	0.0	100.0	184
Baucau	7.8	26.1	0.4	6.7	3.0	54.6	1.3	100.0	370
Bobonaro	3.4	18.0	0.2	14.3	0.3	63.6	0.1	100.0	558
Covalima	7.6	24.3	0.0	4.0	0.0	64.1	0.0	100.0	326
Dili	17.6	48.6	0.5	12.3	5.4	11.7	4.0	100.0	740
Ermera	3.8	3.8	0.5	2.1	0.6	89.3	0.0	100.0	670
Lautem	12.7	24.8	0.0	5.7	0.3	55.5	1.0	100.0	155
Liquiçá	4.6	19.7	0.3	4.0	0.8	70.3	0.3	100.0	301
Manatuto	5.2	24.4	0.0	10.2	3.0	56.9	0.2	100.0	221
Manufahi	4.8	22.9	0.0	3.6	0.6	68.1	0.0	100.0	225
Oecussi	1.4	24.7	0.0	1.4	12.9	59.5	0.0	100.0	769
Viqueque	4.4	10.3	0.7	2.8	1.6	79.8	0.4	100.0	298
Education									
No education	0.6	14.7	0.3	4.6	2.2	77.3	0.3	100.0	2,012
Primary	1.2	19.8	0.1	4.8	4.6	68.6	0.9	100.0	1,326
Secondary	13.4	30.3	0.3	8.0	5.5	41.7	0.9	100.0	1,651
More than secondary	45.6	36.9	0.0	10.3	3.2	1.3	2.7	100.0	197
Wealth quintile									
Lowest	1.3	12.3	0.2	3.5	3.7	78.8	0.2	100.0	1,149
Second	1.9	13.5	0.0	3.5	2.2	78.6	0.4	100.0	1,049
Middle	3.1	13.9	0.5	4.9	3.4	73.9	0.2	100.0	1,077
Fourth	6.8	26.0	0.3	6.9	4.8	54.7	0.6	100.0	922
Highest	20.9	46.6	0.2	11.6	5.5	12.7	2.5	100.0	990
Total	6.5	21.8	0.2	5.9	3.9	60.8	0.8	100.0	5,186

Table 3.6.2 Occupation: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Professional/ technical/ managerial	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of men
Age									
15-19	3.6	5.4	1.1	2.8	1.0	85.7	0.4	100.0	680
20-24	8.3	10.6	1.8	4.6	1.1	72.6	1.1	100.0	525
25-29	12.4	18.8	1.6	5.9	0.2	58.4	2.7	100.0	537
30-34	13.0	22.2	3.3	4.9	0.1	56.1	0.4	100.0	424
35-39	14.2	19.5	1.8	4.9	0.1	58.8	0.7	100.0	535
40-44	15.6	14.5	0.9	6.4	0.0	61.5	1.1	100.0	449
45-49	11.8	13.7	1.3	0.1	0.0	71.8	1.4	100.0	387
Marital status									
Never married	8.2	8.5	1.3	4.2	0.9	76.2	0.7	100.0	1,390
Married or living together	12.6	18.5	1.9	4.3	0.1	61.3	1.4	100.0	2,101
Divorced/separated/ widowed	4.9	5.1	2.1	5.0	0.0	82.9	0.0	100.0	47
Number of living children									
0	8.8	9.4	1.3	4.2	0.8	74.6	1.0	100.0	1,527
1-2	10.3	20.4	2.6	4.7	0.4	59.1	2.5	100.0	621
3-4	13.1	22.1	1.2	5.4	0.0	57.4	0.7	100.0	703
5+	13.3	12.3	2.0	2.8	0.0	69.2	0.4	100.0	688
Residence									
Urban	19.5	36.0	1.6	10.1	0.6	29.2	2.9	100.0	769
Rural	8.4	8.4	1.7	2.6	0.4	78.0	0.6	100.0	2,769
District									
Aileu	10.9	3.6	0.0	0.8	0.0	84.3	0.4	100.0	154
Ainaro	4.5	6.7	0.0	0.8	2.7	85.3	0.0	100.0	192
Baucau	5.4	13.4	2.9	3.7	0.0	72.2	2.4	100.0	396
Bobonaro	6.4	10.5	0.8	1.8	0.0	80.1	0.4	100.0	324
Covalima	15.1	11.9	3.0	3.3	0.0	66.6	0.0	100.0	215
Dili	24.3	45.9	2.4	11.9	0.4	10.9	4.2	100.0	515
Ermera	3.4	3.4	0.3	0.7	0.0	92.1	0.0	100.0	489
Lautem	7.2	8.2	1.5	3.9	1.5	77.7	0.0	100.0	280
Liquiçá	12.3	12.3	4.3	6.6	0.0	63.6	0.9	100.0	244
Manatuto	8.0	21.9	4.1	5.1	1.3	58.8	0.9	100.0	185
Manufahi	19.9	8.4	0.0	3.1	0.0	68.6	0.0	100.0	105
Oecussi	8.4	6.2	0.2	0.9	0.4	83.8	0.0	100.0	226
Viqueque	16.3	4.5	0.5	6.3	0.0	71.9	0.5	100.0	214
Education									
No education	4.2	6.4	1.7	0.9	0.0	86.7	0.1	100.0	762
Primary	8.1	9.8	2.5	2.8	0.2	76.2	0.3	100.0	965
Secondary	12.1	18.8	1.3	6.0	0.7	59.6	1.5	100.0	1,623
More than secondary	40.0	32.7	0.0	10.3	0.7	11.3	5.0	100.0	188
Wealth quintile									
Lowest	4.2	2.3	1.0	2.0	0.3	90.1	0.2	100.0	675
Second	5.2	5.2	1.2	2.0	0.3	85.4	0.8	100.0	733
Middle	8.0	6.4	2.4	2.0	0.4	80.2	0.6	100.0	722
Fourth	14.7	17.9	1.1	5.7	0.4	58.9	1.2	100.0	726
Highest	22.1	41.1	2.5	9.9	0.6	21.1	2.7	100.0	682
Total 15-49	10.8	14.4	1.6	4.3	0.4	67.4	1.1	100.0	3,538

The relationship between occupation and age is mixed. One notable finding is the relatively higher percentages of women age 25-34 employed in sales and services and engaged in professional, technical, and managerial occupations.

Residence has a significant effect on the type of occupation. As expected, a high proportion of respondents in rural areas—seven in ten employed women, and eight in ten employed men—are engaged in agricultural work. Urban women are most likely to be engaged in sales and services compared with other occupations. Women and men in Dili are much more likely to be engaged in sales and services and in professional, technical, and managerial occupations, and are least likely to be engaged in agriculture. On the other hand, women and men in Ermera are most likely to be engaged in agriculture and least likely to be engaged in sales and services.

3.4.3 Earnings, Employers, and Continuity of Employment

Table 3.7 shows the percent distribution of women by type of earnings and employment characteristics. These tables also present data on whether respondents are involved in agricultural or nonagricultural occupations because all of the employment variables shown in the tables are strongly influenced by the sector of employment.

Table 3.7 Type of employment

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or nonagricultural), Timor-Leste 2009-10

Employment characteristic	Agricultural work	Nonagricultural work	Total
Type of earnings			
Cash only	2.3	45.6	19.3
Cash and in-kind	0.3	2.1	1.0
In-kind only	1.1	0.5	0.9
Not paid	96.2	51.7	78.8
Missing	0.0	0.1	0.0
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	19.3	11.1	16.1
Employed by nonfamily member	1.3	37.8	15.6
Self-employed	79.5	51.2	68.4
Total	100.0	100.0	100.0
Continuity of employment			
All year	26.9	68.0	42.9
Seasonal	57.0	22.7	43.7
Occasional	16.1	9.2	13.5
Total	100.0	100.0	100.0
Number of women employed during the last 12 months	3,154	1,992	5,186

Note: Total includes 40 women with missing information on type of employment who are not shown separately.

Four-fifths of working women are not paid for their work. This is because the vast majority of women (96 percent) engaged in agricultural work are unpaid workers, most likely employed by family members at the peak of the agricultural season. On the other hand, almost one in two women employed in nonagricultural work will receive cash earnings.

More than two-thirds of women are self-employed, with self-employment much higher in the agricultural (80 percent) than in the nonagricultural sector (51 percent). Women are as likely to be employed by a family member as by a nonfamily member (16 percent each). One in five women working in the agricultural sector is working for a family member compared with only 11 percent of women working in the nonagricultural sector. In addition, the proportion of women employed by someone outside the family is higher among those working in the nonagricultural sector than among those working in the agricultural sector (38 percent versus 1 percent).

About two in five women work all year. A similar proportion works seasonally, while one in seven works occasionally. Continuity of employment also varies by sector. The majority of women employed in the agricultural sector are seasonal workers (57 percent), compared with only one in four among those working in the nonagricultural sector. On the other hand, 68 percent of women working in the nonagricultural sector work all year compared with 27 percent of women engaged in agricultural work.

3.5 KNOWLEDGE AND ATTITUDES CONCERNING TUBERCULOSIS

Tuberculosis (TB) is a leading cause of death in the world and a major public health problem in the developing world. TB is caused by the bacteria *Mycobacterium tuberculosis*, whose transmission is mainly airborne through droplets that are coughed or sneezed by infected persons. The infection is primarily concentrated in the lungs, but in some cases it can be transmitted to other areas of the body. Tuberculosis is a major public health problem in Timor-Leste.

The very young and very old and persons with a suppressed immune system (brought on from HIV infection or other causes) are especially prone to contracting TB when exposed to it. The 2009-10 TLDHS collected information from women and men of reproductive age on the level of awareness of TB. Specifically, respondents were asked whether they had ever heard of the illness, how it spreads from one person to another, whether it can be cured, and whether they would want to keep the information secret if a member of their family got TB. This information is useful in policy formulation and implementation of programs designed to combat and limit the spread of the disease.

Table 3.8.1 Knowledge and attitude concerning tuberculosis: Women

Percentage of women age 15-49 who have heard of tuberculosis (TB), and among women who have heard of TB, the percentages who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep secret that a family member has TB, by background characteristics, Timor-Leste 2009-10

	Among all women:		Among women who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number of women	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of women
Age						
15-19	78.0	3,144	66.7	88.1	9.6	2,451
20-24	80.2	2,343	67.0	90.2	11.2	1,879
25-29	79.0	1,897	66.3	88.4	10.4	1,499
30-34	80.3	1,534	68.1	87.2	11.7	1,232
35-39	76.7	1,684	65.1	87.6	9.6	1,293
40-44	75.2	1,388	64.7	85.3	10.8	1,044
45-49	75.2	1,146	66.7	85.7	7.9	862
Residence						
Urban	88.0	3,439	59.5	85.7	17.5	3,027
Rural	74.6	9,698	69.4	88.8	7.2	7,233
District						
Aileu	73.8	554	64.4	87.2	0.9	409
Ainaro	70.5	619	65.4	80.8	14.7	436
Baucau	85.9	1,408	76.7	95.4	0.8	1,210
Bobonaro	68.4	1,262	63.8	87.4	24.8	864
Covalima	76.7	781	41.6	94.3	5.4	599
Dili	91.6	2,466	56.9	84.0	24.9	2,259
Ermera	62.0	1,542	98.7	99.3	3.1	955
Lautem	83.0	864	44.3	89.6	2.9	717
Liquiçá	59.6	801	70.4	87.8	6.1	478
Manatuto	80.9	603	81.1	93.0	5.8	488
Manufahi	89.7	470	88.9	96.6	0.9	422
Oecussi	90.0	884	62.4	60.2	2.9	796
Viqueque	71.1	882	62.5	93.0	5.1	627
Education						
No education	63.4	3,854	67.1	84.1	8.6	2,444
Primary	73.8	3,005	66.2	85.6	8.0	2,217
Secondary	88.6	5,829	65.8	90.6	11.2	5,167
More than secondary	96.4	449	72.0	88.2	20.1	433
Wealth quintile						
Lowest	67.7	2,314	60.1	80.5	5.4	1,568
Second	69.8	2,468	71.7	89.7	6.1	1,724
Middle	75.9	2,590	70.0	90.4	7.5	1,967
Fourth	80.7	2,687	69.3	90.9	8.9	2,167
Highest	92.1	3,077	62.1	86.9	18.3	2,834
Total	78.1	13,137	66.5	87.9	10.2	10,260

Tables 3.8.1 and 3.8.2 show the percentage of women and men who have heard of TB, and among those who have heard of it, their knowledge and attitudes concerning TB, according to background characteristics. TB awareness is very high in Timor-Leste, with 78 percent of women and 83 percent of men aware of it. Differences in awareness of TB by age are not prominent. Rural women and men are less likely to be aware of TB than their urban counterparts. Awareness of TB is lowest among women in Liquiçá and men in Ermera, and highest among women in Dili and men in Manatuto. Not surprisingly, awareness of TB rises with education and wealth quintile.

Sixty-seven percent of women and 64 percent of men age 15-49 reported that TB is spread through the air when coughing or sneezing. Knowledge of the spread of TB through the air is higher in rural than urban areas among women, but among men, it is higher in urban than in rural areas. Surprisingly, almost all women who are aware of TB in Ermera are also aware of how it is spread and that it can be cured. Knowledge of how it is spread is lowest in Covalima, although nearly all women in Covalima who are aware of TB believe it can be cured. All men in Manatuto who are aware of TB are also aware of how it is spread and that it can be cured. There is little difference in the knowledge of how TB is spread by education among women, but among men knowledge increases markedly with education. There is no clear pattern between knowledge of how TB is spread and wealth quintile.

Most respondents are aware that TB is curable. Eighty-eight percent of women, and 93 percent of men believe that TB can be cured. Women's belief that TB can be cured varies minimally by education, wealth quintile, and place of residence.

A relatively small percentage of women and men mention that they would want to keep a family member's TB a secret. However, women are five times more likely than men to want to keep secret that a family member has TB (10 percent compared with 2 percent). Differences by age are not large, although the oldest cohort of women is least likely to want to keep this secret. More than twice as many women in urban as in rural areas want to keep a family member's TB a secret. Among women, wanting to keep secret a family member's TB is much higher in Dili and Bobonaro, and highest among the most educated and wealthiest women. Differences by background characteristics are not as marked among men.

Table 3.8.2 Knowledge and attitude concerning tuberculosis: Men

Percentage of men age 15-49 who have heard of tuberculosis (TB), and among men who have heard of TB, the percentages who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep secret that a family member has TB, by background characteristics, Timor-Leste 2009-10

	Among all men:		Among men who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number of men	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of men
Age						
15-19	77.9	994	59.5	91.3	2.2	774
20-24	87.1	643	64.3	93.7	3.3	560
25-29	87.4	586	67.5	92.8	2.6	512
30-34	86.8	439	66.8	94.6	1.3	381
35-39	86.0	553	64.5	95.1	1.9	476
40-44	81.6	462	63.5	94.1	0.6	377
45-49	75.1	400	61.3	92.0	1.8	300
Residence						
Urban	94.3	1,102	76.6	95.9	2.9	1,039
Rural	78.7	2,974	57.9	92.0	1.7	2,340
District						
Aileu	71.3	181	77.8	79.9	0.9	129
Ainaro	90.9	217	41.6	83.9	0.3	197
Baucau	94.1	415	28.2	96.3	0.8	390
Bobonaro	85.4	357	11.3	81.1	9.3	304
Covalima	91.5	236	88.9	93.5	0.0	216
Dili	97.2	797	82.5	96.3	3.4	774
Ermera	39.5	491	47.2	95.2	1.0	194
Lautem	92.5	308	61.3	92.0	0.9	285
Liquiçá	63.3	252	78.1	91.6	0.5	159
Manatuto	99.7	190	100.0	100.0	0.0	189
Manufahi	63.9	137	98.7	99.4	0.0	88
Oecussi	95.7	235	66.5	98.0	1.1	225
Viqueque	87.5	260	77.5	96.9	1.0	228
Education						
No education	58.1	791	52.0	84.8	4.0	460
Primary	76.7	1,046	54.8	92.1	2.2	802
Secondary	94.0	2,009	67.4	95.1	1.5	1,888
More than secondary	99.7	230	87.1	98.5	2.2	230
Wealth quintile						
Lowest	77.0	728	59.7	92.0	1.4	561
Second	73.7	781	51.2	90.3	2.4	575
Middle	77.8	786	58.8	91.4	1.8	612
Fourth	85.8	849	63.2	95.1	2.0	729
Highest	96.9	932	77.6	95.5	2.6	903
Total 15-49	82.9	4,076	63.6	93.2	2.1	3,379

3.6 USE OF TOBACCO

Smoking has negative effects on health and is associated with increased risk of lung and heart diseases. Women and men interviewed in the 2009-10 TLDHS were asked about their smoking habits. Table 3.9.1 and 3.9.2 show the percentages of women and men who smoke cigarettes or tobacco and the percent distributions of female and male cigarette smokers by number of cigarettes smoked in the preceding 24 hours, according to background characteristics.

Use of tobacco is much more common among Timorese men than women. Sixty-six percent of men smoke cigarettes, while 25 percent consume other forms of tobacco, compared with just 3 percent of women who smoke cigarettes and 3 percent who consume other forms of tobacco. Use of tobacco is most common among older men, those living in rural areas, men with little or no education, and men in the lower wealth quintiles, with much of this difference due to the use of other tobacco. Use of tobacco varies little by background characteristics among women; however, it must be noted that 4 percent each of pregnant women and women currently breastfeeding use tobacco.

Table 3.9.1 Use of tobacco: Women

Percentage of women age 15-49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics and maternity status, Timor-Leste 2009-10

Background characteristic	Uses tobacco			Does not use tobacco	Number of women	Number of cigarettes in the last 24 hours					Total	Number of cigarette smokers
	Cigarettes	Pipe	Other tobacco			1-2	3-5	6-9	10+	Don't know/ missing		
Age												
15-19	0.4	0.0	0.2	99.6	3,144	*	*	*	*	*	100.0	11
20-24	1.8	0.1	0.7	98.1	2,343	(60.0)	(20.9)	(4.3)	(6.4)	(8.5)	100.0	42
25-29	2.2	0.0	1.7	97.2	1,897	(38.2)	(38.6)	(2.7)	(13.3)	(7.2)	100.0	42
30-34	2.7	0.2	2.6	95.7	1,534	48.3	32.0	8.0	11.7	0.0	100.0	42
35-39	4.9	0.1	4.8	92.3	1,684	52.6	21.7	14.4	11.3	0.0	100.0	82
40-44	6.4	0.1	7.3	89.0	1,388	53.7	26.2	13.2	4.2	2.7	100.0	89
45-49	6.5	0.4	10.2	86.4	1,146	44.4	31.2	11.0	13.4	0.0	100.0	75
Residence												
Urban	3.5	0.1	2.4	95.1	3,439	56.9	18.8	10.3	10.7	3.3	100.0	121
Rural	2.7	0.1	3.2	95.4	9,698	47.5	31.0	10.6	8.9	1.9	100.0	262
District												
Aileu	7.0	0.1	5.6	91.9	554	52.4	23.2	8.8	14.3	1.4	100.0	39
Ainaro	0.5	0.0	0.9	98.9	619	*	*	*	*	*	100.0	3
Baucau	1.3	0.0	1.5	97.6	1,408	*	*	*	*	*	100.0	18
Bobonaro	0.9	0.1	1.5	97.6	1,262	*	*	*	*	*	100.0	12
Covalima	1.2	0.0	4.1	95.0	781	*	*	*	*	*	100.0	9
Dili	3.4	0.1	1.8	95.7	2,466	64.3	16.2	7.3	7.3	4.9	100.0	83
Ermera	2.1	0.2	1.8	97.5	1,542	*	*	*	*	*	100.0	33
Lautem	4.2	0.4	3.1	93.2	864	(38.0)	(46.6)	(2.8)	(7.0)	(5.6)	100.0	37
Liquiçá	8.4	0.1	7.8	88.7	801	72.5	24.1	2.3	0.0	1.1	100.0	68
Manatuto	3.1	0.0	1.9	95.6	603	(58.8)	(38.2)	(0.0)	(2.9)	(0.0)	100.0	19
Manufahi	8.0	0.0	6.2	90.5	470	20.8	28.1	35.2	15.9	0.0	100.0	38
Oecussi	1.9	0.2	4.9	93.9	884	*	*	*	*	*	100.0	17
Viqueque	1.0	0.0	4.4	95.1	882	*	*	*	*	*	100.0	9
Education												
No education	4.9	0.2	6.8	90.9	3,854	45.2	30.8	10.1	13.1	0.9	100.0	188
Primary	3.4	0.1	2.9	94.9	3,005	56.8	26.6	10.0	2.9	3.7	100.0	103
Secondary	1.5	0.0	0.7	98.2	5,829	53.4	19.2	13.1	10.1	4.2	100.0	85
More than secondary	1.6	0.0	0.4	98.4	449	*	*	*	*	*	100.0	7
Maternity status												
Pregnant	2.8	0.0	2.1	96.3	899	(49.3)	(23.0)	(8.6)	(11.2)	(7.9)	100.0	26
Breastfeeding (not pregnant)	2.5	0.1	2.9	95.8	2,953	39.2	37.2	7.6	10.9	5.1	100.0	75
Neither	3.0	0.1	3.1	95.0	9,285	53.6	24.9	11.5	8.9	1.1	100.0	283
Wealth quintile												
Lowest	2.7	0.1	5.3	93.2	2,314	42.6	33.0	15.4	6.5	2.6	100.0	63
Second	3.6	0.1	3.8	94.7	2,468	43.8	32.2	9.2	12.7	2.0	100.0	89
Middle	2.9	0.2	3.0	95.6	2,590	54.1	26.1	9.6	8.8	1.3	100.0	76
Fourth	2.5	0.1	2.1	96.2	2,687	58.5	26.7	7.6	7.2	0.0	100.0	67
Highest	2.9	0.1	1.4	96.4	3,077	53.6	19.3	11.4	10.6	5.2	100.0	88
Total	2.9	0.1	3.0	95.3	13,137	50.5	27.2	10.5	9.5	2.3	100.0	383

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Among male cigarette smokers, two-fifths smoked 10 or more cigarettes, one-fourth smoked 3 to 5 cigarettes, one-fifth smoked 6 to 9 cigarettes, and one-eighth smoked 1 to 2 cigarettes in the 24 hours prior to the survey. Among women who smoked, half smoked just 1 to 2 cigarettes, one-fourth smoked 3 to 5 cigarettes, and one in ten smoked either 6 to 9 or 10 or more cigarettes in the past 24 hours.

Table 3.9.2 Use of tobacco: Men

Percentage of men age 15-49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Uses tobacco			Does not use tobacco	Number of men	Number of cigarettes in the last 24 hours						Total	Number of cigarette smokers
	Cigarettes	Pipe	Other tobacco			0	1-2	3-5	6-9	10+	Don't know/ missing		
Age													
15-19	34.9	0.2	9.4	63.7	994	0.3	21.6	39.6	17.4	21.2	0.0	100.0	347
20-24	73.1	0.0	20.2	25.1	643	0.0	11.4	32.1	20.5	36.0	0.0	100.0	470
25-29	84.2	0.0	25.3	13.2	586	0.5	10.0	23.3	21.7	44.5	0.0	100.0	494
30-34	79.4	0.0	30.0	15.8	439	1.4	9.6	23.2	19.3	46.5	0.0	100.0	349
35-39	72.4	0.4	32.2	23.0	553	1.0	9.0	23.5	22.7	43.7	0.1	100.0	400
40-44	72.0	0.4	38.8	20.7	462	1.0	12.6	22.8	22.5	41.1	0.0	100.0	332
45-49	71.7	0.3	43.9	20.1	400	0.7	15.1	21.7	18.8	43.7	0.0	100.0	287
Residence													
Urban	62.5	0.0	9.9	36.0	1,102	0.1	9.8	23.7	20.2	46.2	0.0	100.0	689
Rural	66.9	0.2	31.2	28.5	2,974	0.9	13.3	27.8	20.7	37.3	0.0	100.0	1,990
District													
Aileu	70.5	0.0	26.4	27.2	181	0.0	13.3	24.6	29.1	33.1	0.0	100.0	127
Ainaro	65.8	0.0	38.2	28.1	217	0.0	20.6	27.4	25.4	26.6	0.0	100.0	143
Baucau	69.7	0.4	8.9	28.7	415	0.0	4.6	34.3	29.1	32.1	0.0	100.0	289
Bobonaro	49.6	0.0	20.8	34.5	357	0.0	11.4	29.9	26.9	31.8	0.0	100.0	177
Covalima	72.5	0.0	21.3	25.6	236	0.0	17.1	51.3	16.8	14.8	0.0	100.0	171
Dili	62.5	0.0	5.7	37.3	797	0.0	6.4	22.4	20.8	50.4	0.0	100.0	498
Ermera	76.5	0.4	51.2	23.2	491	0.0	11.0	34.3	25.7	29.1	0.0	100.0	376
Lautem	48.5	0.3	7.5	51.3	308	0.0	6.3	15.1	21.1	57.5	0.0	100.0	149
Liquiçá	65.4	0.0	32.6	27.4	252	0.5	33.6	25.9	10.5	29.6	0.0	100.0	165
Manatuto	72.1	0.0	20.9	25.1	190	0.0	1.5	1.9	5.1	91.0	0.4	100.0	137
Manufahi	61.9	0.0	44.5	21.5	137	0.0	23.6	32.7	15.6	28.0	0.0	100.0	85
Oecussi	79.0	0.4	66.3	16.9	235	9.1	30.8	26.6	13.3	20.2	0.0	100.0	186
Viqueque	67.5	0.4	33.1	29.4	260	0.0	3.5	11.7	13.2	71.7	0.0	100.0	176
Education													
No education	70.9	0.5	51.5	18.6	791	1.3	15.2	25.2	23.0	35.3	0.0	100.0	560
Primary	72.5	0.1	34.6	23.3	1,046	1.0	12.0	27.9	20.7	38.3	0.1	100.0	758
Secondary	60.8	0.1	12.5	38.0	2,009	0.2	11.8	27.3	19.7	41.1	0.0	100.0	1,221
More than secondary	60.6	0.0	7.1	39.4	230	0.0	8.1	22.2	18.4	51.2	0.0	100.0	140
Wealth quintile													
Lowest	65.4	0.7	42.0	26.5	728	2.2	18.3	26.4	17.3	35.7	0.0	100.0	476
Second	67.5	0.0	38.8	26.9	781	0.7	15.3	27.6	22.3	34.1	0.0	100.0	527
Middle	67.5	0.0	28.3	28.2	786	0.2	12.7	30.3	24.4	32.4	0.0	100.0	531
Fourth	67.3	0.2	18.7	30.8	849	0.4	10.3	27.6	19.2	42.5	0.0	100.0	571
Highest	61.5	0.0	5.0	38.5	932	0.0	6.6	22.1	19.5	51.6	0.1	100.0	574
Total 15-49	65.7	0.2	25.4	30.5	4,076	0.7	12.4	26.7	20.6	39.6	0.0	100.0	2,679

FERTILITY 4

One of the major objectives of the 2009-10 TLDHS was to examine levels, trends and differentials in fertility in Timor-Leste. Fertility is one of the three principal components of population dynamics that determines the size and structure of the population of a country. Analysis in this chapter is based on birth histories collected from women age 15-49 who were interviewed during the survey. These women were asked the number of children living at home, children living elsewhere, and children who had died, in order to obtain the total number of live births that the women had in their lifetime. For each live birth, information was collected on the name, sex, age, and survival status of the child. For children who had died, age at death was recorded. Information from the birth history was then used to assess current and completed fertility and factors related to fertility, such as age at first birth, birth intervals, and adolescent childbearing. In addition to information on live births, the survey included questions pertaining to pregnancies in the past five years that did not result in a live birth, including the month and year the pregnancy ended and the duration of the pregnancy.

This chapter analyzes the information collected in the 2009-10 TLDHS on current fertility and differentials by the background characteristics of the women. Trends in fertility and cumulative fertility in Timor-Leste are reported. The chapter also examines the length of birth intervals, age at first birth, and frequency of teenage pregnancy and motherhood. As is standard practice, the analysis of fertility presented here is based only on live births.

4.1 CURRENT FERTILITY

The level of current fertility is one of the most important demographic indicators for determining the status of women in a society. Health and family planning policy makers are aware of its direct relevance to population policy and programs. Measures of current fertility are presented in Table 4.1 for the three-year period preceding the survey, corresponding roughly to the calendar years 2007-2009. A three-year period was chosen because it reflects the most current information, while also allowing the rates to be calculated on a sufficient number of cases so as not to compromise the statistical precision of the estimate.

Several measures of fertility are shown in this table. Age-specific fertility rates (ASFRs)[1], expressed as the number of births per thousand women in a specified age group, are calculated by dividing the number of live births to women in a specific age group by the number of woman-years lived in that age group. The total fertility rate (TFR) is the sum of the ASFRs and is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed ASFRs.

Table 4.1 Current fertility

Age-specific and total rate, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Timor-Leste 2009-10

	Residence		
Age group	Urban	Rural	Total
15-19	35	57	51
20-24	187	236	221
25-29	251	287	276
30-34	235	261	254
35-39	171	205	197
40-44	64	96	89
45-49	33	51	47
TFR (15-49)	4.9	6.0	5.7
GFR	153	183	175
CBR	33.1	33.2	33.2

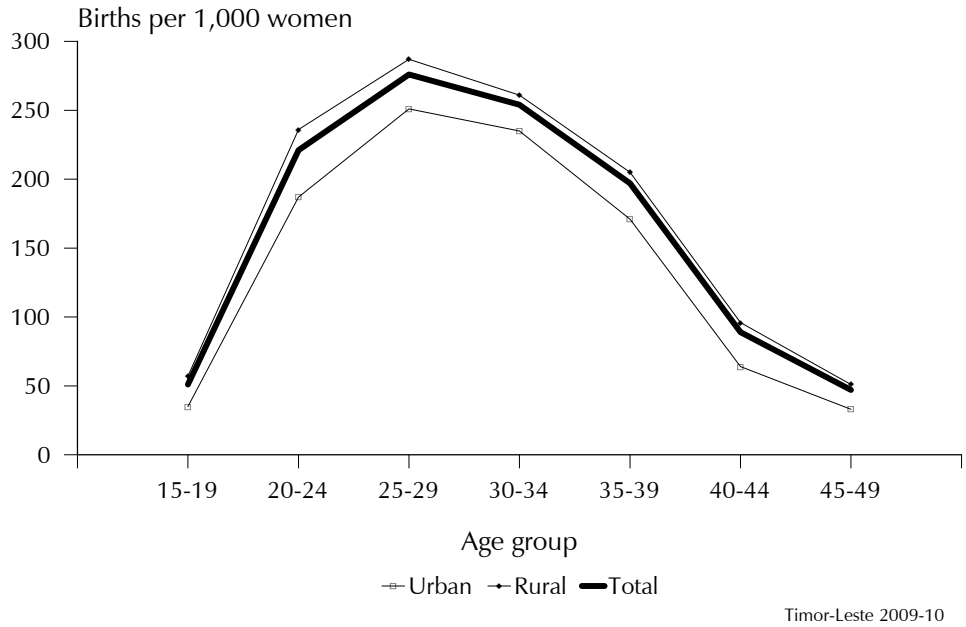
Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population

[1] Numerators of the age-specific fertility rates are calculated by summing the number of live births that occurred in the period 1-36 months preceding the survey (determined by the date of interview and the date of birth of the child), and classifying them by the age (in 5-year groups) of the mother at the time of birth (determined by the mother's date of birth). The denominators of the rates are the number of woman-years lived in each of the specified 5-year groups during the 1 to 36 months preceding the survey.

The general fertility rate (GFR) is the number of live births occurring during a specified period per 1,000 women age 15-44. The crude birth rate (CBR) is the number of births per 1,000 population during a specified period.

Table 4.1 shows the current fertility for Timor-Leste at the national level and by urban-rural residence. The total fertility rate for Timor-Leste for the three years preceding the survey is 5.7 births per woman and is the highest in South East Asia and Asia (together with Afghanistan) (PRB, 2010) but below the levels of Africa. At this level, it is estimated that the population will increase from its current size of 1.2 million to 1.9 million by the year 2025 and 3.2 million by the year 2050 (PRB, 2010). As expected, fertility is considerably higher in rural areas than in urban areas. Rural women have on average about one child more than urban women (6.0 compared with 4.9 births per woman). As the ASFRs show, the pattern of high rural fertility is prevalent in all age groups (Figure 4.1). The urban-rural difference in fertility is most pronounced for women age 20-24 (187 births per 1,000 women in urban areas versus 236 births per 1,000 women in rural areas).

Figure 4.1 Age-specific Fertility Rates by Urban-Rural Residence



The overall age pattern of fertility as reflected in the ASFRs indicates that childbearing begins early. Fertility is low among adolescents and increases to a peak of 276 births per 1,000 among women age 25-29 and declines thereafter.

4.2 FERTILITY DIFFERENTIALS

Table 4.2 presents the differentials in the total fertility rates, the percentage of women who are currently pregnant and the mean number of children ever born (CEB) to women age 40-49, by urban-rural residence, district, education, and wealth quintile.

There are considerable differentials in fertility among districts, with fertility ranging from a low of 4.4 births per woman in Covalima to a high of 7.2 births per woman in Ainaro. The level of fertility is inversely related to women's educational attainment, decreasing rapidly from 6.1 births among women with no education to 2.9 births among women with more than secondary education. Fertility is also inversely associated with wealth quintile. Women in the lowest wealth quintile have an average of 7.3 births, about three children more than women in the highest quintile (4.2 births).

Table 4.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Timor-Leste 2009-10

Background characteristic	Total fertility rate	Percentage women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	4.9	7.1	5.5
Rural	6.0	6.7	5.9
District			
Aileu	5.6	5.4	6.3
Ainaro	7.2	8.4	6.7
Baucau	5.5	6.1	5.0
Bobonaro	6.0	5.4	6.0
Covalima	4.4	5.8	5.5
Dili	4.6	6.9	5.4
Ermera	6.6	6.8	6.9
Lautem	6.7	8.6	6.5
Liquiçá	5.5	7.0	6.5
Manatuto	5.5	6.6	5.8
Manufahi	5.9	8.8	5.5
Oecussi	6.6	7.0	5.4
Viqueque	5.6	7.7	5.3
Education			
No education	6.1	6.7	6.0
Primary	6.5	7.7	6.2
Secondary	5.2	6.4	5.2
More than secondary	2.9	8.3	3.1
Wealth quintile			
Lowest	7.3	6.9	5.9
Second	6.0	7.8	6.0
Middle	6.1	7.0	5.9
Fourth	5.3	6.4	6.0
Highest	4.2	6.3	5.3
Total	5.7	6.8	5.8

Note: Total fertility rates are for the period 1-36 months prior to interview.

Table 4.2 also presents a crude assessment of trends in the various subgroups by comparing current fertility with a measure of completed fertility: the mean number of children ever born to women age 40-49. The mean number of children ever born to older women who are nearing the end of their reproductive period is an indicator of average completed fertility of women who began childbearing three decades before the survey. If fertility remained constant over time, and the reported data on both children ever born and births during the three years preceding the survey are reasonably accurate, the TFR and the mean number of children ever born for women 40-49 are expected to be similar. When fertility levels have been falling, the TFR will be substantially lower than the mean number of children ever born among women age 40-49.

The comparison between the two measures suggests that overall fertility has remained constant in the past few decades, because the TFR in the three years preceding the survey and the mean number of children ever born to women 40-49 are similar (5.7 and 5.8, respectively). However, it is interesting to note that there are marked differences between the two measures by background characteristics. While there has been little difference in rural fertility, urban fertility has fallen by 0.6 births over the last few decades. This decline is not reflected in the overall fertility because the urban population is much smaller than the rural population, and overall fertility is therefore more likely to reflect fertility in rural areas. There has been a notable decline in fertility in the last few decades in Aileu, Covalima, Dili, and Liquiçá and smaller declines in Ermera and Manatuto. On the other hand, fertility has increased markedly in Ainaro, Baucau, and Oecussi, with smaller increases in Lautem, Manufahi, and Viqueque. No changes were seen in Bobonaro. Increases in fertility were also observed among women with little to no education and women in the lowest wealth quintile.

The percentage of women who reported being pregnant at the time of the survey is also presented in Table 4.2. This percentage may be underreported since women may not be aware of a pregnancy, especially at the very early stages, while some women who are early in their pregnancy may not want to reveal that they are pregnant. Seven percent of women were pregnant at the time of the survey. Urban women were more likely to be pregnant than rural women. Current pregnancy is highest in Manufahi and Lautem. The proportion of women currently pregnant varies by women's education, but the pattern is unclear and is highest among women with more than secondary education. The percentage currently pregnant ranges from 6 percent among women in the highest wealth quintile to a high of 8 percent among women in the second wealth quintile.

4.3 FERTILITY TRENDS

Trends in fertility over time can also be examined by comparing age-specific fertility rates from the TLDHS 2009-10 for successive five-year periods preceding the survey, as presented in Table 4.3. Because women age 50 and older were not interviewed in the survey, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 35-39 for the period 15 to 19 years before the survey because these women would have been over age 50 at the time of the survey and therefore not eligible to be interviewed.

Table 4.3 Trends in age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Timor-Leste 2009-10

	Number of years preceding survey			
Mother's age at birth	0-4	5-9	10-14	15-19
15-19	54	75	80	85
20-24	224	271	251	226
25-29	284	313	295	273
30-34	257	294	270	[274]
35-39	200	230	[238]	
40-44	97	[165]		
45-49	[48]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Table 4.3 shows that the ASFRs in the 0 to 4 years before the survey for women age 20-34 (the peak childbearing years) are very similar to what they were in the 15 to 19 years before the survey and mirror somewhat the pattern seen in Table 4.2. The results also show that fertility over the past two decades has dropped uniformly only among women age 15-19 and 35-39. Among women age 20-24, fertility increased substantially from the period 15 to 19 years before the survey to the period 5 to 9 years before the survey, with the ASFR in the most recent five years similar to what it was two decades ago. A similar trend is seen among women age 25-29, with fertility in the most recent five-year period slightly higher than what it was two decades ago. An increase in fertility is also observed among women age 30-34 in the 5 to 9 years before the survey from the ASFR observed 10 to 14 years ago. The marked increase in fertility, particularly in the 5-9 years before the survey, which corresponds to the years 1999-2000 to 2003-04, can be attributed to the virtual collapse of the overall health system, and particularly the family planning program, following the struggle for independence from Indonesia and the ensuing chaos.

Table 4.4 and Figure 4.2 compare fertility trends seen in the 2009-10 data with estimates obtained in earlier surveys conducted in the country. The TFR estimated from the 2003 DHS is 7.8 children per woman. It is unclear if this estimate is based on a denominator that adjusts for the fact that the survey only interviewed ever-married women. If it did not, then it is likely that the estimate of 7.8 may be higher than what it would have been, and the 2-child decline in fertility between the two surveys may in fact be less. Nevertheless, it is important to point out that the trend in ASFRs

calculated in the 2003 DHS follows closely the trend in the ASFRs found in the TLDHS and corroborates the findings of the spike in TFR in the period immediately following the withdrawal of Indonesia. The 2002 MICS survey provides an indirect measure of TFR at 7.4 children per woman in the 12 months preceding the survey. This is high compared with the 1997 IDHS, in which the TFR was estimated at 4.4 children per woman among all women.

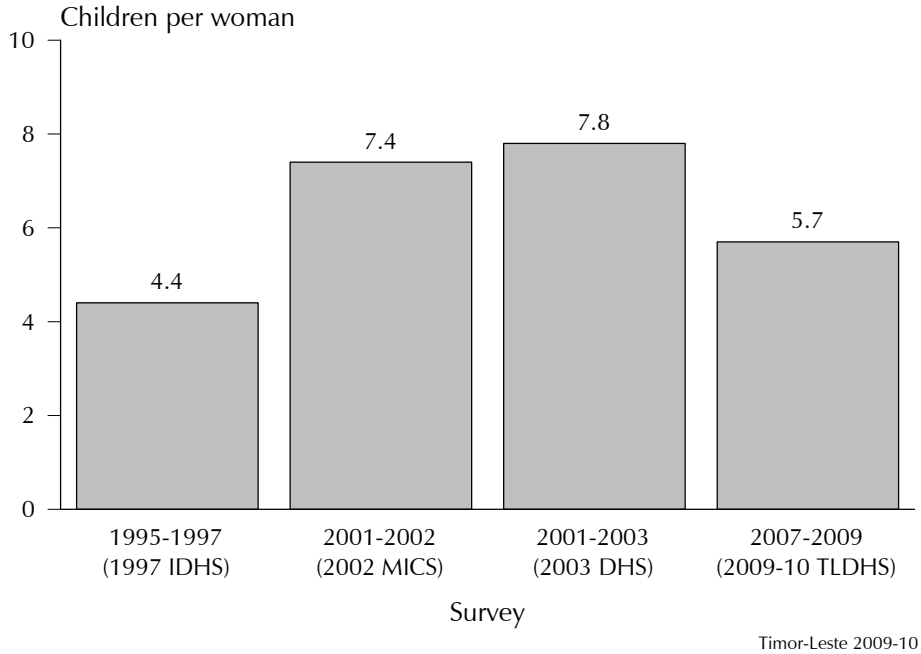
Table 4.4 Trends in fertility

Age-specific fertility rates (per 1,000 women) and total fertility rates (TFR), Timor-Leste 2009-10

Age group	2009-10 TLDHS (2007-2009)	2003 DHS[a] (2001-2003)	2002 MICS[b] (2001-2002)	1997 IDHS[c] (1995-1997)
15-19	51	78	80	u
20-24	221	322	319	u
25-29	276	362	355	u
30-34	254	329	290	u
35-39	197	260	245	u
40.44	89	138	118	u
45-49	47	66	68	u
TFR	5.7	7.8	7.4	4.4

u = unavailable
[a] MOH et al., 2004 p. 70
[b] UNICEF, 2003 p. 72. Based on indirect estimates for the 12 months preceding the survey.
[c] CBS, NFPCB, MOH, and Macro International, 1998 p. 39. ASFRs for Timor-Leste are not published in this report.

Figure 4.2 Trends in Total Fertility Rates 1995-2010



Many factors may have contributed to the decline in fertility in the most recent five-year period. The relative political stability following the 1999 and 2006 crises and the return of people from remote rural areas to semi-urban or urban areas may have exposed them to social and economic influences encouraging smaller families. Furthermore, exposure to family planning messages through the mass media, and wider and easier access to modern family planning methods not previously available in Timor-Leste may also have had an impact.

4.4 CHILDREN EVER BORN AND SURVIVING

Data on the number of children ever born reflect the accumulation of births over the past 30 years and therefore have limited relevance to current fertility levels, particularly when the country has experienced a decline in fertility. Moreover, the data are subject to recall error, which is typically greater for older than for younger women. Nevertheless, the information on children ever born (or parity) increases our understanding of a number of issues. The parity data show how average family size varies across age groups. The percentage of women in their forties who have never had children also provides an indicator of the level of primary infertility or the inability of women to bear children. Comparison of the differences in the mean number of children ever born and surviving reflects the cumulative effects of mortality levels during the period in which women have been bearing children.

Table 4.5 shows the percent distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of children living. More than nine in ten women age 15-19 (94 percent) have never given birth. However, this proportion declines to one in five (21 percent) among women age 25-29 and to less than 10 percent among women age 30 and above, indicating that childbearing among Timorese women is very high. On average, Timorese women nearing the end of their reproductive years have attained a parity of about 6 children.

Table 4.5 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Timor-Leste 2009-10

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of living children
ALL WOMEN															
15-19	94.3	4.4	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	3,144	0.07	0.07
20-24	56.2	18.7	14.9	7.7	1.9	0.6	0.0	0.0	0.0	0.0	0.0	100.0	2,343	0.82	0.77
25-29	21.2	12.6	20.2	19.1	15.9	7.3	2.9	0.6	0.1	0.1	0.0	100.0	1,897	2.34	2.16
30-34	9.5	6.2	8.4	15.6	18.6	17.5	13.7	5.9	3.0	1.2	0.3	100.0	1,534	3.94	3.56
35-39	7.7	2.8	5.6	9.1	15.0	14.3	15.8	12.5	9.0	5.4	2.8	100.0	1,684	5.04	4.50
40-44	5.6	3.5	4.8	6.9	10.6	11.5	15.6	13.0	11.1	7.2	10.1	100.0	1,388	5.80	5.06
45-49	7.8	2.7	4.6	7.1	8.7	11.5	13.7	13.2	11.2	7.8	11.8	100.0	1,146	5.86	5.07
Total	39.0	7.9	8.4	8.5	8.6	7.3	6.9	4.9	3.7	2.3	2.5	100.0	13,137	2.73	2.44
CURRENTLY MARRIED WOMEN															
15-19	32.1	51.6	12.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	243	0.88	0.83
20-24	10.3	37.4	30.8	16.2	4.0	1.2	0.0	0.0	0.0	0.0	0.0	100.0	1,100	1.70	1.60
25-29	5.4	13.7	24.4	23.3	19.6	9.0	3.6	0.8	0.2	0.1	0.0	100.0	1,516	2.85	2.64
30-34	3.0	5.6	8.2	16.7	20.4	19.3	15.0	6.6	3.4	1.3	0.4	100.0	1,362	4.29	3.88
35-39	2.9	1.8	5.1	9.6	15.9	15.2	17.5	13.4	9.9	5.7	3.0	100.0	1,514	5.41	4.84
40-44	1.8	2.8	4.5	7.0	10.1	11.7	16.8	13.8	12.3	8.1	11.1	100.0	1,211	6.19	5.42
45-49	4.6	2.1	3.8	6.4	9.2	11.4	14.5	13.7	12.7	8.5	13.3	100.0	960	6.25	5.40
Total	5.4	11.4	12.9	13.4	13.6	11.3	11.0	7.6	5.9	3.6	3.9	100.0	7,906	4.29	3.84

The same pattern is replicated for currently married women, except that the mean number of children ever born is higher for currently married women (4.3 children) than for all women (2.7 children). The difference between all women and currently married women in the mean number of children ever born is due to a substantial proportion of young and unmarried women in the former category who exhibit lower fertility.

As expected, the mean number of children ever born and mean number of children surviving rise with the increasing age of women. Comparison of the mean number of children ever born with the mean number of living children reveals the experience of child loss among Timorese women. By the end of their reproductive years (age 45-49), women in Timor-Leste have given birth, on average, to 5.9 children, with 5.1 surviving.

Voluntary childlessness is uncommon in Timor-Leste, and currently married women with no children are likely to be those who are sterile or unable to bear children. The level of childlessness among married women at the end of their reproductive period can be used as an indicator of the level

of primary sterility. In Timor-Leste, primary sterility among older currently married women (45-49) is around 5 percent.

4.5 BIRTH INTERVALS

A birth interval is the length of time between two successive live births. Information on birth intervals provides insight into birth spacing patterns, which affect fertility as well as maternal, infant, and childhood mortality. Studies have shown that short birth intervals are associated with an increased risk of death for the mother and baby, particularly when the birth interval is less than 24 months.

Table 4.6 shows the percent distribution of non-first births in the five years preceding the survey by number of months since the preceding birth, according to background characteristics. The median birth interval in Timor-Leste is 29 months. The median number of months since a preceding birth increases markedly with age, from a low of 25.5 months among mothers age 15-19 to a high of 33.9 months among mothers age 40-49. There is no notable difference in the length of the median birth interval by birth order or sex of the preceding birth.

Table 4.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Age									
15-19	(17.0)	(26.8)	(46.0)	(7.2)	(1.1)	(1.9)	100.0	48	25.5
20-29	12.1	25.5	42.6	13.1	4.5	2.3	100.0	2,829	26.3
30-39	7.7	17.9	38.6	18.3	8.3	9.2	100.0	3,847	30.4
40-49	5.7	16.4	33.0	20.6	9.6	14.7	100.0	1,414	33.9
Birth order									
2-3	9.7	23.6	39.5	14.5	5.6	7.1	100.0	2,954	27.8
4-6	8.7	18.2	37.6	18.0	8.2	9.3	100.0	3,389	30.1
7+	8.0	19.0	41.0	18.4	7.8	5.8	100.0	1,796	29.3
Sex of preceding birth									
Male	8.9	19.4	39.4	16.9	7.0	8.4	100.0	4,134	29.3
Female	9.0	21.4	38.6	16.7	7.4	7.0	100.0	4,005	28.6
Survival of preceding birth									
Living	7.9	20.1	39.6	17.3	7.4	7.7	100.0	7,529	29.3
Dead	21.5	23.3	32.4	11.0	4.4	7.5	100.0	609	25.1
Residence									
Urban	11.4	20.6	32.8	17.8	7.4	10.0	100.0	1,912	29.2
Rural	8.2	20.3	40.9	16.5	7.1	7.0	100.0	6,226	28.9
District									
Aileu	7.0	22.9	40.3	17.4	6.9	5.6	100.0	296	28.9
Ainaro	10.4	25.2	41.7	13.2	4.6	5.0	100.0	495	27.2
Baucau	6.4	22.3	39.5	16.7	7.2	7.8	100.0	810	28.7
Bobonaro	9.1	20.4	39.0	14.2	8.6	8.8	100.0	755	29.4
Covalima	6.4	14.1	34.1	22.8	10.7	12.0	100.0	361	34.2
Dili	12.9	21.3	29.9	17.9	7.6	10.4	100.0	1,334	28.8
Ermera	10.3	19.8	42.2	15.0	6.3	6.3	100.0	1,060	27.8
Lautem	5.8	18.1	49.8	15.6	5.8	4.8	100.0	644	28.8
Liquiçá	10.3	18.8	41.6	16.3	6.8	6.2	100.0	472	29.4
Manatuto	8.6	21.0	44.3	13.3	6.0	6.8	100.0	351	28.3
Manufahi	9.2	20.7	44.2	15.4	5.3	5.1	100.0	310	27.6
Oecussi	5.4	16.5	36.1	21.4	9.7	11.0	100.0	679	32.5
Viqueque	8.2	22.2	37.1	19.9	6.9	5.7	100.0	572	28.7
Education									
No education	7.6	20.0	39.5	17.0	7.3	8.6	100.0	2,938	29.5
Primary	8.9	19.2	41.2	17.0	6.6	7.2	100.0	2,368	28.8
Secondary	10.5	21.8	36.8	16.4	7.5	6.9	100.0	2,687	28.4
More than secondary	5.8	18.6	35.6	19.1	6.8	14.2	100.0	145	31.9
Wealth quintile									
Lowest	7.6	20.3	39.5	18.8	6.7	7.1	100.0	1,812	29.6
Second	7.7	21.8	41.3	16.1	6.5	6.6	100.0	1,634	28.6
Middle	9.2	19.1	42.1	15.6	6.7	7.3	100.0	1,613	28.6
Fourth	10.0	20.5	40.5	14.3	7.4	7.4	100.0	1,538	28.1
Highest	10.5	20.0	31.3	19.0	8.7	10.4	100.0	1,542	30.7
Total	8.9	20.3	39.0	16.8	7.2	7.7	100.0	8,139	29.0

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. Figures in parentheses are based on 25-49 unweighted cases.

Studies have shown that the death of a preceding child leads to a shorter birth interval than when the preceding child survived. The median birth interval is four months shorter among births for which the previous sibling is dead than among births in which the previous sibling is alive (25.1 months and 29.3 months, respectively). This difference in the birth intervals may be due to the desire of parents to replace a dead child as well as the loss of the fertility-delaying effects of breastfeeding.

There are no marked differences in the median birth intervals by urban-rural residence, education of mother or wealth status of households. However, the median birth interval is noticeably higher in Covalima and Oecussi than in the other districts.

4.6 AGE AT FIRST BIRTH

The onset of childbearing at an early age has a major effect on the health of both mother and child. It also lengthens the reproductive period, thereby increasing the level of fertility. Table 4.7 shows the median age at first birth and the percentage of women who gave birth by exact ages, by five-year age cohorts.

Table 4.7 Age at first birth

Percentage of women age 15-49 who gave birth by exact ages, percentage who have never given birth, and median age at first birth, according to current age, Timor-Leste 2009-10

	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
Current age	15	18	20	22	25			
15-19	0.4	na	na	na	na	94.3	3,144	a
20-24	0.7	8.8	24.4	na	na	56.2	2,343	a
25-29	1.5	12.9	30.2	49.4	69.5	21.2	1,897	22.1
30-34	2.4	14.6	31.1	51.0	74.8	9.5	1,534	21.9
35-39	2.4	13.3	28.6	47.0	69.1	7.7	1,684	22.4
40-44	2.5	16.0	30.6	46.1	67.6	5.6	1,388	22.5
45-49	2.0	10.9	23.3	38.2	58.5	7.8	1,146	23.6
25-49	2.1	13.6	29.1	46.9	68.5	11.0	7,650	22.4

na = Not applicable
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

Childbearing begins early in Timor-Leste. The median age at first birth is 22.1 years for the youngest cohort (age 25-29) of women for whom a median age can be computed, and the median age varies between 21.9 among women age 30-34 and 23.6 years among women 45-49. Fourteen percent of Timorese women have given birth before reaching age 18, while nearly half have had a birth by age 22. More than two-thirds of Timorese women have become mothers by age 25.

Table 4.8 shows the median age at first birth by background characteristics. The median age at first birth is slightly higher in urban areas than in rural areas. The urban-rural difference is widest among women age 45-49. The median age at first birth is lowest among women in Covalima (21.3 years) and highest among women in Baucau (24.0 years). It is higher among women with secondary education than among women with no education.

Table 4.8 Median age at first birth

Median age at first birth among women age 25-49 years, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	22.4	22.8	23.5	22.3	22.7	22.7
Rural	22.0	21.5	22.1	22.6	24.0	22.3
District						
Aileu	21.8	20.9	21.8	23.0	22.7	22.0
Ainaro	21.7	21.0	23.2	22.7	24.7	22.4
Baucau	23.4	21.8	23.7	24.5	27.6	24.0
Bobonaro	22.9	21.1	22.2	22.2	23.6	22.4
Covalima	20.5	20.5	21.3	21.9	23.5	21.3
Dili	22.6	23.1	24.1	22.4	22.7	23.0
Ermera	22.5	21.7	21.4	21.6	23.5	21.9
Lautem	21.7	21.9	21.7	21.7	22.9	21.9
Liquiçá	23.2	20.9	21.6	21.6	22.9	21.9
Manatuto	22.0	22.8	23.3	22.5	22.9	22.7
Manufahi	21.9	21.5	21.9	22.8	24.1	22.1
Oecussi	20.5	20.8	22.0	22.5	21.3	21.5
Viqueque	21.0	21.9	22.9	24.0	25.2	22.7
Education						
No education	21.7	21.1	21.9	22.3	23.5	22.2
Primary	20.7	20.9	21.5	21.5	22.9	21.3
Secondary	22.6	22.5	23.5	23.8	26.4	23.0
More than secondary	a	26.2	27.4	29.9	23.2	a
Wealth quintile						
Lowest	21.1	21.1	22.4	23.5	26.1	22.5
Second	22.2	21.3	22.1	22.5	24.1	22.2
Middle	22.5	21.6	21.8	22.2	23.2	22.2
Fourth	22.2	22.1	21.7	21.9	22.5	22.1
Highest	22.4	22.8	23.8	22.4	23.0	22.9
Total	22.1	21.9	22.4	22.5	23.6	22.4

a = Omitted because less than 50 percent of the women had a birth before reaching the beginning of the age group

4.7 ADOLESCENT PREGNANCY AND MOTHERHOOD

Early teenage pregnancy can cause severe health problems for both the mother and child. Moreover, an early start to childbearing greatly reduces the educational and employment opportunities of women and is associated with higher levels of fertility. Table 4.9 shows the percentage of women age 15-19 who have had a live birth, the percentage who are pregnant with their first child and the combined percentage of those who have begun childbearing, by background characteristics.

Seven percent of women age 15-19 have already had a birth or are pregnant with their first child. The percentage of women who have begun childbearing increases rapidly with age, from 1 percent among women age 15 to 20 percent among women age 19. Rural women are more than twice as likely as urban women to have begun childbearing early. Adolescent childbearing is lowest in Dili (2 percent) and highest in Oecussi (16 percent). Teenage pregnancy is also markedly higher among women with little or no education (13 to 16 percent) than among mothers with secondary or higher levels of education. The percentage of teenagers who have begun childbearing is also relatively higher among those in the lowest three wealth quintiles compared with those in the highest two wealth quintiles.

Table 4.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child and percentage who have begun childbearing, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	0.2	0.8	1.0	718
16	1.4	0.8	2.3	636
17	2.3	1.4	3.7	626
18	8.6	2.9	11.5	607
19	18.0	2.3	20.3	557
Residence				
Urban	2.9	0.8	3.7	771
Rural	6.6	1.8	8.4	2,373
District				
Aileu	3.9	0.7	4.6	161
Ainaro	5.3	2.8	8.1	154
Baucau	4.5	1.9	6.4	341
Bobonaro	9.9	1.0	10.9	329
Covalima	8.3	1.2	9.5	222
Dili	1.6	0.4	2.0	506
Ermera	4.6	0.8	5.3	398
Lautem	5.4	2.0	7.4	211
Liquiçá	4.4	1.6	6.0	190
Manatuto	7.5	1.7	9.2	161
Manufahi	6.1	2.4	8.4	96
Oecussi	13.3	2.5	15.8	179
Viqueque	4.8	5.2	10.0	197
Education				
No education	11.1	2.1	13.2	370
Primary	12.4	3.1	15.5	626
Secondary	2.8	1.1	3.8	2,138
More than secondary	*	*	*	11
Wealth quintile				
Lowest	7.1	2.0	9.1	551
Second	7.3	2.0	9.3	589
Middle	7.3	1.8	9.1	645
Fourth	4.8	1.7	6.5	664
Highest	2.5	0.5	3.0	695
Total	5.7	1.6	7.2	3,144

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

FAMILY PLANNING 5

In 2002, the Council of Ministers for Timor-Leste developed and approved the first family planning policy for the country (MOH, 2004a). Despite the presence of this policy, reproductive choice remains a relatively new concept for families in Timor-Leste. Findings from the 2009-10 TLDHS suggest that the total fertility ratio (TFR) of 5.7 children per women in Timor-Leste is the highest in South East Asia and also in Asia, where the rank is shared with Afghanistan (PRB, 2010). This high total fertility rate has immediate and serious implications for childbearing women and the health care system. The ability to provide quality reproductive health services will be severely compromised because existing resources are scarce, and high fertility will only increase these demands on the system.

According to the International Conference on Population and Development (ICPD) Program of Action, family planning programs must enable couples and individuals to decide freely and responsibly the number and spacing of their children; to provide individuals and couples with the information and means to make these decisions; to ensure informed choices; and to make available a full range of safe and effective family planning methods (MOH, 2004a).

Family planning continues to be a priority of the National Reproductive Health Strategy 2004–2015. The objectives of the National Family Planning Program are (1) to reduce the population growth rate gradually by promoting the concept of a small family norm to the population in general and to the rural population in particular; (2) to increase the availability of and the demand for family planning services; (3) to provide quality services; and (4) to reduce unmet need for services (MOH, 2004b).

The National Family Planning Program also aims to expand and sustain adequate family planning services at the community level utilizing all health facilities. To achieve this, family planning services are being offered at integrated community health service (SISCa) posts. These are mobile outreach services that provide integrated care, including health promotion, on a monthly basis, in almost every *suco* in the country. Health facilities have been encouraged to play a more effective role in the national family planning program. The Ministry of Health (MOH) plans to train health care providers in not only the technical and managerial aspects of contraception but also in appropriate interpersonal communication and counseling skills. Contraceptive services will be provided as part of primary health care. Advice on natural methods (standard days method and lactational amenorrhea method) as well as the provision of condoms, pills, and injectables will be provided at the health post level; implants and IUDs will be available at level two community health centers with beds (CHC-2); and sterilization will be available at referral hospitals and higher level health centers that have appropriate equipment and trained staff. Specific strategies will be developed to cover areas of unmet demand for family planning, particularly for older mothers still of childbearing age.

This chapter evaluates the level of knowledge of various contraceptive methods and discusses past and current prevalence of use. For users of periodic abstinence (rhythm method), knowledge of the ovulatory cycle is examined, and for those relying on sterilization, the timing of the method of adoption is reviewed. Special attention is focused on the source of contraception, informed choice, non-use, and intention to use contraceptive methods in the future. The chapter also contains information on exposure to family planning messages through the media, contact with family planning providers, and a husband's knowledge of his wife's use of contraception. These topics are of practical use to policy and program administrators to formulate effective family planning strategies. Although the chapter focus is on women, results from the survey of men are also presented because men play an important role in the realization of reproductive goals. Wherever possible, comparisons are made with findings from previous surveys in order to evaluate progress in family planning in Timor-Leste over time.

5.1 KNOWLEDGE OF CONTRACEPTIVE METHODS

Knowledge of contraceptive methods is an important precursor to use. The ability to spontaneously name or recognize a family planning method when described is a simple test of a respondent's familiarity with a method but is not necessarily an indication of the comprehensiveness of their knowledge. Information on knowledge of contraception was collected by first asking a respondent to name ways or methods by which a couple could delay or avoid pregnancy. If the respondent failed to mention a particular method spontaneously, the interviewer described the method and asked whether the respondent recognized it. The survey collected information on eleven modern family planning methods—female and male sterilization, the pill, the IUD, injectables, implants, female and male condoms, lactational amenorrhea method (LAM), emergency contraception, the standard days method, and two traditional methods—rhythm method and withdrawal. Folk methods, such as use of plants and herbs, could be mentioned spontaneously by respondents.

In Table 5.1, information about knowledge of specific contraceptive methods is presented for all women and men as well as for currently married women and men and for sexually active unmarried men. Findings from the 2009-10 TLDHS show that 78 percent of currently married women and 66 percent of currently married men in Timor-Leste know of at least one modern method of family planning. The most widely known modern contraceptive methods among currently married women are injectables (70 percent) and the pill (58 percent). Currently married men are most likely to know of the male condom (54 percent) and injectables (46 percent). Twenty-seven percent of currently married men mentioned knowledge of a traditional method compared with 22 percent of currently married women. Sexually active unmarried men are most knowledgeable about the male condom (90 percent) followed by injectables (55 percent). The pattern of knowledge for all women and men is similar to that described for currently married women and men. The mean number of methods known is slightly higher among married women (3.3) than among married men (3.0).

Table 5.1 Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents, and sexually active unmarried respondents age 15-49 who know any contraceptive method, by specific method, Timor-Leste 2009-10

	Women		Men		
Method	All women	Currently married women	All men	Currently married men	Sexually active unmarried men[1]
Any method	71.4	78.1	66.4	66.6	92.8
Any modern method	71.1	77.7	66.1	66.4	92.1
Female sterilization	20.0	23.9	21.2	26.8	31.7
Male sterilization	4.0	4.8	8.7	11.3	13.6
Pill	50.1	57.6	33.1	40.3	47.7
IUD	28.1	35.9	15.7	20.6	21.3
Injectables	61.2	70.3	36.0	45.5	55.3
Implants	31.5	40.0	19.3	25.3	35.4
Male condom	27.7	26.2	58.0	53.7	90.4
Female condom	10.4	10.1	10.4	11.1	15.3
Lactational amenorrhea (LAM)	7.0	9.5	4.8	7.1	0.4
Emergency contraception	3.2	4.0	3.7	5.2	2.2
Standard days method	13.2	16.8	9.8	14.6	6.8
Any traditional method	16.9	21.7	23.1	27.4	54.9
Rhythm	13.2	17.0	8.3	12.5	6.1
Withdrawal	7.7	10.2	19.4	21.7	54.6
Folk method	2.7	3.8	3.3	5.1	0.0
Mean number of methods known by respondents 15-49	2.8	3.3	2.5	3.0	3.8
Number of respondents	13,137	7,906	4,076	2,158	215

Note: There are too few sexually active unmarried women to analyze their knowledge separately.
[1] Had last sexual intercourse within 30 days preceding the survey

According to the 2003 DHS, knowledge of contraception for ever-married women and men was 38 percent and 30 percent, respectively. These percentages are not exactly comparable to the 2009-10 TLDHS; they also include knowledge among women and men who are widowed and divorced, and as such may be slightly inflated. Nevertheless, it is important to note that over the past seven years there has been a considerable increase in the overall knowledge of contraceptive methods in the country. This increase in knowledge may be attributed to the successful dissemination of family planning messages through the mass media and, to a lesser degree, through service providers in family planning and reproductive health.

5.2 KNOWLEDGE OF CONTRACEPTIVE METHODS BY BACKGROUND CHARACTERISTICS

The study of differentials in knowledge of contraceptive methods by background characteristics is important because it helps to identify subgroups of the population to target for family planning services. Table 5.2 presents, by background characteristics, the percentages of currently married women and men who have heard of any method and any modern method of family planning.

Table 5.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Timor-Leste 2009-10

	Women			Men		
Background characteristic	Heard of any method	Heard of any modern method[1]	Number of women	Heard of any method	Heard of any modern method[1]	Number of men
Age						
15-19	70.4	70.4	243	*	*	4
20-24	77.3	77.2	1,100	66.4	66.4	125
25-29	82.3	82.1	1,516	69.0	69.0	359
30-34	83.3	82.8	1,362	73.8	73.0	368
35-39	78.3	78.2	1,514	70.1	70.1	492
40-44	77.1	76.5	1,211	61.2	61.1	433
45-49	68.2	67.2	960	58.9	58.7	378
Residence						
Urban	88.7	88.3	2,025	84.0	83.6	567
Rural	74.5	74.1	5,881	60.4	60.2	1,592
District						
Aileu	68.8	68.7	299	59.6	59.6	92
Ainaro	57.8	57.4	382	51.4	50.7	101
Baucau	56.2	55.8	852	31.2	31.0	237
Bobonaro	78.8	78.3	739	87.6	87.6	170
Covalima	95.5	95.5	458	92.8	92.8	123
Dili	92.9	92.6	1,459	87.5	87.0	416
Ermera	72.1	71.3	881	17.5	17.5	233
Lautem	88.0	87.6	541	87.1	87.1	163
Liquiçá	76.2	75.6	460	75.0	75.0	124
Manatuto	74.8	74.6	353	100.0	100.0	96
Manufahi	78.6	77.8	319	38.9	37.4	77
Oecussi	95.1	94.9	603	91.2	91.2	165
Viqueque	61.8	61.8	559	47.2	47.2	159
Education						
No education	66.0	65.5	2,909	40.5	40.3	523
Primary	80.3	79.8	2,027	62.4	62.4	650
Secondary	87.9	87.6	2,739	81.4	81.0	853
More than secondary	96.5	96.5	231	94.3	94.3	132
Wealth quintile						
Lowest	65.5	65.0	1,467	57.2	56.9	413
Second	67.9	67.1	1,487	48.5	48.5	408
Middle	76.7	76.6	1,559	62.3	62.3	411
Fourth	84.3	83.9	1,571	72.1	71.5	447
Highest	92.5	92.4	1,821	88.4	88.3	479
Total 15-49	78.1	77.7	7,906	66.6	66.4	2,158

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhea method (LAM), standard days method, and emergency contraception

Knowledge of a modern method rises from 70 percent among currently married women age 15-19 to a peak at 83 percent among those age 30-34 and then declines to 67 percent among the oldest cohort of women. Currently married women in urban areas (88 percent) are more likely to have heard about a modern method of family planning than rural women (74 percent), perhaps reflecting the wider availability and easier access to methods in urban than in rural areas as well as better penetration of mass media and higher literacy in urban areas. Knowledge of a modern method varies widely by district and ranges from a low of 56 percent of currently married women in Baucau to a high of 96 percent in Covalima. Knowledge rises with level of education, from 66 percent among women with no education to 97 percent among women with more than secondary education. Similarly, there is a direct relationship between knowledge and wealth quintile, with knowledge rising from 65 percent of currently married women in the poorest households to 92 percent of women in the richest households. Currently married men exhibit a similar pattern in knowledge by background characteristics, with the exception of knowledge by district, where men in Ermera are least likely to know of a modern method (18 percent) in contrast with men in Manatuto who have universal knowledge of contraceptives.

5.3 Ever Use of Contraception

Data on ever use of contraception has special significance because it reveals the cumulative success of programs promoting the use of family planning among couples. Ever use refers to use of a method at any time, with no distinction between past and present use. In the 2009-10 TLDHS, respondents who had heard of a method of family planning were asked if they had ever used a method.

Table 5.3.1 shows the percentage of all women and currently married women who have ever used family planning by specific method and age. Thirty-two percent of currently married women have ever used a method of contraception, and 30 percent have ever used a modern method. Among currently married women, nearly one in four has ever used injectables, making it the most commonly used modern method. Four percent of currently married women have used the pill, and 2 percent each have used the IUD or implants. About 3 percent of currently married women report having used traditional methods.

Ever use of contraception varies with women's age. The pattern of ever use is curvilinear, with use being lowest among women in the youngest age group (15-19), increasing with age, and reaching a plateau among women in their thirties before declining thereafter. The level of ever-use of any modern method among currently married women rises to a high of 35 percent among those age 30-39 and then declines to 24 percent among women age 45-49. Ever-use among all women follows a similar pattern.

The 2009-10 TLDHS collected information on ever use of contraception for men but with respect to five male methods only: male sterilization, condoms, standard days method, rhythm method, and withdrawal. As evident in Table 5.3.2, fewer than one in ten currently married men age 15-49 (9 percent) has ever used a method, with most having used a modern method (6 percent). Ever-use is highest among sexually active unmarried men, with nearly one in two men having ever used a method. Among currently married men, the condom is the most commonly used method (3 percent), and they are much more likely to report ever-use of condoms than women. Two percent of currently married men reported having used the standard days method. There is no clear pattern between ever-use and age among men. Ever-use of a modern method declines from 7 percent among currently married men age 20-24 to a plateau around 6 percent among those age 25-44, and then decreases to 3 percent among the oldest cohort. Five percent of currently married men report having used a traditional method, with withdrawal twice as likely to have been used as the rhythm method.

Table 5.3.1 Ever use of contraception: Women

Percentage of all women and of currently married women age 15-49 who have ever used any contraceptive method by method, according to age, Timor-Leste 2009-10

Age	Any method	Any modern method	Modern method											Any traditional method	Traditional method			Number of women
			Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Female condom	LAM	Emergency contraception	Standard days method		Rhythm	Withdrawal	Folk method	
ALL WOMEN																		
15-19	0.8	0.8	0.0	0.0	0.1	0.0	0.5	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	3,144
20-24	9.8	9.1	0.0	0.0	1.3	0.1	7.5	0.4	0.0	0.0	0.2	0.0	0.2	0.8	0.4	0.3	0.1	2,343
25-29	26.7	25.9	0.1	0.0	3.1	1.0	22.2	0.9	0.7	0.0	0.2	0.0	0.5	1.4	0.6	0.5	0.4	1,897
30-34	33.2	31.5	0.8	0.1	3.9	2.5	24.8	1.3	1.2	0.0	0.5	0.0	0.6	2.6	1.3	1.0	0.4	1,534
35-39	33.8	32.4	1.0	0.0	4.3	1.9	26.4	1.5	0.2	0.0	0.4	0.0	0.8	2.3	1.5	0.5	0.5	1,684
40-44	32.8	30.5	0.8	0.1	4.8	2.3	23.0	2.1	0.4	0.0	0.5	0.0	1.1	3.7	1.9	1.0	1.3	1,388
45-49	23.3	22.0	2.0	0.0	2.5	1.0	16.1	2.1	0.0	0.0	0.4	0.0	0.5	2.0	0.9	0.5	0.8	1,146
Total	19.5	18.5	0.5	0.0	2.4	1.0	14.8	0.9	0.3	0.0	0.2	0.0	0.4	1.5	0.8	0.5	0.4	13,137
CURRENTLY MARRIED WOMEN																		
15-19	8.9	7.9	0.0	0.0	1.4	0.0	6.3	0.0	0.2	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	243
20-24	20.5	19.0	0.0	0.0	2.9	0.3	15.7	0.8	0.1	0.0	0.3	0.0	0.4	1.7	0.8	0.7	0.2	1,100
25-29	32.8	31.8	0.1	0.0	3.7	1.2	27.2	1.1	0.8	0.0	0.3	0.0	0.7	1.8	0.7	0.6	0.4	1,516
30-34	37.1	35.3	0.9	0.1	4.4	2.9	27.7	1.5	1.3	0.0	0.5	0.0	0.7	3.0	1.5	1.2	0.5	1,362
35-39	36.9	35.4	1.1	0.0	4.8	2.0	28.7	1.6	0.2	0.0	0.4	0.0	0.9	2.6	1.7	0.6	0.6	1,514
40-44	35.8	33.6	0.9	0.1	5.3	2.5	25.1	2.3	0.5	0.0	0.6	0.0	1.3	3.7	1.8	1.0	1.5	1,211
45-49	25.6	24.3	2.2	0.0	2.8	1.2	17.8	2.3	0.0	0.0	0.5	0.0	0.6	2.2	0.9	0.6	1.0	960
Total	31.5	29.9	0.8	0.0	4.0	1.7	23.9	1.5	0.5	0.0	0.4	0.0	0.7	2.5	1.2	0.8	0.7	7,906

LAM = Lactational amenorrhea method

Table 5.3.2 Ever use of contraception: Men

Percentage of all men, currently married men, and sexually active unmarried men age 15-49 who have ever used any contraceptive method by method, according to age, Timor-Leste 2009-10

Age	Any method	Any modern method	Modern method: Male sterilization	Modern method: Male condom	Modern method: Standard days method	Any traditional method	Traditional method: Rhythm	Traditional method: Withdrawal	Number of men
ALL MEN									
15-19	4.4	1.7	0.1	1.5	0.2	3.1	0.1	3.1	994
20-24	13.9	8.7	0.2	8.1	0.5	6.9	0.3	6.6	643
25-29	13.9	10.1	0.6	9.4	0.4	6.0	0.7	5.4	586
30-34	10.5	8.0	0.9	5.5	1.6	4.6	1.6	3.5	439
35-39	9.3	6.0	0.4	3.8	2.1	5.2	1.4	4.3	553
40-44	10.1	5.9	0.2	3.5	2.9	5.8	2.2	3.9	462
45-49	5.8	2.8	0.1	1.5	1.2	3.7	1.4	2.9	400
Total 15-49	9.4	5.8	0.3	4.6	1.1	4.9	0.9	4.3	4,076
CURRENTLY MARRIED MEN									
15-19	*	*	*	*	*	*	*	*	4
20-24	8.8	7.0	0.0	5.5	1.5	5.3	1.5	3.7	125
25-29	10.0	6.2	1.0	5.0	0.4	5.4	0.7	4.7	359
30-34	8.3	5.6	1.1	2.7	1.9	4.9	1.9	3.5	368
35-39	9.8	6.3	0.5	3.8	2.3	5.6	1.6	4.6	492
40-44	9.8	5.5	0.3	2.9	3.1	6.1	2.4	4.0	433
45-49	6.2	3.0	0.1	1.5	1.3	3.9	1.5	3.1	378
Total 15-49	8.9	5.5	0.5	3.3	1.9	5.2	1.6	4.0	2,158
SEXUALLY ACTIVE UNMARRIED MEN[1]									
15-19	57.2	7.8	0.0	7.8	0.0	50.5	0.0	50.5	45
20-24	48.8	22.5	0.0	21.7	0.7	28.6	0.0	28.6	81
25-29	48.8	38.3	0.0	38.3	1.6	17.4	1.0	16.4	58
30-49	35.5	30.4	0.0	30.4	0.0	6.7	0.0	6.7	31
Total 15-49	48.6	24.8	0.0	24.5	0.7	27.0	0.3	26.8	215

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Men who had sexual intercourse within 30 days preceding the survey

5.4 CURRENT USE OF CONTRACEPTION

Current use of contraception is defined as the proportion of women who reported the use of a family planning method at the time of the interview. The level of current use—usually calculated among currently married women—is the most widely used and valuable measure of the success of a family planning program. Table 5.4 shows the percent distribution by age of all women and currently married women who are using specific family planning methods. Similar information on current use was not collected for men.

Table 5.4 shows that more than one in five currently married women (22 percent) is using a method of family planning, with 21 percent using a modern contraceptive method. This indicates that modern contraceptive methods are highly favored over either natural family planning methods or other traditional methods.

Contraceptive use varies by age. Use is lower among younger women (because they are in the early stage of family building) and among older women (some of whom are no longer fecund) than among those at intermediate ages. For example, current use of a modern contraceptive method is 7 percent among currently married women age 15-19, rises to 26-27 percent among women age 30-39, and then drops sharply to 12 percent at age 45-49. The low use among older women may be due to a combination of decreased fertility and lower awareness of contraception in this age cohort.

Injectables are by far the most popular modern method, and they are used by 16 percent of currently married women. Two percent of women use the pill, and about 1 percent of women each use the IUD or implants, or they are sterilized. Most women who are sterilized are over age 30. Injectables are popular among women age 20-44.

One percent of women report currently using a traditional method. The rhythm method is slightly more popular than withdrawal.

Table 5.4 Current use of contraception by age

Percent distribution of all women and of currently married women age 15-49 by contraceptive method currently used, according to age, Timor-Leste 2009-10

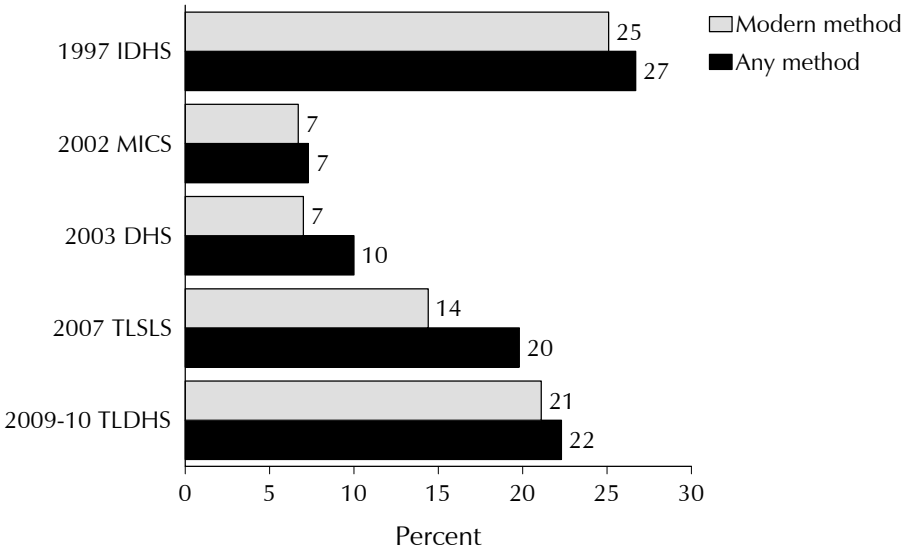
Age	Any method	Any modern method	Modern method								Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilization	Pill	IUD	Injectables	Implants	Male condom	LAM	Standard days method		Rhythm	Withdrawal	Folk method			
ALL WOMEN																	
15-19	0.6	0.6	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	99.4	100.0	3,144
20-24	7.5	7.0	0.0	0.6	0.1	5.8	0.3	0.0	0.0	0.2	0.5	0.2	0.3	0.0	92.5	100.0	2,343
25-29	19.2	18.7	0.1	1.4	0.8	15.3	0.7	0.3	0.0	0.2	0.5	0.2	0.2	0.1	80.8	100.0	1,897
30-34	24.8	23.8	0.8	1.5	2.4	17.0	0.8	0.7	0.0	0.5	1.0	0.5	0.3	0.1	75.2	100.0	1,534
35-39	24.5	23.5	1.0	2.0	1.5	17.6	0.8	0.0	0.1	0.6	1.0	0.5	0.4	0.1	75.5	100.0	1,684
40-44	21.5	19.3	0.8	2.3	1.3	13.1	1.2	0.1	0.0	0.5	2.2	1.2	0.3	0.8	78.5	100.0	1,388
45-49	11.3	10.4	2.0	0.4	0.7	6.5	0.5	0.0	0.1	0.2	0.9	0.2	0.1	0.5	88.7	100.0	1,146
Total	13.6	12.8	0.5	1.0	0.8	9.6	0.5	0.1	0.0	0.3	0.7	0.3	0.2	0.2	86.4	100.0	13,137
CURRENTLY MARRIED WOMEN																	
15-19	7.9	6.8	0.0	0.9	0.0	5.9	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	92.1	100.0	243
20-24	15.7	14.6	0.0	1.4	0.2	12.1	0.6	0.0	0.0	0.3	1.1	0.4	0.7	0.0	84.3	100.0	1,100
25-29	23.8	23.1	0.1	1.7	1.0	18.9	0.8	0.4	0.0	0.2	0.7	0.3	0.3	0.1	76.2	100.0	1,516
30-34	27.8	26.7	0.9	1.7	2.7	19.1	0.9	0.8	0.0	0.6	1.1	0.6	0.4	0.2	72.2	100.0	1,362
35-39	27.0	25.9	1.1	2.2	1.7	19.3	0.8	0.0	0.1	0.6	1.1	0.6	0.4	0.1	73.0	100.0	1,514
40-44	24.6	22.1	0.9	2.7	1.5	14.9	1.4	0.2	0.0	0.6	2.5	1.3	0.3	0.9	75.4	100.0	1,211
45-49	13.2	12.2	2.2	0.4	0.8	7.8	0.6	0.0	0.1	0.2	1.0	0.2	0.2	0.6	86.8	100.0	960
Total	22.3	21.1	0.8	1.7	1.3	15.7	0.8	0.2	0.0	0.4	1.2	0.6	0.4	0.3	77.7	100.0	7,906

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method

5.5 TREND IN CURRENT USE OF CONTRACEPTION

There has been a marked increase in the use of contraception by currently married women since 2002. Use of modern methods doubled in the five years between 2002 and 2007 and rose by nearly 50 percent in the three years between the 2007 TLSLS and the 2009-10 TLDHS. The increase in use of modern methods contributed to a three-fold increase in overall contraceptive use, from 7 percent to 21 percent, in a matter of 7 to 8 years. It is interesting to note that use of a modern method was 25 percent in 1997 (CBS et al., 1998) but fell sharply to 7 percent following the struggle for national independence when there was a total disruption of services previously provided through the Indonesian National Family Planning Program (BKKBN), which had extensive service networks extending down to volunteers at the village level.

Figure 5.1 **Trends in Use of Contraception among Currently Married Women, 1997-2010**



Note: Lactational amenorrhea method (LAM) is included as a traditional method in the 2002 MICS and the 2003 DHS, but as a modern method in the 2009-10 TLDHS. Timor-Leste 2009-10

5.6 CURRENT USE OF CONTRACEPTION BY BACKGROUND CHARACTERISTICS

The study of differentials in current use of contraception is important because it helps to identify subgroups of the population to target for family planning services. Table 5.5 presents the percent distribution of currently married women by their current use of family planning methods, according to background characteristics. This table allows comparison of levels of current contraceptive use among major population groups. It also permits an examination of differences in the method mix among current users within the various subgroups.

Substantial differences in the use of contraceptive methods among subgroups of currently married women can be seen in Table 5.5. Women in urban areas are more likely to use a family planning method than rural women, reflecting wider availability and easier access to methods in urban than in rural areas. The contraceptive prevalence rate for modern methods is 28 percent in urban areas, compared with 19 percent in rural areas.

Table 5.5 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Any method	Any modern method	Modern method								Any tradi-tional method	Traditional method			Not currently using	Total	Number of women
			Female sterili-zation	Pill	IUD	Inject-ables	Implants	Male condom	LAM	Standard days method		Rhythm	With-drawal	Folk method			
Residence																	
Urban	30.4	28.2	1.7	3.7	2.6	17.7	0.6	1.0	0.1	0.8	2.2	1.6	0.6	0.0	69.6	100.0	2,025
Rural	19.6	18.7	0.5	1.0	0.9	15.0	0.9	0.0	0.0	0.3	0.9	0.2	0.3	0.4	80.4	100.0	5,881
District																	
Aileu	20.7	19.5	0.2	1.6	0.7	16.3	0.5	0.0	0.2	0.0	1.2	1.2	0.0	0.0	79.3	100.0	299
Ainaro	14.1	13.7	0.2	0.9	0.8	10.7	0.8	0.0	0.0	0.4	0.4	0.0	0.0	0.4	85.9	100.0	382
Baucau	8.0	7.6	1.0	1.2	0.7	3.5	0.6	0.0	0.0	0.6	0.4	0.2	0.0	0.2	92.0	100.0	852
Bobonaro	20.4	20.4	0.8	1.0	0.8	16.1	1.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	79.6	100.0	739
Covalima	43.8	43.2	0.9	1.4	0.6	38.6	1.3	0.0	0.0	0.4	0.6	0.6	0.0	0.0	56.2	100.0	458
Dili	33.2	30.5	2.1	4.5	2.7	18.2	0.6	1.3	0.2	0.9	2.6	2.0	0.6	0.0	66.8	100.0	1,459
Ermera	18.8	15.3	0.0	0.4	0.6	13.9	0.4	0.0	0.0	0.0	3.5	0.0	1.8	1.8	81.2	100.0	881
Lautem	17.7	17.5	0.3	1.6	1.9	13.4	0.2	0.0	0.0	0.1	0.2	0.2	0.0	0.0	82.3	100.0	541
Liquiçá	24.5	23.8	1.1	2.8	1.6	16.9	1.0	0.0	0.0	0.5	0.7	0.0	0.0	0.7	75.5	100.0	460
Manatuto	20.7	20.0	0.8	1.8	2.2	15.2	0.2	0.0	0.0	0.0	0.7	0.4	0.2	0.2	79.3	100.0	353
Manufahi	25.3	24.2	0.2	1.1	1.6	19.1	1.7	0.0	0.0	0.6	1.0	0.0	1.0	0.0	74.7	100.0	319
Oecussi	24.1	23.4	0.2	0.1	0.6	19.4	2.5	0.1	0.0	0.5	0.7	0.3	0.3	0.2	75.9	100.0	603
Viqueque	13.1	12.7	0.0	0.4	1.0	10.3	0.4	0.0	0.0	0.7	0.4	0.4	0.0	0.0	86.9	100.0	559
Education																	
No education	15.9	14.7	0.6	0.5	0.8	11.8	0.9	0.0	0.1	0.1	1.1	0.1	0.4	0.7	84.1	100.0	2,909
Primary	25.8	25.1	0.7	1.0	1.2	20.8	1.2	0.0	0.0	0.2	0.7	0.3	0.3	0.1	74.2	100.0	2,027
Secondary	25.7	24.2	0.9	3.5	1.8	16.3	0.6	0.3	0.0	0.8	1.5	1.2	0.3	0.0	74.3	100.0	2,739
More than secondary	32.8	29.5	2.3	1.8	3.8	13.8	0.3	4.6	0.9	1.9	3.3	1.6	1.7	0.0	67.2	100.0	231
Wealth quintile																	
Lowest	15.0	14.5	0.3	0.4	0.7	12.3	0.7	0.0	0.0	0.0	0.5	0.0	0.0	0.4	85.0	100.0	1,467
Second	16.4	15.5	0.1	0.7	0.6	13.2	0.7	0.0	0.1	0.2	0.9	0.1	0.2	0.6	83.6	100.0	1,487
Middle	18.0	16.9	0.4	0.7	0.4	14.4	1.0	0.0	0.0	0.1	1.1	0.1	0.6	0.3	82.0	100.0	1,559
Fourth	25.3	24.4	1.0	1.3	1.5	19.5	0.6	0.0	0.0	0.5	0.9	0.4	0.4	0.2	74.7	100.0	1,571
Highest	34.2	31.7	1.8	4.9	3.1	18.3	1.2	1.1	0.1	1.3	2.4	1.8	0.6	0.0	65.8	100.0	1,821
Number of living children																	
0	0.7	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	99.3	100.0	469
1-2	16.7	16.0	0.3	1.4	0.6	12.4	0.6	0.5	0.0	0.3	0.7	0.3	0.4	0.0	83.3	100.0	2,103
3-4	26.7	25.6	0.8	2.5	1.6	18.6	1.1	0.4	0.1	0.6	1.1	0.6	0.4	0.1	73.3	100.0	2,421
5+	26.2	24.4	1.3	1.5	1.8	18.2	1.0	0.0	0.1	0.5	1.8	0.8	0.4	0.7	73.8	100.0	2,913
Total	22.3	21.1	0.8	1.7	1.3	15.7	0.8	0.2	0.0	0.4	1.2	0.6	0.4	0.3	77.7	100.0	7,906

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method

Contraceptive use varies by district with much of the difference due to the use of injectables. Use of a modern method among currently married women is highest in Covalima (43 percent) and lowest in Baucau (8 percent). The most popular method in Covalima is injectables where 39 percent of currently married women use them. Three in ten currently married women in Dili, the most urbanized district in the country, use a modern method of family planning, with 18 percent currently using injectables, 5 percent using the pill, 3 percent using IUDs, and 2 percent using sterilization. About 1 percent use implants, the male condom, and the standard days method. The scale-up in the provision of implants in Timor-Leste has been relatively recent, but at the current rate, they may soon overtake the IUD as the method of choice (Marie Stopes International, 2010). Sterilization services have in recent years been very limited, with most sterilizations provided by visiting surgical providers during a short window of time. Data for 2010 show that there is a full-time provider of both male and female sterilization services currently as well as a plan for training others in these surgical techniques, so use of sterilization could be expected to increase significantly over the coming years (Marie Stopes International, 2010).

Although current use varies markedly between women who have some education and those who have none, there is little variation among educated women by specific level of education. Women with more than secondary education (30 percent) are twice as likely to use a modern method of contraception as women with no education (15 percent). Women with more than secondary education are more likely than other women to use male condoms (5 percent) and IUDs (4 percent), and they are more likely to be sterilized and to use the standard days method (2 percent each). On the other hand, injectables are most common among women with primary education (21 percent).

Wealth has a positive effect on women's contraceptive use, with modern contraceptive use increasing markedly as household wealth increases, from 15 percent among currently married women in the lowest wealth quintile to 32 percent among those in the highest wealth quintile.

There is a direct association between the use of modern family planning methods and the number of children that women have, except among women with five or more children. Not surprisingly, use is lowest among women with no children (less than 1 percent), rises to 16 percent among women with 1 to 2 children, is 26 percent among women with three to four children, and then decreases slightly to 24 percent among women with five or more children. As expected, female sterilization is popular among high-parity women (5+ children).

Current use of traditional methods is more common in urban than in rural areas and is highest in Ermera district, among women with more than secondary education, among women in the highest wealth quintile, and among women with five or more children. Effective use of a traditional method requires knowledge of a woman's fertile period, and educated women, who are also more likely to be urban and belong to wealthier households, are most likely to effectively understand and use a traditional method; hence there is this uncommon pattern of use by educated, urban, wealthy women. Ermera appears to be an exception to this demographic pattern, but a detailed examination reveals that Ermera has a different pattern of use of traditional methods when compared with the pattern in Dili. Folk methods and withdrawal are the predominant methods in Ermera (at 2 percent each), with less than 0.1 percent using the rhythm method. Dili, on the other hand, has 2 percent of currently married women using the rhythm method. Similarly, the use of folk methods shifts to use of the rhythm method as education increases.

5.7 Number of Children at First Use of Contraception

To examine the timing of initial family planning use during the family building process, the 2009-10 TLDHS asked all women about the number of living children they had at first use. Table 5.6 shows this information by age group and allows analysis of cohort changes in parity at first use of contraception.

Use increases with parity but with little difference among women with 1, 2, or 3 children (about 3 percent each). Nine percent of all women first used a method of family planning when they had four or more children. Younger women report first use of contraception at lower parities than older women, suggesting a shift toward the early use of contraception and the desire to delay childbearing among younger Timorese women. For example, 9 percent of women age 25-29 first used contraception when they had 2 children compared with 2 percent of women age 45-49.

Table 5.6 Number of children at first use of contraception

Percent distribution of women age 15-49 by number of living children at the time of first use of contraception, according to current age, Timor-Leste 2009-10

		Number of living children at time of first use of contraception							Number of
Current age	Never used	0	1	2	3	4+	Missing	Total	women
15-19	99.2	0.2	0.4	0.1	0.1	0.0	0.0	100.0	3,144
20-24	90.2	0.1	4.1	3.5	1.6	0.4	0.0	100.0	2,343
25-29	73.3	0.1	4.5	8.7	6.8	6.5	0.1	100.0	1,897
30-34	66.8	0.3	5.6	4.3	6.1	16.6	0.3	100.0	1,534
35-39	66.2	0.2	3.5	2.4	5.8	21.8	0.1	100.0	1,684
40-44	67.2	0.4	3.7	3.1	5.2	20.4	0.0	100.0	1,388
45-49	76.7	0.2	1.8	2.0	2.7	16.5	0.0	100.0	1,146
Total	80.5	0.2	3.1	3.2	3.5	9.4	0.1	100.0	13,137

5.8 KNOWLEDGE OF FERTILE PERIOD

An elementary knowledge of reproductive physiology provides a useful background for the successful practice of the rhythm method. As shown in Tables 5.1, 5.3.1 and 5.4, respectively, 13 percent of all women and 17 percent of currently married women have heard of the rhythm method, but only 1 percent of currently married women have ever used the rhythm method, and less than half a percent are currently using the method. Table 5.7 shows respondents' knowledge about the time during the menstrual cycle when a woman is most likely to get pregnant.

Table 5.7 Knowledge of fertile period

Percent distribution of women age 15-49 by knowledge of the fertile period during the ovulatory cycle, according to current use of the rhythm method, Timor-Leste 2009-10

Perceived fertile period	Users of rhythm method	Nonusers of rhythm method	All women
Just before her menstrual period begins	(25.2)	4.7	4.8
During her menstrual period	(0.0)	3.3	3.3
Right after her menstrual period has ended	(38.5)	46.2	46.2
Halfway between two menstrual periods	(19.7)	9.5	9.6
Other	(0.0)	0.0	0.0
No specific time	(15.3)	17.5	17.5
Don't know	(1.2)	18.7	18.6
Total	100.0	100.0	100.0
Number of women	44	13,093	13,137

Note: Figures in parentheses are based on 25-49 unweighted cases.

Overall, only one in ten women correctly reported the most fertile time as being halfway between two menstrual periods. Nearly one in two women (46 percent) incorrectly reported that a woman's most fertile period is right after menstruation has ended; one in five women each mentioned that there was no specific time when a woman is most fertile or that she did not know when a woman is most fertile. The small number of users of the rhythm method makes it difficult for any meaningful analysis of knowledge among rhythm users. The limited knowledge of when a woman is most fertile indicates that there is much scope for educating women and men on female physiology. Current teaching on reproductive physiology and anatomy is limited in Timor-Leste, although this is undergoing curriculum development and review. The very high levels of misconception regarding the occurrence of the woman's most fertile period also represent a real challenge to those not using a modern method of contraception and not wishing to become pregnant. This also has implications for Timor-Leste's high teenage pregnancy rates.

5.9 TIMING OF FEMALE STERILIZATION

In countries where female sterilization is prevalent, there is interest in trends in the adoption of the method and age at the time of sterilization. There were only 54 women in the 2009-10 TLDHS sample who were sterilized at the time of the survey. Due to these small numbers, a separate table is not shown in this report. The median age at sterilization was 34.1 years, with the majority sterilized before age 40 (79 percent), and 20 percent were sterilized between 40 and 44 years.

5.10 SOURCE OF MODERN CONTRACEPTION METHODS

Table 5.8 on source of contraception is intended simply to document the main sources of contraception for users of different modern methods of contraception. Information on where women obtain the contraceptive method that they use is important for program managers and implementers in designing family planning policies and programs. All current users of modern contraceptive methods were asked the most recent source of their methods. The government sector remains the major source of contraceptive methods in Timor-Leste, providing methods to almost nine in ten current users. Eighty-eight percent of users get their methods from the government sector, 9 percent from the private medical sector, and 2 percent from other sources. The share of the government sector has increased slightly over the past five years. Data from the 2003 DHS show that the government sector supplied methods to 80 percent of users.

Forty-five percent of all users are served by community health centers, 20 percent by health posts, 17 percent by government and referral hospitals, 3 percent by integrated community health services (SISCa), and 2 percent by mobile clinics. In the private medical sector, most users are served by private hospitals/clinics (8 percent of all users). Most contraceptives sold in private hospitals/ clinics are provided through the Timor-Leste Contraceptive Retail Sales Company.

Table 5.8 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Timor-Leste 2009-10

Source	Female sterilization	Pill	IUD	Injectables	Implants	Total[1]
Public sector	**91.7**	**77.2**	**96.9**	**89.3**	**97.9**	**88.4**
National hospital	55.4	2.3	28.4	1.4	0.0	5.5
Referral hospital	29.1	15.4	15.6	10.2	16.2	11.8
Community health center	4.1	42.9	39.5	48.3	59.3	45.4
Health post	0.0	13.3	10.7	23.6	13.1	20.3
SISCa post	0.0	1.8	0.0	4.1	2.0	3.4
Mobile clinic	0.0	1.5	2.0	1.7	7.3	1.8
Other public	3.1	0.0	0.6	0.0	0.0	0.2
Private medical sector	**2.1**	**13.9**	**2.4**	**9.7**	**2.1**	**9.3**
Private hospital/clinic	0.0	9.5	2.4	8.2	2.1	7.5
Pharmacy	0.0	2.4	0.0	0.5	0.0	0.9
Private doctor's office	0.0	1.5	0.0	0.2	0.0	0.3
Mobile clinic	0.0	0.0	0.0	0.1	0.0	0.0
Field worker	0.0	0.0	0.0	0.1	0.0	0.1
Other private medical	2.1	0.6	0.0	0.5	0.0	0.5
Other source	**0.0**	**8.9**	**0.0**	**0.8**	**0.0**	**1.8**
Shop	0.0	0.6	0.0	0.0	0.0	0.4
Friend/relative	0.0	5.3	0.0	0.2	0.0	0.6
Marie Stopes (NGO)	0.0	1.5	0.0	0.3	0.0	0.4
Other NGO	0.0	1.5	0.0	0.3	0.0	0.4
Other	6.2	0.0	0.0	0.2	0.0	0.4
Missing	0.0	0.0	0.7	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	65	135	105	1,255	68	1,647

[1] Total includes other modern methods but excludes lactational amenorrhea method (LAM) and standard days method.

Female and male sterilizations are performed mostly in government hospitals (55 and 29 percent, respectively). Forty-eight percent of women using injectables obtain their supply from community health centers, and 24 percent obtain them from health posts. Pills are primarily obtained from community health centers (43 percent) and referral hospitals (15 percent). Fifty-nine percent of implants are provided through community health centers. IUDs are mostly inserted at community health centers (40 percent) and national hospitals (28 percent). These findings point to the continued reliance on government facilities as a major source of contraceptives. There is clearly scope for greater utilization of SISCa posts for provision of some family planning methods since there are a greater number of SISCa posts than all fixed facilities combined. Although SISCa offers services on a monthly basis, many family planning methods do not necessarily require more frequent visits. Injectables are the most preferred method, which can certainly be offered during a monthly service.

5.11 Payment of Fees for Modern Contraceptive Methods

The majority of users (98 percent) in Timor-Leste do not pay for contraception (data not shown). In most cases the only cost borne by public sector users is a registration fee, whereas the small number of private sector users who pay must bear the cost of the consultancy and payment for the method as well as the registration fee.

5.12 Informed Choice

Informed choice is an important tool for monitoring the quality of family planning services. All providers of sterilization must inform potential users that the operation is a permanent, irreversible procedure; potential users also must be informed of alternate methods that could be used. Users of temporary methods also should be informed about choices they have and other methods available. Family planning providers also should inform all method users of potential side effects and what to do if they experience a problem. This information assists users in coping with side effects and decreases unnecessary discontinuation of temporary methods.

Table 5.9 presents information on informed choice by type and source of method. The data show that 61 percent of current users were informed about possible side effects or problems associated with use, 55 percent of users were informed about what to do if they experienced side effects, and 53 percent were told of other methods that could be used. The private sector is more likely than the public sector to inform users about side effects or problems associated with using a method. In contrast, the public sector is more likely than the private sector to inform clients of what to do if they experience side effects and to tell them about other methods that can be used. Information on whether women who had been sterilized were told if the method was permanent is not shown by the method source due to the very small number of cases.

Table 5.9 Informed choice

Among current users of modern methods age 15-49 who started the last episode of use within the five years preceding the survey, the percentage who were informed about possible side effects or problems of that method, the percentage who were informed about what to do if they experienced side effects, and the percentage who were informed about other methods that they could use, by method and source, Timor-Leste 2009-10

	Among women who started last episode of modern contraceptive method within five years preceding the survey:			
Method/source	Percentage who were informed about side effects or problems of method used	Percentage who were informed about what to do if experienced side effects	Percentage who were informed by a health or family planning worker of other methods that could be used	Number of women
Method				
Female sterilization	(78.0)	(78.0)	(48.8)	42
Pill	67.2	66.7	64.1	113
IUD	76.5	66.4	64.8	97
Injectables	59.2	52.5	50.7	1,123
Implants	53.2	53.8	60.7	64
Initial source of method[1]				
PUBLIC	59.2	55.6	53.7	1,287
National hospital	81.0	62.7	54.0	69
Referral hospital	46.7	42.2	35.9	181
Community health center	61.7	59.4	55.8	663
Health post	57.7	53.1	58.1	301
SISCa post	(58.5)	(61.9)	(68.7)	46
Other public	*	*	*	1
Mobile clinic	*	*	*	27
PRIVATE MEDICAL	79.1	45.3	39.6	118
Private hospital/clinic	84.0	45.1	33.2	95
Pharmacy	*	*	*	7
Private doctor's office	*	*	*	6
Mobile clinic	*	*	*	3
Field worker	*	*	*	1
Other private medical	*	*	*	7
OTHER PRIVATE	*	*	*	31
Shop	*	*	*	1
Friend/relative	*	*	*	7
Marie Stopes (NGO)	*	*	*	5
Other NGO	*	*	*	18
OTHER	*	*	*	3
Total	61.3	55.3	53.1	1,440

Note: Table includes users of only the methods listed individually. Figures in parentheses are based on 25-49 unweighted cases. As asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Source at start of current episode of use

5.13 FUTURE USE OF CONTRACEPTION

An important indicator of the changing demand for family planning is the extent to which non-users of contraception plan to use family planning in the future. Currently married women who were not using contraception at the time of the survey were asked about their intention to use family planning in the future. The results appear in Table 5.10. Among currently married women who are not using contraception, 20 percent report that they intend to use a family planning method in the future, 54 percent say that they do not intend to use a method in the future, and 27 percent are unsure of their future intention. Depending on the number of living children, there are differences in the percentage of women who intend to use family planning. The proportion of women intending to use family planning peaks at 26 percent among non-users with one child, declines to 22 percent among women with three children, and further declines sharply to 17 percent among women who have four or more children. This is despite the fact that women with four or more children have a strong demand to delay their next child or have no more children (see Table 7.1).

Table 5.10 Future use of contraception

Percent distribution of currently married women age 15-49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Timor-Leste 2009-10

	Number of living children[1]					
Intention	0	1	2	3	4+	Total
Intends to use	10.4	26.0	23.2	21.8	17.0	19.5
Unsure	17.8	31.1	31.6	28.6	24.3	26.6
Does not intend to use	71.7	43.0	45.3	49.6	58.7	53.8
Missing	0.2	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	300	831	918	932	3,160	6,141

[1] Includes current pregnancy

5.14 Reasons for Non-use of Contraception in the Future

An understanding of the reasons women give for not using family planning methods is critical to designing programs that could improve the quality of services and widen the method mix. Table 5.11 shows the percent distribution of currently married women who are not using a contraceptive method and who do not intend to use one in the future by the main reasons for not intending to use.

Fifty-five percent of women do not intend to use contraception in the future because of opposition to its use, with the majority stating that they themselves are opposed to its use (46 percent). Nine percent mention that their husband/partner is opposed to the use of contraception. Twenty-one percent of women cited method-related reasons for non-use, the most common of these being fear of side effects (10 percent) and health concerns (8 percent). Sixteen percent of women cited fertility-related reasons for non-use in the future, with 7 percent of these women reporting themselves as subfecund or infecund. Six percent of women mention that they don't know of a method or a source for a method.

Table 5.11 Reason for not intending to use contraception in the future

Percent distribution of currently married women age 15-49 who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Timor-Leste 2009-10

Reason	Percent distribution
Fertility-related reasons	
Infrequent sex/no sex	1.5
Menopausal/had hysterectomy	4.3
Subfecund/infecund	6.7
Wants as many children as possible	3.2
Opposition to use	
Respondent opposed	46.0
Husband/partner opposed	8.5
Others opposed	0.2
Religious prohibition	0.3
Lack of knowledge	
Knows no method	5.4
Knows no source	0.3
Method-related reasons	
Health concerns	8.3
Fear of side effects	10.1
Lack of access/too far	0.5
Inconvenient to use	0.1
Interfere with body's normal process	2.0
Other	1.4
Don't know	1.4
Total	100.0
Number of women	3,306

5.15 Preferred Method of Contraception for Future Use

Future demand for specific methods of family planning can be assessed by asking nonusers who intend to use in the future which methods they prefer to use. Table 5.12 provides some indication of currently married women's preferences for the method they might use in the future. However, the information should be interpreted with caution because two conditions are implied here: intention to use and method preferred if intention is followed. Most currently married women would prefer to use injectables (71 percent) and pills (11 percent) in the future. About 4 percent of women each mentioned the IUD or implants as a preferred method for future use. These percentages should also be interpreted in the context of overall limited awareness of methods other than injectables. It is highly likely that increasing awareness of other methods and their advantages and disadvantages will lead to a greater variety of methods being preferred by women according to individual need.

Table 5.12 Preferred method of contraception for future use

Percent distribution of currently married women age 15-49 who are not using a contraceptive method but who intend to use in the future by preferred method, Timor-Leste 2009-10

Method	Percent distribution
Female sterilization	0.5
Pill	11.1
IUD	4.1
Injectables	71.1
Implants	3.7
Condom	0.4
Periodic abstinence	1.0
Withdrawal	0.1
Other	1.8
Unsure	3.7
Missing	2.5
Total	100.0
Number of women	1,199

5.16 EXPOSURE TO FAMILY PLANNING MESSAGES

The electronic media such as radio and television are important for communicating messages about family planning. Information on the level of exposure to such media is important for program managers and planners to effectively target population subgroups for information, education, and communication (IEC) campaigns. In Timor-Leste, the most common media source is the radio. Television is mostly found in urban areas, while the print media are accessed mostly by the educated. To assess the extent to which media serve as a source of family planning messages, respondents were asked if they had heard or seen a message about family planning on the radio, on television, in the print media (newspaper, magazine, poster, or billboard), or at a street drama in the months preceding the survey. The results are shown in Table 5.13.

One in five women (21 percent) and one in three men (32 percent) age 15-49 have heard a family planning message recently on the radio, and 21 percent of women and 23 percent of men have heard family planning messages on television. Ten percent of women and 15 percent of men have read about family planning in a newspaper or magazine. Sixty-eight percent of women and 59 percent of men have not been exposed to family planning messages in the past few months through any of the specified media sources.

With the exception of the youngest age group, exposure is generally higher among younger respondents (20-29 years) than among older respondents (45-49 years). Not surprisingly, women and men residing in urban areas are much more likely to have been exposed to family planning messages in any media than their rural counterparts. This is especially true for messages on television and in the print media. By district, exposure to family planning messages among women is highest in Dili and lowest in Oecussi (with 27 percent and 94 percent exposed to no media messages, respectively). Exposure among men is highest in Manatuto and lowest in Ermera (with 14 percent and 80 percent exposed to no media messages, respectively), Not surprisingly, exposure to media messages on family planning increases with education and wealth quintile.

Table 5.13 Exposure to family planning messages

Percentage of women and men age 15-49 who heard or saw a family planning message on the radio or television or in a newspaper in the past few months, according to background characteristics, Timor-Leste 2009-10

	Women					Men				
Background characteristic	Radio	Television	News-paper/ magazine	None of these three media sources	Number	Radio	Television	News-paper/ magazine	None of these three media sources	Number
Age										
15-19	19.3	18.2	11.2	68.6	3,144	23.3	16.7	11.7	66.8	994
20-24	23.7	23.2	11.9	63.0	2,343	38.6	25.2	13.6	54.0	643
25-29	23.2	24.2	11.6	62.3	1,897	36.8	27.8	17.9	53.0	586
30-34	22.6	23.6	8.7	65.0	1,534	35.5	23.2	15.9	56.7	439
35-39	18.2	18.4	8.3	71.0	1,684	36.2	29.5	17.1	52.2	553
40-44	20.4	20.5	5.8	70.6	1,388	31.0	25.6	15.2	58.9	462
45-49	14.1	15.5	5.5	77.6	1,146	27.6	19.2	11.8	65.2	400
Residence										
Urban	33.7	49.9	13.9	39.2	3,439	35.6	37.3	23.2	48.0	1,102
Rural	15.9	10.3	8.1	77.6	9,698	30.7	18.2	11.3	62.6	2,974
District										
Aileu	34.8	12.5	10.4	57.6	554	29.7	18.6	15.5	65.9	181
Ainaro	16.0	5.1	4.6	81.4	619	23.1	9.5	15.2	72.3	217
Baucau	16.6	14.0	11.1	75.2	1,408	29.8	12.9	4.8	65.3	415
Bobonaro	26.4	16.7	8.3	66.3	1,262	36.6	20.4	7.2	55.4	357
Covalima	13.6	7.1	8.3	79.3	781	53.8	34.6	39.4	36.9	236
Dili	38.5	62.2	13.8	27.4	2,466	36.3	39.4	23.9	47.3	797
Ermera	4.9	2.1	5.0	91.0	1,542	18.0	5.4	3.8	79.5	491
Lautem	15.6	11.6	10.5	74.8	864	25.4	23.4	27.6	58.9	308
Liquiçá	26.3	18.8	14.9	63.2	801	38.4	25.2	6.7	55.2	252
Manatuto	21.8	20.1	19.9	67.5	603	76.2	48.8	7.5	13.5	190
Manufahi	27.3	18.3	6.0	67.0	470	22.8	17.3	7.1	75.0	137
Oecussi	3.7	3.4	2.8	93.6	884	26.3	18.0	17.6	63.3	235
Viqueque	8.1	10.3	6.2	85.4	882	11.3	20.8	5.9	74.6	260
Education										
No education	9.5	6.3	1.3	86.7	3,854	11.5	6.5	0.5	86.0	791
Primary	15.7	13.2	5.1	76.4	3,005	24.1	15.6	6.6	69.2	1,046
Secondary	28.1	30.6	15.8	53.8	5,829	40.7	30.3	19.6	47.0	2,009
More than secondary	50.4	63.9	31.6	22.9	449	62.3	55.2	54.1	19.4	230
Wealth quintile										
Lowest	6.5	3.3	2.0	91.6	2,314	18.1	9.3	8.3	75.6	728
Second	9.7	3.6	3.8	86.6	2,468	24.1	11.0	7.0	71.0	781
Middle	16.5	6.9	7.2	77.2	2,590	32.2	14.0	9.9	63.8	786
Fourth	25.3	20.2	11.9	63.1	2,687	36.8	28.5	15.7	52.7	849
Highest	39.2	59.3	20.0	29.9	3,077	44.9	47.7	28.4	36.4	932
Total 15-49	20.6	20.6	9.6	67.5	13,137	32.0	23.3	14.5	58.7	4,076

5.17 CONTACT OF NON-USERS WITH FAMILY PLANNING PROVIDERS

When family planning providers visit women in the field or when women visit health facilities, family planning fieldworkers and health providers are expected to discuss family planning issues, to discuss contraceptive options available, and to motivate non-users to adopt a method of family planning. To get insight into the level of contact between non-users and health workers, women were asked if a fieldworker had visited them and discussed family planning during the 12 months preceding the survey. In addition, women were asked if they had visited a health facility for any reason in the 12 months preceding the survey and whether anyone at the facility had discussed family planning with them during the visit.

Table 5.14 shows that 15 percent of nonusers were visited by fieldworkers who discussed family planning during the 12 months preceding the survey. At the same time, 13 percent of nonusers visited a health facility in the past 12 months and discussed family planning during their visit, whereas 31 percent visited a health facility but did not discuss family planning, indicating a missed opportunity to inform and educate women about family planning. Four in five women did not discuss family planning in the past 12 months, either with a fieldworker or at a health facility. One of the reasons for the low exposure from fieldworkers could be the lack of emphasis on family planning during home visits. Equally, there may be lack of emphasis on family planning during other

consultations at a health facility. Given the relatively high coverage of ANC services in Timor-Leste, this represents at least one under-utilized opportunity for education and promotion in family planning. This low level of contact of nonusers with family planning providers varies little by urban-rural residence, education, and wealth. Exposure is lowest among very young women (15-19 years) and among women residing in Ermera, Baucau, and Ainaro.

Table 5.14 Contact of nonusers with family planning providers

Among women age 15-49 who are not using contraception, the percentage who during the last 12 months were visited by a fieldworker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility but did not discuss family planning, and the percentage who neither discussed family planning with a fieldworker nor at a health facility, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of women who were visited by fieldworker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who neither discussed family planning with fieldworker nor at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15-19	10.2	4.4	27.0	87.9	3,124
20-24	15.0	11.9	30.3	79.4	2,167
25-29	17.4	17.4	36.6	73.2	1,532
30-34	19.4	17.9	36.9	70.8	1,154
35-39	18.6	19.4	33.0	73.0	1,272
40-44	18.8	17.3	31.2	73.2	1,089
45-49	16.2	12.4	30.6	78.3	1,016
Residence					
Urban	15.8	8.3	30.3	79.8	2,815
Rural	15.2	14.0	31.7	78.2	8,540
District					
Aileu	32.4	18.1	39.8	64.4	491
Ainaro	5.1	7.5	29.0	91.1	565
Baucau	2.7	5.2	36.0	93.0	1,340
Bobonaro	39.5	25.1	32.2	55.0	1,111
Covalima	14.4	11.4	50.8	79.3	573
Dili	20.8	6.3	26.6	76.0	1,976
Ermera	3.3	5.0	47.6	93.2	1,376
Lautem	11.2	14.1	16.1	80.4	768
Liquiçá	17.7	12.8	29.2	76.9	689
Manatuto	18.9	16.3	20.9	77.8	530
Manufahi	12.6	16.5	27.7	79.8	390
Oecussi	16.0	34.1	30.7	61.5	739
Viqueque	8.0	11.6	14.4	83.5	808
Education					
No education	15.3	14.1	31.6	78.0	3,390
Primary	17.0	15.2	32.9	75.3	2,471
Secondary	14.4	10.5	30.5	80.7	5,123
More than secondary	18.5	10.7	30.8	77.4	371
Wealth quintile					
Lowest	12.8	15.6	26.8	78.8	2,092
Second	12.0	10.8	33.1	82.6	2,220
Middle	15.7	13.9	35.2	77.6	2,308
Fourth	19.4	14.0	31.7	74.9	2,283
Highest	16.4	9.1	29.6	79.2	2,453
Total	15.3	12.6	31.3	78.6	11,355

5.18 HUSBAND'S KNOWLEDGE OF WIFE'S USE OF CONTRACEPTION

Concealment of contraceptive use is an indication of absence of communication or disagreement on use of family planning. To shed light on the extent of communication regarding use of contraception among married couples, currently married women who were using contraception at the time of the survey were asked whether their husband knew of their use. Almost all users (97 percent) reported that their husbands know about their use of contraception (Table 5.15), an indication, perhaps, that Timorese husbands in general are supportive of contraceptive use among their wives.

Table 5.15 Husband/partner's knowledge of women's use of contraception

Among currently married women age 15-49 who are using a method, percent distribution by whether they report that their husbands/partners know about their use, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Knows[1]	Does not know	Unsure whether knows/ missing	Total	Number of women
Age					
15-19	*	*	*	100.0	19
20-24	95.5	2.9	1.6	100.0	173
25-29	97.7	0.8	1.5	100.0	361
30-34	95.7	3.2	1.2	100.0	379
35-39	95.8	2.1	2.1	100.0	408
40-44	97.5	2.5	0.0	100.0	298
45-49	96.4	2.8	0.7	100.0	127
Residence					
Urban	95.0	2.4	2.6	100.0	615
Rural	97.3	2.2	0.5	100.0	1,150
District					
Aileu	97.4	2.6	0.0	100.0	62
Ainaro	94.6	4.4	1.1	100.0	54
Baucau	95.3	2.3	2.3	100.0	69
Bobonaro	93.7	5.4	0.9	100.0	151
Covalima	99.3	0.3	0.5	100.0	201
Dili	94.2	2.8	3.0	100.0	484
Ermera	100.0	0.0	0.0	100.0	165
Lautem	97.3	2.7	0.0	100.0	96
Liquiçá	96.2	2.5	1.3	100.0	113
Manatuto	95.9	2.6	1.5	100.0	73
Manufahi	99.3	0.7	0.0	100.0	81
Oecussi	96.9	2.7	0.4	100.0	145
Viqueque	100.0	0.0	0.0	100.0	73
Education					
No education	96.9	2.6	0.5	100.0	462
Primary	96.4	2.9	0.7	100.0	524
Secondary	97.2	1.4	1.4	100.0	704
More than secondary	(88.6)	(2.7)	(8.8)	100.0	76
Wealth quintile					
Lowest	97.3	2.7	0.0	100.0	220
Second	97.1	2.4	0.6	100.0	244
Middle	97.2	2.6	0.2	100.0	281
Fourth	95.4	2.4	2.2	100.0	398
Highest	96.4	1.8	1.8	100.0	623
Total	96.5	2.2	1.2	100.0	1,765

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes women who report use of male sterilization, male condoms, or withdrawal

OTHER PROXIMATE DETERMINANTS OF FERTILITY 6

This chapter addresses the principal factors other than contraception that affect a woman's risk of becoming pregnant. The principal factors are nuptiality (including age at first marriage and age at first sexual intercourse), postpartum amenorrhea and sexual abstinence, and menopause. In societies where sexual activity usually takes place within marriage, marriage signals the onset of a woman's exposure to the risk of childbearing. Postpartum amenorrhea and sexual abstinence affect the duration of a woman's insusceptibility to pregnancy, which in turn affects birth spacing. The onset of menopause marks the end of a woman's reproductive life. These variables taken together determine the length and pace of a woman's reproductive life and are, therefore, important for understanding fertility.

6.1 CURRENT MARITAL STATUS

Table 6.1 shows the marital status by age and sex. Three-fifths of women (60 percent) and just over one in two men (53 percent) age 15-49 are currently in a union. Thirty-six percent of women age 15-49 have never been married, whereas the proportion of men age 15-49 who have never been married is considerably higher (46 percent). The proportion that have never married decreases sharply with age for both women and men: among women, from 92 percent in the age group 15-19 to 3 percent in the age group 45-49; and among men, from nearly 100 percent in the age group 15-19 to less than 2 percent in the age group 45-49.

Table 6.1 Current marital status

Percent distribution of women and men age 15-49 by current marital status, according to age, Timor-Leste 2009-10

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
					WOMEN				
15-19	91.8	6.0	1.7	0.1	0.3	0.0	100.0	7.7	3,144
20-24	51.0	42.2	4.7	0.9	0.9	0.3	100.0	47.0	2,343
25-29	16.6	75.8	4.1	0.6	1.6	1.3	100.0	79.9	1,897
30-34	6.7	86.5	2.3	1.0	1.7	1.9	100.0	88.8	1,534
35-39	5.1	88.6	1.3	0.8	1.2	3.0	100.0	89.9	1,684
40-44	4.0	86.2	1.0	0.9	1.8	6.2	100.0	87.2	1,388
45-49	3.2	83.3	0.5	0.8	1.2	11.0	100.0	83.8	1,146
Total 15-49	35.6	57.8	2.4	0.6	1.1	2.5	100.0	60.2	13,137
					MEN				
15-19	99.6	0.3	0.1	0.0	0.0	0.0	100.0	0.4	994
20-24	80.1	14.6	4.8	0.0	0.6	0.0	100.0	19.4	643
25-29	37.8	54.1	7.2	0.3	0.1	0.5	100.0	61.3	586
30-34	15.2	77.1	6.6	0.1	0.3	0.7	100.0	83.7	439
35-39	8.8	84.7	4.3	0.1	0.6	1.5	100.0	88.9	553
40-44	3.5	89.7	4.2	0.2	0.3	2.1	100.0	93.8	462
45-49	1.8	88.6	6.1	0.0	0.9	2.6	100.0	94.6	400
Total 15-49	45.8	48.8	4.2	0.1	0.3	0.8	100.0	53.0	4,076

About 3 percent of women age 15-49 are widowed compared with less than one percent of men in the same age group. The proportion of women who are widowed increases with age, and at age 45-49 more than one in ten women is widowed. At age 45-49, only about 3 percent of men are widowed. About 2 percent of women and less than half a percent of men age 15-49 are divorced or separated[1].

[1] Data from 2003 DHS on marital status was derived from the household-level questionnaire administered to ever-married women only, so no comparison on marital status can be made.

6.2 POLYGYNY

Polygyny (the practice of having more than one wife) has implications for the frequency of exposure to sexual activity and, therefore, fertility. The extent of polygyny is ascertained from responses of currently married women to questions on whether their husband or partner has other wives and, if so, how many. Similarly, currently married men were asked for the number of wives they have.

Table 6.2 presents, by background characteristics, the proportion of currently married women age 15-49 who are in a polygynous union. Data from the 2009-10 TLDHS show that about 2 percent of currently married women are in a polygynous union; that is, they have co-wives. The data further indicate that women in the youngest age group (15-19) and older women (40-49) are more likely to be in polygynous unions than women age 20-39. For example, about 3 percent of women age 45-49 are in a polygynous union compared with 1 percent of women age 20-24.

Table 6.2 Number of co-wives and wives

Percentage of currently married women age 15-49 with co-wives and percentage of currently married men age 15-49 with two or more wives, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Women		Men	
	Percentage with co-wives	Number of women	Percentage with 2+ wives	Number of men
Age				
15-19	2.4	243	*	4
20-24	1.2	1,100	0.0	125
25-29	1.5	1,516	0.0	359
30-34	2.1	1,362	0.6	368
35-39	1.9	1,514	1.3	492
40-44	2.6	1,211	0.9	433
45-49	2.9	960	2.0	378
Residence				
Urban	1.4	2,025	0.8	567
Rural	2.2	5,881	1.0	1,592
District				
Aileu	0.5	299	0.0	92
Ainaro	1.1	382	0.0	101
Baucau	1.6	852	1.3	237
Bobonaro	2.0	739	0.8	170
Covalima	3.9	458	0.0	123
Dili	0.7	1,459	0.9	416
Ermera	3.2	881	1.3	233
Lautem	6.6	541	2.8	163
Liquiçá	1.5	460	0.0	124
Manatuto	0.5	353	0.0	96
Manufahi	1.5	319	0.0	77
Oecussi	0.7	603	0.0	165
Viqueque	2.7	559	2.8	159
Education				
No education	2.9	2,909	2.1	523
Primary	1.7	2,027	0.8	650
Secondary	1.4	2,739	0.4	853
More than secondary	0.0	231	0.8	132
Wealth quintile				
Lowest	2.7	1,467	0.8	413
Second	1.8	1,487	0.0	408
Middle	2.6	1,559	2.1	411
Fourth	2.0	1,571	1.9	447
Highest	1.1	1,821	0.0	479
Total	2.0	7,906	0.9	2,158

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Data by place of residence show only small differences. Polygyny ranges from a low of less than 1 percent among women living in Manatuto and Aileu to a high of 7 percent among women who live in Lautem.

There is an inverse relationship between education and polygyny, with the proportion of women in a polygynous union decreasing from 3 percent among women with no education to zero among women with more than secondary education. Differences in the prevalence of polygyny among women in different wealth quintiles are not large.

Table 6.2 also shows the percentage of currently married men 15-49 with two or more wives, according to background characteristics. The data indicate that less than 1 percent of men report having two or more wives, with polygyny higher among older men, among men living in Viqueque and Lautem, and among men with no education.

6.3 AGE AT FIRST MARRIAGE

Marriage marks the point in a woman's life when childbearing becomes socially acceptable. Age at first marriage has a major effect on childbearing because women who marry early have, on average, a longer period of exposure to the risk of becoming pregnant and a greater number of lifetime births. Information on age at first marriage was obtained by asking respondents the month and year, or age, at which they started living with their first husband or wife.

Table 6.3 shows the percentage of women and men who have married by specific ages, according to current age. Marriage occurs relatively early in Timor-Leste: among women age 25-49, 24 percent are married by age 18, 42 percent are married by age 20, 59 percent are married by age 22, and 77 percent are married by age 25. The median age at (first) marriage among women age 25-49 is

Table 6.3 Age at first marriage

Percentage of women and men age 15-49 who were first married by specific exact ages and median age at first marriage, according to current age, Timor-Leste 2009-10

Current age	Percentage first married by exact age: 15	18	20	22	25	Percentage never married	Number	Median age at first marriage
				WOMEN				
15-19	1.4	na	na	na	na	91.8	3,144	a
20-24	3.0	18.9	35.3	na	na	51.0	2,343	a
25-29	3.6	24.2	44.2	60.7	78.1	16.6	1,897	20.6
30-34	6.3	25.8	46.6	64.4	81.3	6.7	1,534	20.4
35-39	5.0	23.7	41.4	59.3	77.1	5.1	1,684	20.9
40-44	7.2	26.8	42.4	57.8	76.2	4.0	1,388	21.0
45-49	4.8	20.1	34.6	50.3	69.3	3.2	1,146	22.0
20-49	4.8	23.0	40.6	na	na	17.9	9,993	a
25-49	5.3	24.3	42.3	59.0	76.8	7.8	7,650	20.9
				MEN				
15-19	0.0	na	na	na	na	99.6	994	a
20-24	0.0	3.2	9.7	na	na	80.1	643	a
25-29	0.0	3.8	12.8	25.5	50.1	37.8	586	25.0
30-34	0.0	5.3	13.5	27.5	50.7	15.2	439	24.9
35-39	0.0	6.2	14.4	25.7	50.7	8.8	553	24.9
40-44	0.0	4.0	12.3	23.9	46.2	3.5	462	25.4
45-49	0.0	4.3	12.8	23.1	43.1	1.8	400	26.2
20-49	0.0	4.4	12.5	na	na	28.4	3,082	a
25-49	0.0	4.7	13.2	25.2	48.5	14.8	2,440	a
30-49	0.0	5.0	13.3	25.1	47.9	7.5	1,854	25.3

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner
na = Not applicable due to censoring
a = Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

20.9 years. Although the proportion of women married by age 15 has declined from 7 percent among women age 40-44 to 1 percent among women age 15-19, there is a noticeable decrease in the median age at marriage over the last few decades from 22.0 years among women age 45-49 to 20.6 years among women age 25-29. This trend is in contrast to what is usually seen in countries undergoing social change and increased access to schooling, which typically bring about a delay in the age at marriage. This trend is also confirmed when comparing similarly collected information from the 2003 DHS where the median age at first marriage among women age 25-49 was found to be 21.4 years. The system of dowry accepted in some communities in Timor-Leste, in which a man pays dowry to the prospective bride's family, could exert some pressure for early marriage among women, because a man who marries a woman who is already pregnant is not obliged to give a dowry to her family prior to marriage.

Men on the other hand marry much later than women. Table 6.3 shows that among men age 30-49, 5 percent were married by age 18, 13 percent by age 20, 25 percent by age 22, and 48 percent by age 25. The median age at marriage among men age 30-49 is 25.3 years.

Table 6.4.1 shows the median age at first marriage among women age 25-49 by five-year age groups, according to background characteristics. Urban women marry only slightly later than rural women. The median age at marriage by district shows some notable variation. Women in Covalima marry two years earlier than women in Baucau.

Table 6.4.1 Median age at first marriage: Women

Median age at first marriage among women by five-year age groups and age 25-49, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	20.7	21.2	21.9	20.5	21.0	21.1
Rural	20.6	20.1	20.7	21.2	22.2	20.8
District						
Aileu	20.6	19.8	20.6	21.0	20.8	20.6
Ainaro	20.0	20.1	21.6	21.0	22.9	20.8
Baucau	22.3	20.1	21.6	22.6	26.1	22.2
Bobonaro	21.1	19.7	20.7	21.5	22.0	21.0
Covalima	18.9	19.1	19.5	20.1	20.9	19.7
Dili	20.9	21.5	22.5	20.6	21.5	21.4
Ermera	21.1	20.7	20.1	20.4	22.0	20.8
Lautem	20.5	20.0	20.9	20.4	20.3	20.4
Liquiçá	21.7	20.1	20.2	20.6	21.1	20.7
Manatuto	20.6	21.4	21.8	21.2	22.2	21.3
Manufahi	20.3	20.2	20.9	21.6	22.7	20.7
Oecussi	18.8	19.4	20.3	20.7	19.6	19.8
Viqueque	19.9	20.6	20.7	22.3	22.9	21.0
Education						
No education	20.3	19.8	20.4	20.8	21.8	20.7
Primary	19.3	19.3	20.0	20.0	21.0	19.7
Secondary	21.0	21.0	21.8	22.3	25.0	21.5
More than secondary	24.9	24.9	(25.7)	*	*	a
Wealth quintile						
Lowest	19.8	19.9	20.8	22.0	23.8	20.9
Second	20.6	19.8	20.7	21.1	22.3	20.8
Middle	21.0	20.0	20.4	20.8	21.6	20.7
Fourth	20.6	20.4	20.4	20.3	20.8	20.5
Highest	20.8	21.3	22.0	20.9	21.8	21.3
Total	20.6	20.4	20.9	21.0	22.0	20.9

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
a = Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

There is no clear relationship between age at marriage and education. Women with primary education marry one year earlier (19.7) than women with no education (20.7) and two years earlier than women with secondary education (21.5). Similarly, the median age by wealth quintiles declines from 20.9 among women in the lowest wealth quintile to 20.5 among women in the fourth wealth quintile, then rises to 21.3 among women in the highest wealth quintile.

Table 6.4.2 shows the median age at first marriage for men age 30-49 by five-year age groups, according to background characteristics. Median age among men varies substantially by place of residence. Urban men marry one and a half years later than rural men. Similarly, men in Dili marry nearly four years later than men in Oecussi.

Table 6.4.2 Median age at first marriage: Men

Median age at first marriage among men by five-year age groups and age 30-49, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Current age					Men age 30-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	a	24.8	26.5	28.3	27.5	26.4
Rural	25.0	24.9	24.3	25.0	26.1	25.0
District						
Aileu	(a)	*	(24.7)	(25.2)	(29.7)	25.7
Ainaro	a	(24.2)	(25.0)	(24.6)	*	25.4
Baucau	(24.0)	(25.5)	(23.9)	(25.2)	(29.2)	25.6
Bobonaro	(a)	(24.7)	(25.4)	(24.8)	(26.4)	25.4
Covalima	(a)	(26.4)	(23.8)	(23.9)	(26.2)	25.0
Dili	24.5	(24.6)	26.9	(29.4)	(29.0)	26.9
Ermera	(24.9)	(25.6)	(23.2)	(24.7)	(24.7)	24.8
Lautem	(24.2)	(24.5)	22.9	(25.1)	(25.1)	24.1
Liquiçá	a	*	(27.8)	(25.9)	(26.1)	26.3
Manatuto	a	(23.7)	(25.6)	(26.3)	(28.1)	25.6
Manufahi	(24.0)	(26.7)	(24.7)	(25.6)	*	25.2
Oecussi	(23.7)	(22.6)	(23.2)	(24.2)	(23.9)	23.3
Viqueque	(24.0)	(24.5)	24.2	(24.8)	(26.2)	24.7
Education						
No education	a	25.7	25.0	24.3	25.4	25.0
Primary	23.3	23.4	24.3	24.6	24.8	24.3
Secondary	a	24.8	24.6	26.2	29.4	25.6
More than secondary	(a)	(26.9)	(27.5)	*	*	28.0
Wealth quintile						
Lowest	24.2	23.8	23.8	24.7	26.8	24.7
Second	24.8	25.7	25.3	25.4	27.6	25.9
Middle	a	26.0	23.7	25.7	24.7	24.8
Fourth	a	24.0	24.8	24.7	25.0	24.6
Highest	a	24.8	26.8	28.1	28.0	26.7
Total	25.0	24.9	24.9	25.4	26.2	25.3

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
a = Omitted because less than 50 percent of the men married for the first time before reaching the beginning of the age group

Education also influences age at marriage among men substantially, ranging from a low of 24.3 among men with primary education to a high of 28.0 years among men with more than secondary education. Similarly, men from the highest wealth quintile marry about one year later than men in the second wealth quintile and two years later than those from the other quintiles.

6.4 AGE AT FIRST SEXUAL INTERCOURSE

Age at first marriage is often used as a proxy for first exposure to intercourse and risk of pregnancy. But the two events may not occur at the same time because some people may engage in sexual activity before marriage. In the 2009-10 TLDHS, all women and men, irrespective of their marital status, were asked how old they were when they first had sexual intercourse. Table 6.5 shows by specific ages the proportions of women and men who had first sexual intercourse.

Table 6.5 Age at first sexual intercourse

Percentage of women and men age 15-49 who had first sexual intercourse by specific exact ages, percentage who never had intercourse, and median age at first intercourse, according to current age, Timor-Leste 2009-10

Current age	Percentage who had first sexual intercourse by exact age: 15	18	20	22	25	Percentage who never had intercourse	Number	Median age at first intercourse
				WOMEN				
15-19	1.1	na	na	na	na	91.4	3,144	a
20-24	2.7	16.8	33.1	na	na	50.6	2,343	a
25-29	2.9	22.4	43.8	59.6	76.3	16.6	1,897	20.7
30-34	5.5	25.2	44.7	62.7	79.2	6.2	1,534	20.5
35-39	4.2	22.4	39.6	57.7	74.8	4.8	1,684	20.9
40-44	5.6	25.2	41.5	57.2	73.9	3.9	1,388	21.0
45-49	3.8	20.6	35.4	51.1	69.2	2.8	1,146	21.8
20-49	4.0	21.7	39.4	na	na	17.6	9,993	a
25-49	4.3	23.2	41.4	58.1	75.1	7.5	7,650	20.9
				MEN				
15-19	0.8	na	na	na	na	89.9	994	a
20-24	0.1	9.2	32.6	na	na	44.0	643	a
25-29	0.4	6.8	25.6	48.6	71.5	14.8	586	22.2
30-34	0.1	9.0	23.5	46.7	66.2	5.9	439	22.6
35-39	0.2	9.7	21.5	39.2	64.8	3.9	553	23.2
40-44	0.6	5.6	20.7	40.2	61.6	2.3	462	23.5
45-49	0.5	8.0	19.7	38.9	56.8	1.1	400	23.9
20-49	0.3	8.1	24.5	na	na	14.0	3,082	a
25-49	0.4	7.8	22.4	42.9	64.8	6.1	2,440	23.0
30-49	0.3	8.1	21.4	41.2	62.6	3.4	1,854	23.3

na = Not applicable due to censoring
a = Omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group

The median age at first sexual intercourse among women age 25-49 is 20.9 years and is identical to the median age at first marriage, suggesting that Timorese women generally begin sexual intercourse at the time of their first marriage. Table 6.5 also shows that the median age at first sexual intercourse has decreased over the last two decades, from 21.8 years for women age 45-49 to 20.7 years for women age 25-29.

The median age at first sexual intercourse among men age 25-49 (23.0 years) is two years later than among women in the same age group, primarily because men tend to marry later than women and, presumably, even among men, sexual intercourse tends to be initiated upon marriage. Nevertheless, the median age at first sexual intercourse among men age 30-49 is 23.3 years which is earlier than the median age at first marriage, indicating that some Timorese men do initiate sexual intercourse prior to marriage. Furthermore, the data show that about 28 percent of men age 20-49 are not married (Table 6.3), but only 14 percent in the same age group report never having had sexual intercourse (Table 6.5).

The variation in the median age at first sexual intercourse among women by background characteristics is nearly identical to the median age at first marriage and is, therefore, not shown or discussed separately here.

Table 6.6 shows the median age at first sexual intercourse for men, according to background characteristics. Differences by background characteristics are contrary to those discussed for median age at first marriage (Table 6.4.2). For example, the median age at first sexual intercourse is higher among rural than urban men in contrast with the median age at first marriage, which is higher among urban than rural men. Differences in the median age at first sexual intercourse by district are substantial. Men age 25-49 in Covalima initiate sex about five years earlier than men in Viqueque, Manufahi, Manatuto, and Ainaro; four years earlier than men in Liquiçá and Aileu; three years earlier

than men in Ermera; and two years earlier than men in Dili, with much smaller differences among men in Oecussi and Lautem. This is probably related to the well-known presence of commercial sex workers in Covalima. Men with primary education initiate sexual intercourse one year earlier than men at all the other education levels. Men in the second wealth quintile initiate sexual intercourse one year later than men in the lowest, fourth, and highest wealth quintiles.

Table 6.6 Median age at first intercourse: Men

Median age at first sexual intercourse among men by five-year age groups, age 25-49, and age 30-49, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Age					Men age 25-49	Men age 30-49
	25-29	30-34	35-39	40-44	45-49		
Residence							
Urban	20.9	21.4	23.0	23.0	21.8	22.0	22.5
Rural	23.0	23.1	23.3	23.7	24.5	23.4	23.7
District							
Aileu	(22.4)	*	(23.3)	(23.6)	(27.9)	23.8	25.1
Ainaro	24.0	(23.6)	(24.8)	(23.9)	*	24.4	24.7
Baucau	(a)	(26.6)	(24.6)	(27.2)	(30.0)	a	26.5
Bobonaro	(a)	(24.7)	(25.4)	(24.4)	(26.8)	a	25.4
Covalima	(18.8)	(19.7)	(20.0)	(20.0)	(20.2)	19.7	20.0
Dili	20.9	(21.3)	23.2	(23.7)	(22.3)	22.2	22.9
Ermera	(23.1)	(24.3)	(22.7)	(21.6)	(23.9)	23.0	22.9
Lautem	(20.4)	(20.3)	20.5	(20.7)	(20.4)	20.5	20.5
Liquiçá	22.9	*	(23.4)	(24.2)	(25.5)	23.9	24.8
Manatuto	22.8	(24.0)	(25.3)	(25.7)	(28.1)	24.4	25.3
Manufahi	(23.7)	(27.2)	(24.9)	(25.5)	*	24.9	25.2
Oecussi	(19.5)	(20.1)	(19.7)	(19.7)	(20.6)	20.0	20.1
Viqueque	(24.3)	(24.7)	24.5	(25.4)	(25.2)	24.8	24.9
Education							
No education	23.2	23.5	23.3	22.6	24.0	23.3	23.3
Primary	21.1	22.5	23.2	21.3	23.0	22.2	22.7
Secondary	22.6	22.3	22.8	24.7	25.2	23.3	23.7
More than secondary	(21.6)	(23.2)	(23.9)	*	*	23.2	23.8
Wealth quintile							
Lowest	21.9	21.5	22.2	23.4	24.3	22.7	22.8
Second	22.5	22.8	24.4	23.3	25.8	23.8	24.3
Middle	23.0	24.5	22.7	24.8	22.8	23.2	23.3
Fourth	22.5	23.3	23.3	22.5	22.3	22.8	22.9
Highest	21.4	21.2	23.3	23.6	24.0	22.6	23.1
Total	22.2	22.6	23.2	23.5	23.9	23.0	23.3

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
a = Omitted because less than 50 percent of the men had intercourse for the first time before reaching the beginning of the age group

6.5 RECENT SEXUAL ACTIVITY

In the absence of contraception, the probability of pregnancy is related to the frequency of intercourse. Therefore, information on sexual activity can be used to refine measures of exposure to the risk of pregnancy. All women and men were asked how long ago their last sexual activity occurred, and Tables 6.7.1 and 6.7.2 show the percent distribution of women and men by recent sexual activity. About half of women age 15-49 were sexually active in the four weeks before the survey, 12 percent had been sexually active in the year before the survey but not in the month prior to the interview, and 7 percent had not been sexually active for one or more years. Thirty-five percent of women had never had sexual intercourse.

Table 6.7.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Timing of last sexual intercourse: Within the last 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of women
Age							
15-19	5.1	2.7	0.7	0.1	91.4	100.0	3,144
20-24	32.7	12.0	4.5	0.2	50.6	100.0	2,343
25-29	58.4	17.6	7.1	0.3	16.6	100.0	1,897
30-34	69.3	16.0	8.0	0.5	6.2	100.0	1,534
35-39	70.0	17.4	7.7	0.0	4.8	100.0	1,684
40-44	70.2	14.5	11.3	0.2	3.9	100.0	1,388
45-49	64.5	15.5	17.0	0.3	2.8	100.0	1,146
Marital status							
Never married	0.1	0.2	0.4	0.1	99.1	100.0	4,675
Married or living together	75.5	19.5	4.8	0.3	0.0	100.0	7,906
Divorced/separated/ widowed	3.4	11.4	84.9	0.2	0.0	100.0	556
Marital duration[2]							
0-4 years	67.3	26.5	5.8	0.4	0.0	100.0	1,426
5-9 years	74.2	20.5	5.1	0.1	0.0	100.0	1,605
10-14 years	78.2	17.2	4.1	0.5	0.0	100.0	1,550
15-19 years	80.4	15.6	3.9	0.1	0.0	100.0	1,391
20-24 years	77.0	18.1	4.8	0.1	0.0	100.0	1,043
25+ years	76.4	18.6	4.6	0.4	0.0	100.0	768
Married more than once	77.9	14.6	7.5	0.0	0.0	100.0	123
Residence							
Urban	47.2	9.6	6.0	0.5	36.6	100.0	3,439
Rural	45.0	13.2	6.8	0.1	34.8	100.0	9,698
District							
Aileu	45.3	7.7	5.2	0.3	41.5	100.0	554
Ainaro	52.8	8.1	4.2	0.3	34.5	100.0	619
Baucau	53.9	5.4	4.1	0.0	36.6	100.0	1,408
Bobonaro	44.7	13.6	5.2	0.0	36.5	100.0	1,262
Covalima	48.6	10.0	6.8	0.0	34.6	100.0	781
Dili	50.3	7.8	5.0	0.6	36.4	100.0	2,466
Ermera	22.6	27.9	11.3	0.0	38.2	100.0	1,542
Lautem	52.3	9.8	5.9	0.7	31.3	100.0	864
Liquiçá	43.3	11.0	7.7	0.1	37.9	100.0	801
Manatuto	37.6	15.6	8.5	0.1	38.3	100.0	603
Manufahi	54.9	9.9	5.3	0.3	29.6	100.0	470
Oecussi	55.3	11.3	6.5	0.1	26.8	100.0	884
Viqueque	39.8	18.1	10.5	0.2	31.4	100.0	882
Education							
No education	54.9	17.0	10.5	0.1	17.5	100.0	3,854
Primary	52.5	12.4	8.0	0.4	26.7	100.0	3,005
Secondary	36.3	9.2	3.4	0.2	50.9	100.0	5,829
More than secondary	41.3	10.6	5.2	0.0	43.0	100.0	449
Wealth quintile							
Lowest	48.4	12.5	8.2	0.1	30.8	100.0	2,314
Second	42.6	14.8	7.7	0.2	34.6	100.0	2,468
Middle	44.4	13.3	6.3	0.2	35.9	100.0	2,590
Fourth	43.8	12.8	5.7	0.1	37.7	100.0	2,687
Highest	48.5	8.9	5.5	0.5	36.6	100.0	3,077
Total	45.6	12.3	6.6	0.2	35.3	100.0	13,137

[1] Excludes women who had sexual intercourse within the last 4 weeks
[2] Excludes women who are not currently married

The proportion of women who were sexually active during the four weeks before the survey increases with age, from 5 percent at age 15-19 to about 70 percent by age 30-44, and decreases to 65 percent at age 45-49. Women who are currently in a union are much more likely to be sexually active in the four weeks preceding the survey than women who were formerly married or who have never been married. Women married for fewer than five years are less likely to be sexually active in the recent past than women married for longer durations. There is little difference in recent sexual activity among women who have been married more than once and women who have been married just once.

Similarly, there is little difference in recent sexual activity among rural and urban women. Recent sexual activity is lowest among women in Ermera (23 percent), with about half as many women sexually active in the last four weeks as women in most other districts. Women who have no education are much more likely than women who have secondary and higher education to be sexually active. By wealth quintile, the percentage of women sexually active is U-shaped, i.e., higher among the women in the lowest and highest wealth quintile.

Table 6.7.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Timing of last sexual intercourse: Within the last 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of men
Age							
15-19	4.8	2.7	2.7	0.0	89.9	100.0	994
20-24	25.0	17.1	13.9	0.0	44.0	100.0	643
25-29	59.3	17.7	7.8	0.3	14.8	100.0	586
30-34	69.2	18.8	6.1	0.0	5.9	100.0	439
35-39	76.1	15.0	5.0	0.0	3.9	100.0	553
40-44	78.7	13.0	5.1	0.9	2.3	100.0	462
45-49	78.2	12.0	8.2	0.5	1.1	100.0	400
Marital status							
Never married	11.1	9.4	8.5	0.0	71.0	100.0	1,865
Married or living together	80.7	15.4	3.6	0.4	0.0	100.0	2,158
Divorced/separated/ widowed	15.2	14.0	70.7	0.0	0.0	100.0	53
Marital duration[2]							
0-4 years	74.2	21.6	4.1	0.0	0.0	100.0	429
5-9 years	80.7	15.9	2.5	0.8	0.0	100.0	470
10-14 years	82.7	14.1	2.8	0.4	0.0	100.0	485
15-19 years	83.9	12.3	3.8	0.0	0.0	100.0	406
20-24 years	83.3	13.6	3.1	0.0	0.0	100.0	220
25+ years	77.9	11.2	9.3	1.6	0.0	100.0	124
Married more than once	(91.7)	(6.0)	(2.3)	(0.0)	(0.0)	100.0	25
Residence							
Urban	47.4	15.4	6.8	0.7	29.7	100.0	1,102
Rural	48.2	11.6	6.7	0.0	33.5	100.0	2,974
District							
Aileu	42.8	12.1	15.1	0.0	30.1	100.0	181
Ainaro	43.5	6.6	8.5	0.0	41.4	100.0	217
Baucau	57.7	0.8	1.5	0.0	40.0	100.0	415
Bobonaro	39.0	8.1	1.4	0.0	51.4	100.0	357
Covalima	61.1	12.3	7.5	0.0	19.1	100.0	236
Dili	51.9	16.4	4.7	1.0	26.1	100.0	797
Ermera	27.5	23.2	12.1	0.0	37.2	100.0	491
Lautem	51.0	6.7	5.3	0.0	36.9	100.0	308
Liquiçá	50.0	7.6	15.2	0.0	27.1	100.0	252
Manatuto	69.7	19.3	1.1	0.0	9.9	100.0	190
Manufahi	46.7	7.0	5.9	0.0	40.3	100.0	137
Oecussi	55.2	20.3	4.3	0.0	20.2	100.0	235
Viqueque	40.1	14.7	9.9	0.0	35.4	100.0	260
Education							
No education	54.7	15.0	6.6	0.0	23.7	100.0	791
Primary	54.0	12.6	5.8	0.4	27.2	100.0	1,046
Secondary	40.2	11.4	6.8	0.1	41.4	100.0	2,009
More than secondary	65.6	14.7	9.8	0.9	9.0	100.0	230
Wealth quintile							
Lowest	50.7	9.8	5.7	0.0	33.8	100.0	728
Second	44.8	12.7	6.4	0.0	36.0	100.0	781
Middle	47.0	11.7	7.1	0.0	34.2	100.0	786
Fourth	45.3	13.3	9.2	0.7	31.5	100.0	849
Highest	51.8	14.8	5.1	0.2	28.1	100.0	932
Total 15-49	48.0	12.6	6.7	0.2	32.5	100.0	4,076

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes men who had sexual intercourse within the last 4 weeks
[2] Excludes men who are not currently married

There is little difference in the proportion of men and women age 15-49 who have been sexually active in the past four weeks (48 percent compared with 46 percent). Thirteen percent of men had sexual intercourse in the year before the survey but not in the month prior to the survey, while 7 percent had not been sexually active for one year or more. One in three men said that they have never had sex. As with women, sexual activity among men increases with age and peaks between age 40-44. Men currently in a union are much more likely to be sexually active than those not currently in a union. There is little variation in current sexual activity by marital duration or urban-rural residence.

Regional variation for men shows similar patterns as for women. Recent sexual activity is lowest among men living in Ermera (28 percent) and highest among men living in Manatuto (70 percent).

In contrast to the pattern found for women, the proportion of men sexually active in the past four weeks is highest among those with more than secondary education. As with women, the relationship between recent sexual activity and wealth quintile is U-shaped.

6.6 POSTPARTUM AMENORRHEA, ABSTINENCE, AND INSUSCEPTIBILITY

Postpartum amenorrhea is the interval between the birth of a child and the resumption of menstruation, during which the risk of pregnancy is reduced. Postpartum protection from conception depends upon the intensity and duration of breastfeeding. Postpartum abstinence refers to the period of voluntary sexual inactivity after childbirth. A woman is considered insusceptible if she is not exposed to the risk of pregnancy, either because she is amenorrheic or because she is abstaining from sexual intercourse following a birth. In the TLDHS, information was obtained about the duration of amenorrhea and the duration of sexual abstinence following childbirth for births in the three years preceding the survey.

Table 6.8 Postpartum amenorrhea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Timor-Leste 2009-10

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrheic	Abstaining	Insusceptible[1]	
<2	96.7	92.7	97.7	270
2-3	84.5	56.6	89.2	333
4-5	73.5	31.7	76.7	394
6-7	56.9	24.0	63.0	310
8-9	48.9	18.4	54.9	339
10-11	38.7	11.1	42.7	313
12-13	24.9	7.7	27.4	322
14-15	17.8	8.4	23.2	361
16-17	13.5	6.4	17.1	308
18-19	12.5	4.9	16.0	311
20-21	7.0	4.6	11.2	293
22-23	5.2	4.1	7.5	239
24-25	6.5	2.7	7.5	337
26-27	5.6	4.1	8.5	407
28-29	5.1	4.2	7.4	388
30-31	4.0	2.4	6.1	338
32-33	1.9	2.7	4.4	308
34-35	2.7	2.1	4.8	265
Total	28.2	15.6	31.5	5,836
Median	8.2	3.2	9.1	na
Mean	10.4	6.1	11.6	na

Note: Estimates are based on status at the time of the survey.
na = Not applicable
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

Table 6.8 shows the percentage of births in the three years preceding the survey for which mothers were postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth. The results show that Timorese women are amenorrheic for a median of 8.2 months, abstain for a median of 3.2 months, and are insusceptible to pregnancy for a median of 9.1 months. In general, the proportion of women who are amenorrheic or abstaining decreases with increasing months after delivery. The proportion who are amenorrheic drops from 97 percent in the first two months after birth to 25 percent at 12 to 13 months and 7 percent at 24 to 25 months after birth. The majority of Timorese women (93 percent) are still abstaining from sex in the first two months following birth. A comparison of data from the 2003 DHS indicates that the median duration of postpartum amenorrhea has increased from 7.3 months to 8.2 months, which may be partly explained by the increase in exclusive breastfeeding, which contributes to anovulation and amenorrhea.

Table 6.9 shows the median duration of postpartum amenorrhea, abstinence, and insusceptibility by background characteristics. The duration of postpartum insusceptibility is one month longer among women age 30-49 than among women age 15-29, is substantially longer among rural than urban women, and longer among women residing in Covalima than in the other districts. The duration of postpartum insusceptibility is also longer among women with no education than among those with some primary or secondary education, and twice as long among women from the lowest and second wealth quintiles as among women from the highest wealth quintile.

Table 6.9 Median duration of amenorrhea, postpartum abstinence, and postpartum insusceptibility

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Timor-Leste 2009-10

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15-29	7.7	3.2	8.6
30-49	8.8	3.2	9.9
Residence			
Urban	5.0	2.3	5.7
Rural	9.1	3.6	9.8
District			
Aileu	7.7	(2.3)	8.0
Ainaro	9.3	(2.3)	9.4
Baucau	8.8	(2.4)	9.5
Bobonaro	7.0	2.6	7.8
Covalima	8.3	3.8	12.1
Dili	4.2	2.1	4.6
Ermera	11.2	7.0	11.7
Lautem	6.5	(2.2)	7.0
Liquiçá	10.8	2.9	11.6
Manatuto	8.3	5.4	9.5
Manufahi	10.0	3.4	10.2
Oecussi	10.5	4.4	10.7
Viqueque	9.0	(5.8)	9.6
Education			
No education	10.0	3.5	10.7
Primary	8.4	3.3	9.5
Secondary	7.2	3.1	8.3
More than secondary	*	*	*
Wealth quintile			
Lowest	9.6	3.4	10.3
Second	9.9	3.5	10.2
Middle	8.1	3.3	9.0
Fourth	8.8	3.2	9.9
Highest	4.6	2.4	5.5
Total	8.2	3.2	9.1

Note: Medians are based on the status at the time of the survey (current status). Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

6.7 MENOPAUSE

The risk of becoming pregnant declines with age. The term infecundity denotes a process rather than a well-defined event, and although the onset of infecundity is difficult to determine for an individual woman, there are ways of estimating it for a group of women. Table 6.10 presents data on menopause, an indicator of decreasing exposure to the risk of pregnancy (infecundity) for women age 30 and over.

In the context of the available survey data, women are considered menopausal if they are neither pregnant nor postpartum amenorrheic and have not had a menstrual period for at least six months preceding the survey. The proportion of women who are menopausal increases with age from

2 percent among women age 30-34 to 37 percent among women age 48-49. Overall, 8 percent of women age 30-49 are menopausal, indicating a relatively low level of infecundity among Timorese women. The proportion of currently married women age 30-49, who are menopausal as reported in the 2003 DHS is 17 percent, more than double the proportion reported in the 2009-10 TLDHS.

Table 6.10 Menopause

Percentage of women age 30-49 who are menopausal, by age, Timor-Leste 2009-10

Age	Percentage menopausal[1]	Number of women
30-34	1.9	1,534
35-39	2.5	1,684
40-41	8.0	641
42-43	9.7	518
44-45	11.4	487
46-47	18.4	448
48-49	36.5	439
Total	8.2	5,753

[1] Percentage of all women who are not pregnant and not postpartum amenorrheic whose last menstrual period occurred six or more months preceding the survey

FERTILITY PREFERENCES 7

Information on fertility preferences can be useful in understanding future fertility patterns and demand for contraception. The data are also used to construct measures of unmet need for contraception and assessments of unwanted or mistimed births. Fertility preferences also help to evaluate the overall attitudes of women toward childbearing and the general course of fertility.

In the 2009-10 TLDHS, currently married women and men were asked about their fertility preferences, including their desire to have another child, the length of time they would like to wait before having another child, and what they consider to be their ideal number of children. These data make it possible to quantify fertility preferences and, in combination with the data on contraceptive use, permit estimation of the unmet need for family planning, for both spacing and limiting births. However, the interpretation of data on fertility preferences is controversial because respondents' reported preferences are, in most cases, hypothetical, and do not take into consideration the influence of social pressure. Thus, preferences are subject to change and rationalization. Nevertheless, information on future reproductive intentions is of fundamental importance in the development of population policies and in refining and modifying existing family planning programs.

7.1 DESIRE FOR MORE CHILDREN

In the 2009-10 TLDHS, currently married women and men were asked whether they want to have another child, and if so, how soon. The same question was phrased differently in the case of pregnant women or men whose wife or wives were pregnant at the time of the interview to ensure that they were asked not about the current pregnancy but rather about the desire for subsequent children.

Table 7.1 shows future reproductive intentions of currently married women and men by the number of living children. Nine percent of women want to have another child soon (within two years), and 35 percent want another child two or more years later. This compares with 11 percent in the 2003 DHS. Another 35 percent want no more children, and about 1 percent have been sterilized. The total of women who either want to delay their next child or have no more children is therefore 70 percent, which contrasts greatly with the 22 percent who are currently taking contraceptives. This indicates an enormous opportunity to reach these women with contraceptive methods that match their needs and desires.

The desire to stop childbearing—including those already sterilized—increases with the number of living children—from 2 percent among women with no children to 67 percent among women with six or more children. The proportion of currently married women who want no more children more than doubled in the last seven years, from 17 percent as reported in the 2003 DHS to 36 percent in the 2009-10 TLDHS. Presumably women who want no more children would benefit from increased awareness of long-term contraceptive methods and sterilization options. The great majority of these women are either taking no contraceptives or are still choosing injectables, which require administration every three months or more frequently. Asking these women to regularly access services appears to impose an unnecessary burden on them when longer-term and more permanent methods are available.

Men's reproductive intentions differ somewhat from those of women in the same age group. Men are more likely than women (15 percent compared with 9 percent) to want another child soon. On the other hand, there is only a small difference in their desire to want another child later (39 percent compared with 35 percent). Women are much more likely to want to limit childbearing than men, however. More than one in three women want no more children or are sterilized (36 percent) compared with about one in four men (23 percent), and this difference is consistent at all parities.

Table 7.1 Fertility preferences by number of living children

Percent distribution of currently married women and currently married men age 15-49 by desire for children, according to number of living children, Timor-Leste 2009-10

Desire for children	Number of living children							Total 15-49
	0	1	2	3	4	5	6+	
WOMEN[1]								
Have another soon[2]	27.7	15.7	10.9	11.5	6.9	4.7	2.0	8.6
Have another later[3]	4.3	60.0	54.8	47.1	35.9	26.6	12.7	35.1
Have another, undecided when	2.1	2.2	1.7	1.1	0.6	1.1	0.7	1.2
Undecided	21.9	14.7	17.7	17.4	15.8	17.3	16.8	16.9
Want no more	2.2	5.4	13.2	21.0	38.9	48.4	65.4	34.8
Sterilized[4]	0.0	0.2	0.3	0.7	0.9	0.9	1.4	0.8
Declared infecund	41.7	1.8	1.4	1.3	0.9	1.1	0.9	2.8
Missing	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	303	942	1,159	1,277	1,227	977	2,022	7,906
MEN[5]								
Have another soon[2]	44.9	19.6	16.9	14.9	14.5	8.3	8.1	14.7
Have another later[3]	6.5	53.6	50.1	47.3	39.9	33.8	22.6	38.7
Have another, undecided when	2.8	2.8	3.9	2.5	1.0	0.4	1.4	2.0
Undecided	17.4	15.8	16.5	17.3	21.9	24.0	25.6	20.3
Want no more	0.7	7.3	11.5	16.5	20.6	31.9	40.7	21.8
Sterilized[4]	0.0	0.9	1.1	1.0	1.2	0.4	1.7	1.1
Declared infecund	27.7	0.0	0.0	0.5	0.9	1.1	0.0	1.5
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	87	270	343	381	346	253	479	2,158

[1] The number of living children includes current pregnancy for women.
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilization
[5] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

7.2 DESIRE TO LIMIT CHILDBEARING BY BACKGROUND CHARACTERISTICS

Tables 7.2.1 and 7.2.2 show the desire to limit childbearing among currently married women and men by background characteristics. Urban women are more likely to want to limit childbearing than rural women. Differences by district in the desire to limit childbearing range from a low of 20 percent in Ainaro to a high of 48 percent in Oecussi. Overall, the desire to limit childbearing is higher among women with no education than among those with any level of education. This is true even taking into account the difference in fertility among women with different levels of education. For example, among women with one child, 16 percent of women with no education want no more children compared with 4 percent or less of women with some education. Among women with four or more children, the difference in desire to limit childbearing by education is small. Women living in the wealthiest households are more likely to want to limit childbearing than women in other households.

A similar pattern is seen among men in the desire to limit childbearing by urban-rural residence, education, and wealth quintile, although the differences are smaller. The pattern by district differs somewhat, with men in Lautem and Ainaro least likely to want to limit the number of children and men in Covalima and Manatuto most likely. Given that men in Covalima and Manatuto had the greatest exposure to family planning messages, there appears to be an association between exposure to family planning messages and men's desire to limit the number of children.

Table 7.2.1 Desire to limit childbearing: Women

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	3.3	5.2	19.0	23.0	56.2	61.6	78.8	40.6
Rural	1.9	5.8	11.5	21.0	33.8	45.7	63.6	33.8
District								
Aileu	*	9.2	10.1	22.9	25.9	43.6	65.9	36.0
Ainaro	*	2.0	6.7	1.6	22.4	23.6	39.6	19.7
Baucau	(4.3)	4.0	24.3	21.8	45.9	59.5	74.2	43.4
Bobonaro	*	5.3	10.4	18.9	28.0	34.6	54.6	26.9
Covalima	*	8.3	18.2	26.4	46.7	55.4	80.9	38.4
Dili	(4.1)	5.6	20.9	25.8	65.8	67.2	80.2	42.7
Ermera	(0.0)	8.1	4.1	17.7	22.5	41.9	57.6	31.4
Lautem	*	3.3	0.0	3.8	27.3	34.5	68.5	29.9
Liquiçá	(0.0)	6.1	6.9	24.7	19.7	31.6	60.8	30.2
Manatuto	(3.5)	8.6	9.2	28.1	45.8	69.5	91.1	45.4
Manufahi	*	7.6	9.2	20.9	29.6	60.6	56.0	29.4
Oecussi	*	4.5	23.7	30.9	54.0	64.6	84.4	47.7
Viqueque	(3.9)	1.9	7.6	20.6	15.6	37.7	54.6	25.6
Education								
No education	3.9	15.9	19.1	30.9	38.8	50.7	68.0	44.9
Primary	0.0	3.9	11.5	16.9	39.0	46.9	67.9	36.7
Secondary	1.9	2.2	10.8	17.0	40.4	47.5	61.6	25.6
More than secondary	*	(3.1)	(17.9)	(37.7)	*	*	*	27.3
Wealth quintile								
Lowest	1.9	7.2	9.2	18.3	30.2	41.0	63.3	34.5
Second	1.7	3.7	12.2	18.1	35.5	46.9	60.3	33.1
Middle	3.7	7.7	9.1	22.8	31.1	43.1	64.8	32.9
Fourth	0.0	3.3	14.8	19.3	36.6	49.5	68.7	34.0
Highest	2.9	6.6	20.5	26.5	57.5	66.6	79.3	42.1
Total	2.2	5.6	13.5	21.6	39.8	49.2	66.8	35.6

Note: Women who have been sterilized are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.
[1] The number of living children includes the current pregnancy.

Table 7.2.2 Desire to limit childbearing: Men

Percentage of currently married men age 15-49 who want no more children, by number of living children, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	*	4.3	23.2	18.9	29.3	36.9	53.6	25.9
Rural	0.8	10.1	8.1	16.8	19.1	31.2	39.7	21.8
District								
Aileu	*	*	(14.0)	*	*	(43.1)	(57.0)	30.5
Ainaro	*	*	*	*	(10.7)	*	*	8.6
Baucau	*	*	(8.1)	(10.9)	(21.4)	*	(37.9)	20.5
Bobonaro	*	*	*	(19.0)	*	*	(42.6)	23.4
Covalima	*	*	*	(44.0)	*	*	(64.4)	44.8
Dili	*	(3.1)	(25.2)	(19.1)	(33.6)	*	(64.2)	28.1
Ermera	*	*	*	*	*	*	(16.4)	10.0
Lautem	*	*	*	*	(15.9)	(6.4)	(14.1)	7.3
Liquiçá	*	(11.1)	(6.7)	(7.1)	*	*	51.8	23.1
Manatuto	*	*	(6.8)	(42.3)	*	(72.2)	83.8	44.4
Manufahi	*	*	*	*	*	*	*	15.3
Oecussi	*	*	*	(22.1)	(11.5)	(33.8)	(79.6)	29.3
Viqueque	*	*	*	*	(18.0)	*	(38.1)	18.2
Education								
No education	*	9.9	17.3	21.2	22.7	22.9	37.4	23.7
Primary	*	12.7	6.8	21.6	16.2	32.2	46.0	25.1
Secondary	(0.0)	4.0	13.2	13.6	25.2	35.8	42.2	21.0
More than secondary	*	*	*	(15.5)	*	*	*	20.4
Wealth quintile								
Lowest	*	(3.6)	6.2	15.6	11.0	23.1	43.9	21.0
Second	*	10.7	4.8	10.3	21.8	12.6	31.8	16.6
Middle	*	9.1	12.3	14.0	24.4	34.9	31.2	20.5
Fourth	*	9.1	9.3	27.6	15.8	43.1	46.1	25.2
Highest	*	(7.1)	23.6	18.3	36.8	(47.6)	67.5	29.5
Total 15-49	0.7	8.2	12.6	17.5	21.8	32.3	42.4	22.8

Note: Men who have been sterilized or who state in response to the question about desire for children that their wife has been sterilized are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.
[1] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

7.3 NEED FOR FAMILY PLANNING SERVICES

Data in this section provide information on the extent of need and the potential demand for family planning services in Timor-Leste. Currently married fecund women who want to postpone their next birth for two or more years or who want to stop childbearing altogether but are not using a contraceptive method are considered to have an unmet need for family planning. Pregnant women are considered to have an unmet need for spacing or limiting if their pregnancy was mistimed or unwanted. Similarly, amenorrheic women who are not using family planning and whose last birth was mistimed are considered to have an unmet need for spacing. Those whose last child was unwanted have an unmet need for limiting. Women who are currently using a family planning method are said to have a met need for family planning. The total demand for family planning services comprises those who fall in the met need and unmet need categories.

Table 7.3 shows the need for family planning among currently married women by background characteristics. About one in three currently married women has an unmet need for family planning, with 21 percent having an unmet need for spacing and 10 percent having an unmet need for limiting. Twenty-two percent of women have a met need for family planning. If all currently married women who say they want to space or limit their children were to use a family planning method, the contraceptive prevalence rate would increase to 53 percent from the current 22 percent. Currently, only 42 percent of the family planning needs of currently married women are being met.

There has been a seven-fold increase in unmet need for family planning over the past seven years, with unmet need rising from 4 percent in 2003 to 31 percent in 2009-10. Correspondingly, there has been an increase in met need over the same period, from 9 percent in 2003 to 22 percent in 2009-10, resulting in a four-fold increase in total demand for family planning (13 percent to 53 percent). However, the percentage of demand satisfied declined by 44 percent over the same period, from 75 percent to 42 percent. This indicates that despite the very significant scaling up of family planning services, growth in demand for services has been even stronger. An acceleration of the scaling up of contraceptive service provision is called for. However, it should be noted that the calculation of unmet need differed slightly between the 2003 and 2009-10 surveys, and, therefore, the numbers are not strictly comparable.

With the exception of women in the youngest and oldest age groups, overall unmet need varies little with age. However, the need for spacing does decrease with age, from 34 percent among women age 20-24 to 5 percent among women age 45-49. On the other hand, the unmet need for limiting increases with age, from 1 percent among women age 20-24 to 19 percent among women age 40-44, and then falls to 16 percent among women in the oldest age group. Overall, unmet need varies little by urban-rural residence; however, while the unmet need for spacing is greater among rural than urban women (22 percent compared with 18 percent), the unmet need for limiting is lower among rural than urban women (10 percent compared with 12 percent). The proportion of urban women's total demand that is satisfied is higher than that of rural women (51 percent compared with 38 percent). Women in Covalima are least likely to have an unmet need for family planning (17 percent), and women in Ainaro are most likely (43 percent).

With the exception of women with more than secondary education, who are least likely to have an unmet need for family planning (25 percent), there is little difference in unmet need among the other educational groups. In general, there is an inverse relationship between unmet need and wealth, with unmet need declining from 35 percent among women in the poorest households to 28 percent among women in the richest households.

Table 7.3 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage of the demand for contraception that is satisfied, by background characteristics, Timor-Leste 2009-10

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	26.6	0.2	26.9	7.6	0.2	7.9	34.2	0.5	34.7	22.6	243
20-24	33.5	1.1	34.6	14.3	1.5	15.7	47.7	2.6	50.3	31.2	1,100
25-29	27.5	4.4	32.0	20.7	3.1	23.8	48.2	7.5	55.8	42.7	1,516
30-34	22.0	9.0	31.0	16.6	11.3	27.8	38.6	20.3	58.9	47.3	1,362
35-39	18.9	14.6	33.5	12.2	14.7	27.0	31.2	29.3	60.4	44.6	1,514
40-44	11.5	19.2	30.7	5.6	19.0	24.6	17.1	38.1	55.3	44.5	1,211
45-49	4.9	16.1	21.0	1.3	12.0	13.2	6.1	28.1	34.2	38.7	960
Residence											
Urban	17.6	11.6	29.2	16.5	13.9	30.4	34.1	25.4	59.5	51.0	2,025
Rural	21.5	9.8	31.3	11.0	8.6	19.6	32.5	18.3	50.9	38.4	5,881
District											
Aileu	21.6	8.5	30.1	11.0	9.7	20.7	32.6	18.2	50.8	40.8	299
Ainaro	37.5	5.9	43.4	8.9	5.2	14.1	46.4	11.1	57.4	24.5	382
Baucau	19.1	15.7	34.8	3.6	4.5	8.0	22.7	20.1	42.8	18.8	852
Bobonaro	32.7	9.0	41.6	13.3	7.1	20.4	46.0	16.1	62.1	32.9	739
Covalima	11.4	5.9	17.3	24.9	18.9	43.8	36.2	24.9	61.1	71.7	458
Dili	16.0	13.0	29.0	17.9	15.2	33.2	34.0	28.2	62.2	53.3	1,459
Ermera	16.1	6.7	22.9	12.4	6.4	18.8	28.5	13.1	41.6	45.1	881
Lautem	19.5	8.8	28.3	8.0	9.6	17.7	27.6	18.4	46.0	38.5	541
Liquiçá	21.4	7.6	29.0	14.0	10.5	24.5	35.4	18.1	53.5	45.8	460
Manatuto	13.8	13.4	27.1	11.1	9.7	20.7	24.8	23.0	47.9	43.3	353
Manufahi	15.9	6.6	22.4	16.3	9.0	25.3	32.1	15.6	47.7	53.0	319
Oecussi	23.9	16.0	39.8	9.9	14.2	24.1	33.8	30.1	63.9	37.7	603
Viqueque	24.2	7.0	31.2	7.5	5.6	13.1	31.6	12.6	44.2	29.6	559
Education											
No education	18.6	12.3	31.0	7.1	8.8	15.9	25.7	21.1	46.8	33.9	2,909
Primary	20.0	10.4	30.4	13.0	12.8	25.8	33.0	23.2	56.2	46.0	2,027
Secondary	23.0	8.3	31.3	16.8	8.9	25.7	39.8	17.2	57.0	45.1	2,739
More than secondary	19.9	5.5	25.4	21.6	11.2	32.8	41.5	16.7	58.2	56.3	231
Wealth quintile											
Lowest	23.0	12.0	35.0	8.3	6.7	15.0	31.3	18.8	50.0	30.0	1,467
Second	21.0	9.2	30.1	8.8	7.6	16.4	29.7	16.8	46.5	35.2	1,487
Middle	23.8	9.8	33.5	10.5	7.5	18.0	34.3	17.3	51.5	34.9	1,559
Fourth	20.4	7.6	28.0	14.5	10.9	25.3	34.8	18.5	53.3	47.5	1,571
Highest	15.6	12.3	27.9	18.5	15.7	34.2	34.1	28.0	62.1	55.1	1,821
Total	20.5	10.2	30.8	12.4	9.9	22.3	32.9	20.2	53.1	42.1	7,906

[1] Unmet need for spacing: Includes women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. In addition, unmet need for spacing includes pregnant women whose current pregnancy was mistimed, or whose last pregnancy was unwanted but who now say they want more children. Unmet need for spacing also includes amenorrheic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children.
Unmet need for limiting: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrheic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.
[2] Using for spacing is defined as women who are using some method of family planning and who say they want to have another child or are undecided whether to have another. Using for limiting is defined as women who are using some method of family planning and who say they want no more children. Note that the specific methods used are not taken into account here.

7.4 IDEAL FAMILY SIZE

In the TLDHS, ideal family size was measured in two ways. Respondents who did not have any children were asked the number of children they would like to have if they could choose the exact number to have, and respondents who had living children were asked how many children they would like to have if they could go back to the time when they did not have any children and choose exactly the number of children to have. Even though these questions are based on hypothetical situations, they provide two measures. First, for men and women who have not yet started a family, the data provide

an idea of future fertility. Second, for older, high-parity women, the excess of past fertility over the ideal family size provides a measure of unwanted fertility.

Responses to these questions for both women and men are presented in Table 7.4. Almost all women and men were able to provide a numeric response to these questions, with only 4 percent of women and 3 percent of men providing a non-numeric response. In contrast, the 2003 DHS reported that 20 percent of women gave a non-numeric response.

Table 7.4 Ideal number of children

Percent distribution of women and men age 15-49 by ideal number of children, and mean ideal number of children for all respondents and for currently married respondents, according to number of living children, Timor-Leste 2009-10

Ideal number of children	Number of living children							Total
	0	1	2	3	4	5	6+	
				WOMEN[1]				
0	3.7	0.3	0.1	0.1	0.1	0.4	0.6	1.6
1	0.2	1.9	0.0	0.0	0.0	0.3	0.1	0.3
2	19.5	10.3	9.4	3.4	3.1	1.6	0.8	10.1
3	8.0	7.3	5.5	9.5	2.2	1.6	1.4	5.7
4	36.7	41.8	38.6	29.3	29.4	9.5	6.9	28.9
5	8.7	10.8	13.2	14.2	13.7	21.2	5.2	10.8
6+	18.3	24.3	30.6	41.5	49.0	61.4	80.4	38.7
Non-numeric responses	4.9	3.3	2.6	2.0	2.5	4.1	4.6	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	5,008	1,090	1,262	1,346	1,290	1,028	2,113	13,137
Mean ideal number children for:[2]								
All	3.9	4.4	4.7	5.1	5.4	6.2	7.2	5.0
Number	4,760	1,055	1,229	1,319	1,258	985	2,015	12,622
Currently married	4.6	4.5	4.8	5.1	5.4	6.2	7.2	5.7
Number	288	919	1,132	1,251	1,197	940	1,926	7,654
				MEN[3]				
0	6.2	0.9	0.0	0.0	0.0	0.0	0.0	3.0
1	0.2	0.2	0.0	0.5	0.0	0.0	0.0	0.1
2	12.5	7.0	7.1	1.1	0.7	0.8	0.5	7.4
3	9.8	7.6	2.8	5.5	0.2	1.3	0.1	6.1
4	34.5	41.4	42.6	24.2	21.1	11.8	7.3	28.9
5	13.5	9.1	15.2	24.8	15.2	20.7	4.5	13.9
6+	19.6	31.6	30.8	42.6	60.8	62.4	84.6	37.6
Non-numeric responses	3.9	2.2	1.5	1.2	2.0	3.0	3.0	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	1,961	282	348	394	349	255	486	4,076
Mean ideal number children for:[2]								
All	4.1	4.7	4.8	5.4	5.9	6.1	7.4	5.0
Number	1,885	276	343	389	342	247	472	3,954
Currently married	4.1	4.8	4.9	5.4	5.9	6.1	7.4	5.8
Number	87	264	338	378	339	246	464	2,115

[1] The number of living children includes current pregnancy for women.
[2] Means are calculated by excluding respondents who gave non-numeric responses.
[3] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

There is little difference between women and men in the overall mean ideal number of children they prefer. All women and men express a desire for five children. Currently married women and men prefer about six children, however. Data from the 2003 DHS show that the ideal number of children preferred by currently married women has changed little over the last seven years. Two in five women and men prefer an ideal family size of six children or more, while three in ten prefer 4 children. One-tenth of women express a preference for either two children or five children, with fewer men favoring two children over five children. There has been little change in the mean ideal number of children preferred over the last seven years.

Table 7.4 shows that the mean ideal family size increases with the number of living children among both women and men, rising from 4 children among respondents with no children to just over 7 children among respondents with six or more children, indicating the positive association between actual and ideal number of children. This positive association between actual and ideal number of children could be due to two factors. First, to the extent that women are able to implement their fertility desires, women who want larger families will tend to achieve larger families. Second, some women may have difficulty admitting their desire for fewer children if they could begin childbearing again and may in fact report their actual number as their preferred number.

Table 7.5 shows the mean ideal number of children for all women age 15-49 by background characteristics. The mean ideal number of children increases with age, ranging from a low of 3.9 children among women age 15-19 to a high of 6.1 children among women age 45-49. In the 2003 DHS the corresponding figures were 4.8 children for women age 15-19 and 5.8 for women age 45-49. This preference for fewer children in the youngest cohort may foretell an emerging shift in ideal family size preferences.

The mean ideal number of children is higher in rural than in urban areas. The mean ideal number of children is lowest among women in Dili (4.3) and highest among women Ainaro (6.5).

The mean ideal number of children varies inversely with education, with a nearly two-child difference between women with no education (5.8) and women with more than secondary education (3.9). The mean ideal number of children varies inversely with wealth, from 5.4 among women in the lowest quintile to 4.3 among women in the highest wealth quintile.

Table 7.5 Mean ideal number of children

Mean ideal number of children for all women age 15-49 by background characteristics, Timor-Leste 2009-10

Background characteristic	Mean	Number of women[1]
Age		
15-19	3.9	2,988
20-24	4.4	2,271
25-29	5.0	1,846
30-34	5.5	1,486
35-39	5.9	1,616
40-44	6.0	1,334
45-49	6.1	1,080
Residence		
Urban	4.4	3,204
Rural	5.2	9,417
District		
Aileu	5.3	543
Ainaro	6.5	552
Baucau	4.8	1,391
Bobonaro	5.2	1,247
Covalima	4.6	739
Dili	4.3	2,322
Ermera	5.8	1,534
Lautem	5.6	806
Liquiçá	4.8	755
Manatuto	4.5	586
Manufahi	4.9	450
Oecussi	4.5	855
Viqueque	5.4	843
Education		
No education	5.8	3,726
Primary	5.2	2,891
Secondary	4.4	5,575
More than secondary	3.9	429
Wealth quintile		
Lowest	5.4	2,232
Second	5.3	2,397
Middle	5.2	2,504
Fourth	5.0	2,578
Highest	4.3	2,910
Total	5.0	12,622

[1] Number of women who gave a numeric response

7.5 FERTILITY PLANNING

Information collected from the TLDHS can also be used to estimate the level of unwanted fertility. Moreover, this information provides some insight into the degree to which couples are able to control fertility. Women age 15-49 were asked a series of questions about each child born to them in the preceding five years, as well as any current pregnancy, to determine whether the birth or pregnancy was wanted then, wanted later (mistimed), or not wanted at all (unwanted) at the time of conception. In assessing these results, it is important to recognize that women may declare a previously unwanted birth or current pregnancy as wanted, and this rationalization may in fact result in an underestimate of the true extent of unwanted births.

Table 7.6 shows the percent distribution of births (including current pregnancy) in the five years preceding the survey by planning status of the birth, and according to birth order and age of mother at birth. According to the data, 86 percent of births in the five years preceding the survey were wanted then, 12 percent were mistimed, and 2 percent were unwanted. In general, the proportion of unwanted births increases with birth order. Four percent of births of order four and higher and one percent of births of order three are unwanted. Mistimed births are most common at parity level two. Data from the 2003 DHS show that there has been little change in the planning status of children, with 86 percent of births in the five years preceding the survey planned and 11 percent mistimed. Unwanted births declined from 4 percent in 2003 to 2 percent in 2009-10.

The percentage of unwanted births also increases with the mother's age at birth, rising from a low of less than 1 percent among mothers below 30 years of age at birth to a high of 12 percent among mothers age 45-49 at birth. Mistimed births are generally more common among younger mothers (<34 years) than among older mothers (35-49 years).

Table 7.6 Fertility planning status

Percent distribution of births to women 15-49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Timor-Leste 2009-10

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	92.7	6.8	0.3	0.1	100.0	1,836
2	83.1	16.4	0.3	0.2	100.0	1,695
3	84.9	14.3	0.8	0.1	100.0	1,594
4+	85.0	11.2	3.7	0.1	100.0	5,602
Mother's age at birth						
<20	88.2	11.1	0.4	0.3	100.0	810
20-24	85.7	13.7	0.4	0.2	100.0	2,621
25-29	86.7	12.6	0.7	0.1	100.0	2,533
30-34	85.5	11.5	2.8	0.2	100.0	2,266
35-39	86.5	9.3	4.2	0.0	100.0	1,692
40-44	82.5	9.7	7.7	0.0	100.0	655
45-49	82.8	5.7	11.5	0.0	100.0	149
Total	86.0	11.7	2.2	0.1	100.0	10,727

The extent of unwanted births can also be estimated using information on ideal family size to calculate what the total fertility rate would be if all unwanted births were avoided. This measure also may be an underestimate to the extent that women may not report an ideal family size lower than their actual family size. Table 7.7 shows total wanted fertility rates and actual fertility rates, by background characteristics. Total wanted fertility rates are calculated in the same way as the total fertility rate but exclude unwanted births from the numerator. In this case, unwanted births are those that exceed the number mentioned as ideal by the respondent. This rate represents the level of fertility that would have prevailed in the three years preceding the survey if all unwanted births had been avoided.

Table 7.7 shows that women on average have about half a child more than the wanted number of 5.1 children. The observed total fertility rate is 17 percent higher than the wanted total fertility rate in urban areas, and is 11 percent higher in rural areas. There is a one-child difference between wanted and actual fertility in the district of Oecussi, and there is a slightly less than one-child difference in Liquiçá and Manufahi, with smaller differences in the other districts. The gap between wanted and observed fertility is widest among women with primary education and among women in the lowest wealth quintile.

Table 7.7 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Timor-Leste 2009-10

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Urban	4.2	4.9
Rural	5.4	6.0
District		
Aileu	5.0	5.6
Ainaro	6.9	7.2
Baucau	5.3	5.5
Bobonaro	5.6	6.0
Covalima	4.1	4.4
Dili	3.8	4.6
Ermera	5.9	6.6
Lautem	5.9	6.7
Liquiçá	4.6	5.5
Manatuto	5.3	5.5
Manufahi	5.0	5.9
Oecussi	5.6	6.6
Viqueque	5.4	5.6
Education		
No education	5.6	6.1
Primary	5.8	6.5
Secondary	4.7	5.2
More than secondary	2.7	2.9
Wealth quintile		
Lowest	6.6	7.3
Second	5.4	6.0
Middle	5.7	6.1
Fourth	4.8	5.3
Highest	3.6	4.2
Total	5.1	5.7

Note: Rates are calculated based on births to women age 15-49 in the period 1 to 36 months preceding the survey. The total fertility rates are the same as those presented in Table 4.2.

INFANT AND CHILD MORTALITY 8

Infant and child mortality rates are the basic indicators of a country's socioeconomic development and quality of life as well as the specific measures of its health status. Measures of childhood mortality have value in population projections and show the progress of health programs and policies. Variations in mortality by demographic characteristics, such as sex and age, and by socioeconomic characteristics, such as urban-rural residence, district, mother's education, and household wealth, serve to highlight those factors that most influence child survival. Analysis of mortality measures helps identify promising directions for health and nutrition programs and improves the overall odds of children surviving to adulthood.

This chapter presents estimates of levels, trends, and differentials in neonatal, postneonatal, infant, child, and under-5 mortality in Timor-Leste. The data for mortality estimates were collected through the birth history section of the Woman's Questionnaire. Women of reproductive age (15-49) were asked a series of questions on the number of biological sons and daughters living with them, the number living elsewhere, and the number who have died. In addition, for each live birth, women were asked to provide information on sex, date of birth, whether the birth was single or multiple, and survival status of the child. Current age was collected for living children, and age at death was collected for children who died.

8.1 DEFINITION, DATA QUALITY, AND METHODOLOGY

Childhood mortality estimates in DHS surveys measure the risk of dying from birth through age 5. The rates of childhood mortality presented in this chapter are defined as follows:

Neonatal mortality (NN): the probability of dying between birth and the first month of life

Postneonatal mortality (PNN): the difference between infant and neonatal mortality

Infant mortality ($_1q_0$): the probability of dying between birth and exact age 1

Child mortality ($_4q_1$): the probability of dying between exact age 1 and exact age 5

Under-5 mortality ($_5q_0$): the probability of dying between birth and exact age 5.

All rates are expressed per 1,000 live births, except child mortality, which is expressed per 1,000 children surviving to age 12 months.

Information on stillbirths and deaths that occurred within seven days of birth is used to estimate perinatal mortality, which is the number of stillbirths and early neonatal deaths per 1,000 stillbirths and live births.

8.2 ASSESSMENT OF DATA QUALITY

The accuracy of mortality estimates depends on the sampling variability of the estimates and on nonsampling errors. Sampling variability and sampling errors are discussed in detail in Appendix C. Nonsampling errors depend on the extent to which the date of birth and age at death are accurately reported and recorded and the completeness with which child deaths are reported. Omission of births and deaths affects mortality estimates, displacement of birth and death dates influences mortality trends, and misreporting of age at death may distort the age pattern of mortality. Typically, the most serious source of nonsampling errors in a survey that collects retrospective information on births and deaths is the underreporting of births and deaths of children who were dead at the time of the survey. It may be that mothers are reluctant to talk about their dead children because of the sorrow associated

with their death, or they may live in a culture that discourages discussion of the dead. The possible occurrence of these data problems in the 2009-10 TLDHS is discussed with reference to the data quality tables in Appendix C. Underreporting of births and deaths is generally more common the further back in time an event has occurred.

An unusual pattern in the distribution of births by calendar years is an indication of omission of children or age displacement. In the TLDHS, the cutoff date for asking health questions was January 2004. Table C.4 shows that the overall percentage of births for which a month and year of birth was reported is almost 100 percent for both children who have died and children who are alive. Table C.4 shows some age displacement across this boundary for both living and dead children. The distribution of living children and the total number of children shows a deficit in 2004 and an excess in 2003, as denoted by the calendar year ratios. The deficit in 2004 can be attributed to the transference of births by interviewers out of the period for which health data were collected. Transference is proportionately higher for dead children than for living children, and this displacement may affect mortality rates. The transference of children, especially deceased children, out of the five-year period preceding the survey is likely to result in an underestimate of the true level of childhood mortality for that period.

Underreporting of deaths is usually assumed to be more common for deaths that occur very early in infancy. Omission of deaths or misclassification of deaths as stillbirths may also be more common among women who have had several children or in cases where death took place a long time ago. To assess the impact of omission on measures of child mortality, two indicators are used: (1) the percentage of deaths that occurred within seven days of birth to the number that occurred within one month of birth and (2) the percentage of neonatal to infant deaths. It is hypothesized that omission will be more prevalent for those who died immediately after birth than for those who lived longer, and that it will be more common for events that took place in the distant past compared with those that took place in the more recent past. Table C.5 shows data on age at death for early infant deaths. Selective underreporting of early neonatal deaths would result in an abnormally low ratio of deaths within the first seven days of life to all neonatal deaths. Early infant deaths have not been greatly underreported in the TLDHS survey, as suggested by the high ratio of deaths in the first seven days of life to all neonatal deaths (76 percent in the five years preceding the survey).

Heaping of the age at death on certain digits is another problem that is inherent in most retrospective surveys. Misreporting of age at death biases age pattern estimates of mortality if the net result is the transference of deaths between age segments for which the rates are calculated. For example, child mortality may be overestimated relative to infant mortality if children who died in the first year of life are reported as having died at age 1 or older. In an effort to minimize misreporting of age at death, interviewers were instructed to record deaths at under 1 month in days and deaths at under 2 years in months. In addition, they were trained to probe deaths reported at exactly 1 year or 12 months to ensure that they had actually occurred at 12 months. The distribution of deaths under 2 years during the 20 years prior to the survey by month of death shows that there is some heaping at 6, 9, and 12 months of age, with corresponding deficits in adjacent months (Table C.6). However, heaping is less pronounced for deaths in the five years preceding the survey, for which the most recent mortality rates are calculated.

8.3 Levels and Trends in Infant and Child Mortality

Neonatal, postneonatal, infant, child, and under-5 mortality rates are shown in Table 8.1 for cohorts of children born in three consecutive five-year periods before the survey. Under-5 mortality for the most recent period (0-4 years before the survey or, roughly, during the calendar years 2005-2009) is 64 deaths per 1,000 live births. This means that 1 in 16 children born in Timor-Leste dies before the fifth birthday. Seventy percent of deaths among children under age 5 occur during the first year of life: infant mortality is 45 deaths per 1,000 live births. During infancy, the risk of neonatal deaths and postneonatal deaths is 22 and 23 per 1,000 live births, respectvely. The proportion of child deaths that occurs in the neonatal period (34 percent) in Timor-Leste is lower than the global estimation of 38 percent (Lawn et al., 2005).

Table 8.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey, Timor-Leste 2009-10

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
0-4	22	23	45	20	64
5-9	30	37	68	32	98
10-14	36	47	83	36	115

[1] Computed as the difference between the infant and neonatal mortality rates

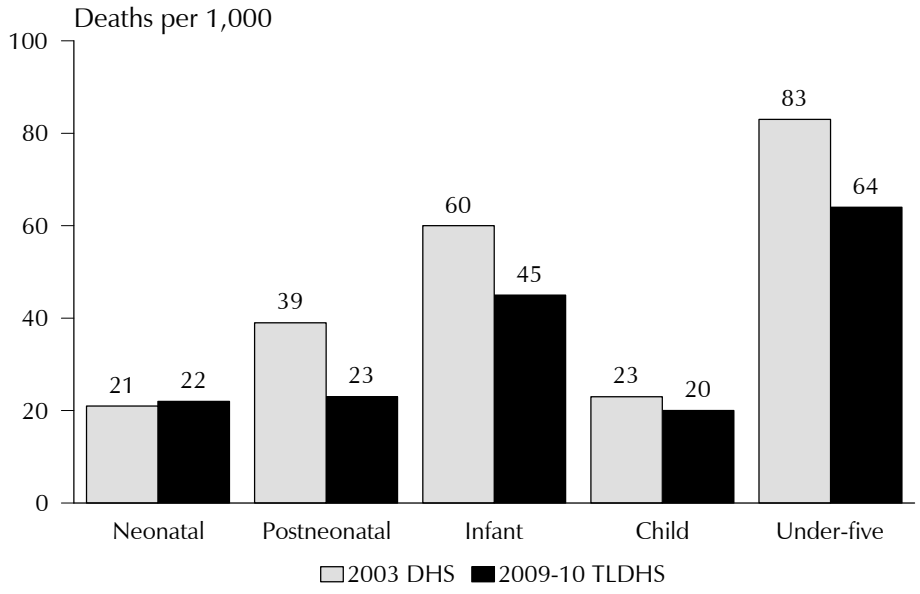
Mortality trends can be examined in two ways: by comparing mortality rates for three five-year periods preceding a single survey and by comparing mortality estimates obtained from various surveys. However, comparisons between surveys should be interpreted with caution because quality of data, time references, and sample coverage vary. In particular, sampling errors associated with mortality estimates are large and should be taken into account when examining trends between surveys.

Data from the TLDHS for the three five-year periods preceding the survey indicate a decline in childhood mortality. For example, infant mortality estimates show a decline from 83 in the 10 to 14 years preceding the survey to 68 in the five- to nine-year period preceding the survey and to 45 during the most recent five-year period. A similar trend is seen for the other under-5 mortality indicators.

Comparison of the TLDHS 2009-10 mortality data with the 2003 DHS survey results shows a substantial (23 percent) improvement in child survival (Figure 8.1). For example, under-5 mortality declined from 83 per 1,000 live births during the period 1999-2003 to 64 per 1,000 live births during the period 2005-2009. This is caused principally by a decrease in the infant mortality rate, from 60 per 1,000 for the zero to four years preceding the 2003 DHS to 45 per 1,000 during the same period prior to the 2009-10 TLDHS.

The decline in neonatal, infant and under-5 mortality in the five years preceding the TLDHS 2009-10 indicates that Timor-Leste is on track to reduce infant and under-5 mortality to reach the target for Millennium Development Goal (MDG) 4, that is, to reduce under-5 mortality by two-thirds by 2015. It is notable that the proportion of neonatal deaths to under-5 deaths (34 percent) is relatively lower in Timor-Leste than in the other neighboring countries of Indonesia, Philippines, Bangladesh, India, and Nepal as measured in the latest DHS surveys in these countries. Neonatal mortality is generally higher than postneonatal mortality, but the pattern observed in the 2009-10 TLDHS is unusual. The common indicators of data quality, including the proportion of neonatal deaths that occur in the first seven days, the ratio of neonatal deaths to perinatal deaths, and the heaping of deaths around one month do not show obvious problems with data quality; however, it is possible that some neonatal deaths have been omitted.

Figure 8.1 Mortality Trends



Note: Data for the neonatal mortality and postneonatal mortality rates for the 2003 DHS are unadjusted.

Timor-Leste 2009-10

8.4 SOCIOECONOMIC DIFFERENTIALS IN MORTALITY

Child survival closely relates to socioeconomic and demographic characteristics such as residence, region, mother's education, and household wealth status (quintile). These differentials are presented in Table 8.2. To minimize sampling errors associated with mortality estimates and to ensure a sufficient number of cases for statistical reliability, the mortality rates shown in Table 8.2 are calculated for a ten-year period.

Mortality in rural areas is consistently higher than in urban areas. In the 10-year period before the survey, infant mortality in rural areas was 61 deaths per 1,000 live births, compared with 42 deaths per 1,000 live births in urban areas. The under-5 mortality rate during the same period was 87 deaths per 1,000 live births in rural areas and 61 deaths per 1,000 live births in urban areas. This variation between rural and urban settings may be because of poor access to health care, a weak communication system (road and transport, telecommunication), and frequent uses of harmful indigenous practices in the rural areas (MOH, 2002b; Zwi et al., 2009; HAI, 2005).

The TLDHS 2009-10 data show wide variations in mortality by district. Under-5 mortality is lowest in Baucau (42 deaths per 1,000 live births) and highest in Ermera (102 deaths per 1,000 live births), with Liquiçá (101 per 1,000) following closely behind. Neonatal mortality is highest in Manufahi (44 per 1,000) and contributes to 51 percent of under-5 mortality in the district. Infant mortality varies from 30 deaths per 1,000 live births in Baucau to 77 per 1,000 in Ainaro.

Table 8.2 Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by background characteristic, Timor-Leste 2009-10

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Residence					
Urban	21	21	42	20	61
Rural	28	33	61	28	87
District					
Aileu	27	29	56	21	76
Ainaro	31	46	77	22	97
Baucau	11	18	30	12	42
Bobonaro	27	23	50	36	85
Covalima	37	38	76	21	95
Dili	21	18	39	22	60
Ermera	23	47	70	34	102
Lautem	36	33	69	31	98
Liquiçá	31	37	68	35	101
Manatuto	31	19	50	20	69
Manufahi	44	19	62	25	86
Oecussi	25	41	66	27	92
Viqueque	24	31	54	24	77
Mother's education					
No education	27	34	61	31	90
Primary	27	32	59	27	84
Secondary	26	25	51	19	69
More than secondary	(9)	(12)	(21)	*	*
Wealth quintile					
Lowest	24	37	62	27	87
Second	30	38	68	28	94
Middle	29	30	59	32	89
Fourth	25	30	56	27	81
Highest	22	16	38	15	52

Note: Numbers in parentheses are based on 250-499 unweighted exposed persons; an asterisk indicates that a rate is based on fewer than 250 unweighted exposed persons and has been suppressed.
[1] Computed as the difference between the infant and neonatal mortality rates

As expected, a mother's education is inversely related to a child's risk of dying. Under-5 mortality among children of mothers with no education (90 deaths per 1,000 live births) is substantially higher than under-5 mortality among children of women with secondary level education (69 deaths per 1,000 live births). The direct association between level of education and under-5 mortality is also seen for infant mortality. Children of women with no education (61 deaths per 1,000 live births) are much more likely to die in the first year than children of women with secondary education (51 deaths per 1,000 live births).The relationship between household wealth and under-5 mortality is not always consistent, although children born to mothers in the highest wealth quintile clearly are at much lower risk of dying than children born to mothers in the other quintiles.

8.5 Demographic Characteristics and Child Mortality

Studies have shown that a number of demographic factors are strongly associated with the survival chances of young children. These factors include sex of child, age of mother at birth, birth order, length of preceding birth interval, and size of child at birth. Table 8.3 shows the relationship between childhood mortality and these demographic variables. Again, for all variables except birth size, mortality estimates are calculated for the 10-year period preceding the survey to reduce sampling variability. Mortality rates by birth size are for the five-year period preceding the survey because information on birth size was collected only for children born in the past five years.

Childhood mortality is higher for males than females (Table 8.3) for all mortality rates. Under-5 mortality rates for male and female children are 85 and 76 deaths per 1,000 live births, respectively. The excess mortality among male children is mostly due to their higher biological risk during the first month of life.

Table 8.3 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by demographic characteristics, Timor-Leste 2009-10

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Child's sex					
Male	28	31	59	27	85
Female	24	29	53	24	76
Mother's age at birth					
<20	35	39	74	31	103
20-29	26	32	58	26	83
30-39	25	27	53	24	75
40-49	22	19	41	25	65
Birth order					
1	34	29	63	22	83
2-3	26	28	53	24	76
4-6	22	31	53	25	77
7+	27	35	62	34	94
Previous birth interval[2]					
<2 years	35	44	79	38	114
2 years	21	26	48	24	71
3 years	19	22	41	18	58
4+ years	13	17	31	16	46
Birth size[3]					
Small/very small	34	26	61	na	na
Average or larger	18	21	40	na	na

na = Not applicable
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Excludes first-order births
[3] Rates for the five-year period before the survey

Results from the TLDHS 2009-10 confirm the expected relationship between mothers who give birth at a very young age and childhood mortality. For example, under-5 mortality is 103 deaths per 1,000 livebirths to mothers age less than 20 years at birth compared with 83 and 75 deaths per 1,000 livebirths to mothers age 20-29 and 30-39, respectively. However, a similar pattern is not visible for older mothers age 40-49 who, similar to very young mothers, are also in a high-risk group. Under-five mortality to mothers age 40-49 is 65 deaths per 1,000 livebirths. This anomalous distribution may be due to large sampling errors associated with the much smaller number of births to women in this age group.

In general, first births and births of order 7 and higher also suffer significantly higher rates of mortality than births of orders 2-3 and 4-6. For example, 1 in 16 first births did not survive to the first year, compared with 1 in 19 second- and third-order births. In contrast, child mortality and postneonatal mortality tend to increase linearly with birth order. The increase in the child mortality rate with birth order may reflect a more intense competition faced by higher birth order children for the caregiver's time, for utilization of health care, and for nutritious food once children are weaned.

Short birth intervals are associated with an increased risk of dying. Different studies have revealed an association between short birth intervals (less than 2 years) and increased mortality, even after controlling for other demographic and socioeconomic variables. In Table 8.3, all childhood mortality rates show a sharp decrease as the length of the birth interval increases. Neonatal, infant, child, and under-5 mortality rates are more than two and a half times higher for children born after an interval of less than 2 years, compared with children who are born after an interval of 4 years or longer.

A child's size at birth has often been found to be an important indicator of the chances of survival during infancy. The majority of births in Timor-Leste take place at home, and these babies are seldom weighed at birth. The mother's assessment of the size of the baby at birth is therefore used as a proxy for birth weight. The TLDHS results indicate that among babies assessed by their mother to be small or very small, infant mortality is one and a half times the level observed for babies assessed as average or larger at birth.

8.6 PERINATAL MORTALITY

The perinatal mortality rate serves as a good indicator of the state of health of a population generally, and this holds true at delivery in particular. It reflects the level of utilisation of health services and the ability of women to cope with the demands of childbirth to deliver a healthy baby. Women in the TLDHS 2009-10 were asked to report on any pregnancy loss that occurred in the five years preceding the survey. For each pregnancy that did not end in a live birth, the duration of pregnancy was recorded. In this report, perinatal deaths include pregnancy losses of at least seven months' gestation (stillbirths) and deaths among live births that occurred within the first seven days of life (early neonatal deaths). The perinatal mortality rate is the sum of stillbirths and early neonatal deaths divided by the sum of all stillbirths and live births. Information on stillbirths and infant deaths that occurred within the first week of life is highly susceptible to omission and misreporting. However, retrospective surveys such as the TLDHS 2009-10 generally provide more representative and accurate perinatal death rates than the vital registration system and hospital-based studies.

Table 8.4 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Timor-Leste 2009-10

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	2	16	24	748
20-29	10	64	16	4,686
30-39	5	68	20	3,688
40-49	5	11	22	728
Previous pregnancy interval in months[4]				
First pregnancy	4	35	24	1,639
<15	2	17	36	509
15-26	9	56	19	3,331
27-38	3	28	13	2,449
39+	4	23	14	1,922
Residence				
Urban	6	28	14	2,358
Rural	16	130	20	7,491
District				
Aileu	0	5	13	359
Ainaro	1	14	25	580
Baucau	0	6	7	970
Bobonaro	1	17	20	936
Covalima	5	6	23	458
Dili	0	20	12	1,652
Ermera	5	22	22	1,258
Lautem	5	12	22	763
Liquiçá	3	9	20	585
Manatuto	0	8	19	433
Manufahi	1	16	41	393
Oecussi	2	11	16	785
Viqueque	0	12	17	678
Mother's education				
No education	7	48	17	3,305
Primary	8	44	19	2,774
Secondary	6	65	20	3,552
More than secondary	0	1	6	218
Wealth quintile				
Lowest	4	25	14	2,094
Second	2	48	25	1,962
Middle	7	37	22	1,998
Fourth	6	22	14	1,909
Highest	3	27	16	1,887
Total	22	158	18	9,850

[1] Stillbirths are fetal deaths in pregnancies lasting seven or more months.
[2] Early neonatal deaths are deaths at age 0-6 days among live-born children.
[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration, expressed per 1000.
[4] Categories correspond to birth intervals of <24 mos., 24-35 mos., 36-47 mos., and 48+ mos.

Table 8.4 shows that out of the 9,850 reported pregnancies of at least seven months' gestation, 22 were stillbirths and 158 were early neonatal deaths, yielding an overall perinatal mortality rate of 18 per 1,000 pregnancies of seven or more months' duration. Perinatal mortality is highest among mothers less than age 20 (24 per 1,000 pregnancies) and lowest among mothers age 20-29 (16 per 1,000 pregnancies).

First pregnancies and pregnancies that occur after an interval of less than 15 months are much more likely than pregnancies that occur after longer intervals to end in a perinatal loss. Perinatal mortality is also higher among women in rural areas than in urban areas (20 and 14 per 1,000 pregnancies, respectively). Mothers with more than secondary education are less likely to experience pregnancy losses than less educated mothers. There is no clear relationship between perinatal mortality and household wealth status.

8.7 HIGH-RISK FERTILITY BEHAVIOR

The survival of infants and children depends in part on the demographic and biological characteristics of their mothers. These characteristics are of particular importance because many health problems are easily avoidable at a relatively low cost. Infants and children have an elevated risk of dying if their mothers are too young (under 18 years of age) or too old (over 35 years old), if they are born after too short a birth interval (less than 24 months), and if they are of high birth order (mother has three or more children). Although first births are commonly associated with higher mortality risk, they are not included in the high-risk category because the risks associated with first births are unavoidable.

Table 8.5 shows the percent distribution of children born in the five years preceding the survey and the percent distribution of currently married women, by risk factors. The table also shows the risk ratio (of dying) for children, by comparing the proportion of dead children in each risk category with the proportion of dead children not in any high-risk category.

Table 8.5 High-risk fertility behavior

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Timor-Leste 2009-10

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high risk category	18.7	1.00	12.2[a]
Unavoidable risk category			
First order births between ages 18 and 34 years	15.1	1.33	3.6
Single high-risk category			
Mother's age <18	1.9	1.52	0.3
Mother's age >34	1.5	1.73	4.7
Birth interval <24 months	9.6	1.36	9.1
Birth order >3	21.8	1.26	13.8
Subtotal	34.9	1.32	27.9
Multiple high-risk category			
Age <18 & birth interval <24 months[2]	0.2	*	0.2
Age >34 & birth interval <24 months	0.3	*	0.3
Age >34 & birth order >3	16.7	1.30	35.5
Age >34 & birth interval <24 months & birth order >3	4.9	2.75	8.8
Birth interval <24 months & birth order >3	9.3	1.90	11.5
Subtotal	31.3	1.70	56.3
In any avoidable high-risk category	66.2	1.50	84.2
Total	100.0	na	100.0
Number of births/women	9,828	na	7,906

Notes: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the category age <18 and birth order >3
[a] Includes sterilized women

Two-thirds (66 percent) of births in Timor-Leste have elevated mortality risks that are avoidable, and about one in five (19 percent) are not in any high-risk category. Among those who are at risk, 35 percent of births are in a single high-risk category, while 31 percent of births are in multiple high-risk categories. In general, risk ratios are higher for children in multiple high-risk categories than for those in a single high-risk category.

The most vulnerable births are those to women who are age 35 or older, with a birth interval less than 24 months, and birth order of three or higher. These children are about three times more likely to die than children not in any high-risk category. However, only five percent of births are in this category.

Twenty-two percent of births occur to mothers who have three or more births, and another 17 percent of births occur to mothers who are 35 years or older and have had three or more children. These children whose mothers are 35 years or older and have had three or more children however, are only slightly more likely to die than children in the no high-risk category.

The final column of Table 8.5 shows the distribution of currently married women who have the potential for having a high-risk birth, by category of risk. Thirty-six percent of women are over age 35 and have three or more children. The potential for having a birth in a multiple high-risk category is much higher (56 percent) than the potential for having a birth in a single high-risk category (28 percent). Eighty-four percent of women are in any high-risk category.

ADULT AND MATERNAL MORTALITY 9

The Safe Motherhood Initiative, launched in 1987, drew increased worldwide attention to reproductive health, as did the need for reliable countrywide estimates of maternal deaths. In response to this increased interest, DHS surveys began collecting maternal mortality data through a series of questions designed to obtain a direct measure of maternal mortality. More recently, in an effort to improve global health, the United Nations Development Program initiated the Millennium Development Goals (MDG), with Goal 5 focused on the reduction of maternal mortality by three-quarters between 1990 and 2015. The government of Timor-Leste hopes that its strong commitment to a reproductive health strategy, a national family planning policy, training for health providers on safe, clean deliveries and emergency obstetric care, and the equipping of established health facilities will result in a reduction in the maternal mortality ratio (MMR) to 252 deaths per 100,000 by the year 2015 from a baseline estimate of 660 in 2000 (UNDP and the Government of Timor-Leste, 2009).

Estimates of maternal mortality in Timor-Leste have ranged from a low of 380 deaths per 100,000 live births to a high of 880 deaths per 100,000 live births (HAI, 2010). Data from WHO, UNICEF, UNFPA, and the World Bank for 2005 indicate that the MMR is 380 deaths per 100,000 live births (WHO et al., 2004). In 2008, WHO, UNICEF, UNFPA, and the World Bank estimated, from reports by national authorities, an adjusted maternal mortality ratio of 370 per 100,000 women and a lifetime risk of 1 in 44 deaths to women from maternal causes (WHO et al., 2010). These various model-based estimates of MMR are extrapolated from indirect estimates of other published health-related information.

Estimating maternal mortality requires a comprehensive and accurate reporting of maternal deaths. Data from the 2009-10 TLDHS provides for the first time a direct estimate of maternal mortality from a population-based survey. The data presented in this chapter will play a vital role in filling the need for a reliable national estimate of maternal mortality. Nevertheless, it is important for users of this information to understand the inherent problems associated with measuring maternal mortality in general if they are to avoid misinterpretation of the survey results. This holds particularly true when comparing results obtained from other indirect and model-based estimates.

Direct estimates of maternal mortality use data on the age of surviving sisters of survey respondents, the age at death of sisters who have died, and the number of years that have passed since the deaths of sisters.

9.1 DATA QUALITY ANALYSIS

To obtain the sibling history, each respondent was first asked to give the total number of her mother's live births. The respondent was then asked to provide a list of all of the children born to her mother, starting with the first-born and the first-born's survival status at the time of the interview. For living siblings, the current age was collected. For deceased siblings, the age at death and years since death were collected. Interviewers were carefully instructed to obtain precise information wherever possible, and when respondents were unable to provide exact age at death or years since death, particularly in the case of events that occurred decades ago, approximate but quantitative answers were accepted. For sisters who died at age 12 and above, three additional questions were asked: whether the sister was pregnant at the time of death, whether she died during childbirth, and whether she died within two months of the end of a pregnancy or childbirth. Listing all siblings in chronological order of their birth is believed to result in better reporting of events than would be the case if the interviewer obtained only information on sisters. Moreover, the information collected also allows direct estimates of adult male and female mortality.

The estimation of adult and maternal mortality requires reasonably accurate reporting of the number of brothers and sisters a respondent has ever had, the number who have died, and for maternal mortality, the number of sisters who have died of maternity-related causes. One measure of the quality of the data collected is the completeness of information on siblings. Table 9.1 shows data from the 2009-10 TLDHS on the number of siblings reported by the respondents and the completeness of the data reported on current age, age at death, and years since death. Of the 63,481 siblings reported in the sibling history, survival status was not reported for 16 siblings (<0.01 percent). Among surviving siblings, current age (used for estimating exposure to death) was missing for 90 siblings (0.2 percent). For 99 percent of deceased siblings, both age at death and years since death were reported (with missing age at death, or years since death, or both, missing for <1 percent of dead siblings). Therefore the overall level of completeness of information on siblings appears to be good.

Table 9.1 Completeness of information on siblings

Number of sisters and brothers reported by interviewed women and completeness of age data for living siblings and age at death (AD) and years since death (YSD) data for dead siblings, Timor-Leste 2009-10

	Sisters		Brothers		Total	
	Number	Percent	Number	Percent	Number	Percent
All siblings	30,861	100.0	32,621	100.0	63,481	100.0
Living	26,061	84.4	27,258	83.6	53,318	84.0
Dead	4,790	15.5	5,357	16.4	10,147	16.0
Status Unknown	10	0.0	7	0.0	16	0.0
Living siblings	26,061	100.0	27,258	100.0	53,318	100.0
Age reported	26,013	99.8	27,215	99.8	53,228	99.8
Age missing	48	0.2	42	0.2	90	0.2
Dead siblings	4,790	100.0	5,357	100.0	10,147	100.0
AD and YSD reported	4,766	99.5	5,319	99.3	10,085	99.4
Missing only AD	4	0.1	9	0.2	13	0.1
Missing only YSD	2	0.0	4	0.1	7	0.1
Missing both	18	0.4	24	0.5	42	0.4

The distribution of respondents' year of birth in relation to their siblings is another crude measure of the quality of maternal mortality data. If there is no bias in reporting, the year of birth of siblings should be roughly equivalent to the year of birth of respondents overall. The median year of birth of respondents is the same as that of their siblings, indicating that there is no serious underreporting of siblings (Table 9.2).

Table 9.2 Year of birth of respondents and siblings

Percent distribution of respondents and siblings by year of birth, Timor-Leste 2009-10

Year of birth	Respondents	Siblings
Before 1950	0.0	0.7
1950-54	0.0	1.3
1955-59	0.1	3.1
1960-64	8.7	5.4
1965-69	10.6	7.7
1970-74	12.9	9.8
1975-79	11.6	10.5
1980-84	14.6	13.6
1985 or later	41.5	48.0
Total	100.0	100.0
Lower range	1959	1923
Upper range	1995	2009
Median	1971	1971
Number of cases	13,137	63,458

Yet another crude measure of data quality is the mean number of siblings, or the mean sibship size (Table 9.3). Sibship size is expected to decline as fertility declines over time. The absence of a monotonic decline in sibship size, even though fertility has declined in Timor-Leste, is an indication that there may be some omission in the reporting of older siblings. However, since adult mortality rates are reported here for the seven years preceding the survey, this omission is unlikely to affect the calculation of mortality rates. Moreover, if the omission occurred mostly among sisters who did not survive to adulthood (which is most likely the case), such errors may not bias the estimation of maternal mortality. The possible omission of sisters is also suggested by the sex ratios that are larger than the internationally accepted sex ratio of 103-105, indicating that the sisters are underreported or the brothers are overreported. Nevertheless, it should be borne in mind that any information that relies on recall of events will suffer from some degree of misreporting, especially if it pertains to deceased persons and to events that occurred a long time before the survey.

Table 9.3 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of births, Timor-Leste 2009-10

Year of birth of respondents	Mean sibship size	Sex ratio at birth of siblings
1955-59	5.3	80.0
1960-64	5.1	106.6
1965-69	5.2	101.2
1970-74	5.3	104.3
1975-79	5.5	105.4
1980-84	5.8	101.0
1985-89	6.2	107.9
1990-95	6.5	108.9
Total	5.8	105.7

9.2 ADULT MORTALITY

It is advisable to begin by discussing overall adult mortality. If the overall mortality estimates display a general, stable, and plausible pattern, they lend credence to the maternal mortality estimates derived thereafter because maternal mortality is a subset of adult mortality.

Table 9.4 Adult mortality rates

Direct estimates of female and male mortality for the period 0 to 6 years prior to the survey, Timor-Leste 2009-10

Age	Deaths	Exposure years	Mortality rates[1]
FEMALE			
15-19	38	26,996	1.42
20-24	52	26,051	1.99
25-29	51	20,387	2.49
30-34	68	17,247	3.97
35-39	28	14,917	1.85
40-44	33	10,412	3.16
45-49	18	5,917	3.06
15-49	288	121,927	2.35[a]
MALE			
15-19	47	28,503	1.65
20-24	23	27,180	0.85
25-29	46	21,459	2.12
30-34	30	17,734	1.67
35-39	32	15,002	2.11
40-44	36	10,539	3.39
45-49	24	6,188	3.95
15-49	237	126,605	2.02[a]

[1] Expressed per 1,000 population
[a] Age-adjusted rate

Direct estimates of male and female adult mortality are obtained from information collected in the sibling history. Age-specific death rates are computed by dividing the number of deaths in each age group by the total person-months of exposure in that age group during a specified reference period. In total, female respondents in the 2009-10 TLDHS reported 63,481 siblings, of whom 30,861 were sisters and 32,621 were brothers (Table 9.1). Direct estimates of age-specific mortality rates for females and males are shown in Table 9.4 for the period zero to six years before the survey. This seven-year period is taken as a compromise between the desire to minimize recall bias and the desire to minimize sampling errors associated with small numbers. The number of sibling deaths is fairly small, and because of the large sampling variability at each five-year age group, it is preferable to aggregate the data over the age range of 15-49 years. There are more female than male deaths in the seven years preceding the survey (288 compared with 237 per 1,000 population). The female mortality rate is 2.4 deaths per 1,000 population and is 16 percent higher than the male mortality rate of 2.0 deaths per 1,000 population.

In the absence of comparable estimates of adult mortality, it may be useful to refer to indirect estimates of adult mortality from the World Health Organization (WHO). For the year 2006, which is roughly equivalent to the midpoint for the reference period of adult mortality rates in the 2009-10 TLDHS, the WHO estimates adult mortality for the age group of 15-60 years at 237 per 1,000 for men and 161 per 1,000 for women (WHO, 2008).

9.3 MATERNAL MORTALITY

Maternal deaths are a subset of all female deaths and are associated with pregnancy and childbearing. Two survey methods are generally used to estimate maternal mortality in developing countries: the indirect sisterhood method (Graham et al., 1989) and a direct variant of the sisterhood method (Rutenberg and Sullivan, 1991). Information on maternal mortality for the period of zero to

six years before the survey is shown in Table 9.5. Age-specific mortality rates are calculated by dividing the number of maternal deaths by years of exposure. To remove the effect of truncation bias (the upper boundary for eligibility in the TLDHS survey is 49 years), the overall rate for women age 15-49 is standardized by the age distribution of the survey respondents. Maternal deaths are defined as any death that occurred during pregnancy, childbirth, or within two months of the birth or termination of a pregnancy.

Table 9.5 Direct estimates of maternal mortality

Direct estimates of maternal mortality for the period 0-6 years prior to the survey, Timor-Leste 2009-10

Age	Maternal deaths	Exposure years	Mortality rates[1]	Proportion of maternal deaths to female deaths
15-19	8	26,996	0.286	20.2
20-24	22	26,051	0.862	43.3
25-29	24	20,387	1.198	48.2
30-34	32	17,247	1.842	46.4
35-39	12	14,917	0.836	45.2
40-44	15	10,412	1.439	45.5
45-49	6	5,917	1.026	33.5
Total	120	121,927	0.960[a]	41.7
General fertility rate (GFR)			0.172[a]	
Maternal mortality ratio (MMR)[2]			557	

[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per 100,000 live births; calculated as the maternal mortality rate divided by the general fertility rate
[a] Age-adjusted rate
na = Not available

Maternal mortality in Timor-Leste is high relative to many developed countries. However, for each age group, maternal deaths are a relatively rare occurrence. As such, the age-specific pattern should be interpreted with caution. Respondents reported 120 maternal deaths in the seven years preceding the survey. The maternal mortality rate, which is the annual number of maternal deaths per 1,000 women age 15-49, for the period zero to six years preceding the survey, is 0.96. Maternal deaths accounted for 42 percent of all deaths to women age 15-49; in other words, more than two in five Timorese women who died in the seven years preceding the survey died from pregnancy or pregnancy-related causes. The MMR, which is obtained by dividing the age-standardized maternal mortality rate by the age-standardized general fertility rate, is often considered a more useful measure of maternal mortality because it measures the obstetric risk associated with each live birth. Table 9.5 shows that the MMR for Timor-Leste for the seven years preceding the survey is 557 deaths per 100,000 live births (or alternatively, about 6 deaths per 1,000 live births). The 95 percent confidence interval places the true MMR for 2009-10 anywhere between 408 and 706.

As pointed out at the beginning of the chapter, the MMR estimate from the 2009-10 TLDHS is the first direct measure of maternal mortality because it is based on survey data and is therefore not comparable to other model-based estimates of MMR that have been used in Timor-Leste in earlier years. Nevertheless, it is important to point out that the MMR for Timor-Leste remains one of the highest in the world, and government programs must address this problem. Necessary interventions include increasing women's access to reproductive health care, (through more and better health facilities that offer family planning and maternity care), increasing skilled birth attendance, and educating women about birth spacing. These issues are discussed in detail in the following chapters of this report.

MATERNAL HEALTH 10

Making Pregnancy Safer, a program launched by WHO, is a significant component of the Safe Motherhood Initiative of 1987. The program's framework is designed to ensure that all pregnancies are wanted, that women can progress safely through pregnancy and childbirth, and that infants are born alive and healthy (WHO, 2010). The government of Timor-Leste recognizes the importance of the availability of good basic and comprehensive essential services for all women during pregnancy and childbirth. The intent of the government is to reduce levels of maternal and neonatal mortality and morbidity in the country. The National Reproductive Health Strategy (NRHS) for Timor-Leste incorporates four basic strategic approaches to make pregnancy safer (MOH, 2004a):

- To substantially increase the level of knowledge in the general population on issues related to pregnancy and childbirth
- To improve the quality and the coverage of prenatal, delivery, postnatal, and perinatal health care
- To improve emergency obstetric care through recognition, early detection, and management or referral of complications of pregnancy and delivery
- To integrate effective detection and management of STI cases, including HIV, in maternal and perinatal care

Traditional beliefs and practices around childbearing and child rearing are very strong in Timor-Leste. A high number of maternal deaths have been documented (see Chapter 9). The absence of a basic health service infrastructure, which was destroyed during the Indonesian withdrawal in 1999, has compromised health services for women and children. Since then, Timor-Leste has set health as its national priority, yet gaps persist in the availability of strong and sustained community-wide health promotion strategies (WHO Timor-Leste, 2004). Efforts from agencies such as the Health Alliance International (HAI), United Nations Children's Fund (UNICEF), and United Nations Population Fund (UNFPA) have addressed the issues of maternal and newborn care in support of the Ministry of Health (HAI, 2008). This chapter presents findings on several aspects of maternal health in Timor-Leste: antenatal, delivery, postnatal, and newborn care practices as well as problems in accessing health care for women.

10.1 ANTENATAL CARE

The quality of antenatal care (ANC) can be measured by the qualifications of the provider and the number and frequency of ANC visits. Antenatal care quality can also be monitored through the content of services received and the kinds of information given to mothers during their visits.

Information about ANC was obtained from women who gave birth in the five years preceding the survey. Table 10.1 shows the percent distribution of mothers in the five years preceding the survey by source of care received during pregnancy, according to selected background characteristics. Women were asked to report on whom they saw for care for their last birth, and if they saw more than one provider, only the provider with the highest qualification is included in the table.

Antenatal care from a skilled birth attendant, that is, from a doctor, nurse, midwife, or assistant nurse, is very common in Timor-Leste, with 86 percent of women reporting receipt of such care. The majority of women receive care from a nurse or midwife (80 percent). Four percent of women receive care from a doctor, and less than 2 percent receive care from an assistant nurse. One

Table 10.1 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Doctor	Nurse/ midwife	Assistant nurse	Community health worker	Traditional birth attendant	Other	No one	Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
Mother's age at birth										
<20	3.6	81.2	1.6	0.8	1.1	0.0	11.8	100.0	86.3	358
20-34	4.2	82.6	1.5	0.4	0.7	0.2	10.4	100.0	88.2	3,966
35-49	4.0	74.9	1.8	0.3	1.4	0.2	17.5	100.0	80.6	1,691
Birth order										
1	5.6	81.0	2.0	0.6	0.8	0.1	9.9	100.0	88.6	849
2-3	4.2	83.7	1.5	0.2	0.7	0.2	9.6	100.0	89.4	1,748
4-5	3.8	82.4	1.2	0.2	1.0	0.1	11.2	100.0	87.4	1,516
6+	3.5	75.3	1.7	0.5	1.3	0.4	17.3	100.0	80.6	1,902
Residence										
Urban	8.7	83.7	0.7	0.5	0.8	0.6	4.9	100.0	93.2	1,484
Rural	2.6	79.2	1.9	0.3	1.0	0.1	15.0	100.0	83.6	4,531
District										
Aileu	6.3	86.2	0.2	0.5	0.7	0.6	5.5	100.0	92.8	220
Ainaro	3.1	71.3	0.0	0.2	0.0	0.9	24.5	100.0	74.4	318
Baucau	2.0	84.9	0.5	0.5	0.5	0.0	11.5	100.0	87.4	598
Bobonaro	2.5	84.6	0.7	0.7	0.3	0.0	11.2	100.0	87.8	587
Covalima	4.3	87.5	0.6	0.3	0.8	0.0	6.5	100.0	92.3	322
Dili	9.2	86.2	0.7	0.6	0.6	0.6	2.2	100.0	96.1	1,043
Ermera	2.4	66.9	1.3	0.2	0.4	0.1	28.7	100.0	70.5	719
Lautem	3.0	81.8	0.8	0.2	0.6	0.0	13.6	100.0	85.6	444
Liquiçá	3.2	86.8	6.5	0.0	0.0	0.0	3.6	100.0	96.4	358
Manatuto	1.4	92.1	0.4	0.2	1.1	0.0	4.7	100.0	93.9	264
Manufahi	3.3	71.0	1.4	0.3	0.2	0.3	23.5	100.0	75.7	238
Oecussi	5.4	77.6	0.9	0.0	6.3	0.0	9.8	100.0	83.9	492
Viqueque	1.5	68.4	8.0	0.7	0.4	0.3	20.8	100.0	77.8	412
Mother's education										
No education	2.2	72.0	2.2	0.2	1.6	0.2	21.6	100.0	76.3	1,980
Primary	3.4	81.3	1.7	0.8	1.1	0.2	11.5	100.0	86.4	1,656
Secondary	5.7	86.5	1.1	0.3	0.3	0.2	5.9	100.0	93.3	2,226
More than secondary	12.9	87.1	0.0	0.0	0.0	0.0	0.0	100.0	100.0	154
Wealth quintile										
Lowest	2.2	69.3	2.7	0.2	2.4	0.3	22.9	100.0	74.2	1,226
Second	1.7	75.7	1.6	0.2	1.0	0.1	19.7	100.0	79.0	1,171
Middle	3.0	83.1	1.4	0.6	0.3	0.0	11.5	100.0	87.5	1,203
Fourth	5.6	85.2	1.7	0.2	0.8	0.1	6.4	100.0	92.6	1,170
Highest	7.7	88.4	0.5	0.6	0.2	0.5	2.1	100.0	96.6	1,244
Total	4.1	80.3	1.6	0.4	1.0	0.2	12.5	100.0	86.0	6,015

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, midwife, and assistant nurse

percent of women receive care from a traditional birth attendant. Thirteen percent of women did not receive care from a health provider for their last birth in the five years preceding the survey. These findings reveal that there has been a significant improvement in the proportion of women receiving ANC from a skilled provider—an increase of 41 percent, from 61 percent in the 2003 DHS to 86 percent in the 2009-10 TLDHS. These findings are also consistent with the results of the 2008 Knowledge, Practices, and Coverage (KPC) survey conducted by HAI in selected districts. The KPC survey found that 84 percent of women surveyed reported receiving ANC from health professionals (HAI, 2008).

Mothers age 35 years and older are less likely than younger mothers to receive ANC from a skilled provider. Care from a skilled provider is also less likely for mothers of babies of order 6 and higher. There is a marked difference by urban-rural residence in the percentages of mothers who receive ANC from a skilled provider, with 93 percent getting care in urban settings and 84 percent receiving care in rural settings. Antenatal care from a skilled provider is lowest in Ermera (71 percent) and highest in Dili (96 percent) and Liquiçá (97 percent).

There is a direct relationship between ANC received from a skilled provider and both education and wealth quintiles. Care from a skilled provider increases with education, rising from 76 percent of mothers with no education to 100 percent of mothers with more than secondary education. Similarly, by wealth quintile, receipt of antenatal care from a skilled provider rises from 74 percent

among women in the lowest wealth quintile to 97 percent among women in the highest wealth quintile.

10.2 NUMBER AND TIMING OF ANTENATAL VISITS

Antenatal care is more beneficial in preventing adverse pregnancy outcomes when sought early in the pregnancy and continued through delivery. It is possible during visits to detect health problems associated with a pregnancy. In the event of any complications, more frequent visits are advised, and admission to a health facility may be necessary.

Table 10.2 shows that more than one in two pregnant women (55 percent) made four or more visits for care during their entire pregnancy. Urban women are more likely than rural women to have made four or more visits (63 percent and 53 percent, respectively).

Table 10.2 Number of antenatal care visits and timing of first visit

Percent distribution of women age 15-49 who had a live birth in the 5 years preceding the survey, by number of ANC visits for the most recent live birth, by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Timor-Leste 2009-10

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	4.9	15.0	12.5
1	2.2	3.5	3.2
2-3	29.1	28.6	28.7
4+	62.8	52.5	55.1
Don't know/missing	1.0	0.4	0.6
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	4.9	15.0	12.5
<4	52.9	42.9	45.3
4-5	33.3	30.4	31.1
6-7	7.3	10.3	9.6
8+	0.7	1.1	1.0
Don't know/missing	0.9	0.4	0.5
Total	100.0	100.0	100.0
Number of women	1,484	4,531	6,015
Median months pregnant at first visit (for those with ANC)	3.8	4.0	3.9
Number of women with ANC	1,411	3,853	5,264

About one in two women (45 percent) made their first ANC visit before the fourth month of pregnancy. The median duration of pregnancy at the first visit is 3.9 months (3.8 months in urban areas and 4 months in rural areas).

10.3 COMPONENTS OF ANTENATAL CARE

The content of ANC is important in assessing the quality of care received. Pregnancy complications are an important source of maternal and child morbidity and mortality, and thus teaching pregnant women about the danger signs associated with pregnancy and the appropriate actions to take are essential components of good care.

Table 10.3 presents information on the percentage of women who took iron tablets or syrup and intestinal parasite drugs during their last pregnancy in the five years preceding the survey. The table also shows the percentage of women who were informed about the signs of pregnancy complications and, among women receiving care, the percentage who received specific, routine ANC services, according to background characteristics.

Table 10.3 Components of antenatal care

Among women age 15-49 with a live birth in the five years preceding the survey, the percentages who took iron tablets (or syrup) and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific ANC services, according to background characteristics, Timor-Leste 2009-10

	Among women with a live birth in the last five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the last five years, the percentage with selected services:					
Background characteristic	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in the last five years	Informed of signs of pregnancy compli-cations	Weighed	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Mother's age at birth									
<20	62.2	15.9	358	50.5	94.8	91.9	14.9	12.3	316
20-34	65.5	12.7	3,966	55.8	97.3	93.9	18.3	13.6	3,552
35-49	57.5	14.1	1,691	56.7	96.3	92.4	17.6	15.1	1,396
Birth order									
1	65.1	12.6	849	51.7	95.7	91.7	20.7	15.4	764
2-3	66.5	13.2	1,748	53.6	97.8	94.5	19.4	13.7	1,581
4-5	64.7	12.0	1,516	57.2	97.3	94.6	15.9	12.7	1,346
6+	57.7	14.7	1,902	58.5	96.2	92.1	16.8	14.5	1,573
Residence									
Urban	76.2	6.7	1,484	46.0	97.5	95.0	26.2	16.7	1,411
Rural	58.7	15.4	4,531	59.3	96.7	92.8	14.9	12.9	3,853
District									
Aileu	85.1	8.9	220	77.6	99.0	99.0	11.6	7.7	208
Ainaro	67.7	2.1	318	24.9	97.8	92.9	19.3	9.7	240
Baucau	5.9	9.6	598	17.5	100.0	96.0	23.2	12.9	529
Bobonaro	52.7	29.0	587	38.0	92.3	81.2	19.2	33.4	521
Covalima	63.9	12.0	322	77.8	97.7	97.6	29.0	17.9	301
Dili	84.7	3.6	1,043	40.7	98.8	96.8	24.5	12.5	1,020
Ermera	47.8	23.9	719	85.7	98.0	96.5	3.3	7.1	512
Lautem	87.7	14.1	444	68.8	98.7	97.3	18.1	8.3	384
Liquiçá	69.0	20.9	358	72.7	95.0	89.1	10.8	11.3	345
Manatuto	87.6	35.0	264	77.4	97.9	94.4	7.9	5.1	252
Manufahi	46.5	6.4	238	47.1	91.6	81.5	18.8	20.1	182
Oecussi	74.2	8.0	492	81.5	91.5	91.3	17.1	17.9	444
Viqueque	65.2	3.0	412	53.6	98.2	94.9	17.9	10.3	326
Mother's education									
No education	53.5	14.3	1,980	56.7	94.7	91.2	13.0	13.1	1,552
Primary	64.9	14.7	1,656	58.9	96.8	91.6	14.9	12.6	1,465
Secondary	68.7	11.7	2,226	53.5	98.3	95.9	22.4	15.0	2,093
More than secondary	83.6	6.9	154	45.6	100.0	98.5	36.0	19.8	154
Wealth quintile									
Lowest	55.1	8.7	1,226	55.7	94.1	90.3	12.9	11.0	945
Second	53.4	14.4	1,171	55.3	95.7	92.4	15.7	13.4	941
Middle	62.0	18.6	1,203	60.8	97.6	93.8	15.0	13.1	1,065
Fourth	66.2	16.9	1,170	58.8	97.5	93.1	17.2	16.2	1,095
Highest	78.0	8.2	1,244	48.9	98.9	96.6	26.8	15.2	1,218
Total	63.1	13.3	6,015	55.7	96.9	93.4	17.9	13.9	5,264

Among women with a live birth in the past five years, 63 percent took iron tablets or syrup while pregnant with the last birth. There are substantial variations by background characteristics. Two-thirds of women age 20-34 took iron tablets or syrup compared with lower percentages among women in the other age groups. The consumption of iron tablets or syrup is much higher among urban than rural women (76 and 59 percent, respectively), and among women who reside in Lautem, Manatuto, Aileu, and Dili (more than 80 percent each). On the other hand, only 6 percent of women in Baucau took iron tablets or syrup for their last birth in the five years preceding the survey. Not surprisingly, the consumption of iron tablets or syrup increases with the mother's educational level and household wealth.

A much lower percentage of Timorese mothers took intestinal parasite drugs (13 percent) while pregnant with their last birth in the five years before the survey. Consumption of drugs for control of intestinal parasites is most common among very young mothers (< 20 years), mothers with children of birth order 6 and higher, rural women, those residing in Manatuto, mothers with no education, and mothers living in households in the middle wealth quintile.

More than half (56 percent) of mothers who received ANC reported that they were informed of pregnancy complications during their visit. Surprisingly, urban mothers, those with more than secondary education, and those in the highest wealth quintile are less likely than other mothers to be informed about pregnancy complications. Across districts, mothers living in Baucau are least likely to be informed about signs of pregnancy complications, in contrast with mothers living in Ermera, who are most likely to be informed of the danger signs associated with a pregnancy.

The vast majority of mothers who received ANC were weighed (97 percent) and had their blood pressure taken (93 percent). A much smaller percentage of women who went for care had a urine or blood sample taken (18 and 14 percent, respectively). Older mothers age 35-49, mothers having their first birth, urban residents, those living in Covalima, highly educated mothers, and those in the highest wealth quintile were more likely than their counterparts to have had their urine sample taken. A similar pattern was seen for blood pressure measurement.

10.4 TETANUS TOXOID VACCINATION

Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus, a major cause of death among infants. For full protection, a pregnant woman should receive at least two doses during each pregnancy. If a woman has been vaccinated during a previous pregnancy or during maternal and neonatal tetanus vaccination campaigns, however, she may only require one dose for the current pregnancy. Five doses provide lifetime protection.

Table 10.4 Tetanus toxoid injections

Among mothers age 15-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections (TTI) during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	78.8	80.0	358
20-34	78.2	81.9	3,966
35-49	69.6	74.7	1,691
Birth order			
1	80.9	82.2	849
2-3	79.4	83.4	1,748
4-5	75.2	80.5	1,516
6+	70.7	74.8	1,902
Residence			
Urban	76.9	84.3	1,484
Rural	75.4	78.3	4,531
District			
Aileu	88.3	90.8	220
Ainaro	63.0	66.7	318
Baucau	81.9	82.4	598
Bobonaro	75.6	78.1	587
Covalima	87.0	89.4	322
Dili	76.5	86.8	1,043
Ermera	62.7	65.5	719
Lautem	75.2	80.5	444
Liquiçá	81.0	84.3	358
Manatuto	91.6	94.8	264
Manufahi	68.6	71.2	238
Oecussi	73.8	75.8	492
Viqueque	75.4	77.4	412
Mother's education			
No education	67.6	70.0	1,980
Primary	77.5	81.2	1,656
Secondary	81.1	86.3	2,226
More than secondary	87.7	94.8	154
Wealth quintile			
Lowest	67.9	70.2	1,226
Second	69.9	72.8	1,171
Middle	77.4	81.0	1,203
Fourth	80.0	84.5	1,170
Highest	83.6	90.1	1,244
Total	75.8	79.8	6,015

[1] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth.

Table 10.4 shows the percentage of women who had a live birth in the five years preceding the survey and whose last birth was protected against neonatal tetanus, according to background characteristics. Three-quarters of mothers with a live birth in the five years preceding the survey received two or more tetanus toxoid injections during their last pregnancy, and four-fifths were protected for their last birth.

Mothers less than 20 years of age and mothers of first-order births are more likely (79 percent and 81 percent, respectively) to have received two or more tetanus injections during their last pregnancy than older mothers age 35-49 (70 percent) and mothers of higher order births (71 percent and above). Mothers in Manatuto are most likely to have received two or more tetanus toxoid injections (92 percent) and to have had their last birth protected against neonatal tetanus (95 percent) compared with mothers in all other districts; tetanus toxoid coverage is lowest among mothers in Ermera and Ainaro. Education and wealth have a positive effect on whether women receive tetanus toxoid injections. For example, 88 percent of mothers with more than secondary education received at least two injections during their last pregnancy, compared with 68 percent of mothers with no education. Similarly, 84 percent of mothers in the highest wealth quintile received at least two doses of tetanus toxoid injection, compared with 68 percent of mothers in the lowest quintile.

10.5 KNOWLEDGE OF DANGER SIGNS DURING PREGNANCY

The 2009-10 TLDHS also included women's knowledge of danger signs associated with pregnancy. It is important for mothers and their families to recognize danger signs during pregnancy so that they can seek timely medical care. Women who responded that they had been told about danger signs associated with pregnancy during one of their ANC visits were asked to describe the symptoms they associated with the need to seek immediate care.

Table 10.5 shows the percentage of women with a birth in the five years preceding the survey who could name various symptoms that indicate the need to seek immediate care. Fifty-six percent of women mentioned severe abdominal pain as a danger sign, 47 percent mentioned severe headache, 36 percent mentioned vaginal bleeding, 26 percent mentioned blurred vision and swelling of the hands and face, and 11 percent mentioned convulsions.

Severe abdominal pain is most commonly reported as a danger sign by mothers more than age 20, mothers with births of order 2 and higher, Baucau residents, and those mothers with secondary education. Note that a higher percentage of rural mothers are able to cite the various danger signs than urban mothers, with the pattern by other background characteristics being less consistent.

Table 10.5 Knowledge of danger signs during pregnancy

Percentage with a live birth in the five years preceding the survey who can name various symptoms during pregnancy that indicate the need to seek immediate care, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Vaginal bleeding	Severe abdominal pain	Severe headache	Convulsions	Blurred vision and swelling of hands and face	Other/ don't know	Number of women
Mother's age at birth							
<20	36.8	47.5	47.9	9.8	25.6	13.2	358
20-34	37.0	56.9	45.4	11.1	25.9	12.4	3,966
35-49	34.5	56.9	48.7	9.8	27.8	11.8	1,691
Birth order							
1	36.0	53.3	43.0	8.9	26.7	13.0	849
2-3	35.2	56.2	45.8	10.1	25.4	12.9	1,748
4-5	36.1	57.6	48.2	11.2	27.2	11.0	1,516
6+	37.6	56.7	47.3	11.4	26.6	12.4	1,902
Residence							
Urban	32.8	55.8	35.7	6.4	21.0	12.2	1,484
Rural	37.5	56.5	50.0	12.0	28.2	12.3	4,531
District							
Aileu	48.5	71.6	45.5	13.6	17.5	8.2	220
Ainaro	32.2	47.4	40.4	15.1	40.3	4.3	318
Baucau	25.5	80.9	35.5	3.8	43.3	2.0	598
Bobonaro	34.2	26.1	41.5	2.7	30.8	14.9	587
Covalima	27.3	52.9	37.2	13.8	9.8	13.8	322
Dili	32.6	55.9	35.9	3.6	19.8	11.1	1,043
Ermera	53.8	53.6	70.8	16.2	19.1	2.0	719
Lautem	29.6	60.9	21.5	26.3	15.7	21.0	444
Liquiçá	31.6	57.0	32.9	12.1	29.5	16.5	358
Manatuto	37.5	69.1	71.2	8.9	29.1	23.2	264
Manufahi	58.6	61.9	37.8	10.9	17.9	10.1	238
Oecussi	30.1	52.3	85.8	6.1	57.4	14.3	492
Viqueque	43.1	58.6	47.7	20.6	7.6	30.4	412
Education							
No education	34.1	54.2	50.6	11.6	28.5	13.1	1,980
Primary	36.9	54.4	48.8	10.8	27.7	12.6	1,656
Secondary	37.3	59.8	41.7	9.9	24.1	11.3	2,226
More than secondary	44.9	53.9	38.9	7.5	19.2	11.8	154
Wealth quintile							
Lowest	31.7	55.6	48.9	10.9	28.7	18.0	1,226
Second	36.7	56.8	48.2	12.2	29.4	10.6	1,171
Middle	39.8	54.3	48.8	13.5	26.6	10.7	1,203
Fourth	38.2	56.9	46.9	11.6	25.0	10.8	1,170
Highest	35.4	57.9	40.0	5.3	22.6	11.0	1,244
Total	36.3	56.3	46.5	10.6	26.4	12.3	6,015

10.6 DELIVERY CARE

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that may cause the death or serious illness of the mother, the baby, or both. Hence, an important component in the effort to reduce the health risks to mothers and children is to increase the proportion of babies delivered in a safe, clean environment and under the supervision of health professionals.

10.6.1 Place of Delivery

Table 10.6 presents the percent distribution of live births in the five years preceding the survey, by place of delivery and by percentage delivered in a health facility, according to background characteristics. Just over one in five births are delivered in a health facility, with the vast majority delivered in a public (21 percent) rather than in a private (1 percent) facility. The majority of births (78 percent) are delivered at home. Delivery in a health facility is more common among younger mothers (25 percent), mothers of first-order births (31 percent), and mothers who have had at least four antenatal visits (31 percent). More than half (53 percent) of the children in urban areas are born

Table 10.6 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Health facility		Home	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector					
Mother's age at birth							
<20	23.4	1.1	75.2	0.3	100.0	24.5	745
20-34	22.8	0.7	76.3	0.1	100.0	23.5	6,789
35-49	16.8	0.3	82.8	0.0	100.0	17.0	2,294
Birth order							
1	29.8	1.0	69.1	0.2	100.0	30.8	1,679
2-3	26.0	1.0	72.8	0.1	100.0	27.0	2,964
4-5	19.5	0.5	79.7	0.1	100.0	20.1	2,415
6+	13.1	0.2	86.5	0.0	100.0	13.3	2,770
Residence							
Urban	50.5	2.3	46.7	0.3	100.0	52.8	2,353
Rural	12.3	0.1	87.5	0.1	100.0	12.4	7,475
District							
Aileu	11.7	0.0	87.8	0.3	100.0	11.7	359
Ainaro	7.2	0.0	92.7	0.1	100.0	7.2	579
Baucau	21.1	0.0	78.8	0.0	100.0	21.1	970
Bobonaro	16.1	0.0	83.7	0.1	100.0	16.1	934
Covalima	28.0	0.2	71.4	0.4	100.0	28.2	453
Dili	60.1	3.2	36.2	0.4	100.0	63.3	1,652
Ermera	3.0	0.2	96.8	0.0	100.0	3.2	1,252
Lautem	20.5	0.1	79.3	0.0	100.0	20.7	758
Liquiçá	12.5	0.6	86.9	0.0	100.0	13.1	582
Manatuto	25.4	0.0	74.6	0.0	100.0	25.4	433
Manufahi	11.0	0.2	88.9	0.0	100.0	11.1	393
Oecussi	4.4	0.3	95.4	0.0	100.0	4.6	783
Viqueque	13.9	0.1	85.7	0.0	100.0	14.1	678
Mother's education							
No education	7.1	0.1	92.8	0.0	100.0	7.2	3,298
Primary	15.1	0.5	84.2	0.2	100.0	15.5	2,765
Secondary	36.5	1.3	62.0	0.1	100.0	37.8	3,546
More than secondary	73.7	1.7	24.7	0.0	100.0	75.3	218
Antenatal care visits[1]							
None	1.6	0.0	98.3	0.0	100.0	1.6	751
1-3	23.2	0.9	75.9	0.0	100.0	24.1	1,919
4+	30.7	0.6	68.7	0.0	100.0	31.3	3,312
Wealth quintile							
Lowest	5.2	0.0	94.7	0.0	100.0	5.2	2,090
Second	7.0	0.1	92.9	0.0	100.0	7.1	1,960
Middle	12.8	0.2	86.9	0.1	100.0	13.0	1,992
Fourth	27.1	0.8	71.7	0.3	100.0	27.9	1,903
Highest	57.8	2.2	39.6	0.1	100.0	60.1	1,884
Total	21.4	0.7	77.8	0.1	100.0	22.1	9,828

Note: Total includes 33 cases with information missing on number of ANC visits.
[1] Includes only the most recent birth in the five years preceding the survey

in a health facility, compared with only 12 percent in rural areas. Delivery in a health facility also varies by district, with facility delivery in Dili being much more likely than in any other district (63 percent). Less than 10 percent of births in Ermera, Oecussi, and Ainaro are delivered in a health facility. There is a strong association between health facility delivery, mother's education, and wealth quintile. The proportion of deliveries in a health facility is 7 percent among births to mothers with no education; this compares with 75 percent among births to mothers with more than secondary education. A similar pattern is seen in terms of wealth quintiles: delivery at a health facility is significantly less likely among births to mothers in the lowest two wealth quintiles (5 percent and 7 percent, respectively), compared with 60 percent of births in the highest wealth quintile.

10.6.2 Assistance during Delivery

Obstetric care from a trained provider during delivery is critical for the reduction of maternal and neonatal mortality. Home deliveries are usually less likely to be assisted by a health professional, whereas health facility deliveries are more likely to be assisted by a trained health professional.

Table 10.7 shows the distribution of live births in the five years preceding the survey by the person assisting during delivery. Thirty percent of births are delivered by a skilled provider (doctor, nurse, assistant nurse, or midwife), with a nurse or midwife being the most common skilled provider. Three percent of deliveries are performed by a doctor, and less than 1 percent are performed by an assistant nurse. Nearly one-fifth of deliveries are carried out by traditional birth attendants (18 percent). Women receive assistance from a relative or some other person for nearly one in two births (49 percent), while 3 percent of births take place without any type of assistance at all.

Table 10.7 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of births assisted by a skilled birth attendant, and percentage delivered by caesarean-section, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Person providing assistance during delivery								Percentage delivered by a skilled birth attendant[1]	Percentage delivered by C-section	Number of births
	Doctor	Nurse/ midwife	Assistant nurse	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total			
Mother's age at birth											
<20	1.1	31.4	0.5	20.1	44.7	1.8	0.3	100.0	33.0	0.9	745
20-34	3.1	27.8	0.6	17.7	48.2	2.6	0.0	100.0	31.5	1.9	6,789
35-49	2.9	20.8	0.6	17.8	52.5	5.5	0.0	100.0	24.3	1.6	2,294
Birth order											
1	4.1	34.5	0.6	17.4	41.9	1.3	0.2	100.0	39.2	3.6	1,679
2-3	3.3	30.9	0.5	17.9	45.3	2.0	0.0	100.0	34.8	1.6	2,964
4-5	2.1	24.9	0.7	18.7	50.4	3.2	0.1	100.0	27.7	1.2	2,415
6+	2.3	18.2	0.5	17.6	55.8	5.6	0.0	100.0	21.0	1.1	2,770
Place of delivery											
Health facility	12.3	85.9	1.0	0.3	0.4	0.0	0.0	100.0	99.3	7.8	2,171
Elsewhere	0.2	9.6	0.5	23.0	62.7	4.1	0.0	100.0	10.3	0.0	7,646
Residence											
Urban	7.6	50.9	0.6	16.5	22.8	1.5	0.1	100.0	59.1	4.0	2,353
Rural	1.4	18.8	0.6	18.4	57.1	3.7	0.0	100.0	20.7	1.0	7,475
District											
Aileu	3.4	19.6	0.7	10.1	61.5	4.3	0.3	100.0	23.8	0.9	359
Ainaro	0.6	9.9	0.0	2.0	85.9	1.6	0.0	100.0	10.5	0.3	579
Baucau	1.6	25.3	0.7	5.6	65.6	1.3	0.0	100.0	27.5	0.7	970
Bobonaro	0.9	24.4	0.2	3.9	61.1	9.3	0.1	100.0	25.6	1.8	934
Covalima	3.1	37.5	0.0	11.9	45.8	1.6	0.0	100.0	40.6	1.9	453
Dili	9.3	59.1	0.5	17.9	12.7	0.4	0.1	100.0	68.9	4.8	1,652
Ermera	1.1	10.9	0.1	23.5	62.2	2.2	0.0	100.0	12.1	0.1	1,252
Lautem	1.9	23.5	0.6	26.3	44.9	2.8	0.0	100.0	25.9	2.0	758
Liquiçá	2.1	19.8	1.5	4.7	64.7	7.2	0.0	100.0	23.4	1.4	582
Manatuto	1.6	35.3	0.0	23.7	31.5	7.8	0.0	100.0	36.9	1.6	433
Manufahi	2.0	16.0	0.9	36.5	37.8	6.8	0.0	100.0	19.0	1.3	393
Oecussi	1.6	8.0	0.2	62.6	26.3	1.4	0.0	100.0	9.8	0.6	783
Viqueque	1.4	21.2	2.7	2.7	70.3	1.8	0.0	100.0	25.2	1.7	678
Mother's education											
No education	0.9	12.3	0.3	20.5	60.8	5.2	0.0	100.0	13.5	0.5	3,298
Primary	1.8	20.3	0.7	20.7	53.2	3.2	0.2	100.0	22.7	1.3	2,765
Secondary	5.0	41.5	0.8	14.1	37.1	1.6	0.0	100.0	47.2	2.6	3,546
More than secondary	13.7	73.7	0.0	5.7	6.8	0.0	0.0	100.0	87.5	11.1	218
Wealth quintile											
Lowest	0.6	9.4	0.6	24.0	60.5	4.8	0.0	100.0	10.6	0.6	2,090
Second	1.1	12.4	0.6	18.8	63.4	3.6	0.0	100.0	14.2	0.5	1,960
Middle	1.8	19.0	0.8	16.7	57.9	3.8	0.0	100.0	21.5	0.8	1,992
Fourth	3.6	33.4	0.4	15.9	43.7	2.7	0.2	100.0	37.5	2.3	1,903
Highest	7.7	60.9	0.5	13.6	16.6	0.8	0.0	100.0	69.0	4.7	1,884
Total	2.9	26.4	0.6	17.9	48.9	3.2	0.0	100.0	29.9	1.7	9,828

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. Total includes 11 births with information missing on place of delivery.
[1] Skilled birth attendant includes doctor, nurse, midwife, and assistant nurse.

Skilled providers are most likely to attend births to young mothers less than age 20 and first-order births (33 percent and 39 percent, respectively). Not surprisingly, an overwhelming majority of births delivered in a health facility are attended by a skilled provider as opposed to births delivered elsewhere.

Three-fifths of urban births (59 percent) are assisted by skilled providers, compared with 21 percent of births in rural areas. Births in Dili are most likely to be attended by skilled providers (69 percent). Less than 10 percent of births in Oecussi are attended by skilled providers.

Highly educated mothers are most likely to have their births delivered by skilled attendants (88 percent) as are mothers in the wealthiest households (69 percent).

Less than 2 percent of births are delivered by caesarean section. Not surprisingly all C-section deliveries take place in health facilities, primarily in urban areas, to highly educated mothers who are also from wealthy households. Of the districts, C-section deliveries are most common in Dili (5 percent).

10.7 NEWBORN CARE

Women who did not deliver their last-born child in a health facility were asked about the practice of taking care of newborns, including cord cutting practices, application of materials on the umbilical cord after cutting, and drying and bathing of newborn children. Women were also asked about their knowledge of danger signs for a newborn that would prompt mothers to seek immediate attention.

10.7.1 Knowledge of Danger Signs for Newborns

Skilled care for mothers and their newborns is critical in the first month following delivery. Timorese mothers were asked to name symptoms indicating the need to seek immediate health care for an infant within one month of delivery. Table 10.8 shows the percentage of women with a live birth in the five years preceding the survey who can name various symptoms in a newborn that indicate the need to seek immediate care.

About three-quarters of mothers mentioned fever as a symptom needing immediate care. Lesser percentages mentioned poor suckling (35 percent), fast breathing (23 percent), pustules on the skin (12 percent), infection or discharge around the umbilical cord (11 percent), and severe chest indrawing (9 percent) as danger signs needing immediate medical attention. As noted with knowledge of pregnancy danger signs, rural mothers are more likely than urban mothers to mention each of these danger signs.

Table 10.8 Knowledge of danger signs for newborns

Percentage with a live birth in the five years preceding the survey who can name various symptoms in an infant within one month after birth that indicate the need to seek immediate care, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Poor suckling	Fast breathing	Severe chest indrawing	Fever	Pustules on the skin	Infection/ discharge around the umbilical cord	Hypo-thermia	Difficult to wake/ lethargic	Other	Don't know	Number of women
Mother's age at birth											
<20	37.3	21.9	7.5	71.0	9.1	9.0	3.0	4.3	16.5	7.1	358
20-34	35.3	22.7	8.9	72.3	12.7	11.2	3.6	4.8	15.7	5.3	3,966
35-49	35.0	23.1	9.1	74.4	10.7	11.9	2.3	3.6	15.8	5.2	1,691
Birth order											
1	35.0	21.5	7.0	69.9	10.5	11.3	3.2	5.1	16.2	6.4	849
2-3	35.0	22.9	9.1	71.7	12.6	11.2	3.5	4.6	15.5	4.8	1,747
4-5	34.7	22.6	9.1	74.8	13.7	10.9	3.0	4.8	17.6	5.6	1,516
6+	36.4	23.3	9.3	73.5	10.4	11.7	3.1	3.6	14.3	5.3	1,902
Residence											
Urban	31.5	20.1	4.5	72.2	11.6	9.6	1.6	4.1	15.2	4.0	1,484
Rural	36.6	23.6	10.3	73.0	12.0	11.8	3.7	4.5	15.9	5.9	4,531
District											
Aileu	44.3	25.0	17.3	72.2	11.1	14.6	6.0	8.7	14.5	2.9	220
Ainaro	34.9	28.7	18.8	57.1	8.6	4.0	13.0	11.0	12.2	1.6	318
Baucau	49.1	25.0	12.3	69.1	4.7	32.6	2.0	1.6	1.7	0.5	598
Bobonaro	37.3	10.4	1.3	55.3	2.8	16.0	1.4	0.7	6.4	11.7	587
Covalima	32.7	21.2	11.0	66.3	5.3	1.1	4.0	9.2	12.2	1.4	322
Dili	31.7	17.6	2.9	76.5	14.0	9.9	1.5	2.7	13.9	3.2	1,043
Ermera	38.6	7.6	7.6	91.1	12.3	1.6	0.7	4.6	17.9	0.6	719
Lautem	16.6	28.1	3.9	90.8	2.2	3.4	2.2	0.7	8.0	4.3	444
Liquiçá	19.3	12.9	13.0	70.1	15.8	5.9	2.6	3.2	25.3	3.9	358
Manatuto	63.0	21.2	10.2	78.4	25.6	24.0	5.4	12.3	26.0	4.4	264
Manufahi	36.3	43.8	13.6	43.4	12.9	20.8	3.4	5.6	9.0	6.1	238
Oecussi	31.0	55.6	9.4	92.5	33.8	12.0	1.0	4.3	57.4	0.6	492
Viqueque	34.5	24.6	15.3	52.4	9.1	4.4	8.8	6.1	4.1	33.4	412
Education											
No education	35.3	20.4	9.7	71.7	12.4	10.8	3.1	4.5	16.1	6.5	1,980
Primary	33.2	25.2	8.4	74.7	12.6	10.2	3.4	4.2	17.5	5.4	1,656
Secondary	36.6	22.7	8.8	72.2	11.1	12.8	3.0	4.4	13.6	4.6	2,226
More than secondary	41.3	27.7	3.8	75.2	9.5	8.0	3.8	6.9	22.3	1.7	154
Wealth quintile											
Lowest	34.6	28.9	9.9	71.9	12.7	9.8	3.4	4.2	19.0	9.2	1,226
Second	35.9	24.0	10.7	71.8	12.3	12.3	3.5	3.7	13.9	5.3	1,171
Middle	35.8	21.2	9.9	74.3	9.5	10.8	3.4	5.2	14.6	5.0	1,203
Fourth	35.5	20.3	8.2	71.8	12.1	11.4	3.0	5.1	15.9	4.2	1,170
Highest	34.9	19.4	5.6	74.2	12.8	12.1	2.6	3.9	15.2	3.1	1,244
Total	35.3	22.8	8.9	72.8	11.9	11.3	3.2	4.4	15.7	5.4	6,015

10.7.2 Care for Umbilical Cord

The primary care of newborns includes the proper practice of cutting the umbilical cord. Traditionally, the cord is usually cut with a razor blade, knife, scissors, or even a piece of bamboo, none of which is generally sterile. In some cultures, the cord is not cut until the placenta is delivered, and it is cut only after cord pulsation stops upon the delivery of the placenta. Table 10.9 shows that a new or boiled blade was used in only one in five of the most recent noninstitutional births. The most common instrument used in noninstitutional births was a pair of scissors (56 percent), with a knife or bamboo used in 12 percent and 10 percent of births, respectively. A used blade cut the umbilical cord in a very small percentage of births (2 percent). Scissors were used in a high number (82 percent) of recent noninstitutional births in Liquiçá.

Table 10.9 Instruments used to cut the umbilical cord

Percent distribution of most recent noninstitutional live births in the five years preceding the survey, by type of instrument used to cut the umbilical cord, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Instrument used to cut the umbilical cord							Total	Number of births
	New/ boiled blade	Used blade	Knife	Scissors	Bamboo	Other	Don't know		
Mother's age at birth									
<20	17.1	3.1	12.7	60.6	6.1	0.3	0.0	100.0	267
20-34	20.2	2.3	11.1	57.1	8.7	0.1	0.4	100.0	2,874
35-49	20.1	2.5	13.6	51.7	11.8	0.1	0.2	100.0	1,362
Birth order									
1	19.7	2.6	9.0	60.0	8.2	0.3	0.3	100.0	547
2-3	17.8	1.8	12.3	58.7	8.5	0.2	0.6	100.0	1,208
4-5	18.9	2.5	13.0	55.8	9.7	0.0	0.1	100.0	1,150
6+	22.7	2.8	11.9	51.8	10.5	0.1	0.2	100.0	1,597
Residence									
Urban	26.6	1.3	8.5	58.7	4.0	0.0	1.0	100.0	648
Rural	18.9	2.6	12.6	55.2	10.4	0.1	0.2	100.0	3,854
District									
Aileu	39.0	7.0	7.5	36.9	9.6	0.0	0.0	100.0	188
Ainaro	38.4	0.8	5.9	54.2	0.5	0.0	0.2	100.0	290
Baucau	11.4	1.8	44.6	32.4	9.4	0.0	0.4	100.0	443
Bobonaro	16.5	2.9	1.7	77.5	0.9	0.0	0.6	100.0	482
Covalima	10.0	0.8	10.0	76.3	2.0	0.8	0.0	100.0	224
Dili	36.2	1.2	4.6	53.4	3.5	0.0	1.2	100.0	348
Ermera	44.6	1.5	1.4	50.0	2.5	0.0	0.0	100.0	692
Lautem	0.7	1.6	13.1	70.8	13.6	0.0	0.2	100.0	345
Liquiçá	8.3	2.5	0.5	82.2	5.0	0.0	1.4	100.0	302
Manatuto	5.5	3.1	13.6	54.9	23.0	0.0	0.0	100.0	185
Manufahi	7.4	2.8	4.8	72.0	12.8	0.3	0.0	100.0	205
Oecussi	16.3	6.1	26.5	31.6	19.2	0.2	0.0	100.0	463
Viqueque	0.6	0.6	14.6	51.5	32.1	0.6	0.0	100.0	337
Education									
No education	23.0	2.7	12.2	48.8	12.9	0.2	0.2	100.0	1,795
Primary	17.8	2.7	14.1	56.7	8.5	0.1	0.2	100.0	1,353
Secondary	18.3	1.7	9.8	63.4	6.2	0.0	0.6	100.0	1,323
More than secondary	(15.9)	(0.0)	(1.5)	(82.6)	(0.0)	(0.0)	(0.0)	100.0	30
Wealth quintile									
Lowest	13.2	3.4	18.4	47.3	17.1	0.2	0.3	100.0	1,141
Second	21.8	3.0	13.6	52.0	9.3	0.0	0.4	100.0	1,061
Middle	23.6	1.9	8.8	57.9	7.6	0.2	0.1	100.0	1,022
Fourth	21.5	1.7	8.7	62.4	5.4	0.1	0.1	100.0	819
Highest	22.2	1.1	5.0	68.0	2.3	0.0	1.3	100.0	459
Total	20.0	2.4	12.0	55.7	9.5	0.1	0.3	100.0	4,502

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 10.10 shows that the majority of mothers with noninstitutional births did not apply anything to the umbilical cord after it was cut (53 percent). Nineteen percent of births had ointment or powder applied, 10 percent had oil applied, 7 percent had ash applied, 6 percent were treated with traditional medicine, and 5 percent had betadine applied to the cord. Differences by background characteristics varied depending on the types of material applied.

Table 10.10 Application of material after the umbilical cord was cut

Percentage of most recent noninstitutional live births in the five years preceding the survey, by material applied to the cord immediately after cutting and tying it, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Material applied to the cord							Number of births
	Oil	Ash	Ointment/ powder	Traditional medicine	Betadine	Other/ don't know	Nothing applied to cord	
Mother's age at birth								
<20	10.5	5.4	23.7	5.3	3.4	3.7	53.5	267
20-34	9.1	7.2	19.3	5.9	5.7	4.8	52.6	2,874
35-49	10.2	7.0	18.0	5.0	5.0	4.8	54.6	1,362
Birth order								
1	9.9	7.3	21.5	6.1	3.6	6.4	50.3	547
2-3	9.7	7.3	19.7	5.7	6.1	4.5	51.4	1,208
4-5	9.5	8.0	18.9	5.9	6.0	5.0	52.8	1,150
6+	9.3	6.0	18.1	5.1	5.0	4.3	56.1	1,597
Residence								
Urban	6.5	8.8	26.9	3.5	6.8	4.9	47.9	648
Rural	10.0	6.7	17.9	5.9	5.1	4.7	54.2	3,854
District								
Aileu	9.7	19.7	13.3	4.5	8.7	2.0	51.3	188
Ainaro	6.5	3.5	35.3	3.2	2.1	2.3	48.1	290
Baucau	8.4	18.6	23.8	1.3	4.7	2.3	46.5	443
Bobonaro	46.3	3.6	10.4	8.1	3.1	2.3	35.5	482
Covalima	19.6	0.9	16.9	2.5	15.4	6.8	47.1	224
Dili	4.1	14.5	30.1	1.7	3.5	5.0	47.4	348
Ermera	0.3	0.2	19.3	7.9	2.6	0.0	75.9	692
Lautem	4.9	4.9	23.5	4.1	4.1	1.0	59.6	345
Liquiçá	12.3	2.2	8.3	2.3	13.3	4.9	59.0	302
Manatuto	3.2	5.3	25.2	10.0	8.6	19.3	32.2	185
Manufahi	2.7	12.7	34.9	2.7	6.0	11.1	33.4	205
Oecussi	0.4	8.4	12.6	7.9	3.4	4.2	64.4	463
Viqueque	1.2	5.1	6.3	12.1	5.9	15.8	53.9	337
Education								
No education	10.0	8.7	15.6	6.1	2.6	4.1	56.5	1,795
Primary	9.0	5.7	21.0	6.5	5.7	4.9	53.4	1,353
Secondary	9.1	6.3	21.7	3.9	8.4	5.5	49.2	1,323
More than secondary	(21.8)	(0.0)	(33.3)	(6.6)	(18.7)	(0.0)	(32.9)	30
Wealth quintile								
Lowest	6.7	8.8	15.3	6.5	2.6	5.1	58.2	1,141
Second	10.1	8.4	17.2	6.7	3.6	4.0	55.0	1,061
Middle	12.1	5.4	19.4	5.3	5.6	4.7	52.9	1,022
Fourth	9.5	5.3	23.2	5.0	6.9	5.2	50.4	819
Highest	9.7	6.3	25.6	2.3	13.2	4.9	43.3	459
Total	9.5	7.0	19.2	5.6	5.4	4.8	53.3	4,502

Note: Figures in parentheses are based on 25-49 unweighted cases.

10.7.3 Drying and Bathing of Newborns

Health professionals recommend not bathing a newborn for at least 24 hours after birth to prevent hypothermia. However, although two-thirds of last-born noninstitutional babies are dried and placed on the mother's chest before the placenta is delivered, the majority of newborns born in a non-facility are also bathed one to five hours after delivery (Table 10.11). In fact, 27 percent of the noninstitutional newborns are bathed within the first hour of birth.

Table 10.11 Drying and bathing of newborns

Percentage of most recent noninstitutional live births in the five years preceding the survey who were dried before the delivery of the placenta, and percent distribution of most recent noninstitutional live births in the five years preceding the survey by timing of first bath, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Baby dried before placenta delivered	Timing of first bath					Total	Number of births
		Within the first hour	1-5 hours	6-23 hours	24 hours later	Don't know		
Mother's age at birth								
<20	69.5	24.1	71.5	1.6	2.9	0.0	100.0	267
20-34	65.1	28.4	63.5	2.3	5.1	0.8	100.0	2,874
35-49	63.7	23.8	68.7	1.8	5.2	0.5	100.0	1,362
Birth order								
1	65.6	24.2	68.5	3.2	3.3	0.8	100.0	547
2-3	65.6	27.8	63.7	2.1	5.7	0.7	100.0	1,208
4-5	64.5	28.4	64.2	1.9	4.8	0.7	100.0	1,150
6+	64.6	25.7	66.8	1.8	5.2	0.5	100.0	1,597
Residence								
Urban	69.7	25.5	56.2	4.3	12.8	1.3	100.0	648
Rural	64.2	27.0	67.1	1.7	3.7	0.5	100.0	3,854
District								
Aileu	79.0	4.3	82.4	5.6	6.8	0.8	100.0	188
Ainaro	93.9	48.3	46.3	3.5	1.1	0.9	100.0	290
Baucau	46.3	10.1	86.8	0.0	2.0	1.1	100.0	443
Bobonaro	95.7	17.0	81.2	0.9	1.0	0.0	100.0	482
Covalima	73.9	21.4	63.6	5.9	9.1	0.0	100.0	224
Dili	79.0	25.9	49.0	5.0	18.5	1.6	100.0	348
Ermera	53.8	26.0	73.5	0.0	0.4	0.0	100.0	692
Lautem	50.8	42.1	43.7	2.2	11.5	0.5	100.0	345
Liquiçá	57.0	36.1	49.9	1.5	12.1	0.5	100.0	302
Manatuto	61.1	36.3	58.0	1.8	3.4	0.6	100.0	185
Manufahi	23.5	11.2	75.5	5.2	6.0	2.0	100.0	205
Oecussi	61.0	31.2	66.4	0.5	0.7	1.2	100.0	463
Viqueque	69.7	36.7	57.6	2.9	2.6	0.3	100.0	337
Education								
No education	64.9	26.6	68.2	1.4	3.1	0.6	100.0	1,795
Primary	64.5	25.7	67.1	1.7	5.0	0.5	100.0	1,353
Secondary	65.2	28.3	60.6	3.1	7.3	0.8	100.0	1,323
More than secondary	(79.5)	(14.3)	(55.8)	(13.3)	(16.6)	(0.0)	100.0	30
Wealth quintile								
Lowest	61.2	28.8	65.9	1.5	3.1	0.6	100.0	1,141
Second	62.6	26.0	68.5	1.8	3.1	0.6	100.0	1,061
Middle	67.6	24.9	69.1	1.7	3.9	0.3	100.0	1,022
Fourth	66.7	27.5	62.8	2.4	6.4	0.9	100.0	819
Highest	70.7	26.3	54.7	4.2	13.8	1.0	100.0	459
Total	65.0	26.8	65.5	2.1	5.0	0.6	100.0	4,502

Note: Figures in parentheses are based on 25-49 unweighted cases.

10.8 TIMING OF FIRST POSTNATAL CHECKUP

A large proportion of maternal and neonatal deaths occur during the 24 hours following delivery. In addition, the first two days following delivery are critical for monitoring complications arising from the delivery. A postnatal care visit is also an ideal time to educate a new mother on how to care for herself and her newborn. Safe motherhood programs emphasize the importance of postnatal care, recommending that all women receive at least two postnatal checkups and iron supplementation for 45 days following a delivery.

Table 10.12 shows the percentage of mothers who received postnatal care for their last live birth in the five years preceding the survey. The majority of women (68 percent) did not receive a postnatal check. Among those who received postnatal care, 16 percent received it in less than four hours after delivery, 5 percent received care within 4 to 23 hours, and 3 percent received care within the first two days. Seven percent received postnatal care 3 to 41 days following delivery. Differences by background characteristics are pronounced. Younger mothers (less than 35 years), mothers of first

Table 10.12 Timing of first postnatal checkup

Among women age 15-49 giving birth in the five years preceding the survey, the percent distribution of the mother's first postnatal check-up for the last live birth by time after delivery, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Time after delivery of mother's first postnatal checkup							
	Less than 4 hours	4-23 hours	2 days	3-41 days	Don't know/ missing	No postnatal checkup[1]	Total	Number of women
Mother's age at birth								
<20	16.1	4.2	5.1	5.4	0.6	68.6	100.0	358
20-34	17.5	5.8	3.5	7.7	0.2	65.4	100.0	3,966
35-49	14.0	3.6	2.6	6.2	0.3	73.3	100.0	1,691
Birth order								
1	21.1	5.9	4.0	7.9	0.2	60.8	100.0	849
2-3	19.9	6.4	3.9	7.7	0.4	61.6	100.0	1,748
4-5	15.5	5.3	2.9	7.0	0.1	69.2	100.0	1,516
6+	11.8	3.3	3.0	6.3	0.2	75.4	100.0	1,902
Residence								
Urban	33.5	11.6	5.7	6.2	0.5	42.4	100.0	1,484
Rural	10.8	2.9	2.6	7.4	0.1	76.1	100.0	4,531
District								
Aileu	14.4	3.1	3.6	4.2	0.8	73.9	100.0	220
Ainaro	7.7	1.2	1.8	8.2	0.2	80.9	100.0	318
Baucau	12.3	9.8	3.1	2.5	0.3	72.0	100.0	598
Bobonaro	8.3	0.8	0.8	15.9	0.4	73.8	100.0	587
Covalima	29.6	4.6	2.1	9.2	0.0	54.4	100.0	322
Dili	40.1	14.5	5.0	5.2	0.6	34.6	100.0	1,043
Ermera	2.5	0.5	0.9	12.3	0.0	83.8	100.0	719
Lautem	13.3	4.0	6.3	3.2	0.0	73.3	100.0	444
Liquiçá	15.6	2.3	3.7	10.3	0.2	67.9	100.0	358
Manatuto	20.0	5.5	8.4	9.4	0.0	56.8	100.0	264
Manufahi	11.7	3.4	2.2	3.2	0.0	79.4	100.0	238
Oecussi	7.0	1.2	3.7	2.6	0.0	85.5	100.0	492
Viqueque	11.7	1.6	2.9	3.8	0.3	79.7	100.0	412
Education								
No education	6.5	1.5	1.4	7.5	0.1	83.0	100.0	1,980
Primary	13.0	4.2	2.3	6.1	0.2	74.2	100.0	1,656
Secondary	25.7	7.9	5.6	7.5	0.4	53.0	100.0	2,226
More than secondary	46.1	19.8	7.9	8.4	0.0	17.8	100.0	154
Wealth quintile								
Lowest	6.6	1.2	1.1	4.6	0.0	86.4	100.0	1,226
Second	6.6	1.5	2.2	5.9	0.0	83.8	100.0	1,171
Middle	10.7	2.7	3.1	9.1	0.1	74.3	100.0	1,203
Fourth	19.7	5.6	4.4	8.8	0.4	61.0	100.0	1,170
Highest	37.9	14.1	5.8	7.1	0.6	34.5	100.0	1,244
Total	16.4	5.1	3.4	7.1	0.2	67.8	100.0	6,015

[1] Includes women who received a checkup after 41 days

births, urban residents, women in Dili, highly educated women, and wealthy women were more likely than their counterparts to receive care in less than four hours following delivery. Older mothers, those having births of order six and higher, rural mothers, uneducated mothers, and those in the poorest households are most likely not to receive postnatal care at all. Mothers residing in Oecussi, Ermera, and Ainaro are least likely to receive postnatal care.

10.9 TYPE OF PROVIDER OF FIRST POSTNATAL CHECKUP

Table 10.13 presents information on the provider of postnatal care, according to the mothers' background characteristics. In Timor-Leste, 31 percent of mothers obtain postnatal care from a health professional, and women do not get postnatal care from traditional birth attendants. More than two in three (68 percent) do not receive any postnatal care within 41 days, which almost marks the end of the postnatal period.

Table 10.13 Type of provider of first postnatal checkup

Among women age 15-49 giving birth in the five years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check for the last live birth, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Type of health provider of mother's first postnatal checkup						No postnatal checkup[1]	Total	Number of women
	Doctor/ nurse/ midwife	Auxiliary nurse/ midwife	Community health worker	Traditional birth attendant	Other	Don't know/ missing			
Mother's age at birth									
<20	30.9	0.2	0.2	0.1	0.0	0.0	68.6	100.0	358
20-34	33.8	0.6	0.1	0.0	0.0	0.1	65.4	100.0	3,966
35-49	26.0	0.7	0.0	0.0	0.0	0.0	73.3	100.0	1,691
Birth order									
1	38.4	0.8	0.1	0.0	0.0	0.0	60.8	100.0	849
2-3	37.6	0.5	0.1	0.0	0.0	0.0	61.6	100.0	1,748
4-5	29.7	0.8	0.2	0.0	0.0	0.0	69.2	100.0	1,516
6+	23.9	0.5	0.0	0.0	0.0	0.1	75.4	100.0	1,902
Residence									
Urban	56.9	0.4	0.1	0.0	0.0	0.1	42.4	100.0	1,484
Rural	23.1	0.7	0.1	0.0	0.0	0.0	76.1	100.0	4,531
District									
Aileu	25.4	0.3	0.2	0.2	0.0	0.0	73.9	100.0	220
Ainaro	18.8	0.0	0.0	0.0	0.2	0.0	80.9	100.0	318
Baucau	28.0	0.0	0.0	0.0	0.0	0.0	72.0	100.0	598
Bobonaro	25.2	0.7	0.3	0.0	0.0	0.0	73.8	100.0	587
Covalima	44.4	1.1	0.0	0.0	0.0	0.0	54.4	100.0	322
Dili	64.9	0.2	0.1	0.0	0.0	0.2	34.6	100.0	1,043
Ermera	16.2	0.0	0.0	0.0	0.0	0.0	83.8	100.0	719
Lautem	25.5	1.2	0.1	0.0	0.0	0.0	73.3	100.0	444
Liquiçá	28.6	3.3	0.2	0.0	0.0	0.0	67.9	100.0	358
Manatuto	43.0	0.0	0.2	0.0	0.0	0.0	56.8	100.0	264
Manufahi	20.3	0.2	0.0	0.0	0.0	0.0	79.4	100.0	238
Oecussi	13.4	0.9	0.2	0.0	0.0	0.0	85.5	100.0	492
Viqueque	19.1	1.0	0.0	0.0	0.2	0.0	79.7	100.0	412
Education									
No education	16.3	0.6	0.1	0.0	0.0	0.0	83.0	100.0	1,980
Primary	24.9	0.7	0.1	0.0	0.0	0.0	74.2	100.0	1,656
Secondary	46.2	0.6	0.2	0.0	0.0	0.1	53.0	100.0	2,226
More than secondary	82.2	0.0	0.0	0.0	0.0	0.0	17.8	100.0	154
Wealth quintile									
Lowest	12.5	1.0	0.0	0.0	0.0	0.0	86.4	100.0	1,226
Second	15.9	0.2	0.1	0.0	0.0	0.0	83.8	100.0	1,171
Middle	25.1	0.6	0.0	0.0	0.1	0.0	74.3	100.0	1,203
Fourth	37.8	0.9	0.3	0.0	0.0	0.0	61.0	100.0	1,170
Highest	64.8	0.4	0.1	0.0	0.1	0.2	34.5	100.0	1,244
Total	31.4	0.6	0.1	0.0	0.0	0.0	67.8	100.0	6,015

[1] Includes women who received a checkup after 41 days

Differentials in type of postnatal care provider are similar to those for postnatal care coverage in general. The likelihood of women receiving postnatal care from health professionals decreases with increasing parity. Women in the highest wealth quintile are more than five times as likely to receive postnatal care from a health professional as those in the lowest wealth quintile. Similarly, mothers with more than secondary education are five times as likely to receive postnatal care from a health professional as those with no education. Women in urban areas are more likely to receive postnatal care from a health professional than those in rural areas (57 percent and 24 percent, respectively). Finally, women in Oecussi (14 percent) have least access to a postnatal checkup from a health professional because of the low level of facility-based delivery care in this district.

10.10 Problems in Accessing Health Care

Many factors can prevent women from getting medical advice or treatment for themselves when they are sick. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care during pregnancy and at the time of delivery.

Where health services are present, there are many factors—social, cultural, and economic—that cause women not to use the services, particularly when the health concern is related to sexual or reproductive matters. Information on such factors is particularly important in understanding and addressing the barriers women face in seeking care during pregnancy and at the time of delivery. In the 2009-10 TLDHS, women were asked whether each of the following factors would be a big problem or not a big problem in seeking health care for themselves: getting permission to go for treatment, getting money for treatment, distance to a health facility, having to take transportation, not wanting to go alone to the health facility, concern that there may not be a female provider, concern that there may be no health provider, and concern that there may be no drugs available. The results are shown in Table 10.14.

Table 10.14 Problems in accessing health care

Percentage of women age 15-49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Problems in accessing health care									Number of women
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern no female provider available	Concern no provider available	Concern no drugs available	At least one problem accessing health care	
Age										
15-19	24.9	37.8	53.2	59.6	48.4	64.9	81.9	86.5	96.0	3,144
20-34	22.7	33.6	52.5	58.0	42.6	61.7	81.4	85.8	95.7	5,774
35-49	22.3	36.6	54.4	61.0	40.1	63.7	84.1	87.9	96.2	4,219
Number of living children										
0	24.3	36.4	51.6	57.9	45.6	63.3	80.9	85.7	95.6	5,178
1-2	21.4	32.5	52.6	57.4	42.1	61.5	83.1	87.4	96.0	2,350
3-4	22.4	34.7	53.3	58.7	41.2	60.3	83.2	86.9	95.8	2,554
5+	22.9	37.4	56.7	63.9	41.7	66.2	83.7	87.5	96.6	3,055
Marital status										
Never married	24.6	36.9	51.5	57.9	45.9	63.1	80.5	85.6	95.6	4,675
Married or living together	22.3	34.7	54.3	60.3	41.7	63.1	83.4	87.3	96.1	7,906
Divorced/separated/ widowed	21.9	37.5	53.7	58.2	41.8	63.2	83.1	86.1	95.8	556
Employed last 12 months										
Not employed	26.8	38.8	55.6	60.0	42.3	63.0	84.0	87.8	96.1	7,951
Employed for cash	16.7	20.7	38.1	42.3	33.2	41.6	81.7	85.3	93.7	1,054
Employed not for cash	17.5	33.3	52.6	62.5	47.5	68.6	79.5	84.9	96.1	4,130
Residence										
Urban	21.5	28.1	32.3	35.3	32.5	41.3	78.6	83.7	94.2	3,439
Rural	23.7	38.3	60.7	67.9	47.0	70.8	83.7	87.7	96.6	9,698
District										
Aileu	46.1	64.2	71.2	74.8	69.9	74.3	90.1	92.6	95.4	554
Ainaro	28.4	56.3	59.3	48.9	46.8	71.4	86.6	89.2	91.8	619
Baucau	46.8	54.5	62.5	87.0	13.9	70.4	97.2	97.5	98.9	1,408
Bobonaro	2.3	12.3	40.8	42.6	48.7	60.1	64.5	91.4	96.1	1,262
Covalima	40.5	61.1	77.4	62.3	50.6	43.6	83.6	83.8	95.4	781
Dili	19.7	23.9	26.1	30.6	34.1	32.8	75.8	82.4	94.7	2,466
Ermera	5.5	10.3	42.8	77.9	53.2	91.9	68.3	66.3	99.8	1,542
Lautem	47.8	57.8	74.3	75.7	69.7	84.5	99.2	99.2	99.6	864
Liquiçá	26.8	43.3	53.6	50.6	35.9	64.3	68.7	70.5	83.9	801
Manatuto	19.1	42.3	58.4	44.6	34.7	68.2	84.1	83.5	90.6	603
Manufahi	4.4	16.4	41.3	54.9	53.4	28.9	89.5	92.4	96.1	470
Oecussi	11.7	33.8	70.0	61.4	15.2	74.7	94.5	97.4	98.3	884
Viqueque	18.0	39.6	79.2	84.5	73.2	75.3	97.5	97.6	100.0	882
Education										
No education	20.8	38.1	60.0	68.3	45.4	71.8	82.3	86.2	97.0	3,854
Primary	23.7	39.0	59.1	63.8	43.9	66.0	83.4	88.1	95.9	3,005
Secondary	24.1	32.8	47.9	53.8	42.4	57.5	82.3	86.2	95.4	5,829
More than secondary	26.6	27.7	27.5	24.6	29.3	41.4	77.7	86.1	93.9	449
Wealth quintile										
Lowest	24.6	48.8	72.1	75.8	48.1	72.9	90.6	93.2	97.8	2,314
Second	24.6	39.1	62.7	73.2	49.9	74.1	83.7	86.8	96.9	2,468
Middle	22.0	36.6	57.9	66.5	46.8	69.7	80.5	84.8	96.2	2,590
Fourth	22.7	32.2	50.7	55.5	41.2	62.9	80.2	85.6	95.4	2,687
Highest	22.1	25.1	29.9	33.3	32.7	41.5	78.7	84.0	93.9	3,077
Total	23.1	35.6	53.3	59.4	43.2	63.1	82.4	86.6	95.9	13,137

Note: Total includes 2 women with information missing on employment status.

More than ninety-six percent of Timorese women reported that they have at least one problem when they access health care for themselves. The two major concerns were no availability of drugs (87 percent) and no availability of a health care provider (82 percent). Concern about not having a female provider is also sizeable (63 percent). Women had about equal concern regarding the distance to the health facility and having to take transport (more than one in two women). Getting permission to go for treatment was the least of women's worries (23 percent). Two in five considered not wanting to go alone to be a problem. In general, women with more than secondary education and women in the highest wealth quintile were least likely to report having a serious problem in accessing health facilities.

CHILD HEALTH 11

This chapter presents the findings on child health from the 2009-10 TLDHS. Its focus is on vaccination status and treatment practices that are commonly used for children experiencing three major childhood illnesses: acute respiratory infection (ARI), fever, and diarrhea. Information on children's birth weight and size, treatment practices, and contact with health facilities when children are sick paves the way for strategic planning and implementation of programs to reduce neonatal and infant mortality. Combined with data on childhood mortality, this information can be used to identify subgroups of women and children at increased risk because of non-use of maternal and child health (MCH) services and to assist with planning effective improvements for these services.

Information was obtained for all live births that occurred in the five years preceding the survey. Wherever possible, data from the 2009-10 TLDHS are compared with data from the earlier DHS survey in Timor-Leste, conducted in 2003. However, caution should be used in interpreting the trend data due to differences in the definitions and methodology used in these surveys.

11.1 CHILD'S SIZE AT BIRTH

A child's birth weight or size at birth is an important indicator of the child's vulnerability to the risk of childhood illnesses and the child's chances of survival. Children whose birth weight is less than 2.5 kilograms, or children reported to be "very small" or "smaller than average" are considered to have a higher-than-average risk of early childhood death. Birth weight was recorded in the questionnaire, if available from written records or mother's recall, for all births in the five years preceding the survey. Because birth weight may not be known for many babies, and particularly for babies delivered at home and who are not weighed at birth, the mother's estimate of the baby's size at birth was also obtained. Even though it is subjective, it can be a useful proxy for the weight of the child. Table 11.1 presents information on children's weight and size at birth.

Birth weight was reported for only 26 percent of births in the five years preceding the survey. It is unlikely that these births are representative of all births because births in urban areas and births to mothers in higher wealth quintiles are over-represented, and the pattern of birth weights by background characteristics is likely to be biased. Nevertheless it is important to note that 10 percent of babies weighed at birth were less than 2.5 kilograms. Low birth-weight babies are twice as likely to be born to mothers less than age 20 at birth, and they are more likely to be first-order births, births born to mothers who smoked cigarettes/tobacco, and births to uneducated mothers. One in four children in Ainaro, one in five children in Aileu, and one in six children in Ermera and Manufahi who were weighed at birth are of low weight. Differences by urban-rural residence and wealth quintile are minimal.

Most children were reported by their mothers as average or larger at birth (82 percent), while 10 percent of children were reported as smaller than average, and 5 percent were reported as very small at birth. The characteristics of mothers with very small children at birth are similar to the characteristics of children whose weight at birth was less than 2.5 kilograms, consistent with the notion that a mother's description of the size of the baby at birth is a good proxy in the absence of a recorded weight. Children born to very young mothers (<20 years), first-order births, children born to mothers who smoke, and children of mothers with no education, are more often reported to be very small at birth than children of other mothers. In addition, rural children are twice as likely as urban children to be reported as very small. Nearly one in five children born in Manufahi and one in six children born in Oecussi are reported as very small at birth. Children born in the poorest households are also more likely to be reported as very small at birth.

Table 11.1 Child's weight and size at birth

Percent distribution of live births in the five years preceding the survey with a reported birth weight by birth weight; percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth and percentage of all births with a reported birth weight, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Percent distribution of births with a reported birth weight[1]		Total	Number of births	Percentage of all births with a reported birth weight	Percent distribution of all live births by size of child at birth				Total	Number of births
	Less than 2.5 kg	2.5 kg or more				Very small	Smaller than average	Average or larger	Don't know/ missing		
Mother's age at birth											
<20	18.0	82.0	100.0	209	28.1	6.3	12.0	80.1	1.7	100.0	745
20-34	9.6	90.4	100.0	1,874	27.6	4.9	10.5	82.3	2.3	100.0	6,789
35-49	8.5	91.5	100.0	503	21.9	5.5	9.7	82.6	2.2	100.0	2,294
Birth order											
1	12.3	87.7	100.0	592	35.3	6.1	11.5	80.8	1.6	100.0	1,679
2-3	9.0	91.0	100.0	911	30.7	5.0	10.7	82.2	2.1	100.0	2,964
4-5	9.0	91.0	100.0	592	24.5	5.2	10.5	82.2	2.2	100.0	2,415
6+	10.8	89.2	100.0	491	17.7	4.8	9.4	83.2	2.6	100.0	2,770
Mother's smoking status											
Smokes cigarettes/ tobacco	13.6	86.4	100.0	87	18.3	6.9	17.3	74.3	1.4	100.0	478
Does not smoke	9.9	90.1	100.0	2,498	26.7	5.1	10.1	82.6	2.2	100.0	9,350
Residence											
Urban	10.1	89.9	100.0	1,310	55.7	2.9	12.3	81.9	2.9	100.0	2,353
Rural	10.1	89.9	100.0	1,275	17.1	5.9	9.8	82.3	2.0	100.0	7,475
District											
Aileu	20.0	80.0	100.0	74	20.7	2.1	5.5	90.9	1.5	100.0	359
Ainaro	24.0	76.0	100.0	44	7.7	1.4	3.2	94.8	0.7	100.0	579
Baucau	12.0	88.0	100.0	218	22.4	1.0	8.2	90.8	0.0	100.0	970
Bobonaro	7.7	92.3	100.0	287	30.7	13.1	13.1	73.2	0.6	100.0	934
Covalima	8.6	91.4	100.0	168	37.1	1.4	2.4	95.8	0.4	100.0	453
Dili	9.1	90.9	100.0	1,063	64.3	2.0	12.5	81.9	3.6	100.0	1,652
Ermera	17.8	82.2	100.0	47	3.7	1.2	1.5	97.3	0.0	100.0	1,252
Lautem	3.7	96.3	100.0	196	25.8	8.0	25.5	49.2	17.4	100.0	758
Liquiçá	16.0	84.0	100.0	109	18.7	4.4	18.8	76.5	0.4	100.0	582
Manatuto	12.9	87.1	100.0	121	27.8	0.9	1.5	97.4	0.1	100.0	433
Manufahi	17.9	82.1	100.0	58	14.7	18.5	17.7	63.3	0.5	100.0	393
Oecussi	8.5	91.5	100.0	55	7.1	17.7	17.8	64.5	0.0	100.0	783
Viqueque	8.2	91.8	100.0	146	21.5	0.5	4.5	94.4	0.6	100.0	678
Mother's education											
No education	13.7	86.3	100.0	349	10.6	6.4	9.6	82.1	1.9	100.0	3,298
Primary	11.1	88.9	100.0	560	20.3	6.0	11.6	79.8	2.6	100.0	2,765
Secondary	8.8	91.2	100.0	1,506	42.5	3.6	10.0	84.2	2.2	100.0	3,546
More than secondary	10.6	89.4	100.0	171	78.4	1.4	13.7	84.0	0.9	100.0	218
Wealth quintile											
Lowest	10.6	89.4	100.0	172	8.2	8.3	11.0	77.5	3.1	100.0	2,090
Second	16.5	83.5	100.0	218	11.1	5.5	9.4	83.1	2.0	100.0	1,960
Middle	11.7	88.3	100.0	365	18.3	4.8	9.3	84.4	1.6	100.0	1,992
Fourth	10.5	89.5	100.0	635	33.4	4.3	10.9	83.0	1.7	100.0	1,903
Highest	8.1	91.9	100.0	1,195	63.4	2.5	11.5	83.5	2.5	100.0	1,884
Total	10.1	89.9	100.0	2,586	26.3	5.2	10.4	82.2	2.2	100.0	9,828

[1] Based on either a written record or the mother's recall

11.2 VACCINATION COVERAGE

The 2009-10 TLDHS collected information on immunization coverage for all children born in the five years before the survey. The government of Timor-Leste has adopted the World Health Organization (WHO) and UNICEF guidelines for vaccinating children. According to these guidelines, to be considered fully vaccinated, a child should receive the following vaccinations: one dose each of BCG and measles, three doses of polio vaccine (after polio 0, given at birth), and three doses of DPT. Currently, the tetravalent vaccine DPT-HepB introduced in 2007 has replaced the previous DPT vaccine, so in effect, children fully vaccinated in more recent years are also protected against Hepatitis B. BCG, which protects against tuberculosis, is recommended at birth or at first clinical contact. DPT-HepB protects against diphtheria, pertussis (whooping cough), tetanus, and Hepatitis B. A dose of polio vaccine is recommended at birth (Polio 0) or within 2 weeks/14 days of birth. The DPT-HepB and polio vaccine schedule recommends three vaccinations at approximately 6, 10, and 14 weeks of age. The measles vaccine is recommended at age 9 months. It is recommended that children receive the complete schedule of vaccinations before age 12 months.

In the TLDHS, information on vaccination coverage was obtained in two ways—from health cards (*LISIO*) and from mother's verbal reports. All mothers were asked to show the interviewer the health cards on which the child's immunizations are recorded. If the card was available, the interviewer copied the dates of each vaccination received. If a vaccination was not recorded on the card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a card for a child, she was asked to recall whether the child had received BCG, polio, DPT-HepB, and measles vaccinations. If she recalled that the child had received the polio or DPT-HepB vaccines, she was asked about the number of doses that the child received.

The data presented here are for children age 12-23 months, the youngest cohort of children who have reached the age by which they should be fully vaccinated, and are restricted to children who were alive at the time of the survey. Table 11.2 shows the percentage of children age 12-23 months who received specific vaccines at any time before the survey by source of information. Fifty-three percent of Timorese children age 12-23 months are fully immunized, and 23 percent received no vaccinations (Figure 11.1). Forty-seven percent of children age 12-23 months are fully vaccinated by 12 months of age.

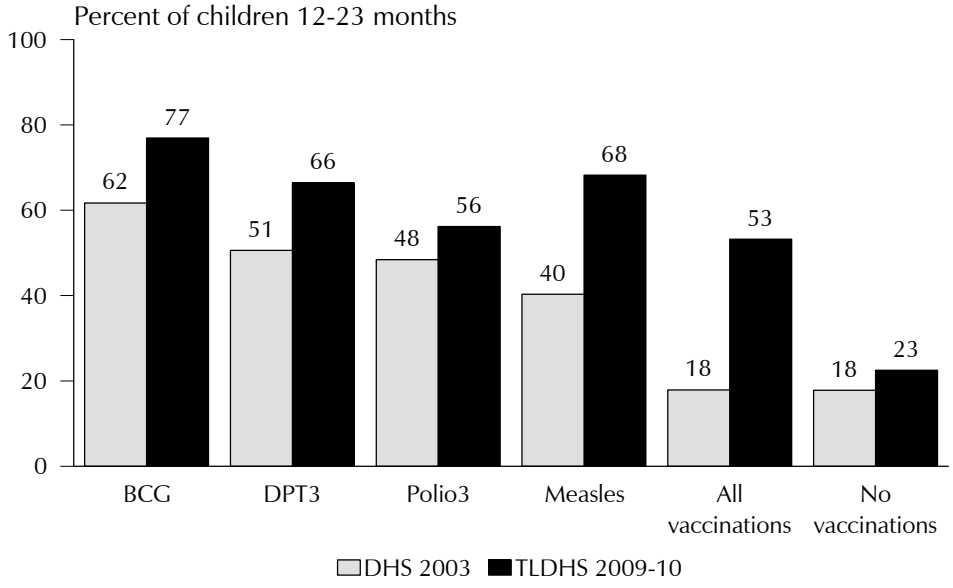
Table 11.2 Vaccinations by source of information

Percentage of children age 12-23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 12 months of age, Timor-Leste 2009-10

Source of information	BCG	DPT			Polio[1]				Hepatitis B			Measles	All basic vaccinations[2]	No vaccinations	Number of children
		1	2	3	0	1	2	3	1	2	3				
Vaccinated at any time before survey															
Vaccination card	49.4	49.0	47.8	47.0	47.7	49.1	47.9	47.0	49.0	47.6	46.8	44.6	44.4	0.0	870
Mother's report	27.3	26.1	23.5	19.4	17.6	25.7	21.4	9.1	25.7	22.6	18.9	23.2	8.2	22.6	882
Either source	76.7	75.1	71.3	66.4	65.3	74.9	69.3	56.2	74.6	70.3	65.7	67.8	52.6	22.7	1,752
Vaccinated by 12 months of age[3]	76.6	74.2	69.9	64.2	65.2	74.0	68.1	54.4	73.7	69.0	62.9	60.0	47.2	23.1	1,752

[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
[3] For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

Figure 11.1 Immunization Coverage of Children 12-23 Months



Timor-Leste 2009-10

Looking at coverage for specific vaccines, 77 percent of children received the BCG vaccination, 75 percent received the first DPT dose, and 75 percent received the first polio dose. Coverage for all three vaccinations declines with subsequent doses; 66 percent of children received the recommended three doses of DPT, and 56 percent received three doses of polio. These figures reflect dropout rates (which represent the proportion of children who received the first dose of a vaccine but who did not get the third dose) of 12 percent for DPT and 25 percent for polio, respectively. This is a huge improvement from 2003 when the dropout rates for DPT and polio were 45 and 62 percent, respectively. It is interesting to note that dropout rates for polio are higher than for DPT despite the fact that these vaccines should be given together. This may be related to polio vaccination being deliberately withheld when a child has diarrhea or to parental concern for a child receiving it during an episode of diarrhea and refusing it. Sixty-eight percent of children received the measles vaccine (Figure 11.1). Hepatitis B coverage varies slightly from DPT coverage, although they have been given together in a tetravalent vaccine since 2007. This difference is likely due to the inclusion of a small number of children who received the DPT vaccine before the tetravalent vaccine was introduced.

Table 11.3 shows the percentages of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report) and the percentages with a vaccination card.

Table 11.3 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Timor-Leste 2009-10

Background characteristic	BCG	DPT			Polio[1]				Hepatitis B			Measles	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
		1	2	3	0	1	2	3	1	2	3					
Sex																
Male	77.8	76.3	72.4	68.6	66.6	76.3	70.8	58.4	75.5	71.5	68.2	69.0	54.3	21.6	51.8	894
Female	75.7	73.8	70.1	64.1	64.1	73.3	67.8	53.8	73.7	69.0	63.2	66.5	50.8	23.8	47.4	859
Birth order																
1	80.7	78.8	75.4	71.4	67.5	78.3	75.5	60.9	78.4	74.6	70.8	70.6	57.9	19.3	54.9	323
2-3	77.7	75.3	71.3	67.4	66.1	75.5	70.0	54.1	75.0	70.5	66.1	70.3	51.1	21.4	45.7	505
4-5	77.7	76.6	72.9	67.0	67.6	76.0	70.2	55.6	76.2	71.9	66.8	68.6	51.1	21.4	50.0	418
6+	72.5	71.3	67.3	61.8	61.3	71.0	64.0	55.6	70.6	66.0	61.3	62.9	51.9	27.1	49.9	507
Residence																
Urban	85.3	81.1	77.3	70.9	74.3	80.7	73.3	49.2	80.2	75.7	69.5	74.3	47.7	14.5	43.7	424
Rural	74.0	73.2	69.3	65.0	62.5	73.0	68.1	58.4	72.8	68.5	64.5	65.7	54.1	25.3	51.5	1,328
District																
Aileu	88.0	87.2	87.2	86.4	77.7	88.0	88.0	83.2	87.2	87.2	85.6	83.3	79.2	12.0	73.6	66
Ainaro	59.3	56.7	54.6	52.0	57.9	57.2	54.1	51.7	56.0	53.9	52.0	50.4	46.1	40.7	32.3	113
Baucau	58.2	58.2	53.0	51.8	49.4	59.1	52.7	50.7	58.2	53.0	51.8	52.0	47.1	40.9	48.0	180
Bobonaro	82.4	82.4	82.4	81.5	74.7	82.4	82.4	56.1	82.8	81.9	81.5	79.8	55.2	17.6	49.7	157
Covalima	91.2	88.5	84.5	81.2	57.0	87.2	85.9	71.4	88.5	80.6	77.3	79.7	61.9	8.8	41.2	69
Dili	86.6	81.7	77.6	70.7	76.3	81.0	72.9	44.1	80.3	75.5	68.6	73.3	43.4	13.4	40.5	281
Ermera	64.6	62.0	56.3	51.5	52.0	63.6	52.9	50.3	62.3	55.8	51.0	54.2	44.6	35.4	45.2	200
Lautem	86.8	87.5	86.0	80.9	80.1	86.4	84.6	75.4	86.8	83.5	79.4	80.1	74.6	12.1	73.8	140
Liquiçá	85.6	80.6	70.6	59.4	66.9	80.6	67.1	50.2	79.9	70.0	59.4	66.3	43.7	14.4	52.2	106
Manatuto	71.8	71.8	71.2	69.3	66.8	71.2	69.3	59.9	71.8	71.2	69.3	64.9	53.6	28.2	48.9	87
Manufahi	69.2	69.1	60.2	53.2	58.9	69.7	60.5	46.4	69.8	59.4	53.3	68.4	42.8	28.6	39.1	80
Oecussi	85.9	86.8	83.4	74.1	65.4	86.8	80.7	63.8	86.8	83.4	74.1	74.8	60.0	10.3	64.2	143
Viqueque	74.4	73.1	69.9	64.4	63.3	69.0	67.5	60.2	70.7	69.1	64.5	66.8	57.1	25.6	48.8	130
Mother's education																
No education	67.9	66.8	61.4	56.6	56.0	66.8	58.5	50.4	66.7	60.8	56.3	58.6	46.6	31.0	45.1	571
Primary	77.3	76.1	72.2	66.2	63.2	74.4	70.1	57.4	75.7	70.9	65.2	67.1	54.0	22.3	50.1	478
Secondary	82.5	80.4	77.9	73.8	73.3	80.6	77.0	61.3	79.7	76.7	72.9	74.8	57.7	17.2	54.3	661
More than secondary	(100.0)	(90.5)	(90.5)	(86.8)	(90.5)	(100.0)	(86.8)	(39.0)	(90.5)	(90.5)	(86.8)	(90.5)	(39.0)	(0.0)	(34.2)	43
Wealth quintile																
Lowest	64.5	64.4	60.9	54.8	52.5	64.1	59.6	49.1	63.5	59.8	54.2	53.7	43.2	33.9	43.1	381
Second	70.9	68.6	66.2	62.5	60.6	69.0	64.1	56.8	68.5	65.7	62.3	63.7	53.5	28.9	50.6	359
Middle	78.8	77.9	71.9	68.3	64.1	77.8	71.3	58.5	78.2	71.4	68.0	71.0	55.8	20.7	52.3	349
Fourth	84.8	83.3	79.0	75.8	71.1	81.3	77.1	69.0	82.9	78.6	74.0	78.0	65.5	15.0	57.4	346
Highest	87.0	83.3	80.3	72.5	81.3	84.2	76.3	47.2	82.0	77.9	72.0	74.7	45.2	12.5	45.1	317
Total	76.7	75.1	71.3	66.4	65.3	74.9	69.3	56.2	74.6	70.3	65.7	67.8	52.6	22.7	49.6	1,752

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

Boys (54 percent) are somewhat more likely to be fully vaccinated than girls (51 percent). Surprisingly, children in rural areas (54 percent) are more likely to be fully vaccinated than children in urban areas (48 percent). Vaccination coverage varies significantly by district, with Manufahi and Dili having the lowest coverage of fully immunized children at 43 percent each. Aileu and Lautem have the highest coverage of fully immunized children at 79 and 75 percent, respectively. Many of the districts with lower coverage of fully vaccinated children have the highest dropout rates, especially for polio. Dili has a very high dropout rate between polio 1 and polio 3 at 46 percent, compared with less than 5 percent for Aileu. The single biggest reason that full vaccination coverage in rural areas is higher than in urban areas is the very low polio 3 coverage in urban areas (49 percent). In fact all other vaccines have higher coverage in urban than rural areas. Even though oral polio vaccine has minimum side effects and can be given to persons with diarrhea, it can lead to gastrointestinal upset like diarrhea and vomiting, prompting physicians (who operate predominantly in urban areas) to withhold the vaccine from children with diarrhea. Additionally, mothers may not return for follow-up visits upon the physician's advice to bring their children back once the diarrhea has ceased. The considerably lower coverage in urban areas and particularly in Dili could also be attributed to the 2006 civil unrest in the country, which disrupted all basic health services, severely damaged infrastructure, and displaced thousands of residents from their homes.

Vaccination coverage is highest for first-born children (58 percent), with little difference in coverage for children of birth order two and above (about 51 percent). Children whose mothers attend only primary or secondary school are more likely to be fully vaccinated than children whose mothers have no education. The proportion of children fully vaccinated generally increases with wealth quintile, from 43 percent in the lowest wealth quintile to 66 percent in the fourth quintile, and decreases for children in the highest wealth quintile (45 percent).

11.3 TRENDS IN VACCINATION COVERAGE

Table 11.4 shows by age cohorts the percentage of children age 12-59 months (at the time of the survey) who received specific vaccines by 12 months of age and the percentage with a vaccination card. Thirty-six percent of children received all their vaccinations by 12 months of age. Children in the oldest cohort (48-59 months) were less likely to have received all their vaccinations (28 percent) than children age 12-23 months (47 percent). This pattern is seen with each vaccine but is most marked when all the vaccines are considered together. Vaccination cards were shown to interviewers for 50 percent of children age 12-23 months, compared with 16 percent of children age 48-59 months. The difference may partly be a result of the cards for older children being lost or misplaced over the longer period of time and may partly be due to a better card uptake in more recent years.

Table 11.4 Vaccinations in first year of life

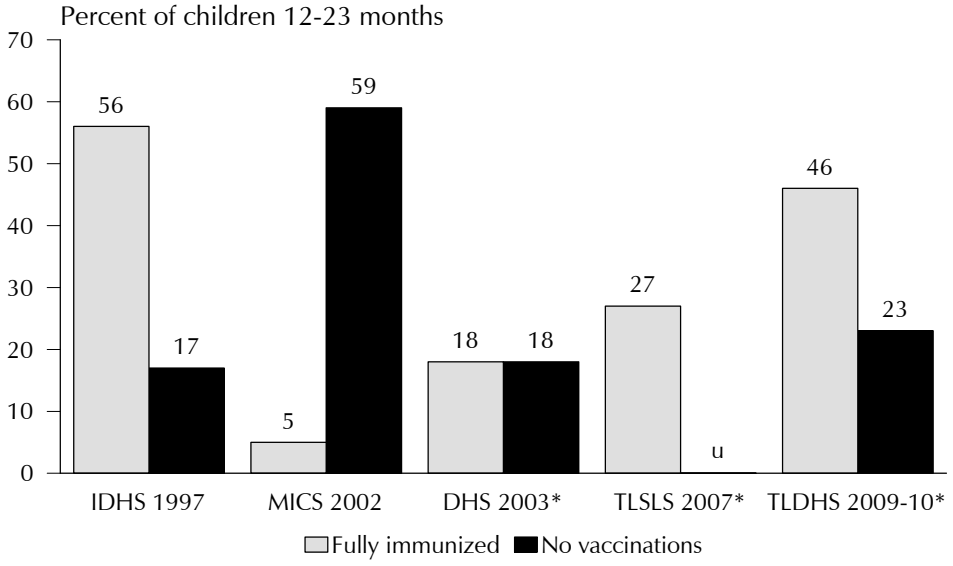
Percentage of children age 12-59 months at the time of the survey who received specific vaccines by 12 months of age, and percentage with a vaccination card, by current age of child, Timor-Leste 2009-10

		DPT			Polio[1]				Hep B							
Age in months	BCG	1	2	3	0	1	2	3	1	2	3	Measles	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
12-23	76.6	74.2	69.9	64.2	65.2	74.0	68.1	54.4	73.7	69.0	62.9	60.0	47.2	23.1	49.6	1,752
24-35	73.0	70.5	66.6	60.2	58.1	70.3	63.0	45.8	69.6	65.8	58.9	56.5	38.2	26.9	34.7	1,959
36-47	70.7	67.0	64.0	54.7	53.6	67.2	60.2	38.7	66.4	63.4	53.5	51.1	31.4	30.0	26.3	1,947
48-59	64.3	61.7	56.8	49.9	46.7	60.9	52.9	31.8	61.2	56.0	49.2	52.8	27.9	36.3	16.2	1,745
Total	71.6	69.0	64.9	57.6	56.2	68.7	61.5	42.9	68.3	64.1	56.4	55.6	36.3	28.3	31.7	7,403

Note: Information was obtained from the vaccination card or if there was no written record, from the mother. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.
[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

The difference in vaccination coverage by 12-month cohorts from the 2009-10 TLDHS supports a trend towards increased vaccination coverage in 2009-10 compared with previous surveys. An analysis of long-term trends in coverage is shown in Figure 11.2. The percentage of children 12-23 months who are fully vaccinated dropped substantially between the 1997 IDHS and the 2002 MICS, primarily because of the total disruption of all health services following the struggle for independence from Indonesian rule. Coverage has since risen to a high of 53 percent in the most recent DHS. Compared with coverage in the 2003 DHS, coverage against all vaccine antigens increased significantly in the 2009-10 TLDHS. The percentage of children fully vaccinated nearly tripled, increasing from 18 percent in 2003 to 53 percent in 2009-10. However, it is important to note that while the 2003 DHS considered full immunization to include four polio doses, including polio 0 given at birth, the 2009-10 survey does not require children to have received polio 0 in order to have received all basic vaccinations. Recalculating the 2009-10 TLDHS data to include polio 0 in the estimate of children fully immunized confirms that coverage has increased two and a half times, from 18 percent in 2003 to 46 percent in 2009-10. The percentage who received no vaccination is reported at 18 percent in 2003, which is less than the current 2009-10 TLDHS estimate of 23 percent. Although the percentage of children fully immunized increased between the 2003 DHS and the 2007 TLSLS, the relatively lower coverage in the latter survey conducted two years before the 2009-10 TLDHS could be attributed to the disruption of health services following the 2006 civil unrest.

Figure 11.2 Trends in Children 12-23 Months Fully Immunized



* Includes 4 doses of polio
u = unavailable

Timor-Leste 2009-10

11.4 Acute Respiratory Infection

Acute respiratory infection (ARI) is one of the leading causes of death among young children in Timor-Leste. In the case of pneumonia, early diagnosis and treatment with antibiotics can prevent a large proportion of deaths due to acute respiratory infection (ARI). The prevalence of ARI in the 2009-10 TLDHS was estimated by asking mothers whether their children under age 5 had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These symptoms, though compatible with pneumonia, are subjective (i.e., mother's perception of illness) and were not validated by a medical examination. Table 11.5 shows the percentage of children under 5 years who had a cough accompanied by short, rapid breathing (symptoms of ARI).

The data indicate that two percent of children had symptoms of ARI in the two weeks preceding the survey. Differentials in the prevalence of ARI by background characteristics are minimal; however, it is worth noting that the prevalence of ARI symptoms is slightly higher among children age 12-23 months, among children living in urban areas, among children living in Lautem, and among children of mothers who have more than secondary education.

Seven in ten children with symptoms of ARI (71 percent) were taken to a health facility or provider, and 45 percent were prescribed antibiotics (data not shown).

11.5 FEVER

Fever is a symptom of malaria and other acute infections in children. Malaria and other illnesses that cause fever contribute to high levels of malnutrition and mortality. Although fever can occur year-round, malaria is more prevalent after the end of the rainy season. For this reason, temporal factors must be taken into account when interpreting fever as an indicator of malaria prevalence. Because malaria is one of the major causes of death in infancy and childhood in many developing countries, the so-called presumptive treatment of fever with anti-malarial medication is advocated in many countries where malaria is endemic. The survey was fielded over six months, from August 2009 to February 2010. Malaria transmission is at its peak at the end of the wet season, which occurs from November to May (Cooper et al., 2010). Malaria in Timor-Leste is discussed in greater detail in Chapter 13.

Table 11.6 shows the percentage of children under age 5 with fever during the two weeks preceding the survey and the percentage receiving various treatments, by selected background characteristics. One-fifth of children (19 percent) under 5 years of age were reported to have had fever in the past two weeks. Fever is most common among children age 6-11 months (28 percent) and then decreases with age. The prevalence of fever is higher among children who live in urban areas (24 percent) compared with those who live in rural areas (18 percent). District differentials show that the proportion of children with fever is highest in Liquiçá (34 percent) and lowest in Ainaro (5 percent). Fever prevalence increases slightly as wealth quintile increases but shows no clear relationship by education of the mother.

Table 11.5 Prevalence and treatment of symptoms of ARI

Percentage of children under age 5 who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Children under age 5: Percentage with symptoms of ARI[1]	Children under age 5: Number of children
Age in months		
<6	1.9	983
6-11	2.3	942
12-23	2.8	1,752
24-35	2.1	1,959
36-47	2.0	1,947
48-59	1.3	1,745
Sex		
Male	2.0	4,742
Female	2.2	4,586
Mother's smoking status		
Smokes cigarettes/tobacco	2.4	453
Does not smoke	2.0	8,875
Cooking fuel		
Electricity or gas	2.1	196
Kerosene	0.2	216
Coal/lignite	*	1
Charcoal	(0.0)	31
Wood/straw[2]	2.1	8,885
Residence		
Urban	2.8	2,269
Rural	1.8	7,059
District		
Aileu	2.6	340
Ainaro	1.1	536
Baucau	0.0	941
Bobonaro	3.6	884
Covalima	3.0	426
Dili	2.3	1,597
Ermera	1.2	1,172
Lautem	5.6	719
Liquiçá	3.0	550
Manatuto	0.9	416
Manufahi	0.8	369
Oecussi	2.5	734
Viqueque	0.3	644
Mother's education		
No education	1.7	3,122
Primary	2.0	2,611
Secondary	2.3	3,381
More than secondary	3.9	214
Wealth quintile		
Lowest	1.5	1,973
Second	2.0	1,834
Middle	2.3	1,875
Fourth	2.3	1,819
Highest	2.3	1,827
Total	2.1	9,328

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related) is considered a proxy for pneumonia.
[2] Includes grass, shrubs, crop residues

Seventy-three percent of children with a fever were taken to a health facility or provider for treatment. Six percent of children under age 5 with fever in the two weeks preceding the survey were given antimalarial drugs, and 36 percent received antibiotics. According to the Integrated Management of Childhood Illness (IMCI) and the national malaria treatment guidelines, all children with fever should be tested for malaria parasites using either a microscope or rapid diagnostic test (RDT) for final diagnosis or classification. Thus, not all children with fever are treated with antimalarial drugs. Treatment of malaria is also dependent on the availability of appropriate antimalarial drugs, RDTs, and microscopy tests in health facilities or at SISCa. However, in the absence of the primary use of RDTs, the use of microscopy testing is promoted in health facilities, and patients with fever are immediately prescribed paracetamol or antibiotics even before the malaria test results are returned (see detailed discussion in Chapter 13). Differentials in the percentage of children for whom advice or treatment is sought by background characteristics such as mother's education and wealth status are minimal.

Table 11.6 Prevalence and treatment of fever

Among children under age 5, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage of children for whom treatment was sought from a health facility or provider, the percentage who took antimalarial drugs, and the percentage who took antibiotic drugs, by background characteristics, Timor-Leste 2009-10

	Among children under age 5:		Children under age 5 with fever			
Background characteristic	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took antimalarial drugs	Percentage who took antibiotic drugs	Number of children
Age in months						
<6	14.7	983	63.4	3.9	33.7	145
6-11	27.8	942	74.2	4.0	35.6	262
12-23	23.4	1,752	72.1	6.9	40.6	410
24-35	21.3	1,959	75.3	6.4	38.0	417
36-47	17.6	1,947	71.3	5.8	32.5	342
48-59	12.3	1,745	76.0	5.3	33.3	214
Sex						
Male	18.7	4,742	73.4	6.4	35.5	887
Female	19.7	4,586	72.2	5.1	37.1	903
Residence						
Urban	24.1	2,269	77.5	5.2	35.1	546
Rural	17.6	7,059	70.7	5.9	36.8	1,243
District						
Aileu	14.9	340	80.8	24.2	49.9	51
Ainaro	4.9	536	(38.8)	(5.9)	(30.8)	26
Baucau	14.9	941	80.5	1.1	62.8	140
Bobonaro	26.4	884	78.7	1.4	34.5	234
Covalima	20.0	426	79.8	8.5	19.9	85
Dili	24.6	1,597	79.3	5.1	30.6	392
Ermera	12.7	1,172	69.4	15.2	20.3	149
Lautem	29.6	719	66.9	1.7	31.7	213
Liquiçá	33.8	550	66.7	7.7	37.8	186
Manatuto	19.3	416	81.3	1.4	59.2	80
Manufahi	11.3	369	55.7	5.8	35.7	42
Oecussi	20.6	734	56.1	1.9	35.0	151
Viqueque	6.3	644	(80.2)	(21.9)	(66.7)	41
Mother's education						
No education	17.7	3,122	68.3	7.7	32.5	552
Primary	20.6	2,611	70.3	3.7	32.2	539
Secondary	19.2	3,381	77.6	5.2	42.9	648
More than secondary	23.7	214	(86.6)	(10.9)	(35.7)	51
Wealth quintile						
Lowest	16.1	1,973	58.6	5.1	33.8	317
Second	16.9	1,834	68.9	4.7	33.4	310
Middle	18.6	1,875	77.1	5.6	41.0	348
Fourth	22.6	1,819	73.2	6.9	32.0	410
Highest	22.1	1,827	82.7	5.9	40.8	404
Total	19.2	9,328	72.8	5.7	36.3	1,790

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes pharmacy, shop, and traditional practitioner

11.6 DIARRHEAL DISEASE

Dehydration caused by severe diarrhea is a major cause of morbidity and mortality among young children in Timor-Leste, although the condition can be easily treated with oral rehydration therapy (ORT) and zinc. Exposure to diarrhea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. In the 2009-10 TLDHS, mothers were asked whether any of their children under 5 years of age had diarrhea during the two weeks preceding the survey. If a child had diarrhea, the mother was asked about feeding practices during the diarrheal episode and about what actions were taken to treat the diarrhea. However, the validity of this indicator is affected by the mother's perception of diarrhea as an illness and her capacity to recall the events. Moreover, because the prevalence of diarrhea varies seasonally, the results of the 2009-10 TLDHS—which pertain to the fieldwork period from August to February—should be interpreted with caution.

11.6.1 Incidence and Treatment of Diarrhea

Table 11.7 shows the percentage of children under age 5 with diarrhea in the two weeks preceding the survey, by selected background characteristics. Overall, 16 percent of all children under the age of 5 had diarrhea in the two weeks before the survey, and 1 percent had diarrhea with blood.

Table 11.7 Prevalence of diarrhea

Percentage of children under age 5 who had diarrhea in the two weeks preceding the survey, by background characteristics, Timor-Leste 2009-10

Background characteristics	Diarrhea in the two weeks preceding the survey: All diarrhea	Diarrhea with blood	Number of children
Age in months			
<6	7.9	0.4	983
6-11	22.2	1.5	942
12-23	25.1	2.3	1,752
24-35	17.2	1.4	1,959
36-47	12.5	0.7	1,947
48-59	8.5	0.4	1,745
Sex			
Male	14.6	1.2	4,742
Female	16.6	1.1	4,586
Source of drinking water[1]			
Improved	16.5	1.2	6,079
Not improved	13.8	1.1	3,249
Toilet facility[2]			
Improved, not shared	17.2	1.2	3,728
Non-improved or shared	14.5	1.1	5,600
Residence			
Urban	18.9	1.1	2,269
Rural	14.5	1.1	7,059
District			
Aileu	12.7	1.4	340
Ainaro	3.9	0.4	536
Baucau	15.1	0.4	941
Bobonaro	20.1	0.8	884
Covalima	18.1	2.4	426
Dili	19.7	1.1	1,597
Ermera	12.8	0.4	1,172
Lautem	21.7	2.0	719
Liquiçá	25.3	1.1	550
Manatuto	11.9	1.2	416
Manufahi	8.4	0.5	369
Oecussi	16.7	2.9	734
Viqueque	4.6	1.1	644
Mother's education			
No education	13.7	1.0	3,122
Primary	15.9	1.5	2,611
Secondary	16.8	1.1	3,381
More than secondary	18.8	0.9	214
Wealth quintile			
Lowest	13.1	1.1	1,973
Second	13.6	1.2	1,834
Middle	15.4	0.5	1,875
Fourth	18.8	1.8	1,819
Highest	17.2	1.0	1,827
Total	15.6	1.1	9,328

[1] See Table 2.7 for definition of categories.
[2] See Table 2.8 for definition of categories.

Not surprisingly, very young children are least likely to have had diarrhea, presumably because most of them are exclusively breastfed and hence less exposed to contaminated food. Diarrhea is relatively more common among young children age 6–11 months (22 percent) and age 12–23 months (25 percent), with prevalence declining at older ages. Age 12-23 months is when children start walking and are at increased risk of contamination from the environment. The introduction of other liquids and foods at the time of weaning can also facilitate the spread of disease-causing microbes. Prevalence of diarrhea among children is highest in Liquiçá (25 percent) and lowest in Ainaro (4 percent). Additionally, prevalence of diarrhea is highest among female children; children who live in urban areas, children whose mothers have more than secondary education, and children with mothers in the higher wealth quintiles. This anomaly in the prevalence of diarrhea may be due to the fact that urban, educated, and wealthy mothers are more likely than other mothers to recognize diarrhea as a serious childhood illness and report it. In the same vein, it is not surprising that diarrhea prevalence is

higher among children who live in households with improved drinking water and in households that do not share toilet facilities.

Mothers of children with diarrhea in the two weeks preceding the survey were asked what was done to manage or treat the illness. Table 11.8 shows the percentage of children with diarrhea who were taken to a health facility or provider for treatment, the percentage who received ORT, and the percentage who were given other treatments, by background characteristics.

Overall, 72 percent of children with diarrhea were taken to a health provider for treatment of diarrhea. Children age 48-59 months are more likely than children in other age groups to be taken to a health facility or provider for treatment (79 percent). Differences in treatment-seeking behavior by gender of the child, urban-rural residence, and mother's education are small. Children in the highest wealth quintile are more likely than other children to be taken to a health facility or provider for treatment when they have diarrhea.

During diarrhea, oral rehydration therapy (ORT), which involves giving children a solution prepared by mixing water with a commercially prepared packet of oral rehydration salts (ORS) or recommended home fluids (RHF)—usually a home-made sugar-salt-water solution—is a simple and effective remedy for dehydration. In the 2009-10 TLDHS, 78 percent of children with diarrhea were treated either with ORS (71 percent) or RHF (40 percent). Ten percent of children were given increased fluids. Overall, 79 percent of children under age 5 with diarrhea were treated with ORT or increased fluids.

Use of ORS varies by age from 50 percent among children less than age 6 months to 72 percent among children age 48-59 months. ORS use is higher among female than male children and among children without bloody diarrhea. There is little difference in the use of ORS by mother's education, but ORS use varies by districts, ranging from 59 percent in Manufahi to 92 percent in Baucau. There is no clear pattern in regard to ORS use and wealth quintiles.

Antibiotics are generally not recommended for treating nonbloody diarrhea in young children. In the 2009-10 TLDHS, 6 percent of children with diarrhea were treated with antibiotics, with no notable difference between bloody and nonbloody diarrhea (7 percent and 6 percent, respectively). Giving antibiotics to treat diarrhea is most likely in children age 6-11 months and in children in urban areas. Home remedies were given to 18 percent of children with diarrhea, and 13 percent of children with diarrhea were given no treatment at all.

Zinc is offered along with ORT to children with diarrhea as per IMCI protocol. Zinc is not a substitute for ORT but when taken in addition to ORT, it reduces the severity and duration of diarrhea. Table 11.8 shows that 6 percent of children with diarrhea received zinc only. Children living in urban areas and in Dili are most likely to have received zinc. Children whose mothers completed secondary or higher education and those in the highest wealth quintile were also more likely to receive zinc than children of mothers with no education and children in the lowest wealth quintile.

Table 11.8 Diarrhea treatment

Among children under age 5 who had diarrhea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of children with diarrhea for whom advice or treatment was sought from a health facility or provider[1]	Oral rehydration therapy (ORT)					Other treatments						
		ORS packets	Recommended home fluids (RHF)	Either ORS or RHF	Increased fluids	ORT or increased fluids	Antibiotic drugs	Antimotility drugs	Zinc supplements	Intravenous solution	Home remedy/ other	No treatment	Number of children
Age in months													
<6	58.7	49.9	26.9	60.6	7.0	62.4	4.6	0.0	4.9	0.0	18.8	29.7	77
6-11	73.3	74.1	36.1	80.8	8.0	80.8	7.3	0.0	7.1	0.0	17.8	12.8	209
12-23	73.9	74.6	37.1	79.6	11.2	80.3	6.6	0.0	5.0	0.2	21.0	11.3	439
24-35	70.7	71.5	43.7	78.3	10.5	79.0	5.6	0.0	5.6	0.3	15.2	12.6	336
36-47	70.4	67.2	46.9	76.7	9.6	78.2	6.0	0.2	7.2	0.0	16.2	11.1	244
48-59	79.3	71.8	42.3	82.1	12.1	82.8	4.8	0.0	5.0	0.0	17.2	10.2	148
Sex													
Male	72.7	67.8	40.3	75.4	9.1	76.2	6.4	0.0	6.6	0.1	18.3	13.3	692
Female	71.8	73.8	40.0	80.8	11.1	81.6	5.8	0.1	5.2	0.1	17.5	12.1	762
Type of diarrhea													
Non bloody	72.2	71.1	40.1	78.4	9.9	79.2	6.0	0.0	5.6	0.2	17.3	12.8	1,349
Bloody	72.1	69.0	40.6	76.8	13.0	77.3	6.7	0.0	8.3	0.0	24.8	11.3	106
Residence													
Urban	69.3	65.0	40.1	73.0	4.7	73.7	9.7	0.1	13.6	0.0	14.6	13.2	429
Rural	73.5	73.5	40.1	80.4	12.4	81.3	4.6	0.0	2.6	0.2	19.3	12.4	1,025
District													
Aileu	81.1	79.9	72.5	86.0	2.4	86.0	11.0	0.0	3.7	0.0	25.0	6.2	43
Ainaro	(56.4)	(58.4)	(57.4)	(70.3)	(2.7)	(70.3)	(13.0)	(0.0)	(0.0)	(0.0)	(16.7)	(19.5)	21
Baucau	85.0	92.1	19.8	95.5	0.0	95.5	0.0	0.0	0.0	0.0	3.4	4.5	142
Bobonaro	83.6	78.3	31.3	85.3	45.8	86.8	2.2	0.3	0.0	0.0	27.0	7.5	178
Covalima	63.7	68.9	49.9	75.9	17.8	78.3	7.2	0.0	0.0	0.0	14.2	14.5	77
Dili	67.3	62.4	39.2	71.0	2.6	71.6	12.1	0.0	18.3	0.0	13.8	12.6	315
Ermera	77.5	72.2	66.2	79.2	0.0	79.2	14.1	0.0	0.0	0.0	23.5	15.9	150
Lautem	61.0	61.5	12.5	65.5	14.5	67.1	2.6	0.0	7.9	0.7	25.3	23.3	156
Liquiçá	68.9	63.6	31.7	69.6	4.9	70.1	1.0	0.0	6.0	0.0	28.4	17.9	139
Manatuto	81.9	84.6	53.3	90.7	7.7	90.7	5.5	0.0	8.8	0.0	13.2	5.5	50
Manufahi	49.4	59.0	50.0	74.2	0.0	74.2	0.0	0.0	1.9	0.0	19.6	10.2	31
Oecussi	68.8	73.0	68.1	85.6	7.0	86.1	2.4	0.0	0.0	0.0	5.4	12.6	123
Viqueque	(86.0)	(76.7)	(19.9)	(86.9)	(3.8)	(90.7)	(3.4)	(0.0)	(0.0)	(3.4)	(16.9)	(0.0)	30
Mother's education													
No education	68.3	71.8	41.1	79.6	9.1	80.0	5.8	0.0	3.4	0.0	16.7	12.8	429
Primary	71.9	71.0	40.3	77.7	13.3	79.0	7.8	0.0	3.4	0.2	21.3	11.7	415
Secondary	74.7	69.3	40.2	77.1	8.6	77.8	5.1	0.1	8.1	0.2	16.1	13.8	569
More than secondary	(83.0)	(85.3)	(26.7)	(85.3)	(10.7)	(87.5)	(5.0)	(0.0)	(25.0)	(0.0)	(20.8)	(3.9)	40
Wealth quintile													
Lowest	66.0	69.6	38.5	80.7	6.2	81.1	2.6	0.0	2.2	0.0	13.0	12.7	259
Second	70.3	69.0	31.2	76.0	13.5	77.0	4.9	0.0	2.0	0.4	21.7	13.7	250
Middle	77.6	79.5	44.8	84.3	13.3	84.3	9.5	0.0	3.3	0.4	21.6	8.2	289
Fourth	68.2	66.5	43.7	74.9	13.1	77.0	3.9	0.0	5.4	0.0	19.5	16.0	343
Highest	78.4	70.6	40.4	76.0	4.6	76.3	9.2	0.2	14.7	0.0	13.8	12.1	314
Total	72.2	71.0	40.1	78.2	10.2	79.0	6.1	0.0	5.8	0.1	17.9	12.7	1,454

Note: ORT includes solution prepared from oral rehydration salt (ORS), pre-packaged ORS packet, and recommended home fluids (RHF). Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes pharmacy, shop, and traditional practitioner

11.6.2 Feeding Practices

Mothers or caregivers are encouraged to continue normal feeding of children with diarrhea and to increase the amount of fluids being given, in addition to continuing to breastfeed as much as possible if the children are breastfed. These practices help to reduce dehydration and minimize the adverse consequences of diarrhea on the child's nutritional status. Mothers interviewed in the 2009-10 TLDHS were asked whether they gave the child less, the same amount, or more fluids and food than usual when their child had diarrhea. Table 11.9 shows, by feeding practices, the percent distribution of children under age 5 who had diarrhea in the two weeks preceding the survey.

Table 11.9 Feeding practices during diarrhea

Percent distribution of children under age 5 who had diarrhea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhea, by background characteristics, Timor-Leste 2009-10

Background characteristic	Amount of liquids offered							Amount of food offered										
	More	Same as usual	Some-what less	Much less	None	Don't know/ missing	Total	More	Same as usual	Some-what less	Much less	None	Never gave food	Don't know/ missing	Total	Percentage given increased fluids and continued feeding[1,2]	Percentage who continued feeding and were given ORT and/or increased fluids[3]	Number of children with diarrhea
Age in months																		
<6	7.0	43.0	40.1	6.3	3.6	0.0	100.0	2.1	31.7	28.4	10.5	12.2	11.8	3.3	100.0	2.5	41.5	77
6-11	8.0	44.4	37.2	9.3	0.6	0.5	100.0	2.6	32.1	37.7	19.3	6.7	1.1	0.5	100.0	4.3	58.4	209
12-23	11.2	41.4	34.6	12.8	0.0	0.0	100.0	3.2	28.5	46.9	18.3	2.4	0.7	0.0	100.0	7.9	63.7	439
24-35	10.5	43.1	33.1	13.0	0.3	0.0	100.0	3.2	35.5	42.9	17.5	0.8	0.0	0.0	100.0	7.6	63.4	336
36-47	9.6	43.7	35.1	11.7	0.0	0.0	100.0	4.2	36.8	42.9	14.4	1.7	0.0	0.0	100.0	7.1	64.8	244
48-59	12.1	39.2	40.2	8.0	0.5	0.0	100.0	9.4	26.4	50.8	12.8	0.5	0.0	0.0	100.0	12.1	71.0	148
Sex																		
Male	9.1	43.6	34.8	11.9	0.4	0.1	100.0	4.1	33.3	41.8	17.2	2.9	0.5	0.2	100.0	6.9	60.1	692
Female	11.1	41.4	36.3	10.8	0.4	0.0	100.0	3.6	30.8	44.9	16.2	2.8	1.4	0.3	100.0	7.7	64.9	762
Type of diarrhea																		
Non bloody	9.9	42.7	36.0	10.9	0.4	0.1	100.0	3.6	32.5	44.1	15.7	3.0	0.9	0.3	100.0	7.2	63.4	1,349
Bloody	13.0	39.9	30.2	16.3	0.5	0.0	100.0	7.1	26.3	34.5	28.4	1.3	2.5	0.0	100.0	9.3	53.7	106
Residence																		
Urban	4.7	46.0	35.8	13.1	0.4	0.0	100.0	0.7	42.8	37.9	17.3	0.1	0.7	0.5	100.0	3.8	58.8	429
Rural	12.4	41.0	35.5	10.6	0.4	0.1	100.0	5.2	27.5	45.7	16.4	4.0	1.1	0.1	100.0	8.8	64.3	1,025
District																		
Aileu	2.4	29.5	25.0	43.0	0.0	0.0	100.0	1.2	28.3	36.8	32.4	0.0	1.2	0.0	100.0	2.4	56.5	43
Ainaro	(2.7)	(48.1)	(23.2)	(23.2)	(2.7)	(0.0)	100.0	(0.0)	(25.9)	(41.6)	(29.7)	(0.0)	(2.7)	(0.0)	100.0	(2.7)	(41.6)	21
Baucau	0.0	17.9	74.2	7.9	0.0	0.0	100.0	2.3	14.2	75.7	7.9	0.0	0.0	0.0	100.0	0.0	87.6	142
Bobonaro	45.8	21.7	14.9	17.7	0.0	0.0	100.0	10.3	15.1	33.8	24.4	15.4	1.1	0.0	100.0	27.5	52.4	178
Covalima	17.8	41.6	37.0	1.8	1.8	0.0	100.0	3.5	26.1	50.1	15.6	3.5	1.2	0.0	100.0	10.6	58.7	77
Dili	2.6	48.9	35.7	12.9	0.0	0.0	100.0	0.6	46.1	36.5	15.4	0.0	0.6	0.6	100.0	2.6	58.1	315
Ermera	0.0	24.6	64.4	11.1	0.0	0.0	100.0	0.0	20.0	66.5	8.4	3.1	2.1	0.0	100.0	0.0	69.1	150
Lautem	14.5	72.3	8.2	4.3	0.7	0.0	100.0	14.1	32.8	16.2	35.6	0.0	1.3	0.0	100.0	14.1	44.4	156
Liquiçá	4.9	54.7	27.8	10.9	1.6	0.0	100.0	2.2	51.0	29.9	12.6	2.7	1.6	0.0	100.0	3.8	57.5	139
Manatuto	7.7	33.5	47.8	11.0	0.0	0.0	100.0	5.5	31.3	48.9	9.9	3.3	0.0	1.1	100.0	7.7	79.7	50
Manufahi	0.0	27.9	60.0	12.1	0.0	0.0	100.0	1.9	24.2	59.7	14.3	0.0	0.0	0.0	100.0	0.0	64.0	31
Oecussi	7.0	62.7	25.6	3.4	0.5	0.8	100.0	0.8	36.4	55.1	5.6	0.5	0.8	0.8	100.0	6.1	80.5	123
Viqueque	(3.8)	(55.9)	(23.8)	(16.5)	(0.0)	(0.0)	100.0	(0.0)	(52.9)	(27.2)	(16.5)	(3.4)	(0.0)	(0.0)	100.0	(3.8)	(70.8)	30
Mother's education																		
No education	9.1	42.6	34.9	12.8	0.4	0.2	100.0	2.6	30.0	42.9	18.5	4.1	1.6	0.2	100.0	5.4	60.9	429
Primary	13.3	37.4	37.7	11.0	0.5	0.0	100.0	4.4	30.8	43.9	15.7	4.3	1.0	0.0	100.0	10.2	63.3	415
Secondary	8.6	46.2	35.0	9.8	0.4	0.0	100.0	4.7	33.5	44.4	15.6	1.2	0.6	0.1	100.0	6.4	63.6	569
More than secondary	(10.7)	(39.7)	(29.6)	(20.0)	(0.0)	(0.0)	100.0	(0.0)	(44.7)	(28.6)	(21.7)	(0.0)	(0.0)	(5.0)	100.0	(10.7)	(60.8)	40
Wealth quintile																		
Lowest	6.2	53.0	32.6	7.8	0.0	0.4	100.0	3.4	34.6	41.0	18.3	0.9	1.5	0.4	100.0	5.7	65.8	259
Second	13.5	40.2	34.4	11.0	0.8	0.0	100.0	5.8	25.9	47.0	14.7	5.2	1.5	0.0	100.0	10.1	60.1	250
Middle	13.3	39.6	37.3	9.5	0.3	0.0	100.0	4.9	30.5	43.3	15.2	5.5	0.5	0.0	100.0	7.7	66.9	289
Fourth	13.1	34.6	35.9	15.6	0.7	0.0	100.0	3.3	27.2	47.3	18.6	2.7	0.9	0.0	100.0	9.4	59.1	343
Highest	4.6	46.8	37.0	11.4	0.2	0.0	100.0	2.4	41.4	38.3	16.1	0.4	0.6	0.8	100.0	3.8	62.0	314
Total	10.2	42.5	35.6	11.3	0.4	0.1	100.0	3.9	32.0	43.4	16.7	2.9	1.0	0.2	100.0	7.3	62.7	1,454

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Equivalent to the UNICEF/WHO indicator "Home management of diarrhea." MICS Indicator 34
[2] Continue feeding practices includes children who were given more, same as usual, or somewhat less food during the diarrhea episode
[3] Equivalent to UNICEF MICS Indicator 35.

Ten percent of children with diarrhea were given more to drink than usual, 43 percent were given the same as usual, and 36 percent were given somewhat less to drink than usual. It is particularly unfortunate that 12 percent of children with diarrhea were given much less or nothing to drink.

Food intake is curtailed even more than fluid intake during episodes of diarrhea. Only 4 percent of children with diarrhea were given more to eat than usual, 32 percent were given the same amount of food as usual, and 63 percent were given less food to eat than usual or none at all. These patterns reflect a gap in practical knowledge among some mothers regarding the nutritional requirements of children during diarrheal episodes. A study on health-care-seeking behavior found diverse and varied local beliefs and practices related to childhood diarrhea (Zwi et al., 2009). For example, certain communities expressed a belief that diarrhea was caused by breastfeeding, contamination, food consumption patterns, and the season. The initial response to diarrhea was usually homemade rehydration, boiled leaves, or both. The 2009-10 TLDHS findings and other studies indicate a need for further health education efforts to reduce the number of children that become dehydrated or malnourished because of improper feeding practices during diarrhea.

Overall, 7 percent of children with diarrhea were given increased fluids and continued feeding, and 63 percent received continued feeding and were given ORT, increased fluids, or both. Children age 48-59 months were more likely than other children to receive continued feeding, ORT, and/or increased fluids during the last episode of diarrhea. Differentials in these indicators by other background characteristics are very minimal.

11.7 KNOWLEDGE OF ORS PACKETS

As mentioned earlier, a simple and effective response to dehydration caused by diarrhea is a prompt increase in the child's fluid intake through some form of ORT, which may include the use of a solution prepared from packets of oral rehydration salts (ORS). To ascertain how widespread knowledge of ORS is in Timor-Leste, mothers were asked whether they knew about ORS packets.

Table 11.10 shows the percentage of mothers with a birth in the five years preceding the survey who knew about ORS packets for treatment of diarrhea. Knowledge of ORS is widespread in Timor-Leste, with 89 percent of mothers having heard of it. Mothers age 15-19 are slightly less likely to know about ORS than older mothers. Knowledge of ORS is high among urban mothers and increases with level of education and wealth of mothers. Mothers in Ermera district are less likely than mothers in other districts to have heard of ORS.

Table 11.10 Knowledge of ORS packets

Percentage of mothers age 15-49 who gave birth in the five years preceding the survey who know about ORS packets for treatment of diarrhea by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of women who know about ORS packets	Number of women
Age		
15-19	85.4	178
20-24	89.9	1,012
25-34	88.4	2,615
35-49	89.1	2,210
Residence		
Urban	91.2	1,484
Rural	88.1	4,531
District		
Aileu	93.8	220
Ainaro	95.8	318
Baucau	89.2	598
Bobonaro	94.5	587
Covalima	93.1	322
Dili	91.3	1,043
Ermera	74.0	719
Lautem	91.3	444
Liquiçá	80.6	358
Manatuto	90.2	264
Manufahi	93.3	238
Oecussi	97.3	492
Viqueque	79.5	412
Education		
No education	83.7	1,980
Primary	88.8	1,656
Secondary	93.2	2,226
More than secondary	93.4	154
Wealth quintile		
Lowest	85.2	1,226
Second	85.6	1,171
Middle	88.6	1,203
Fourth	90.5	1,170
Highest	94.2	1,244
Total	88.8	6,015

ORS = Oral rehydration salts

11.8 STOOL DISPOSAL

Contact with human feces directly, or indirectly by animal contact with the feces, can lead to diarrheal diseases. Hence, the safe disposal of children's stools is important in preventing the spread of disease. Table 11.11 shows the percent distribution of mothers who have their youngest child under age 5 living with them, by the way in which the child's stools are disposed of, according to background characteristics and type of toilet facilities in the household.

Twenty-eight percent of mothers of children under age 5 dispose of their youngest child's stools safely (that is, children use a toilet or latrine, the stools are rinsed in the toilet or latrine, or the stools are buried). Thirteen percent of mothers put or rinse their children's stools into a drain or ditch, 4 percent throw them into the garbage, and 45 percent of mothers leave them in the open.

Table 11.11 Disposal of children's stools

Percent distribution of youngest children under age five living with the mother by the manner of disposal of the child's last fecal matter, and percentage of children whose stools are disposed of safely, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely	Number of children
	Child used toilet or latrine	Put/ rinsed into toilet or latrine	Buried	Put/ rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Missing			
Age in months											
<6	2.9	12.1	5.0	28.4	4.5	27.4	19.4	0.2	100.0	20.0	973
6-11	4.2	12.3	6.9	20.9	5.3	35.6	14.9	0.0	100.0	23.3	927
12-23	5.4	11.8	9.0	9.7	2.7	53.0	8.1	0.2	100.0	26.3	1,616
24-35	10.5	12.7	7.7	6.6	3.7	51.2	7.6	0.0	100.0	30.9	1,176
36-47	13.6	14.7	6.0	6.9	3.3	50.2	5.4	0.0	100.0	34.3	735
48-59	19.2	19.0	4.7	6.7	1.9	43.6	4.9	0.0	100.0	42.9	454
Toilet facility											
Improved, not shared[1]	12.8	20.2	5.4	11.7	4.0	36.7	9.1	0.2	100.0	38.4	2,419
Non-improved or shared	4.5	8.0	8.2	14.5	3.4	50.1	11.3	0.0	100.0	20.7	3,461
Residence											
Urban	13.0	23.9	9.5	7.6	5.4	28.0	12.3	0.3	100.0	46.4	1,447
Rural	6.3	9.5	6.2	15.2	3.0	50.0	9.7	0.0	100.0	22.0	4,432
District											
Aileu	2.5	11.2	3.4	8.0	5.5	48.6	20.8	0.0	100.0	17.2	214
Ainaro	0.4	6.0	1.6	18.9	1.0	68.4	3.8	0.0	100.0	7.9	310
Baucau	5.1	10.4	5.9	1.6	9.3	44.0	23.7	0.0	100.0	21.4	595
Bobonaro	23.1	7.2	8.8	17.3	1.1	35.3	7.3	0.0	100.0	39.1	569
Covalima	3.2	9.5	2.6	18.9	3.2	59.4	2.9	0.3	100.0	15.3	311
Dili	13.8	24.2	9.9	5.6	6.3	24.1	15.7	0.4	100.0	47.8	1,017
Ermera	4.6	22.0	0.3	27.9	1.2	43.8	0.2	0.0	100.0	26.9	708
Lautem	2.3	18.0	0.5	4.0	2.3	60.1	12.8	0.0	100.0	20.7	438
Liquiçá	7.7	7.6	0.9	10.6	2.8	70.3	0.0	0.0	100.0	16.2	347
Manatuto	21.1	6.0	0.8	23.1	1.1	47.7	0.2	0.0	100.0	27.9	259
Manufahi	1.4	6.0	0.6	23.1	4.9	62.7	1.4	0.0	100.0	8.0	229
Oecussi	1.2	2.5	40.8	6.8	3.6	18.5	26.6	0.0	100.0	44.5	479
Viqueque	3.6	10.9	0.3	22.1	0.5	59.3	3.4	0.0	100.0	14.8	402
Education											
No education	5.4	8.2	7.4	15.5	2.0	51.2	10.3	0.0	100.0	21.0	1,938
Primary	6.7	10.1	8.1	13.0	4.3	46.8	11.0	0.0	100.0	24.9	1,617
Secondary	10.5	19.4	5.9	12.3	4.3	38.1	9.3	0.1	100.0	35.8	2,176
More than secondary	15.2	15.7	7.7	5.3	7.0	28.5	19.4	1.4	100.0	38.6	148
Wealth quintile											
Lowest	2.0	1.9	9.9	15.6	2.1	55.6	12.8	0.1	100.0	13.8	1,199
Second	3.5	6.9	6.1	14.2	3.0	55.2	11.1	0.0	100.0	16.5	1,149
Middle	6.2	9.5	6.3	14.6	3.6	51.2	8.7	0.0	100.0	22.0	1,170
Fourth	11.7	20.4	4.6	13.7	3.2	36.2	9.7	0.4	100.0	36.8	1,148
Highest	16.1	26.2	8.1	8.8	6.0	25.2	9.5	0.0	100.0	50.5	1,213
Total	7.9	13.0	7.0	13.4	3.6	44.6	10.4	0.1	100.0	28.0	5,879

[1] Non-shared facilities that are of the types: flush or pour flush into a piped sewer system/septic tank/pit latrine; ventilated, improved pit (VIP) latrine; pit latrine with a slab; and a composting toilet.

There are marked differences in the way children's stools are disposed of, according to background characteristics. For example, older children are more likely than younger children to have their stools disposed of safely. As expected, children in urban areas and children living in households with an improved toilet facility are more likely to have safe disposal of their stools than children in rural areas and in households without such facilities. By region, the proportion of children whose stools are disposed of safely ranges from 8 percent in Ainaro and Manufahi to 48 percent in Dili. Surprisingly, although a high percentage of children's stools are not disposed of safely in Ainaro, it had the lowest prevalence of diarrhea among children under age 5 in the two weeks preceding the survey (4 percent). Safe disposal of children's stools increases with mother's level of education and household wealth quintile.

NUTRITION OF CHILDREN AND WOMEN 12

This chapter reviews the nutritional status of children and women in Timor-Leste. The specific topics discussed are (1) infant and young child feeding practices, including breastfeeding and feeding with solid/semi-solid foods; (2) quantity and quality of foods, including their diversity and frequency; (3) micronutrient intake and food supplementation among children and women; (4) night blindness among children, and (5) anemia among women and children. The section also covers anthropometric assessment of the nutritional status of children under 5 years of age and the nutritional status of women 15-49 years of age.

The poor nutritional status of children and women has been a serious problem in Timor-Leste for many years. The most common forms of malnutrition in the country are protein energy malnutrition (PEM) and micronutrient deficiencies. The National Nutrition Strategy, developed in 2004, provides comprehensive documentation of the country's goals (MOH, 2004c). In addition, the country has drafted a breastfeeding policy, a National Salt Law, and Infant and Young Child Feeding (IYCF) strategies . Several programs with an explicit nutrition component have been launched in the country under the initiative of the Directorate of Community Health and through the Nutrition Department of the Ministry of Health. The major partners in initiating programs to address the problem of malnutrition are the World Health Organization, UNICEF, the World Food Program (WFP), USAID, CARE International, Oxfam, World Vision, Concern, Alola Foundation, *Medico do Mundo* (MDM), TAIS (*Timor-Leste Asistensia Integradu Saude*), and other international and national nongovernmental organizations. The findings in the following section are highlighted with respect to these initiatives.

12.1 NUTRITIONAL STATUS OF CHILDREN

Anthropometric data on height and weight collected in the 2009-10 TLDHS permit the analysis and evaluation of the nutritional status of young children in Timor-Leste. This analysis allows identification of subgroups in the population that are at increased risk of faltered growth, disease, impaired mental and physical development, and death. The nutritional status of young children and women of reproductive age reflects household, community, and national development. Children and women in developing countries are most vulnerable to malnutrition because of inadequate dietary intake, infectious diseases, inadequate access to appropriate health care, and inequitable distribution of food within the household.

12.1.1 Nutritional Status of Children

The 2009-10 TLDHS included information on the nutritional status of children less than age 5 for three indices: weight-for-age, height-for-age, and weight-for-height. Weight measurements were taken using a lightweight electronic SECA scale with a digital screen, designed and manufactured under the guidance of UNICEF, and height measurements were carried out using a measuring board from Shorr Productions. Children younger than 24 months were measured lying down (recumbent length) on the board, while standing height was measured for older children. The scale allowed for the weighing of very young children through an automatic mother-child adjustment that eliminated the mother's weight while she was standing on the scale with her baby.

The nutritional status of children in the survey population is compared with the WHO Child Growth Standards, which are based on an international sample (from Brazil, Ghana, India, Norway, Oman, and the United States) of ethnically, culturally, and genetically diverse healthy children living under optimum conditions conducive to achieving a child's full genetic growth potential (WHO, 2006). The WHO Child Growth Standards are used here instead of the former NCHS/CDC/WHO

international reference population because of the prescriptive, rather than descriptive, nature of the WHO Child Growth Standards versus the NCHS/CDC/WHO international reference population. The WHO Child Growth Standards identify the breastfed child as the normative model for growth and development, and they document how children should grow under optimum conditions and infant feeding and child health practices.

The use of the WHO Child Growth Standards is based on the finding that well-nourished children of all population groups for which data exist follow very similar growth patterns before puberty. The internationally based standard population serves as a point of comparison, facilitating the examination of differences in the anthropometric status of subgroups in a population and of changes in nutritional status over time.

For the purposes of comparison with previous surveys, indices are expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO international reference population, which was in use prior to the new WHO Child Growth Standards.

Each of the three nutritional status indicators is expressed in standard deviation units (z-scores) from the median of the reference population. In any large population, there is variation in height and weight; this variation approximates a normal distribution. The three indices—height-for-age, weight-for-height, and weight-for-age—provide different information about growth and body composition, which can be used to assess nutritional status. The height-for-age index indicates linear growth retardation and cumulative growth deficits. Children whose height-for-age z-score is below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age (stunted) and chronically malnourished. Children who are below minus three standard deviations (-3 SD) from the median of the reference population are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is worsened by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and does not vary according to recent dietary intake.

The weight-for-height index measures body mass in relation to body length and describes current nutritional status. Children whose z-scores are below minus two standard deviations (-2 SD) from the median of the reference population are considered to be thin for their height (wasted) and acutely malnourished. Wasting represents failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake during a recent episode of illness, causing loss of weight and the onset of malnutrition. Children whose weight-for-height is below minus three standard deviations (-3 SD) from the median of the reference population are considered severely wasted. Children whose weight-for-height is above two standard deviations (+2 SD) from the median reference population are considered to be overweight.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are classified as underweight. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the median of the reference population are considered severely underweight.

Height and weight data were collected from the sampled household population in Timor-Leste. A total of 9,989 children under age 5 were identified in the households. Information on height or weight was missing for 3 percent of children who were not present and for 8 percent who refused to be measured. The final analysis of nutritional status is based on the remaining 8,171[1] children (88 percent). The results are shown in Table 12.1.

[1] These are unweighted numbers.

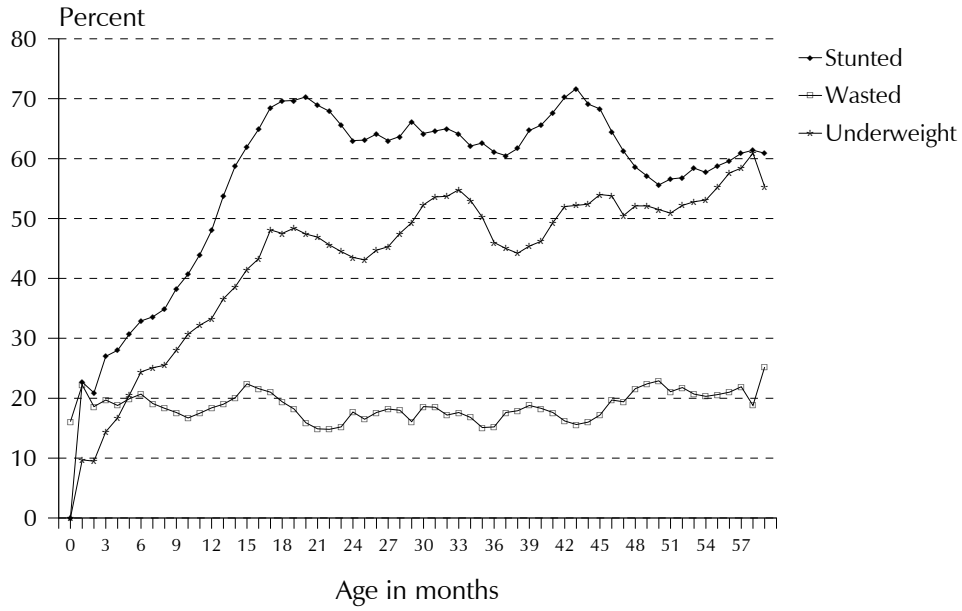
Table 12.1 Nutritional status of children

Percentage of children under 5 years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Timor-Leste 2009-10

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	15.3	26.0	-0.6	8.8	19.8	16.6	-0.1	4.8	14.9	3.7	-0.7	563
6-8	17.5	34.6	-1.3	7.2	18.6	9.4	-0.5	7.9	25.1	0.0	-1.3	351
9-11	19.0	37.8	-1.6	6.7	16.2	7.8	-0.6	11.1	28.7	1.0	-1.4	392
12-17	33.5	60.4	-2.0	7.8	21.8	4.2	-0.8	14.5	40.7	0.9	-1.6	828
18-23	45.1	69.0	-2.5	6.1	15.2	4.7	-0.8	17.5	46.9	1.5	-1.8	692
24-35	39.6	63.8	-2.4	7.3	17.5	2.8	-0.8	16.3	49.3	0.5	-1.9	1,752
36-47	36.9	66.5	-2.5	5.9	17.1	3.9	-0.8	17.7	48.7	0.1	-2.0	1,864
48-59	28.6	57.8	-2.3	7.3	21.5	2.3	-1.0	17.7	53.9	0.0	-2.1	1,729
Sex												
Male	34.5	60.3	-2.2	7.8	20.3	4.5	-0.8	16.3	45.5	0.7	-1.8	4,106
Female	31.2	56.0	-2.1	6.2	17.0	4.9	-0.7	14.5	43.8	0.6	-1.8	4,065
Birth interval in months[2]												
First birth[3]	31.9	56.0	-2.1	7.8	20.8	3.8	-0.9	15.4	44.9	0.5	-1.8	1,304
<24	34.6	60.9	-2.3	7.4	18.4	4.9	-0.7	15.9	44.5	0.5	-1.8	1,790
24-47	33.3	58.5	-2.2	6.3	17.3	4.6	-0.8	15.0	45.3	0.7	-1.8	3,539
48+	26.9	53.0	-1.9	7.4	21.2	5.8	-0.8	15.5	40.9	0.9	-1.7	953
Size at birth[2]												
Very small	36.6	64.7	-2.3	10.1	21.0	3.6	-1.0	20.7	54.1	0.4	-2.1	406
Small	32.8	58.7	-2.1	5.7	18.3	5.1	-0.8	16.6	46.3	0.5	-1.8	800
Average or larger	32.6	57.7	-2.2	7.0	18.7	4.8	-0.8	15.0	43.8	0.7	-1.8	6,212
Mother's interview status												
Interviewed	32.5	57.9	-2.2	7.0	18.6	4.7	-0.8	15.4	44.5	0.7	-1.8	7,587
Not interviewed but in household	32.3	55.9	-2.2	6.7	18.1	6.9	-0.6	12.2	40.5	1.1	-1.7	218
Not interviewed, and not in the household[4]	40.6	63.4	-2.4	8.2	19.2	4.5	-0.8	18.4	51.3	0.0	-2.0	367
Mother's nutritional status[5]												
Thin (BMI<18.5)	38.1	64.5	-2.4	7.1	22.3	3.4	-1.0	21.7	54.3	0.4	-2.1	1,852
Normal (BMI 18.5-24.9)	31.6	56.3	-2.1	7.2	17.9	5.0	-0.7	13.6	42.0	0.8	-1.7	5,265
Overweight/obese (BMI ≥25)	21.3	50.2	-2.0	4.0	11.2	6.5	-0.5	9.8	31.9	0.7	-1.5	448
Residence												
Urban	21.5	49.2	-1.9	4.5	14.9	4.3	-0.7	9.7	34.9	0.9	-1.5	1,794
Rural	36.1	60.6	-2.2	7.7	19.7	4.8	-0.8	17.0	47.4	0.6	-1.9	6,377
District												
Aileu	16.7	31.4	-0.6	29.8	49.4	1.4	-1.9	12.0	41.2	1.7	-1.6	271
Ainaro	43.8	69.1	-2.7	6.7	18.2	10.2	-0.4	17.0	47.7	1.2	-1.8	482
Baucau	39.6	58.1	-2.4	5.5	21.6	11.2	-0.4	17.5	43.0	1.0	-1.7	687
Bobonaro	45.0	72.6	-2.7	6.8	15.3	9.7	-0.5	18.8	52.5	0.5	-2.0	792
Covalima	36.8	64.7	-2.4	4.4	13.8	3.6	-0.7	13.2	47.4	0.3	-1.8	373
Dili	16.1	43.9	-1.7	4.1	14.5	4.5	-0.6	7.9	30.1	1.0	-1.4	1,289
Ermera	48.9	68.5	-2.6	6.8	20.7	2.7	-0.9	23.6	58.0	0.3	-2.2	1,077
Lautem	18.7	51.0	-1.9	2.9	9.6	1.8	-0.7	6.7	32.1	0.0	-1.5	714
Liquiçá	34.7	56.9	-2.2	5.1	15.1	4.4	-0.7	14.6	41.4	1.0	-1.7	456
Manatuto	21.2	46.7	-1.5	10.8	19.7	2.6	-0.9	8.7	34.4	0.1	-1.5	429
Manufahi	37.1	64.7	-2.3	5.6	14.9	3.2	-0.7	13.5	43.7	0.6	-1.8	296
Oecussi	40.6	69.1	-2.5	9.0	26.9	1.0	-1.3	28.5	62.8	0.1	-2.3	708
Viqueque	25.0	51.5	-1.8	9.3	19.4	3.0	-1.0	12.7	44.8	1.3	-1.7	597
Mother's education[6]												
No education	38.6	62.6	-2.3	8.0	20.9	5.0	-0.8	18.8	48.8	0.8	-1.9	2,734
Primary	33.9	59.7	-2.2	6.8	18.7	4.4	-0.8	15.9	46.5	0.6	-1.8	2,175
Secondary	26.3	52.7	-2.0	6.1	16.7	4.7	-0.7	11.8	38.9	0.7	-1.6	2,736
More than secondary	15.9	41.6	-1.7	4.7	10.5	5.2	-0.6	6.5	32.0	0.0	-1.4	160
Wealth quintile												
Lowest	37.3	63.0	-2.3	8.8	20.8	4.8	-0.8	18.9	49.4	0.5	-1.9	1,762
Second	40.8	63.5	-2.4	6.7	18.7	6.7	-0.7	17.3	48.0	0.9	-1.9	1,629
Middle	36.1	60.5	-2.3	7.6	19.6	4.0	-0.8	17.3	48.1	0.6	-1.9	1,663
Fourth	28.6	55.4	-2.0	6.5	17.6	3.3	-0.8	13.1	41.4	0.3	-1.7	1,599
Highest	20.2	47.1	-1.8	5.1	16.2	4.8	-0.7	9.6	35.3	1.1	-1.5	1,518
Total	32.9	58.1	-2.2	7.0	18.6	4.7	-0.8	15.4	44.7	0.7	-1.8	8,171

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
Total includes 164 children with information missing on size at birth and 119 children with information missing on mother's nutritional status.
[1] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth standards population median
[2] Excludes children whose mothers were not interviewed
[3] First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval
[4] Includes children whose mothers are deceased
[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 12.9.
[6] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Figure 12.1 Nutritional Status of Children by Age



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Fifty-eight percent of children under age 5 are stunted, and 33 percent are severely stunted. Nineteen percent of children under age 5 are wasted, and 7 percent are severely wasted. The weight-for-age indicator shows that 45 percent of children under age 5 are underweight and 15 percent are severely underweight. Table 12.1 highlights another problem among young children in Timor-Leste: 5 percent are overweight [Z-scores are above two standard deviations (+2 SD)].

Table 12.1 and Figure 12.1 indicate that stunting is apparent even among children less than 6 months of age (26 percent). Stunting increases with the age of the child; this is evidenced by the increase in stunting from 35 percent among children age 6-8 months to 69 percent among children age 18-23 months and gradually decreases to 58 percent by age 48-59 months. More male children (60 percent) than female children (56 percent) are stunted. Size at birth is an important indicator of the nutritional status of children: stunting is higher among children who were reported to have been very small at birth (65 percent) than among children who were average or larger in size at birth (58 percent). More rural children (61 percent) than urban children (49 percent) are stunted. District variation in nutritional status of children is substantial. Stunting among children is highest in Bobonaro district (73 percent) and lowest in Aileu district (31 percent). The percentage of children stunted decreases as mother's BMI and education level increase. Stunting is more prevalent in children with thin (BMI <18.5) mothers compared with those with overweight/obese (BMI ≥25) mothers (65 percent vs. 50 percent).

Wasting is high among children less than 6 months of age (20 percent). The highest percentage of wasting is seen among children age 12-17 months and age 48-59 months (22 percent each). Wasting decreases with size at birth; wasting is higher among children who were reported to be very small at birth (21 percent) than among children who were average or larger in size at birth (19 percent). The proportion of children who are wasted is higher in rural areas (20 percent) than in urban areas (15 percent). Wasting is higher in children whose mother has a low body mass index (BMI) (22 percent) compared with children whose mother has a high BMI (11 percent). Wasting is especially pronounced in Aileu (49 percent) compared with Lautem, the district with the lowest prevalence of wasting (10 percent). A report submitted by an Emergency Needs Assessment Mission conducted by the World Food Program and the Food and Agriculture Organization in August 2003 indicated that the nutritional status in districts with a bad harvest had deteriorated, and Aileu was identified as one of these districts (WFP and FAO, 2003). Wasting is higher among children from the lowest wealth quintile (21 percent) as compared with children from the highest wealth quintile (16 percent).

It is further observed that the highest proportion of overweight children (+2 SD) is in the age group less than age 6 months, with 17 percent of children in that age group being overweight. There is hardly any difference between urban and rural areas in the proportions of children overweight. Looking at district patterns, the prevalence of overweight children ranges from 1 percent in Oecussi and Aileu to 11 percent in Baucau. Although variations by mother's level of education and wealth quintile are not large, the highest proportions of overweight children are seen among the most educated mothers and mothers who live in households in the second quintile.

Table 12.1 and Figure 12.1 show that the percentage of children who are underweight increases sharply, from 15 percent among children under age 6 months to 25 percent among children age 6-8 months, to 29 percent among children age 9-11 months, and to above 40 percent among children age 12 months and older. This may be due to inappropriate and/or inadequate feeding practices because the increasing levels of children who are underweight for their age coincides with the age at which normal complementary feeding starts. Children who are reported to be very small in size at birth are more likely to be underweight (54 percent) compared with those children who are reported to be average or larger in size at birth (44 percent). Children living in rural areas are more likely to be underweight (47 percent) compared with those children living in urban areas (35 percent). Children of mothers with low BMI, those with no education, and those belonging to households in the lowest wealth quintile are most likely to be underweight.

12.1.2 Trends in Children's Nutritional Status

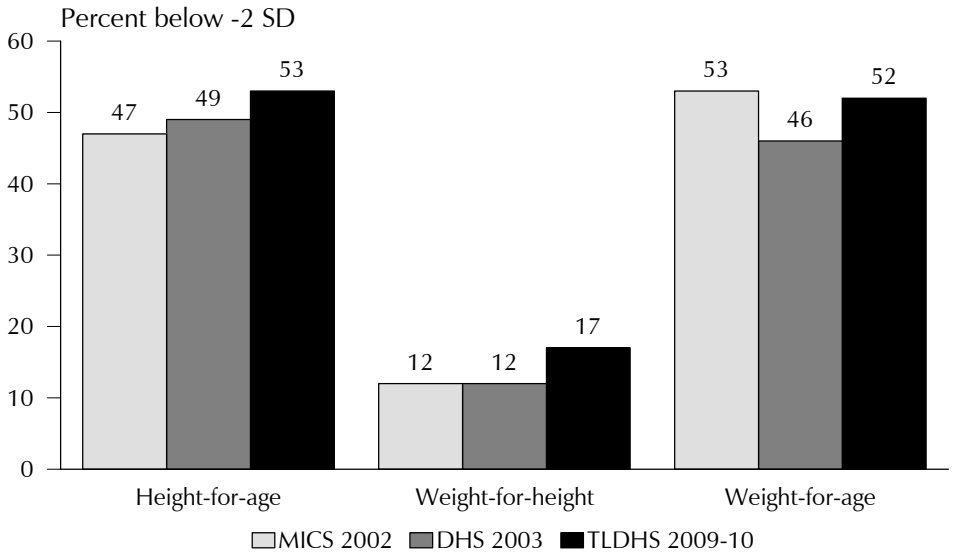
The results of the 2009-10 TLDHS show children's nutritional status compared with the status from earlier surveys conducted in Timor-Leste. However, several factors make direct comparisons difficult. Because the data in the previous surveys were analyzed based on the NCHS/CDC/WHO international reference population, it was necessary to re-calculate the current data accordingly to make it comparable. Therefore, comparison of data on nutritional status of children should be made with caution.

The data from the 2009-10 TLDHS and Figure 12.2, indicate that there has been a slight rise in the level of stunting, wasting, and underweight over the past 6 years. Stunting increased from 49 percent to 53 percent, wasting increased from 12 percent to 17 percent, and underweight increased from 46 percent to 52 percent[2]. The results indicate that achieving the Millennium Development Goal of a 50 percent reduction in the prevalence of underweight children under 5 years of age by the year 2015 continues to be a challenge.

It can be further noted that, with use of the new WHO Child Growth Standards, the nutritional status of children can be compared using data from the 2007 Living Standard Survey and the current 2009-10 TLDHS. Figure 12.3 shows that malnutrition has remained high in general, and the proportion of children who have chronic malnutrition has increased from 54 percent to 58 percent. However, the proportion of children who are wasted has decreased from 25 percent to 19 percent, while the proportion of children who are severely wasted has remained the same over the time period. Similarly, the percentage of underweight children has declined, with an 8 percent decline occurring in the past two years. However, the percentage of severely underweight children has remained the same. These findings indicate that the effort to reduce malnutrition among children is showing some positive results but still has a long way to go.

[2] Comparison should be carried with caution as there are overlaps in the confidence interval of these estimates.

Figure 12.2 Trends in Nutritional Status of Children, 2002-2010, NCHS/CDC/WHO Standards



Note: Data for the 2009-10 TLDHS are recalculated using the NCHS/CDC/WHO reference population to be comparable to the estimates from the earlier surveys.

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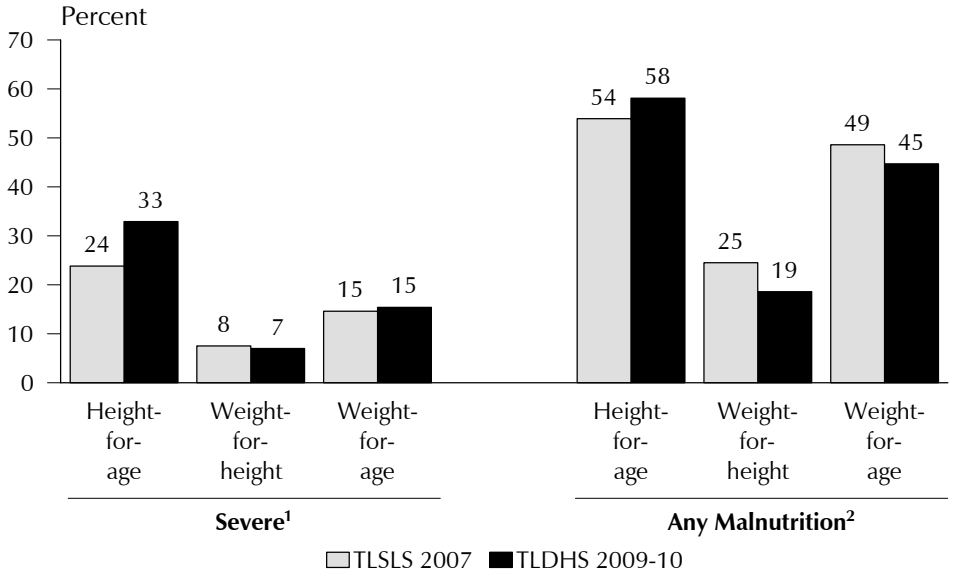
Figure 12.3 Trends in Nutritional Status of Children, 2007-2010, WHO Child Growth Standards



[1] Percentage below -3 SD
[2] Percentage below -2 SD

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12.2 INITIATION OF BREASTFEEDING

Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefit from early suckling because it stimulates breast milk production and facilitates the release of oxytocin, which helps the uterus to contract and reduces postpartum blood loss. The first breast milk contains colostrum, which is highly nutritious and has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also fosters bonding between mother and child.

Table 12.2 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and for the last children born in the five years preceding the survey ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth and the percentage who received a prelacteal feed, by background characteristics, Timor-Leste 2009-10

	Breastfeeding among children born in last five years		Among last-born children ever breastfed:			
Background characteristic	Percentage ever breastfed	Number of children born in last five years	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	96.6	5,021	81.3	96.2	12.8	3,048
Female	96.6	4,807	82.1	96.5	12.6	2,835
Residence						
Urban	95.8	2,353	83.5	95.5	17.0	1,435
Rural	96.8	7,475	81.1	96.6	11.3	4,448
District						
Aileu	97.6	359	81.1	99.8	6.9	218
Ainaro	96.8	579	82.7	97.1	6.9	310
Baucau	99.3	970	78.0	99.2	12.8	597
Bobonaro	85.6	934	84.3	97.8	19.9	548
Covalima	98.2	453	87.2	92.3	13.3	317
Dili	95.7	1,652	87.5	96.4	17.0	1,007
Ermera	99.1	1,252	87.3	98.7	5.8	715
Lautem	98.7	758	67.1	95.7	9.2	441
Liquiçá	96.4	582	69.0	88.2	29.9	350
Manatuto	97.9	433	90.1	99.1	9.2	259
Manufahi	97.2	393	72.0	93.1	13.8	231
Oecussi	98.1	783	84.7	94.1	10.4	487
Viqueque	98.4	678	77.6	97.2	4.6	404
Mother's education						
No education	96.9	3,298	80.0	96.7	11.2	1,948
Primary	96.5	2,765	80.7	95.9	12.3	1,625
Secondary	96.2	3,546	83.4	96.3	13.7	2,160
More than secondary	98.6	218	89.0	97.3	21.0	151
Assistance at delivery						
Health professional[3]	95.7	2,941	84.4	96.6	15.2	1,945
Traditional birth attendant	97.7	1,762	79.5	95.2	9.9	1,007
Other	96.9	4,808	81.2	96.7	11.5	2,744
No one	92.7	313	71.8	94.5	19.0	188
Place of delivery						
Health facility	95.9	2,171	84.8	96.4	16.0	1,468
At home	96.8	7,641	80.6	96.3	11.6	4,413
Other	*	5	*	*	*	2
Wealth quintile						
Lowest	98.3	2,090	79.2	96.1	8.5	1,211
Second	96.6	1,960	80.4	97.0	11.1	1,155
Middle	95.9	1,992	80.7	95.3	11.6	1,175
Fourth	95.9	1,903	82.1	96.1	15.2	1,138
Highest	96.2	1,884	85.9	97.3	17.0	1,204
Total	96.6	9,828	81.7	96.3	12.7	5,883

Note: Table is based on births in the last five years whether the children are living or dead at the time of interview. Total for number of children born in the five years before the survey includes four children with information missing on assistance at delivery and 11 children with information missing on place of delivery. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes children who started breastfeeding within one hour of birth

[2] Children given something other than breast milk during the first three days of life

[3] Doctor, nurse/midwife, or assistant nurse

Table 12.2 shows the percentages of children born in the five years preceding the survey who were ever breastfed, who started breastfeeding within one hour and within one day of birth, and among last-born children ever breastfed in the five years before the survey, the percentage who received a prelacteal feed. Breastfeeding is nearly universal in Timor-Leste, with 97 percent of children born in the five years preceding the survey having been breastfed at some time. The percentage of children ever breastfed does not vary much by background characteristics.

On average four in five children are breastfed within the first hour of birth (82 percent) and 96 percent are breastfed within one day of birth. Thirteen percent of children are given a prelacteal feed, that is, something other than breast milk, during the first three days of life. The percentage of children who are breastfed early has increased in the past six years, the increase being more pronounced for children breastfed within one hour of birth. There has been a rise in the percentage of children breastfed within one hour of birth by about 74 percent, from 47 percent in the 2003 DHS to 82 percent in 2009-10 TLDHS.

There is no difference in the timing of initial breastfeeding by sex of the child or by rural or urban areas. Children from Manatuto are most likely to be breastfed immediately after birth (90 percent), and nearly all children in this region (99 percent) are breastfed within one day of birth. Children in Liquiçá are least likely to be breastfed, with 69 percent breastfed within one hour and 88 percent fed within one day of birth. As expected, the proportion of children given a prelacteal feed is also high in Liquiçá at 30 percent.

Women who have completed more than secondary school or a higher level of education are more likely to breastfeed within one hour of birth (89 percent) compared with women who have no education (80 percent). Women who have received more than secondary school education are more likely to give a prelacteal feed (21 percent) compared with women with no education (11 percent). Moreover, other characteristics of the infant and mother, such as type of assistance at delivery and place of delivery, have important influences on early breastfeeding practices. There is a difference in initiation of breastfeeding within one hour between children delivered by a health professional (84 percent) and children delivered with no assistance (72 percent). Eighty-five percent of children delivered in a health facility have initiated breastfeeding within one hour of birth. Initiation of breastfeeding within an hour of birth for children delivered at home has improved by 71 percent over the past years, rising from 48 percent in the 2003 DHS to 82 percent in the 2009-10 TLDHS. Differences in early breastfeeding by wealth are small, although larger proportions of children in the highest wealth quintile are likely to be breastfed within an hour of birth.

12.3 BREASTFEEDING STATUS BY AGE

UNICEF and WHO recommend that children be exclusively breastfed during the first six months of life and that children be given solid or semisolid complementary food in addition to continued breastfeeding after six months. The nutrition program under the National Nutrition Strategy 2004 promotes exclusive breastfeeding through the age of 6 months and thereafter promotes introducing complementary foods along with continued breast milk until the child is at least two years of age (MOH, 2004c). Exclusive breastfeeding is recommended in the first 6 months of life because breast milk is uncontaminated and contains all the nutrients necessary for children.

Information on breastfeeding was obtained in the 2009-10 TLDHS by asking mothers about the current breastfeeding status of all children under age 3 and, for the youngest child born in the three years before the survey and living with the mother, food (liquids or solids) given to the child the day before the survey.

Table 12.3 shows the percent distribution of youngest children under age 3 years by breastfeeding status and the percentage of children under age 3 using a bottle with a nipple. Contrary to WHO's recommendations, only about half (52 percent) of children under age 6 months are exclusively breastfed in Timor-Leste. There are high proportions of children 0-5 months receiving food other than breast milk with complementary food (26 percent), plain water only (7 percent), and other milk (14 percent).

Table 12.3 Breastfeeding status by age

Percent distribution of youngest children under age 3 who are living with their mother by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under age 3 using a bottle with a nipple, according to age in months, Timor-Leste 2009-10

	Percent distribution of youngest children under three living with their mother by breastfeeding status									
			Breastfeeding and consuming:							
Age in months	Not breast-feeding	Exclusively breastfed	Plain water only	Other milk	Comple-mentary foods	Total	Percentage currently breast-feeding	Number of youngest children under 3 years	Percentage using a bottle with a nipple[1]	Number of all children under 3 years
0-1	1.8	71.1	6.2	14.8	6.2	100.0	98.2	264	3.1	269
2-3	2.6	54.6	6.9	16.6	19.4	100.0	97.4	321	8.4	324
4-5	1.7	35.4	7.2	11.9	43.8	100.0	98.3	387	9.4	389
6-8	4.5	9.3	1.1	6.9	78.2	100.0	95.5	464	15.3	472
9-11	7.9	2.8	0.9	1.4	86.9	100.0	92.1	463	13.4	470
12-17	32.4	0.5	0.0	0.4	66.7	100.0	67.6	910	19.2	946
18-23	59.0	0.1	0.1	0.0	40.8	100.0	41.0	706	16.9	806
24-35	85.0	0.0	0.0	0.0	15.0	100.0	15.0	1,176	12.9	1,959
0-3	2.2	62.0	6.6	15.8	13.4	100.0	97.8	586	6.0	593
0-5	2.0	51.5	6.8	14.3	25.5	100.0	98.0	973	7.3	983
6-9	5.1	7.8	1.1	5.9	80.1	100.0	94.9	626	14.1	636
12-15	29.4	0.4	0.0	0.1	70.2	100.0	70.6	622	19.9	650
12-23	44.0	0.3	0.1	0.2	55.4	100.0	56.0	1,616	18.1	1,752
20-23	66.6	0.0	0.2	0.0	33.2	100.0	33.4	429	16.8	506

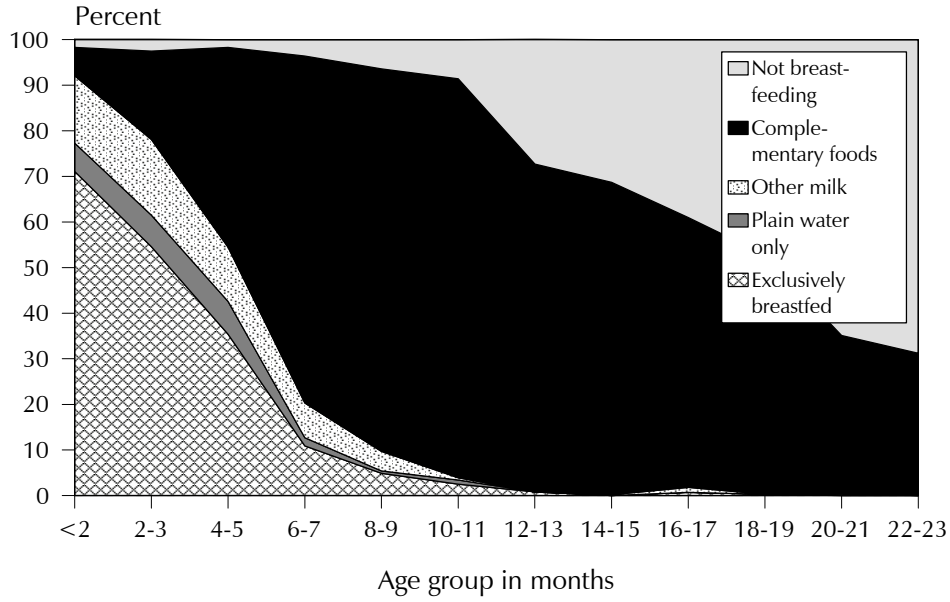
Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

[1] Based on all children under three years

It can be noted that the data reported here cannot be directly compared with data from the previous surveys as the methodology and data collection were different from the current survey. However, it can still be highlighted here: the 2003 DHS indicated 31 percent of children less that 6 months are being exclusively breastfed, a lower percentage than that indicated by the 2002 MICS survey (44 percent). The current finding does indicate a rise in the proportion of children fewer than 6 months of age who are exclusively breastfed (52 percent).

Table 12.3 and Figure 12.4 also show that seven in ten children (71 percent) under 2 months of age are exclusively breastfed, 6 percent consumed breast milk and plain water, and 15 percent consumed other milk in addition to breast milk. The proportion of children exclusively breastfed declines at age 6-8 months by 74 percent from the preceding cohort as complementary foods are introduced.

Figure 12.4 Infant Feeding Practices by Age



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The 2009-10 TLDHS results also indicate that the proportion of children receiving complementary foods in a timely fashion is encouraging, with 78 percent of children age 6-8 months receiving complementary foods. This is an important Infant and Young Child Feeding (IYCF) indicator.

Bottle-feeding is usually associated with increased risk of illness, and especially diarrheal diseases, because of the difficulty in sterilizing the nipples properly. Bottle-feeding also shortens the period of postpartum amenorrhea and increases the risk of pregnancy. The practice of bottle-feeding with a nipple is not widespread in Timor-Leste. However, the percentage of children who are bottle-fed rises from 3 percent among children under age 2 months to 19 percent among children age 12-17 months and generally drops to 13 percent among children 24-35 months. It is noteworthy that 7 percent of children less than 6 months old are bottle-fed, and a considerable proportion of children 12-23 months are being bottle-fed (18 percent).

12.4 Duration and Frequency of Breastfeeding

Table 12.4 shows the median duration and frequency of breastfeeding by selected background characteristics. The estimates of median and mean durations of breastfeeding are based on current status data, that is, the proportion of last-born children in the 3 years preceding the survey who were being breastfed at the time of the survey.

Both duration and frequency of breastfeeding can affect the length of postpartum amenorrhea. The median duration of any type of breastfeeding in Timor-Leste is 17.5 months, while the mean duration is about 18.2 months. The median duration of exclusive breastfeeding is 2.5 months, while the mean duration is 4 months.

The median duration of exclusive breastfeeding is longest in Aileu (5.5 months) and shortest in Dili (1.6 months). The data also show that the median duration of breastfeeding among children is longer in the lowest two wealth quintiles (3.1 months or longer) compared with children in the highest wealth quintile (1.4 months).

Table 12.4 also shows that the overwhelming majority of children under age 6 months were breastfed six or more times in the 24 hours preceding the survey (98 percent). In line with expectations, breastfeeding is slightly more frequent in the daytime than at night (mean number of daytime feeds is 7 compared with 6 at night). The mean number of daytime feeds is highest among children residing in Bobonaro district (8.5) and lowest among children in Dili (6.1).

Table 12.4 Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the 3 years preceding the survey, percentage of breastfeeding children under 6 months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Timor-Leste 2009-10

	Median duration (months) of breastfeeding among children born in the last 3 years[1]			Frequency of breastfeeding among children under 6 months[2]			
Background characteristic	Any breastfeeding	Exclusive breastfeeding	Predominant breastfeeding[3]	Percentage breastfed 6+ times in last 24 hours	Mean number of day feeds	Mean number of night feeds	Number of children
Sex							
Male	17.3	2.3	3.0	97.6	6.9	6.0	502
Female	17.8	2.8	3.4	98.2	7.2	6.1	453
Residence							
Urban	16.9	2.0	2.1	96.3	6.3	5.5	221
Rural	17.7	2.7	3.6	98.3	7.2	6.2	734
District							
Aileu	19.6	5.5	6.3	96.3	6.2	5.2	44
Ainaro	19.2	4.5	4.8	97.2	6.2	5.0	49
Baucau	15.2	2.7	2.9	96.5	6.6	5.7	91
Bobonaro	16.5	*	3.8	98.7	8.5	6.4	103
Covalima	17.8	1.9	2.0	100.0	7.7	6.6	46
Dili	15.3	1.6	1.7	97.6	6.1	5.4	165
Ermera	18.5	2.6	4.3	100.0	7.8	8.0	141
Lautem	17.5	2.1	3.0	95.1	6.7	5.6	63
Liquiçá	18.5	4.2	4.8	98.7	7.8	6.7	60
Manatuto	17.1	*	*	98.7	7.0	6.9	42
Manufahi	20.0	4.3	4.7	96.5	7.8	4.8	36
Oecussi	20.0	3.2	3.4	97.1	6.2	5.2	75
Viqueque	14.3	(2.9)	(3.1)	97.5	6.5	4.8	40
Mother's education							
No education	18.7	2.7	3.7	99.0	7.4	6.4	330
Primary	17.6	2.7	3.3	96.7	6.7	5.8	244
Secondary	16.7	2.2	2.8	98.2	7.0	5.9	358
More than secondary	*	*	*	88.8	4.8	5.2	24
Wealth quintile							
Lowest	17.3	3.1	3.6	97.7	7.1	5.9	211
Second	18.5	3.3	3.9	99.2	7.4	6.6	203
Middle	17.3	2.2	3.6	97.2	7.2	5.9	198
Fourth	18.6	2.5	3.2	97.3	6.9	5.8	167
Highest	14.0	1.4	1.6	97.8	6.3	5.9	176
Total	17.5	2.5	3.2	97.9	7.0	6.0	955
Mean for all children	18.2	4.0	4.4	na	na	na	na

Note: Median and mean durations are based on current status. Includes children living and deceased at the time of the survey. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding
[2] Excludes children without a valid answer on the number of times breastfed
[3] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only

12.5 TYPES OF COMPLEMENTARY FOODS

WHO recommends the introduction of solid food to infants around the age of 6 months because by that age breast milk by itself is no longer sufficient to maintain a child's optimal growth. Table 12.5 shows information on the types of food given to the youngest child under 3 years of age living with the mother on the day or night preceding the survey, according to their breastfeeding status.

The percentage of children receiving solid or semisolid food increases gradually by age. It is encouraging to note that at 6-8 months of age, about four in five breastfed children are consuming solid or semisolid food (82 percent).

Table 12.5 Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under 3 years of age who are living with the mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status and age, Timor-Leste 2009-10

	Liquids			Solid or semi-solid foods											
Age in months	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vege-tables rich in vitamin A[4]	Other fruits and vege-tables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry, and eggs	Cheese, yogurt, other milk product	Any solid or semi-solid food	Food made with oil, fat and butter	Sugary foods	Number of children
BREASTFEEDING CHILDREN															
0-1	14.4	11.4	1.0	0.6	5.3	2.9	1.0	1.6	0.0	2.6	0.6	6.3	1.7	2.1	260
2-3	22.0	13.7	1.5	7.3	15.1	2.3	1.9	1.3	0.6	2.8	0.2	19.6	0.5	0.4	313
4-5	24.0	17.0	2.3	14.3	41.6	9.4	0.8	2.1	1.0	11.3	0.6	44.5	4.8	5.6	381
6-8	23.1	18.6	5.7	12.3	80.7	25.6	8.5	8.2	2.2	29.3	2.1	81.9	10.8	9.9	443
9-11	19.4	13.2	21.9	5.8	93.2	45.7	12.4	17.8	4.5	43.9	1.9	94.3	25.0	26.5	426
12-17	18.9	17.1	41.0	5.6	97.5	71.8	28.2	30.7	15.1	52.4	3.1	98.5	41.6	37.0	615
18-23	19.6	15.7	51.7	4.4	99.4	72.7	32.5	31.6	12.1	51.2	0.8	99.4	37.1	39.9	290
24-35	16.9	11.1	68.1	5.6	99.1	82.1	27.3	48.0	18.1	56.9	3.9	100.0	46.9	54.3	177
6-23	20.2	16.3	29.3	7.1	92.6	54.1	20.2	22.1	8.8	44.4	2.2	93.5	29.2	28.2	1,773
Total	20.1	15.3	22.6	7.4	70.1	39.8	14.4	17.0	6.7	32.6	1.7	71.7	21.5	21.5	2,903
NONBREASTFEEDING CHILDREN															
12-17	23.0	24.1	46.1	6.6	99.0	79.5	29.9	35.7	14.0	58.8	5.5	99.8	44.9	45.1	295
18-23	13.8	13.5	58.0	6.1	99.1	86.7	33.1	40.5	9.9	56.8	7.0	99.3	44.8	47.0	416
24-35	11.0	13.8	65.8	4.0	99.0	83.9	38.7	42.4	15.9	61.1	3.7	99.8	48.4	47.7	999
6-23	19.6	20.1	51.3	7.9	98.8	82.4	31.0	38.5	11.1	57.1	6.0	99.3	44.3	45.5	769
Total	15.5	17.2	58.9	5.7	98.2	82.4	35.0	40.3	13.6	58.8	4.7	98.9	46.1	46.2	1,788

Note: Breastfeeding status and food consumed refer to a 24-hour" period (yesterday and last night). Nonbreastfeeding children under the age of 12 months are included in the total but are not shown separately.
[1] Other milk includes fresh, tinned and powdered cow or other animal milk
[2] Doesn't include plain water
[3] Includes fortified baby food
[4] Includes pumpkin, squash, carrots, sweet potatoes, dark green leafy vegetables, mangoes, and papayas

However, the introduction of other liquids such as water, juice, and formula takes place earlier than the recommended age of 6 months. Even among the youngest group of breastfeeding children (<2 months), 14 percent drink infant formula in addition to breast milk, and 11 percent drink other milk in addition to breast milk. Forty-five percent of breastfed children age 4-5 months have started consuming solid or semisolid food. The early introduction of water and foods increases the risk of infections, and thus contributes to malnutrition.

Consumption of liquids other than milk increases gradually with age, and by age 12-17 months, 41 percent of breastfed children receive liquid supplements other than milk. Consumption of milk other than breast milk peaks at 6-8 months (19 percent) and declines thereafter. Supplementing with infant formula starts at 14 percent among breastfed children age 0-1 months and increases to 24 percent among breastfed children age 4-5 months.

In all age groups, children are more likely to consume foods made from grains than other types of solid or semisolid foods. Twenty-six percent of breastfed children 6-8 months consumed vitamin A-rich fruits and vegetables in the day and night preceding the survey. Meat, fish, poultry, and eggs have bodybuilding substances essential to good health, and they are important for balanced physical and mental development. These foods are introduced later into the diet of children in Timor-Leste, and few children consume them. For instance, at age 6-8 months, only 29 percent of breastfed children consume meat, fish, shellfish, poultry, or eggs. As expected, more nonbreastfeeding children at age 6-23 months consume solid or semi-solid foods than breastfeeding children.

12.6 INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES

Infant and young child feeding (IYCF) practices include timely initiation of feeding solid/semi-solid foods from age 6 months, feeding small amounts, and increasing the amount of foods and frequency of feeding as the child gets older, while maintaining frequent breastfeeding. For the average, healthy breastfed child, solid/semi-solid foods should be provided two to three times per day at 6-8 months and three to four times per day between ages 9 and 24 months, with an additional snack being offered 1 to 2 times per day, as desired. The minimum infant and young child feeding (IYCF)

practices for children age 6-23 months are defined as continued breastfeeding, feeding at least the minimum number of times per day (according to age), and feeding from the minimum number of food groups per day. However, not all infants and young children are breastfed. Therefore, for nonbreastfed children, the criteria reflected under "feeding practices" are receiving replacement feeding (that is, commercially produced infant formula, tinned, powdered, or fresh animal milk, cheese, yogurt, and other milk products), being fed at least the minimum number of times, and eating from the minimum number of food groups for nonbreastfed infants and young children.

As an integral part of the national nutrition strategy, various approaches have been developed by the Nutrition Department of the Ministry of Health, including the creation of awareness of growth monitoring and the timely introduction of complementary food and feeding practices. The National Strategy for Infant and Young Child Feeding was developed in 2003 and includes training of health workers on IYCF counseling and conducting a workshop on IYCF for all the nutrition and health education staff in all thirteen districts (MOH, 2004c). Moreover, the Nutrition Department of the MOH is working closely with Alola Foundation and UNICEF to organize mother's support groups to enhance knowledge of timely initiation of proper feeding practices. In 2010, doctors and midwives were trained on IYCF practices and counseling in order to provide appropriate services and support to communities.

Figure 12.5 and Table 12.6 highlight infant and young child feeding practices among children age 6-23 months living with the mother. About 30 percent of children age 6-23 months are fed according to all three IYCF practices; that is, they are given milk or milk products and foods from recommended food groups and are fed at least the recommended minimum number of times. Seventy-eight percent are given breast milk or milk products, 54 percent are given the recommended number of foods (food from three or more groups for breastfed children), and 55 percent are fed at least as often as recommended.

These feeding practices are better among children age 12-17 months. For example, 25 percent of children age 6-8 months are fed according to IYCF recommendations, compared with 37 percent of children age 12-17 months. The findings indicate that there is no significant difference in feeding practices by sex of the child, residence, or mother's education. However, children who are born to mothers in the higher wealth quintiles are more likely than other children to be fed according to recommendations.

Figure 12.5 Infant and Young Child Feeding (IYCF) Practices

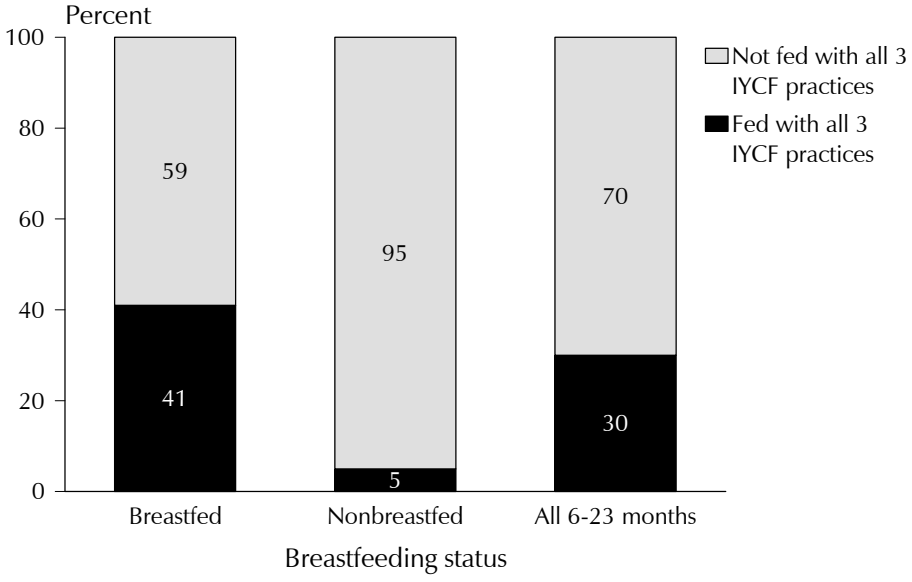

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Table 12.6 Infant and young child feeding (IYCF) practices

Percentage of youngest children age 6-23 months living with their mother who are fed according to three IYCF feeding practices based upon number of food groups and times they are fed during the day or night preceding the survey by breastfeeding status and background characteristics, Timor-Leste 2009-10

	Among breastfed children 6-23 months, percentage fed:				Among non-breastfed children 6-23 months, percentage fed:					Among all children 6-23 months, percentage fed:				
Background characteristic	3+ food groups[1]	Minimum times or more[2]	Both 3+ food groups and minimum times or more	Number of breastfed children 6-23 months	Milk or milk products[3]	4+ food groups	4+ times or more	With 3 IYCF practices[4]	Number of non-breastfed children 6-23 months	Breast-milk or milk products[3]	3+ or 4+ food groups[5]	Minimum times or more[6]	With all 3 IYCF practices	Number of all children 6-23 months
Age in months														
6-8	28.0	75.2	26.5	443	*	*	*	*	21	98.6	28.9	72.2	25.3	464
9-11	47.1	64.7	32.9	426	(39.3)	(56.4)	(20.1)	(0.0)	37	95.2	47.8	61.1	30.3	463
12-17	69.9	70.5	51.4	615	29.7	52.8	22.0	7.3	295	77.2	64.4	54.8	37.1	910
18-23	69.1	75.7	54.0	290	20.3	55.1	17.6	4.1	416	53.0	60.9	41.4	24.6	706
Sex														
Male	52.8	71.2	41.3	912	29.8	51.3	19.7	7.0	398	78.7	52.4	55.5	30.8	1,310
Female	54.8	71.1	41.0	862	22.1	57.1	18.4	2.9	371	76.6	55.5	55.2	29.6	1,232
Residence														
Urban	65.1	65.7	43.4	367	48.4	75.0	15.6	7.8	226	80.3	68.9	46.6	29.8	593
Rural	50.9	72.5	40.6	1,407	16.8	45.4	20.6	3.9	542	76.8	49.3	58.1	30.4	1,949
District														
Aileu	49.2	44.1	32.6	68	(26.0)	(45.3)	(6.6)	(3.4)	16	85.6	48.4	36.8	26.9	85
Ainaro	16.1	49.7	9.1	111	18.0	17.0	4.6	0.0	42	77.5	16.4	37.3	6.6	153
Baucau	58.6	77.2	43.0	191	13.5	47.5	12.4	1.8	90	72.3	55.0	56.5	29.8	282
Bobonaro	56.5	91.4	54.7	156	27.4	48.3	26.2	5.7	72	77.1	53.9	70.9	39.3	228
Covalima	40.9	70.9	29.6	76	(21.6)	(23.6)	(9.9)	(0.0)	33	76.5	35.7	52.6	20.7	109
Dili	75.5	66.9	49.2	232	52.8	82.9	14.0	9.5	163	80.5	78.6	45.1	32.8	395
Ermera	49.7	67.4	48.3	236	(23.1)	(38.4)	(64.7)	(11.3)	62	84.1	47.4	66.8	40.6	298
Lautem	42.7	68.1	22.0	157	23.0	34.6	10.2	0.8	66	77.2	40.3	50.9	15.7	223
Liquiçá	73.5	78.4	61.7	108	23.7	85.4	27.7	7.3	41	79.2	76.7	64.6	46.9	149
Manatuto	60.9	86.2	56.1	79	14.5	74.3	17.1	2.6	41	70.5	65.5	62.4	37.6	120
Manufahi	75.6	50.0	41.8	81	(30.7)	(65.8)	(5.6)	(3.0)	22	85.1	73.5	40.5	33.5	103
Oecussi	43.8	71.7	32.8	164	8.0	45.6	21.8	3.4	47	79.5	44.2	60.6	26.3	211
Viqueque	45.1	87.5	40.6	114	10.9	44.6	15.4	4.3	74	65.0	44.9	59.1	26.3	187
Mother's education														
No education	48.1	72.9	39.3	583	16.3	47.9	22.1	2.9	210	77.9	48.0	59.5	29.7	792
Primary	52.8	71.9	40.6	527	16.7	44.9	20.3	4.6	202	76.9	50.6	57.6	30.6	729
Secondary	59.9	68.4	43.1	634	35.4	61.9	16.3	5.0	321	78.3	60.6	50.9	30.3	956
More than secondary	*	*	*	29	*	*	*	*	36	(73.8)	(64.3)	(47.7)	(31.7)	65
Wealth quintile														
Lowest	43.6	73.2	32.6	401	9.1	34.4	15.9	1.5	155	74.7	41.0	57.2	24.0	556
Second	46.8	70.9	37.6	370	11.2	41.3	21.9	1.8	150	74.4	45.2	56.8	27.3	520
Middle	54.6	70.1	43.4	376	17.9	48.0	15.1	3.2	136	78.2	52.8	55.5	32.7	512
Fourth	59.8	70.7	45.5	372	38.1	59.9	22.5	4.4	138	83.3	59.8	57.7	34.4	510
Highest	70.2	70.2	50.1	254	48.7	80.3	19.9	12.2	191	78.0	74.6	48.6	33.8	444
Total	53.8	71.1	41.2	1,773	26.1	54.1	19.1	5.0	769	77.6	53.9	55.4	30.2	2,542

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Food groups: a. infant formula, milk other than breastmilk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers, including porridge, fortified baby food from grains; c. vitamin A-rich fruits and vegetables; d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. legumes and nuts; h. foods made with oil, fat, butter.
[2] At least twice a day for breastfed infants 6-8 months and at least three times a day for breastfed children 9-23 months
[3] Includes commercial infant formula, fresh, tinned and powdered animal milk, and cheese, yogurt and other milk products
[4] Nonbreastfed children age 6-23 months are considered to be fed with a minimum standard of three Infant and Young Child Feeding practices if they receive other milk or milk products and are fed at least the minimum number of times per day with at least the minimum number of food groups.
[5] 3+ food groups for breastfed children and 4+ food groups for non-breastfed children
[6] Fed solid or semi-solid food at least twice a day for infants 6-8 months, 3+ times for other breastfed children, and 4+ times for non-breastfed children

12.7 ANEMIA IN CHILDREN

Anemia is a condition characterized by a reduction in the red blood cell volume and a decrease in the concentration of hemoglobin in the blood. Hemoglobin is necessary for transporting oxygen to tissues and organs in the body. About half of the global burden of anemia is due to iron deficiency. Iron deficiency, in turn, is largely due to an inadequate dietary intake of bioavailable iron, increased iron requirements during rapid growth periods (such as pregnancy and infancy), and increased blood loss due to hookworm infestation. Nutritional anemia includes the anemia burden due to deficiency in iron plus deficiencies in folate, vitamins B and B_{12}, and certain trace elements involved with red blood cell production. Anemia in children is associated with impaired mental and

physical development and with increased morbidity and mortality. Anemia can be a particularly serious problem for pregnant women, leading to premature delivery and low birth weight[3].

The 2009-10 TLDHS included anemia testing of children age 6-59 months and women age 15-49 in every third household selected for the 2009-10 TLDHS sample. Anemia levels were determined by measuring the level of hemoglobin in the blood, with a decreased concentration characterizing anemia. For hemoglobin measurements, a drop of capillary blood was taken with a finger prick (using sterile, disposable instruments). Hemoglobin concentration was measured using the HemoCue photometer system.

Table 12.7 Prevalence of anemia in children

Percentage of children age 6-59 months classified as having anemia, by background characteristics, Timor-Leste 2009-10

Background characteristic	Anemia status by hemoglobin level: Mild (10.0-10.9 g/dl)	Moderate (7.0-9.9 g/dl)	Severe (<7.0 g/dl)	Any anemia (<11.0 g/dl)	Number of children
Age in months					
6-8	34.5	24.3	0.8	59.6	106
9-11	36.5	29.6	0.8	66.9	129
12-17	27.1	23.6	0.8	51.5	296
18-23	27.4	18.6	0.4	46.3	258
24-35	30.2	11.6	0.2	42.0	589
36-47	18.1	8.2	0.4	26.8	615
48-59	19.7	5.7	0.1	25.5	574
Sex					
Male	24.1	13.6	0.2	38.0	1,286
Female	25.5	12.4	0.6	38.4	1,281
Mother's interview status					
Interviewed	24.5	13.5	0.4	38.4	2,362
Not interviewed but in household	28.5	8.5	1.1	38.1	73
Not interviewed, and not in the household[1]	27.7	7.0	0.0	34.7	132
Residence					
Urban	20.9	12.1	0.1	33.1	511
Rural	25.8	13.2	0.5	39.4	2,056
District					
Aileu	20.9	16.6	2.1	39.6	103
Ainaro	19.8	10.7	0.5	31.0	161
Baucau	38.6	12.5	0.0	51.1	253
Bobonaro	30.7	13.4	0.0	44.1	255
Covalima	19.8	15.6	0.8	36.2	108
Dili	17.6	7.7	0.0	25.3	365
Ermera	11.0	4.3	0.0	15.4	324
Lautem	29.6	16.2	0.4	46.3	247
Liquiçá	25.9	14.0	0.5	40.5	142
Manatuto	31.4	36.0	0.4	67.9	130
Manufahi	30.8	6.9	0.0	37.7	77
Oecussi	31.7	12.4	0.5	44.5	217
Viqueque	23.0	19.2	1.5	43.7	185
Mother's education[2]					
No education	24.7	11.0	0.4	36.1	881
Primary	26.6	14.9	0.5	42.0	672
Secondary	22.8	14.7	0.4	37.9	844
More than secondary	28.4	8.4	0.0	36.8	37
Wealth quintile					
Lowest	24.0	16.7	0.5	41.2	570
Second	26.1	9.7	0.2	36.0	544
Middle	27.5	12.2	0.5	40.2	498
Fourth	23.5	14.9	0.4	38.8	494
Highest	22.8	11.1	0.3	34.1	461
Total	24.8	13.0	0.4	38.2	2,566

Note: Table is based on children who slept in the household the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude using CDC formulas (CDC, 1998). Hemoglobin in grams per deciliter (g/dl). Figures in parentheses are based on 25-49 unweighted cases.

[1] Includes children whose mothers are deceased

[2] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

[3] WHO considers anemia prevalence over 40 percent in a population to be a major public health problem, from 20-40 percent is considered a medium-level public health problem, and from 5-19.9 percent is a mild public health problem (WHO, 2001a).

Table 12.7 shows the percentage of children age 6-59 months classified as having anemia, by background characteristics. Nearly two in five (38 percent) Timorese children age 6-59 months old are anemic, with 25 percent mildly anemic, 13 percent moderately anemic, and less than 1 percent severely anemic.

It is noteworthy that children 36 months and older are less likely to be anemic than younger children. Rural children (39 percent) are slightly more likely to have anemia than urban children (33 percent). Children in Manatuto district have the highest prevalence of anemia (68 percent), and children in Ermera district have the lowest prevalence (15 percent). There is no consistent pattern between prevalence of anemia and mother's education or sex of the child. Children in the highest wealth quintile are less likely to have anemia (34 percent) compared with children in the lowest wealth quintile (41 percent).

The levels of childhood anemia as reported in DHS 2003 show 32 percent of children are anemic, indicating minimal improvement over the years.

12.8 MICRONUTRIENT INTAKE AMONG CHILDREN

Micronutrient deficiency has serious consequences for childhood morbidity and mortality. Children can receive micronutrients from foods, fortified foods, and direct supplementation. Vitamin A is an essential micronutrient for the immune system. Severe vitamin A deficiency (VAD) can cause eye damage. VAD can also increase the severity of infections, such as measles and diarrheal diseases in children, and can slow recovery from illness. Vitamin A is found in breast milk, other milks, liver, eggs, fish, butter, red palm oil, mangoes, papayas, carrots, pumpkins, and dark green leafy vegetables. The liver can store enough vitamin A for four to six months.

The 2009-10 TLDHS collected information on the consumption of vitamin A-rich foods and supplements. Table 12.8 shows the intake of several key micronutrients among children. Nearly four-fifths (79 percent) of last-born children age 6-35 months consumed vitamin A-rich foods in the 24-hour period before the survey. Consumption of vitamin A-rich foods increases from 38 percent among children age 6-8 months to 93 percent among children age 24-35 months. There is no difference by sex in the consumption of vitamin A-rich foods. Breastfeeding children are much less likely to consume foods rich in vitamin A than nonbreastfeeding children. Urban children (87 percent) are more likely than rural children (77 percent) to consume vitamin A-rich foods. Children born to mothers with more than a secondary level of education are more likely to have received foods rich in vitamin A than children born to mothers with a primary education. Children of older mothers are somewhat more likely than their counterparts to receive vitamin A-rich foods. Children living in the wealthiest households are much more likely to consume vitamin A-rich foods than children living in other households.

Fifty-two percent of young children consumed foods rich in iron during the 24 hours before the survey. Noticeable differences by background characteristics are also seen in the consumption of iron-rich foods by young children. Consumption of iron-rich foods peaks at 60 percent among children age 24-35 months and is slightly higher among nonbreastfeeding children, urban children, and children of mothers age 20 and older. Children living in the wealthiest households (76 percent) are much more likely to consume foods rich in iron than children living in households in the lowest two wealth quintiles (less than 40 percent).

An important strategy for preventing vitamin A deficiency in Timor-Leste has been the distribution of vitamin A capsules through the Timor-Leste national immunization campaign, which has been in place since 2000. In addition to the campaigns, vitamin A supplements are also readily available and distributed at health facilities and integrated community health service (SISCa) posts. The campaigns cover all the districts in the country. During the distribution periods, children age 6-11 months receive 100,000 international units (IU), and children 12-59 months receive 200,000 IU of vitamin A. Children under 6 months are not covered because most children in this age group are breastfed and receive vitamin A through breast milk. Information on vitamin A and supplements is based on the mother's recall.

Table 12.8 Micronutrient intake and food supplementation among children

Among youngest children age 6-35 months who are living with their mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children age 6-59 months, the percentages who were given vitamin A supplements in the 6 months preceding the survey, who were given iron supplements in the last seven days, who were given deworming medication in the 6 months preceding the survey, and who have ever received supplementary food, by background characteristics, Timor-Leste 2009-10

	Among youngest children age 6-35 months living with the mother:			Among all children age 6-59 months:				
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given vitamin A supplements in last 6 months	Percentage given iron supplements in last 7 days	Percentage given deworming medication in last 6 months[3]	Percentage ever given supplementary food	Number of children
Age in months								
6-8	37.7	30.1	464	36.5	20.3	12.4	33.9	472
9-11	62.5	44.4	463	51.6	17.8	17.9	38.3	470
12-17	84.5	54.5	910	52.7	24.8	28.7	39.6	946
18-23	88.3	54.5	706	55.2	21.5	36.2	37.7	806
24-35	92.6	60.4	1,176	51.7	21.7	39.0	35.4	1,959
36-47	na	na	na	52.4	18.8	41.4	33.6	1,947
48-59	na	na	na	48.2	16.2	38.9	30.4	1,745
Sex								
Male	78.5	50.7	1,889	50.6	20.0	35.7	34.0	4,224
Female	79.8	53.6	1,829	50.8	19.8	35.1	35.4	4,121
Breastfeeding status								
Breastfeeding	68.6	45.5	1,950	51.2	22.0	22.8	40.7	2,025
Not breastfeeding	91.0	59.4	1,760	50.7	19.2	39.7	33.1	6,239
Residence								
Urban	86.8	69.5	906	50.5	26.9	40.3	15.4	2,037
Rural	76.7	46.5	2,812	50.8	17.7	33.8	40.9	6,308
District								
Aileu	81.3	42.4	124	70.4	20.7	46.8	36.6	296
Ainaro	53.7	20.1	216	19.8	9.2	7.3	26.2	485
Baucau	82.7	60.7	375	45.4	2.2	28.2	24.2	850
Bobonaro	81.4	53.9	354	55.7	37.2	43.4	61.8	779
Covalima	67.7	38.4	172	72.3	8.1	48.0	48.0	379
Dili	91.2	78.9	614	48.2	31.4	43.4	7.6	1,424
Ermera	70.7	31.6	443	37.7	16.0	22.8	38.1	1,031
Lautem	79.8	54.4	306	58.5	8.0	45.3	20.8	653
Liquiçá	87.7	54.4	210	61.6	35.0	38.0	54.0	488
Manatuto	81.1	63.6	167	76.9	41.4	64.4	49.6	371
Manufahi	91.7	73.3	150	40.0	12.9	37.7	55.0	332
Oecussi	69.5	37.9	314	65.6	9.4	35.5	76.4	657
Viqueque	80.7	42.5	273	38.0	20.3	15.1	3.8	599
Mother's education								
No education	76.6	40.6	1,173	42.9	15.7	29.2	37.2	2,788
Primary	76.9	49.7	1,049	53.4	18.7	35.3	39.1	2,361
Secondary	82.6	61.9	1,405	55.6	23.1	40.3	30.2	3,009
More than secondary	85.7	76.7	92	54.1	47.3	51.4	15.5	188
Mother's age at birth								
15-19	58.0	35.8	104	50.3	15.9	31.0	46.2	147
20-29	78.7	53.1	1,645	51.2	20.8	36.2	34.4	3,504
30-39	80.4	53.4	1,462	50.7	19.6	35.3	34.1	3,444
40-49	81.4	48.5	508	49.2	18.6	33.9	35.8	1,250
Wealth quintile								
Lowest	74.0	39.8	788	43.8	10.7	27.5	38.3	1,759
Second	73.5	38.5	723	44.4	13.5	29.4	36.6	1,629
Middle	78.1	49.1	750	50.7	21.3	35.1	41.8	1,671
Fourth	82.4	57.7	730	56.6	25.0	39.0	36.7	1,646
Highest	88.4	76.3	727	58.5	29.7	46.6	19.7	1,641
Total	79.2	52.1	3,718	50.7	19.9	35.4	34.7	8,345

Note: Information on vitamin A and iron supplements and deworming medication is based on the mother's recall and immunization card (where available). Total for youngest children age 6-35 months living with the mother includes 8 children with information missing on breastfeeding status. Total for all children 6-59 months includes 79 children with information missing on breastfeeding status.

na = Not applicable

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, squash, carrots, sweet potatoes, dark green leafy vegetables, mango, and papaya

[2] Includes meat (including organ meat)

[3] Deworming for intestinal parasites is commonly done for helminthes.

One in two children (51 percent) age 6-59 months received a vitamin A supplement in the six months before the survey (Table 12.8). This is an improvement over the last five years; the 2003 DHS reported that 34 percent of children age 6-59 months had received vitamin A supplementation during

the most recent distribution preceding the survey. Differences in the consumption of vitamin A supplements by sex, residence, breastfeeding status, and mother's age at birth are small. Differences in vitamin A supplementation by wealth quintiles is marked, with children in the highest wealth quintile much more likely to receive vitamin A supplements than children in the lowest wealth quintile (59 percent versus 44 percent). Children residing in Ainaro are least likely (20 percent) to receive vitamin A supplements compared with children in Manatuto (77 percent).

Along with vitamin A deficiency, the prevalence of worm infestation has been high in Timor-Leste (MOH, 2004c). The Ministry of Health therefore integrated the deworming of children age 2-5 into the national biannual vitamin A supplementation program. By 2003, the entire country was covered. Deworming medication is given to children from age 6-59 months. Information on deworming of children was collected in the 2009-10 TLDHS survey.

Table 12.9 Signs of night blindness among children

Among children 12-59 months, the percentage who in the past 6 months have exhibited less movement in the evenings and who have tipped over or bumped into things in the evening, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage who in the past 6 months have: Exhibited less movement in the evenings	Tripped over or bumped into things in the evenings	Number of children
Age in months			
12-17	6.9	10.3	946
18-23	8.4	14.9	806
24-35	6.7	14.3	1,959
36-47	6.8	12.0	1,947
48-59	5.1	10.7	1,745
Sex			
Male	6.5	12.0	3,736
Female	6.6	12.9	3,667
Breastfeeding status			
Breastfeeding	7.0	11.4	1,144
Not breastfeeding	6.5	12.5	6,181
Residence			
Urban	5.3	13.2	1,828
Rural	7.0	12.1	5,575
District			
Aileu	6.0	11.4	268
Ainaro	23.3	38.4	435
Baucau	5.7	10.0	736
Bobonaro	4.8	13.1	690
Covalima	1.4	1.1	335
Dili	4.7	15.1	1,277
Ermera	0.4	0.3	915
Lautem	4.1	9.8	559
Liquiçá	36.5	41.7	438
Manatuto	2.6	1.9	330
Manufahi	7.3	28.8	302
Oecussi	0.5	4.2	584
Viqueque	1.9	0.4	533
Mother's education			
No education	7.4	12.3	2,520
Primary	6.4	12.6	2,059
Secondary	6.1	12.5	2,661
More than secondary	2.5	10.8	163
Mother's age at birth			
15-19	4.2	15.4	98
20-29	6.7	12.6	3,054
30-39	6.8	12.7	3,099
40-49	5.6	10.9	1,152
Wealth quintile			
Lowest	7.0	12.0	1,553
Second	7.0	13.0	1,441
Middle	6.0	11.8	1,473
Fourth	7.0	11.6	1,445
Highest	5.8	13.7	1,491
Total	6.6	12.4	7,403

Note: Total includes 77 children with information missing on breastfeeding status.

Table 12.8 indicates that 35 percent of children age 6-59 months received deworming tablets in the six months preceding the survey. Children over 24 months are more likely to receive deworming tablets. Children in urban areas are more likely to receive deworming tablets than rural children. District-level variation among children who receive deworming tablets is high, ranging from 7 percent in Ainaro to 64 percent in Manatuto. Mother's education has a positive influence on children receiving deworming tablets.

Age in the 2009-10 TLDHS does not refer to the age of the child during the vitamin A or deworming distribution but rather refers to age on the day of the interview (current status). The inclusion of these "ineligible" children in the denominator may account for some underestimation in the coverage of vitamin A and deworming in these specific age groups at the time of the survey.

The 2009-10 TLDHS also assessed reported cases of night blindness among children age 12-59 months. As it would be difficult for mothers to report correctly whether her child had night blindness, two proxy questions were administered: a question on whether the child showed any restriction of movement during the evenings compared with the daytime; and whether the child showed any signs of tripping or bumping into things in the evenings. These types of proxy reports have been used in other population-based surveys in which the parent/guardian was asked if the child has difficulty seeing in the evenings and, to be more specific, was prompted to probe for whether the child bumps into objects or trips over objects in the evenings (Wedner et al., 2004).

Table 12.9 indicates that about 7 percent of the children showed restricted movements in the evenings and 12 percent were reported to trip or bump into objects. Children age 18-23 months are most likely to show these signs. Children in Ainaro and Liquiçá most often showed these symptoms. It can be noted here that the proportion of children receiving vitamin A supplementation in the 6 months before the survey was lowest in Ainaro (20 percent in Table 12.8).

12.9 NUTRITIONAL STATUS OF WOMEN

A woman's nutritional status has important implications for her health as well as for the health of her children. Malnutrition in women results in reduced productivity, an increased susceptibility to infections, delayed recovery from illness, and heightened risk of adverse pregnancy outcomes. A woman with poor nutritional status, as indicated by a low body mass index (BMI), short stature, anemia, or other micronutrient deficiency, has a greater risk of obstructed labor, having a baby with a low birth weight, producing lower quality breast milk, dying from postpartum hemorrhage, and experiencing illness for herself and her baby.

The 2009-10 TLDHS collected information on the height and weight of women in the reproductive age group. In this report, two indicators of nutritional status are presented—height and BMI.

The height of a woman is associated with past socioeconomic status and nutrition during childhood and adolescence. A woman's height is used to predict the risk of difficulty in delivery because small stature is often associated with small pelvic size and the potential for obstructed labor. The risk of giving birth to a low birthweight baby is influenced by the mother's nutritional status. The cut-off point for the height at which mothers can be considered at risk varies between populations but normally falls between 140 and 150 centimeters. As in other DHS surveys, a cut-off point of 145 cm is used for the 2009-10 TLDHS.

The index used to measure thinness or obesity is known as the BMI, defined as weight in kilograms divided by height squared in meters (kg/m^2). A cut-off point of 18.5 is used to define thinness or acute undernutrition, and a BMI of 25 or above usually indicates overweight or obesity. According to WHO, a prevalence of more than 20 percent of women with a BMI less than 18.5 indicates a serious public health problem (WHO, 1995).

Table 12.10 presents the values of the two indicators of nutritional status and the proportion of women falling into high-risk categories, according to background characteristics. Women for whom there was no information on height and/or weight and for whom a BMI could not be estimated (pregnant women and women with a birth in the preceding two months) are excluded from this analysis. The data analysis on BMI is based on 11,698 women, while the height analysis is based on 12,845 women age 15-49 years. Overall, 15 percent of women are shorter than 145 cm. Women in rural areas are much shorter on average than women in urban areas, with 17 percent falling below the 145 cm cutoff compared with only 9 percent of women in urban areas. Women living in Dili are least likely to be below 145 cm (7 percent), while women in Ermera are most likely (31 percent). Women with a secondary and higher level of education are less likely to be short than women who have no education. Women in the highest wealth quintile are less likely to be below 145 cm than women in the lowest wealth quintile (8 percent and 17 percent, respectively).

Table 12.10 shows that there are large differentials across background characteristics in the percentage of women assessed as malnourished or "thin" (BMI less than 18.5) and overweight (BMI 25 or higher). Twenty-seven percent of women were found to be malnourished with BMI <18.5 indicating that malnutrition among women is a serious public health concern in Timor-Leste. About 5 percent of Timorese women are overweight or obese. Women age 15-19 are more likely to be thin or undernourished than women in other age cohorts (33 percent). Women are more likely to have a BMI less than 18.5 in rural areas (28 percent) than in urban areas (24 percent). However, the

Table 12.10 Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Timor-Leste 2009-10

	Height		Body Mass Index[1]								
				Normal	Thin			Overweight/obese			
Background characteristic	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderately and severely thin)	≥25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	≥30.0 (Obese)	Number of women
Age											
15-19	22.0	3,045	19.5	65.1	33.4	22.3	11.1	1.5	1.2	0.4	2,952
20-29	12.8	4,139	20.1	68.6	27.9	18.8	9.1	3.5	2.9	0.6	3,539
30-39	12.6	3,175	20.7	69.1	22.8	15.6	7.2	8.0	6.8	1.2	2,804
40-49	12.3	2,487	20.6	67.7	23.9	15.9	7.9	8.5	7.5	1.0	2,403
Residence											
Urban	8.8	3,276	20.8	66.5	24.4	16.4	8.0	9.1	7.5	1.6	2,973
Rural	16.9	9,570	20.0	68.0	28.2	19.0	9.2	3.7	3.3	0.5	8,725
District											
Aileu	15.6	539	20.3	76.6	20.8	15.9	4.8	2.6	2.3	0.3	501
Ainaro	23.0	605	20.5	74.1	21.0	14.7	6.3	5.0	4.3	0.7	544
Baucau	16.7	1,388	20.5	79.7	16.9	11.8	5.0	3.4	3.2	0.3	1,282
Bobonaro	11.8	1,249	19.5	57.1	39.4	24.0	15.4	3.4	3.1	0.4	1,149
Covalima	13.9	772	20.4	58.7	31.4	21.1	10.4	9.9	9.0	0.9	719
Dili	7.1	2,350	21.1	68.5	21.6	15.6	6.0	9.9	8.0	1.8	2,134
Ermera	31.3	1,518	19.6	66.8	31.3	21.3	10.1	1.9	1.6	0.2	1,384
Lautem	8.8	839	20.3	67.5	27.8	18.6	9.2	4.7	3.5	1.2	746
Liquiçá	16.5	788	19.8	64.1	32.8	23.1	9.7	3.1	2.6	0.5	715
Manatuto	7.8	596	20.3	75.0	21.1	13.6	7.5	3.9	3.3	0.6	544
Manufahi	14.1	462	20.0	65.1	29.8	18.9	10.9	5.1	4.3	0.7	409
Oecussi	10.3	878	19.5	60.9	36.3	22.3	14.0	2.8	2.4	0.5	794
Viqueque	17.3	861	20.2	66.9	27.2	18.9	8.3	5.8	5.1	0.7	777
Education											
No education	17.3	3,791	20.0	68.0	28.0	18.7	9.3	3.9	3.5	0.5	3,446
Primary	15.2	2,956	20.3	66.3	27.3	18.2	9.1	6.4	5.5	0.9	2,666
Secondary	13.5	5,677	20.2	67.7	27.4	18.5	8.9	4.9	4.0	0.9	5,204
More than secondary	8.2	422	21.1	72.4	18.3	14.0	4.3	9.3	9.3	0.0	382
Wealth quintile											
Lowest	17.2	2,277	19.7	67.9	29.9	19.4	10.6	2.2	1.8	0.4	2,053
Second	19.7	2,440	19.9	68.5	28.8	19.0	9.8	2.8	2.3	0.5	2,203
Middle	17.1	2,550	19.9	67.8	28.9	20.0	8.9	3.3	3.0	0.4	2,312
Fourth	13.8	2,628	20.2	65.7	28.4	18.8	9.6	6.0	5.1	0.8	2,411
Highest	7.9	2,950	21.1	68.4	21.6	15.2	6.4	10.0	8.4	1.6	2,720
Total	14.8	12,845	20.2	67.6	27.2	18.3	8.9	5.1	4.3	0.8	11,698

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months

percentage of overweight or obese women is higher in urban areas (9 percent) than in rural areas (4 percent). Bobonaro district (39 percent) has the highest percentage of undernourished women compared with Baucau district, which has the lowest percentage (17 percent). The percentage of women who are thin declines as level of education and household wealth increases. However, the proportion of overweight or obese women increases with increasing educational level and is highest among those in the highest wealth quintile.

Women's nutritional status has improved over the years. The proportion of malnourished women (BMI <18.5) has decreased by 29 percent in the past decade, from 38 percent in the 2003 DHS to 27 percent in the 2009-10 TLDHS. However, the level of chronic energy deficiency among nonpregnant women is still high, with more than one-quarter of women having a BMI less than 18.5. The mean BMI has increased only slightly over the years from 19.5 in the 2003 DHS to 20.2 in the 2009-10 TLDHS.

12.10 Foods Consumed by Mothers

The quality and quantity of food that mothers eat influences their health and their children's health, especially breastfeeding children. The 2009-10 TLDHS included questions on the types of foods that mothers of children under age 3 ate during the day and night preceding the interview. Table 12.11 shows that most mothers of young children eat foods made from grains (92 percent), nearly one in two (50 percent) eats foods made from roots or tubers, one in five (20 percent) eats foods

Table 12.11 Foods consumed by mothers in the day or night preceding the interview

Among mothers age 15-49 with a child under age 3 living with them, the percentage who consumed specific types of foods in the day or night preceding the interview, by background characteristics, Timor-Leste 2009-10

	Liquids			Solid or semi-solid foods										
Background characteristic	Milk	Tea/ coffee	Other liquids	Foods made from grains	Foods made from roots/ tubers	Foods made from legumes	Meat/ fish/ shellfish/ poultry/ eggs	Cheese/ yogurt	Vitamin A-rich fruits/ vege-tables[1]	Other fruits/ vege-tables	Other solid or semi-solid food	Foods made with oil/ fat/butter	Sugary foods	Number of mothers
Age														
15-19	5.1	77.2	11.3	95.7	41.3	18.3	42.0	2.9	81.9	39.3	52.1	37.6	19.8	164
20-29	4.9	81.0	16.9	92.0	49.6	19.9	55.5	6.6	88.9	36.9	49.8	51.5	23.9	2,131
30-39	5.4	84.0	15.3	93.3	50.0	21.1	53.2	7.4	88.3	35.2	50.3	49.6	23.3	1,811
40-49	4.8	84.4	15.5	89.4	51.8	19.4	44.8	3.9	84.0	35.0	52.1	51.1	20.6	585
Residence														
Urban	9.4	84.7	24.9	92.4	48.3	31.0	73.7	15.4	94.0	41.6	47.5	56.3	33.1	1,134
Rural	3.7	81.7	13.1	92.3	50.2	16.8	46.1	3.6	85.9	34.3	51.3	48.3	19.9	3,557
District														
Aileu	5.4	92.7	23.0	81.6	54.6	21.5	37.7	9.3	93.1	31.2	31.6	45.5	13.2	168
Ainaro	4.4	90.9	6.3	84.8	57.9	23.1	26.3	4.8	96.5	34.4	65.2	46.0	7.7	266
Baucau	5.5	79.7	7.4	95.1	68.2	6.7	59.8	1.5	89.0	27.7	37.6	55.0	7.5	466
Bobonaro	3.2	64.7	24.7	92.4	35.4	23.7	49.8	4.8	86.5	31.7	60.6	18.3	23.4	458
Covalima	2.2	79.4	4.0	96.6	20.0	6.7	42.2	0.9	74.2	9.6	35.7	29.1	9.4	218
Dili	8.9	86.3	30.5	91.5	45.5	33.5	83.3	21.4	96.0	40.4	49.3	65.3	44.6	785
Ermera	1.6	88.2	16.0	92.1	60.6	13.2	35.1	3.0	78.6	28.5	29.7	66.0	32.6	585
Lautem	6.9	78.2	10.6	90.4	34.0	15.6	51.2	2.0	80.7	29.2	60.4	27.8	5.9	370
Liquiçá	4.1	85.8	17.9	96.6	76.3	41.9	56.0	7.9	96.6	46.3	80.3	80.7	51.5	271
Manatuto	7.1	89.4	10.1	92.2	64.9	25.1	67.2	8.0	95.1	69.5	83.7	67.1	50.3	211
Manufahi	14.8	89.9	11.5	97.5	83.6	10.2	80.0	2.0	98.5	44.9	39.1	0.6	6.4	186
Oecussi	2.6	84.7	9.1	93.6	14.5	22.5	38.3	0.9	72.8	31.3	84.7	64.5	7.8	391
Viqueque	2.1	71.3	11.3	93.1	54.0	8.2	33.1	1.3	92.6	58.0	7.7	44.0	9.0	318
Education														
No education	2.9	83.6	14.0	90.4	53.3	18.9	42.0	4.1	85.4	32.9	52.1	48.3	19.7	1,505
Primary	3.7	82.2	13.7	93.0	44.6	21.0	48.6	4.5	86.7	35.0	51.4	48.1	20.2	1,298
Secondary	7.3	82.5	18.1	93.3	49.6	21.0	62.6	8.2	90.2	39.5	48.5	53.0	27.0	1,769
More than secondary	16.8	69.8	32.5	93.2	62.6	17.8	89.1	30.5	96.7	37.6	43.8	57.7	40.1	118
Wealth quintile														
Lowest	1.9	81.7	11.8	90.8	49.0	16.2	37.5	1.9	82.0	31.5	56.1	43.8	13.3	1,001
Second	2.4	80.9	11.3	91.3	50.7	14.8	38.4	2.8	85.8	33.7	46.2	47.3	17.6	928
Middle	4.0	84.3	12.5	93.0	52.8	20.8	49.3	3.3	88.2	35.0	49.5	47.4	20.7	950
Fourth	6.7	81.6	16.2	92.4	46.5	21.7	60.3	8.0	89.9	37.8	52.4	49.7	27.0	900
Highest	11.1	83.7	28.5	94.2	49.6	28.1	80.5	16.7	93.9	43.0	47.3	63.8	38.1	912
Total	5.1	82.4	15.9	92.3	49.7	20.2	52.8	6.4	87.8	36.1	50.4	50.2	23.1	4,691

Note: Foods consumed in the last "24-hour" period (yesterday and last night).
[1] Includes pumpkin, squash, carrots, sweet potatoes, green leafy vegetables, mangoes, and papayas

made from legumes, and 88 percent of mothers eat vitamin A-rich fruits and vegetables. More than one in two (53 percent) mothers eat meat, fish, shellfish, poultry, and eggs, and 36 percent eat other fruits and vegetables. Smaller proportions of mothers consume cheese/yogurt or milk (6 percent and 5 percent, respectively), and 50 percent eat foods made with oil, fat, or butter. Eighty-two percent of mothers drink tea or coffee, and 23 percent eat sugary foods.

12.11 MICRONUTRIENT INTAKE AMONG MOTHERS

Micronutrient deficiencies are a result of inadequate intake of micronutrient-rich foods and the inadequate utilization of available micronutrients in the diet as a result of infections, parasitic infestations, and other factors. Measures of micronutrient fortification, micronutrient supplementation with iron and vitamin A, consumption of vitamin A-rich and iron-rich foods, and micronutrient status in terms of anemia and night blindness are discussed in this section.

A mother's nutritional status during pregnancy is important both for the child's intrauterine development and for protection against maternal morbidity and mortality. Night blindness is an indicator of severe vitamin A deficiency, and pregnant women are especially prone to experience it. This section discusses women's micronutrient intake, both in terms of food and supplementation.

Table 12.12 shows data on micronutrient intake among mothers of young children by background characteristics. More than nine in ten mothers (94 percent) consumed vitamin A-rich foods, and more than one-half (53 percent) consumed iron-rich foods in the 24 hours preceding the survey. Consumption of vitamin A-rich foods is higher among mothers residing in urban areas, more educated mothers, and those in the highest wealth quintile. Similarly, urban residence, education, and wealth are positively associated with consumption of iron-rich foods. Mothers living in urban areas are much more likely to consume iron-rich foods (74 percent) than mothers living in rural areas (46 per cent).

Women living in Manufahi and Dili are most likely to receive vitamin A-rich foods (99 percent each) compared with women living in Oecussi, who are least likely (84 percent). In addition, women in Dili are most likely to receive iron-rich foods (83 percent), and women in Ainaro are the least likely (26 percent).

Supplementation with vitamin A capsules (200,000 IU) for postpartum mothers through health care facilities and community volunteers is a strategy to reduce night blindness caused by vitamin A deficiency. Table 12.12 shows that 55 percent of women received vitamin A postpartum, an improvement from the 23 percent of women who received vitamin A postpartum reported in the 2003 DHS. Women 20-39 years of age are more likely to receive vitamin A postpartum. There is a marked urban-rural difference, with 61 percent of urban women receiving vitamin A, compared with 53 percent of women residing in the rural areas. Women with a higher level of education and those in the highest wealth quintile are also more likely to receive vitamin A postpartum. Vitamin A supplementation is highest in Covalima district (71 percent) and is lowest in Viqueque (37 percent).

Thirteen percent of mothers reported having difficulty seeing at night but, when this figure is adjusted to include only those mothers who had no difficulty seeing in the daytime, only 2 percent of mothers suffered from night blindness during their most recent pregnancy in the last five years. This is a decrease from the 13 percent of mothers reported with night blindness in the DHS 2003 survey. Night blindness during pregnancy is more prevalent among mothers in urban areas, mothers with higher education, and mothers in the poorest households. The prevalence of night blindness during pregnancy among districts in Timor-Leste is variable, with the highest prevalence in Lautem (7 percent) and lowest prevalence in Bobanaro (0.1 percent).

Besides improving food intake, supplementation is an important strategy for addressing the problem of micronutrient deficiency. Iron supplementation during pregnancy has been a key health initiative in Timor-Leste since 2003. According to the nutrition strategy, all pregnant women are supplied with iron-folic acid tablets free of charge. The iron-folic acid tablets are provided to all pregnant women from the beginning of the second trimester of pregnancy. Health staff are trained and equipped to provide iron tablets to pregnant and postnatal women at the facility and community levels (MOH, 2004c).

Presumably as a result of these existing program interventions, the proportion of women who took iron supplements during pregnancy has risen from 43 percent in 2003 to 61 percent in 2009-10. However, 37 percent of women did not take any iron supplements during their most recent pregnancy. Further, only 16 percent of women took the recommended dose of iron supplements for 90 days or more during their pregnancy.

Table 12.12 also shows that 13 percent of women received deworming medication during pregnancy, 31 percent received supplementary food while pregnant with their last birth, and 29 percent received supplementary food while breastfeeding their last-born child. Variations by background characteristics are similar to those discussed earlier.

Table 12.12 Micronutrient intake among mothers

Among women age 15-49 with a child under age 3 living with her, the percentages who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey; among women age 15-49 with a child born in the last 5 years, the percentage who received a vitamin A dose in the first two months after the birth of the last child; and among mothers age 15-49 who during the pregnancy of the last child born in the five years prior to the survey, the percentage who suffered from night blindness, the percentage who took iron tablets or syrup for specific numbers of days, the percentage who took deworming medication, and the percentage of women who received supplemental food during pregnancy or while breastfeeding, by background characteristics, Timor-Leste 2009-10

	Among women with a child under three years living with her			Among women with a child born in the last five years											
					Percentage who suffered night blindness during pregnancy of last birth		Number of days women took iron tablets or syrup during pregnancy of last birth								
Background characteristic	Percentage consumed Vitamin A rich foods[1]	Percentage consumed iron-rich foods[2]	Number of women	Percentage who received vitamin A dose post-partum[3]	Reported	Adjusted[4]	None	<60	60-89	90+	Don't know/ missing	Percentage of women who took deworming medication during pregnancy of last birth[5]	Percentage of women who received supplementary food during pregnancy of last birth	Percentage of women who received supplementary food while breast-feeding after last birth	Number of women
Age															
15-19	90.4	42.0	164	51.7	15.3	2.3	39.9	43.2	4.2	10.8	1.8	16.6	34.1	29.9	178
20-29	94.5	55.5	2,131	56.0	11.8	1.6	34.2	41.8	5.2	17.0	1.7	12.4	32.4	29.8	2,438
30-39	93.8	53.2	1,811	55.5	14.5	2.2	36.1	39.4	5.0	17.5	2.0	14.0	30.2	28.3	2,401
40-49	91.9	44.8	585	50.4	13.4	2.4	44.5	35.2	5.9	12.0	2.3	13.1	29.4	28.8	998
Residence															
Urban	96.5	73.7	1,134	60.6	12.2	2.5	23.6	50.6	8.0	15.5	2.3	6.7	12.2	11.6	1,484
Rural	92.9	46.1	3,557	52.8	13.6	1.8	41.2	36.3	4.3	16.4	1.8	15.4	37.2	34.7	4,531
District															
Aileu	94.6	37.7	168	66.0	20.8	1.2	14.9	60.6	8.0	14.4	2.2	8.9	19.8	21.9	220
Ainaro	97.7	26.3	266	52.7	8.2	0.9	32.0	58.2	1.5	7.4	0.9	2.1	44.1	37.5	318
Baucau	94.6	59.8	466	64.8	8.6	1.4	94.1	3.3	2.1	0.5	0.0	9.6	40.0	24.3	598
Bobonaro	95.2	49.8	458	56.6	7.7	0.1	47.3	48.3	1.6	1.4	1.4	29.0	44.9	46.1	587
Covalima	84.7	42.2	218	70.5	7.4	0.7	36.1	62.2	0.0	0.6	1.1	12.0	37.8	39.6	322
Dili	98.5	83.3	785	61.9	10.0	2.2	15.1	52.3	10.5	19.6	2.5	3.6	6.3	4.6	1,043
Ermera	90.1	35.1	585	40.4	8.2	0.3	52.2	4.9	3.5	39.4	0.1	23.9	39.9	38.6	719
Lautem	91.5	51.2	370	41.4	28.0	6.7	12.3	55.0	10.4	20.9	1.4	14.1	11.5	11.7	444
Liquiçá	98.3	56.0	271	65.4	34.7	3.2	30.4	48.7	2.6	11.9	6.4	20.9	52.0	36.0	358
Manatuto	96.9	67.2	211	59.3	7.7	1.8	12.4	26.3	5.4	53.4	2.6	35.0	28.2	29.5	264
Manufahi	99.1	80.0	186	52.5	13.0	3.5	53.5	45.5	0.5	0.2	0.2	6.4	42.9	49.0	238
Oecussi	83.5	38.3	391	49.7	22.9	2.7	25.7	59.8	5.1	3.5	5.9	8.0	58.4	66.5	492
Viqueque	94.6	33.1	318	36.7	7.4	2.3	34.8	24.4	9.6	30.1	1.0	3.0	1.3	1.9	412
Education															
No education	92.6	42.0	1,505	45.8	14.1	1.7	46.4	33.7	3.9	13.8	2.2	14.3	34.1	32.2	1,980
Primary	92.4	48.6	1,298	54.6	14.9	2.0	35.0	41.7	5.9	15.6	1.9	14.7	33.5	31.3	1,656
Secondary	95.3	62.6	1,769	61.9	11.6	2.1	31.2	42.7	5.9	18.3	1.8	11.7	28.0	26.1	2,226
More than secondary	100.0	89.1	118	67.1	9.9	3.7	16.4	55.1	5.2	23.3	0.0	6.9	8.5	6.3	154
Wealth quintile															
Lowest	89.9	37.5	1,001	41.8	14.9	2.5	44.8	38.4	5.3	8.9	2.6	8.7	34.5	32.8	1,226
Second	91.7	38.4	928	49.9	13.7	2.1	46.4	33.4	3.7	14.5	1.9	14.4	35.8	31.8	1,171
Middle	94.7	49.3	950	53.6	12.8	1.7	38.0	37.7	4.2	19.4	0.7	18.6	37.1	35.5	1,203
Fourth	96.2	60.3	900	61.8	15.6	1.9	33.8	40.1	4.2	19.4	2.6	16.9	32.7	29.6	1,170
Highest	96.9	80.5	912	66.4	9.6	1.8	21.8	49.0	8.5	18.8	1.8	8.2	15.9	15.9	1,244
Total	93.8	52.8	4,691	54.7	13.3	2.0	36.9	39.8	5.2	16.2	1.9	13.3	31.0	29.0	6,015

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, squash, carrots, sweet potatoes, mango, and papaya,
[2] Includes meat (and organ meat), fish, poultry, eggs
[3] In the first two months after delivery
[4] Women who reported night blindness but did not report difficulty with vision during the day
[5] Deworming for intestinal parasites is commonly done for helminthes and for schistosomiasis

12.12 PREVALENCE OF ANEMIA IN WOMEN

The most common cause of anemia in developing countries is inadequate intake of iron, folate, vitamin B_{12}, or other nutrients. Anemia can also result from sickle cell disease, malaria, and intestinal worm infestation. Anemia may be the underlying cause of maternal mortality, spontaneous abortion, premature birth, and low birth weight. Iron and folic acid supplementation and deworming among pregnant women are important measures for reducing anemia prevalence among vulnerable groups of women. Anemia is characterized by a low level of hemoglobin in the blood. The 2009-10 TLDHS measured hemoglobin levels to identify anemia in women.

Table 12.13 Prevalence of anemia in women

Percentage of women age 15-49 with anemia, by background characteristics, Timor-Leste 2009-10

Background characteristic	Not pregnant / Pregnant	Anemia status by hemoglobin level: Mild anemia	Moderate anemia	Severe anemia	Any anemia	Number of women
		10.0-11.9 g/dl / 10.0-10.9 g/dl	7.0-9.9 g/dl	<7.0 g/dl	<12.0 g/dl / <11.0 g/dl	
Age						
15-19		19.0	2.4	0.1	21.5	975
20-29		15.8	4.2	0.2	20.2	1,297
30-39		14.1	4.1	0.7	18.9	1,022
40-49		22.8	3.3	0.2	26.3	765
Number of children ever born						
0		16.5	2.3	0.2	19.0	1,550
1		20.8	6.7	0.0	27.5	331
2-3		17.8	3.7	0.5	21.9	673
4-5		15.3	4.3	0.5	20.1	635
6+		19.3	4.0	0.2	23.5	870
Maternity status						
Pregnant		17.7	9.8	0.3	27.8	307
Breastfeeding		20.0	4.7	0.4	25.1	935
Neither		16.6	2.5	0.2	19.4	2,817
Using IUD						
Yes		19.7	7.1	0.0	26.8	28
No		17.4	3.6	0.3	21.3	4,031
Smoking status						
Smokes cigarettes/tobacco		18.2	7.6	0.9	26.8	194
Does not smoke		17.4	3.4	0.3	21.0	3,865
Residence						
Urban		14.7	4.4	0.1	19.1	1,004
Rural		18.4	3.3	0.3	22.0	3,055
District						
Aileu		24.1	3.5	0.0	27.5	183
Ainaro		9.1	1.0	0.0	10.1	207
Baucau		16.3	1.0	0.0	17.3	424
Bobonaro		18.8	6.8	0.0	25.6	376
Covalima		19.1	5.7	0.6	25.4	241
Dili		12.5	4.2	0.0	16.7	706
Ermera		19.4	1.7	0.3	21.4	494
Lautem		21.9	3.0	0.5	25.5	289
Liquiçá		15.8	4.6	0.3	20.7	247
Manatuto		29.2	3.5	0.0	32.6	196
Manufahi		9.5	2.5	0.8	12.8	137
Oecussi		16.6	5.2	0.7	22.5	288
Viqueque		20.4	3.7	1.2	25.2	271
Education						
No education		19.8	3.9	0.5	24.1	1,210
Primary		15.5	4.2	0.2	19.9	953
Secondary		17.3	3.1	0.2	20.6	1,768
More than secondary		12.5	3.1	0.0	15.6	128
Wealth quintile						
Lowest		18.3	3.5	0.5	22.3	755
Second		18.4	3.3	0.3	22.0	776
Middle		18.4	2.9	0.2	21.5	801
Fourth		17.4	3.2	0.3	21.0	831
Highest		15.1	4.8	0.1	20.0	896
Total		17.5	3.6	0.3	21.3	4,059

Note: Prevalence is adjusted for altitude and for smoking status if known using CDC formulas (CDC, 1998).

Iron deficiency anemia is one of the most common nutritional problems in Timor-Leste. Table 12.13 indicates that three in ten pregnant women (28 percent) are anemic. To address the problem of anemia in women, iron-folic acid supplementation was introduced as part of the Ministry of Health programming, covering all 13 districts. The program involved distributing iron-folic acid supplements to pregnant women through health facilities and SISCa.

Table 12.13 shows that overall 21 percent of Timorese women age 15-49 are anemic, with 18 percent mildly anemic, 4 percent moderately anemic, and less than 1 percent severely anemic[4]. However, pregnant women are more likely to be anemic than women who are neither pregnant nor breastfeeding (28 percent and 19 percent, respectively).

Anemia is higher among rural than urban women (22 percent versus 19 percent). Anemia ranges from 10 percent in Ainaro to 33 percent in Manatuto. There is a higher prevalence of anemia in women with no education and in those in the lowest wealth quintile. Women using IUDs are more likely to be anemic (27 percent) than women who do not use IUDs.

[4] The level of anemia in women reported in the 2003 DHS cannot be compared with the 2009-10 TLDHS data as no adjustment for smoking was made in the 2003 DHS.

MALARIA 13

Malaria remains a leading public health problem in Timor-Leste. Most of the estimated one million population in the country is at high risk of malaria, with about 80 percent of the cases reported from just 4 of the 13 districts—Dili, Viqueque, Covalima and Lautem (WHO SEAR, 2010). The number of confirmed cases has risen from 15,212 in 2000 to 45,973 in 2008. Slide positivity increased from 44 percent to 50 percent between 2002 and 2008, and the percentage attributed to *Plasmodium falciparum* increased from 53 percent to 73 percent over the same period (WHO SEAR, 2010). This increase may be due to an actual increase in malaria or to the strengthening of diagnostic facilities and improved monitoring and evaluation. The Ministry of Health (MOH) estimates between 100,000 and 200,000 cases of suspected malaria are reported each year in public health facilities, representing 12 percent of outpatient attendance. Of this figure, about 40,000 are children under age 5. Malaria also accounts for about four percent of hospital admissions (MOH, 2003).

The existing climatic conditions in Timor-Leste are conducive to the spread of mosquitoes and the perennial transmission of malaria. The number of reported cases peak during the post-wet season of November to May (Cooper, et al., 2010). Still, a relatively large number of cases are recorded throughout the rest of the year. However, because there is relative variation in the topography of the country, the intensity of transmission varies with altitude, and endemicity is reduced in the higher altitudes (WHO SEAR, 2010).

Timor-Leste's efforts to control malaria date back to the pre-independence era when various strategies were employed at different times. In 1999, the country adopted the Roll Back Malaria initiative and has since been implementing a combination of curative and preventive interventions. The National Malaria Control Strategy focuses on early case management and delivery of effective antimalarial therapies, universal access to long-lasting insecticidal nets (LLINs), selective use of indoor residual spraying (IRS), and promotion of behavioral change and communication (BCC).

Since 2003, the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) has substantially funded malaria control programs in Timor-Leste (Martins et al., 2009). The NMS supports the recommendation of WHO's Roll Back Malaria (RBM) strategy, and in aiming to achieve the Millennium Development Goals (MDGs), has modified its LLIN distribution program accordingly, to ensure that there is one LLIN for every two persons considered to be at risk of malaria (95 percent of the population), thereby providing universal access to LLIN coverage. This is a shift from the earlier strategy of approximately two nets per household targeted for distribution to households with children under age 5 and pregnant women, the two most vulnerable groups, and therefore of primary focus (MOH, 2003). LLINs are distributed to pregnant women through antenatal clinics in public health facilities. It is reported that approximately 60 percent of the population is covered under the country's bed net program (WHO SEAR, 2010).

Case management of malaria is done at hospitals, community health centers (CHCs), and health posts (HPs) and also during visits to mobile clinics. Since 2007, the antimalaria drug policy has shifted its focus and adopted artemether-lumefantrine, an artemisinin-based combination therapy (ACT), as the drug of choice for the treatment of uncomplicated *P. falciparum* malaria across the country. This is because of the emergence of chloroquine and sulfadoxine-pyramethamine-resistant strains of the parasite. Health care providers in both the public and private sectors were trained in the new protocol for the treatment of malaria, which stipulated that the provision of ACT must be based on the results of a laboratory examination (microscopy), or a Rapid Diagnostic Test (RDT), where microscopy was not available. Chloroquine continues to be the drug of choice for the treatment of *P. vivax*, the second, but less common, malaria parasite in Timor-Leste.

13.1 MOSQUITO NETS

13.1.1 Ownership of Mosquito Nets

A simple and relatively inexpensive way to control malaria is through the use of bed nets, which effectively breaks the host-vector link by creating a physical barrier between humans and the female Anopheles mosquito, which feeds primarily at night. Treating bed nets with an insecticide that leaves a residual effect has the added advantage of repelling and/or killing the mosquitoes. This leads to a reduction in the vector population and, eventually, to the termination of their ability to transmit malaria. The Timor-Leste health service therefore promotes the ownership and use of insecticide-treated mosquito nets, particularly factory-treated LLINs, as one of the primary interventions for reducing malaria transmission and morbidity in the country. The two types of LLINs promoted by the MOH are Olyset and Permanet, which require re-treatment after about four years or 20 washes, in contrast with the standard insecticide-treated nets (ITNs) that need to be re-treated every six months, or after three washes.

Table 13.1 shows the percentage of households with at least one and more than one mosquito net (treated or untreated), ever-treated net, and ITN, by background characteristics. The data show that 45 percent of households in Timor-Leste own at least one mosquito net, whether treated or untreated, 44 percent own at least one ever-treated net, and 41 percent of households own at least one ITN. More than one in three households own more than one of any type of net. Urban households are more likely to own at least one ITN than rural households. Households belonging to the fourth and fifth wealth quintiles are more likely to have at least one ITN compared with those in the lower wealth quintiles. Households in Covalima (62 percent) are most likely to have at least one ITN compared with all other districts. Ownership of ITNs is particularly low in Ainaro, Baucau, Ermera, and Manufahi, probably due to their higher altitude and reduced risk of mosquito exposure.

Table 13.1 Ownership of mosquito nets

Percentage of households with at least one and more than one mosquito net (treated or untreated), ever treated mosquito net, and insecticide-treated net (ITN), and the average number of nets per household, by background characteristics, Timor-Leste 2009-10

	Any type of mosquito net			Ever-treated mosquito net[1]			Insecticide-treated mosquito net (ITNs)[2]			
Background characteristic	Percentage with at least one	Percentage with more than one	Average number of nets per household	Percentage with at least one	Percentage with more than one	Average number of ever treated nets per household	Percentage with at least one	Percentage with more than one	Average number of ITNs per household	Number of households
Residence										
Urban	60.6	43.5	1.3	55.8	37.9	1.1	51.0	34.0	1.0	2,695
Rural	40.8	26.7	0.8	39.9	26.0	0.8	37.7	24.1	0.7	8,768
District										
Aileu	52.5	37.4	1.1	51.9	36.7	1.1	51.8	36.6	1.0	445
Ainaro	20.8	10.3	0.3	16.1	8.1	0.3	15.5	7.9	0.3	674
Baucau	24.9	16.6	0.5	24.8	16.6	0.5	22.5	15.0	0.4	1,338
Bobonaro	48.8	33.9	1.0	45.3	29.9	0.9	41.6	26.6	0.8	1,097
Covalima	66.5	52.4	1.4	65.5	51.2	1.4	62.4	47.7	1.3	684
Dili	61.2	43.9	1.3	55.8	37.6	1.1	51.4	34.1	1.0	1,911
Ermera	26.8	14.9	0.5	26.7	14.9	0.5	26.7	14.9	0.5	1,253
Lautem	54.3	32.8	1.0	54.3	32.8	1.0	53.4	31.8	1.0	751
Liquiçá	41.2	23.3	0.8	40.2	22.6	0.7	38.0	20.9	0.7	640
Manatutu	61.9	48.5	1.4	61.8	48.4	1.4	54.7	40.7	1.2	490
Manufahi	27.9	18.3	0.5	27.3	17.5	0.5	23.3	15.0	0.4	495
Oecussi	58.6	34.4	1.1	57.0	33.1	1.0	54.3	30.5	0.9	817
Viqueque	47.9	33.4	1.0	47.9	33.4	1.0	43.3	29.9	0.9	869
Wealth quintile										
Lowest	25.1	12.4	0.4	24.6	12.2	0.4	23.6	11.6	0.4	2,432
Second	33.7	19.2	0.6	32.8	18.6	0.6	31.2	17.3	0.5	2,354
Middle	44.6	28.8	0.8	43.5	27.6	0.8	41.2	26.1	0.8	2,254
Fourth	60.9	43.4	1.3	58.9	41.2	1.2	55.5	38.1	1.1	2,187
Highest	65.7	52.0	1.5	60.9	46.7	1.4	55.2	41.0	1.2	2,235
Total	45.4	30.6	0.9	43.6	28.8	0.9	40.9	26.4	0.8	11,463

[1] An ever-treated net is (1) a factory net that does not require any further treatment or (2) any pretreated net.
[2] An insecticide treated net (ITN) is (1) a factory treated net that does not require any further treatment or (2) a pretreated net obtained within the past 12 months.

13.1.2 Use of Mosquito Nets by Children

Age is an important factor in determining levels of acquired immunity against malaria. For the first six months of life, antibodies acquired from the mother during pregnancy protect children from malaria. Upon weaning, this immunity is gradually lost, and children start developing their own immunity over a period of time. Unlike immunity for some other infectious diseases, immunity against malaria is not permanent, and protection from infection requires the regular use of protective interventions. ITNs confer some protection if used regularly.

In the 2009-10 TLDHS, respondents to the Household Questionnaire were asked about the use of mosquito nets by all members of the household the night before the interview. Table 13.2 presents information on the use of mosquito nets by children under age 5 in all households, and in households with an ITN, by background characteristics. The results show that 45 percent of children under age 5 in all households slept under a treated or untreated mosquito net the night before the survey, and 41 percent slept under an ITN. In households that own at least one ITN, more than four in five children (83 percent) slept under an ITN.

Table 13.2 Use of mosquito nets by children

Among children under five years of age in all households, the percentages of children under five years of age who slept the night before the survey under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN), and among children under five years of age in households with at least one ITN, the percentage who slept the night before the survey under an ITN, by background characteristics, Timor-Leste 2009-10

	Children under age 5 in all households				Children under age 5 in households with an ITN[2]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ever- treated net last night[1]	Percentage who slept under an ITN last night[2]	Number of children	Percentage who slept under an ITN last night[2]	Number of children
Age (in years)						
<1	47.3	45.6	43.5	2,037	86.8	1,021
1	47.3	45.4	43.5	1,871	85.4	952
2	44.3	42.5	39.4	2,135	82.0	1,028
3	43.8	42.4	41.0	2,140	82.4	1,065
4	42.0	40.0	37.9	1,913	78.5	925
Sex						
Male	44.4	42.7	40.7	5,112	82.4	2,526
Female	45.4	43.6	41.4	4,985	83.7	2,465
Residence						
Urban	60.0	54.9	50.6	2,329	83.6	1,410
Rural	40.4	39.6	38.2	7,768	82.8	3,581
District						
Aileu	56.3	56.0	56.0	367	86.7	237
Ainaro	22.6	18.2	18.1	596	81.9	132
Baucau	29.9	29.9	28.8	1,055	90.9	334
Bobonaro	48.1	44.8	42.9	972	87.1	478
Covalima	65.3	63.8	61.4	474	89.0	327
Dili	62.4	56.5	52.3	1,606	84.0	999
Ermera	28.3	28.2	28.2	1,287	81.7	444
Lautem	49.0	49.0	47.5	792	75.0	501
Liquiçá	43.5	43.2	40.8	584	86.2	276
Manatutu	59.6	59.5	56.0	462	89.5	289
Manufahi	28.3	28.0	24.6	389	86.9	110
Oecussi	49.1	47.5	44.9	791	74.3	479
Viqueque	44.3	44.3	40.5	721	76.1	384
Wealth quintile						
Lowest	25.0	24.7	23.6	2,170	72.6	706
Second	34.3	33.4	32.6	2,020	84.0	784
Middle	44.0	43.1	41.8	2,049	85.2	1,005
Fourth	59.3	57.4	54.7	1,965	84.6	1,272
Highest	65.2	59.9	54.9	1,892	85.0	1,224
Total	44.9	43.1	41.0	10,096	83.0	4,991

[1] An ever-treated net is (1) a factory net that does not require any further treatment or (2) any pretreated net.
[2] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment or (2) a pretreated net obtained within the past 12 months.

Among children under age 5, those less than 1 year of age are most likely to have slept under any net (47 percent), an ever-treated net (46 percent), or an ITN (44 percent) the night before the survey. Children in rural areas are less likely than those in urban areas to have slept under any net, an ever-treated net, or an ITN. The proportion of children who slept under any type of mosquito net is highest in Covalima (65 percent) and lowest in Ainaro (23 percent). The proportion of children who slept under a mosquito net generally increases with increasing wealth quintile; thus while 25 percent of children in the lowest wealth quintile slept under a net the night before the survey, about two and a half times more children in the highest wealth quintile (65 percent) slept under a net. Similar variations were observed among households with an ITN.

13.1.3 Use of Mosquito Nets by Women

Pregnant women are one of the groups most vulnerable to malaria. The disease adversely affects birth outcomes and can lead to spontaneous abortions, pre-term labor, low birthweight babies, and stillbirths. This has prompted many advocacy campaigns to educate not only pregnant women, but also the general public on the importance of preventing malaria during pregnancy. In Timor-Leste, the key malaria preventive method employed during pregnancy is the use of ITNs. As with children under age 5, pregnant women in Timor-Leste have been targeted for bed net distribution over the past five years, and those who slept under an ITN the night before the survey are considered regular users of an ITN.

Table 13.3 Use of mosquito nets by women

Among all women age 15-49 in all households, the percentages who slept the night before the survey under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN), and among all women age 15-49 in households with at least one ITN, the percentage who slept the night before the survey under an ITN, by background characteristics, Timor-Leste 2009-10

	Women age 15-49 in all households				Women age 15-49 in households with ITN[2]	
	Percentage who:					
Background characteristic	Slept under any net last night	Slept under an ever-treated net last night[1]	Slept under an ITN last night[2]	Number of women	Percentage who slept under an ITN last night[2]	Number of women
Residence						
Urban	51.1	45.7	41.4	3,628	78.3	1,917
Rural	34.5	33.7	31.7	10,228	77.0	4,214
District						
Aileu	45.2	44.8	44.8	584	79.1	331
Ainaro	19.4	14.8	14.5	653	78.0	121
Baucau	21.8	21.8	20.7	1,485	75.7	406
Bobonaro	44.5	40.4	37.0	1,331	82.9	595
Covalima	58.2	56.7	53.2	824	82.9	529
Dili	51.0	45.3	41.5	2,601	79.5	1,357
Ermera	21.4	21.3	21.3	1,626	71.9	482
Lautem	39.9	39.9	38.1	912	69.6	499
Liquiçá	33.6	32.9	30.4	844	75.0	342
Manatutu	55.7	55.4	48.2	636	85.6	358
Manufahi	25.3	24.8	21.9	496	77.4	141
Oecussi	45.9	43.8	41.0	932	71.1	537
Viqueque	39.4	39.4	34.6	930	74.6	432
Education						
No education	27.9	26.7	25.3	4,106	75.1	1,383
Primary	41.3	40.2	37.8	3,163	80.3	1,489
Secondary	44.1	41.5	38.1	6,130	76.9	3,042
More than secondary	49.4	43.0	37.7	455	79.0	217
Wealth quintile						
Lowest	20.5	20.1	19.0	2,438	71.5	649
Second	27.7	26.9	25.8	2,589	75.8	881
Middle	35.1	34.1	32.6	2,754	76.5	1,172
Fourth	49.5	47.7	44.5	2,864	79.2	1,611
Highest	55.6	50.2	44.9	3,210	79.2	1,818
Total	38.9	36.8	34.2	13,856	77.4	6,131

Note: Total for women in all households includes 2 women with information missing on education.
[1] An ever-treated net is (1) a factory net that does not require any further treatment or (2) any pretreated net.
[2] An insecticide treated net (ITN) is (1) a factory treated net that does not require any further treatment or (2) a pretreated net obtained within the past 12 months.

Tables 13.3 and 13.4 show the percentages of all women and pregnant women, respectively, in all households who slept under a mosquito net (treated or untreated) the night before the survey, and the proportions of women and pregnant women in households that own at least one ITN who slept under an ITN the night before the survey, by background characteristics. The results show some differences between all women and pregnant women in the use of nets. Overall, 39 percent of all women and 45 percent of pregnant women slept under any net the night before the interview; 37 percent and 43 percent, respectively, slept under an ever-treated net, and 34 percent and 41 percent, respectively, slept under an ITN. As with children under age 5, in households that own at least one ITN, a substantially larger proportion of women slept under an ITN the night before the survey (77 percent of all women and 84 percent of pregnant women).

Table 13.4 Use of mosquito nets by pregnant women

Among pregnant women age 15-49 in all households, the percentages who slept the night before the survey under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN), and among pregnant women age 15-49 in households with at least one ITN, the percentage who slept the night before the survey under an ITN, by background characteristics, Timor-Leste 2009-10

	Pregnant women age 15-49 in all households				Pregnant women age 15-49 in households with ITN[2]	
	Percentage who:					
Background characteristic	Slept under any net last night	Slept under an ever- treated net last night[1]	Slept under ITN last night[2]	Number of women	Percentage who slept under an ITN last night[2]	Number of women
Residence						
Urban	59.2	52.5	49.6	233	81.8	141
Rural	40.3	39.7	37.7	676	85.7	298
District						
Aileu	56.7	56.7	56.7	30	(88.9)	19
Ainaro	20.7	16.2	15.2	55	*	10
Baucau	33.0	33.0	31.1	89	*	28
Bobonaro	59.2	54.9	49.0	73	(94.7)	38
Covalima	60.4	59.2	58.1	46	(88.3)	30
Dili	60.7	52.6	50.3	156	80.1	98
Ermera	23.5	23.5	23.5	107	(84.0)	30
Lautem	48.5	48.5	45.7	76	75.8	46
Liquiçá	40.8	40.8	38.5	57	(94.4)	23
Manatutu	64.6	64.6	60.5	42	94.7	27
Manufahi	25.7	25.7	20.0	42	*	11
Oecussi	43.2	42.4	40.8	64	(66.2)	40
Viqueque	49.5	49.5	48.1	73	(88.4)	40
Education						
No education	28.6	27.4	25.7	266	74.0	92
Primary	48.5	46.6	45.9	238	88.5	124
Secondary	53.5	50.4	46.8	370	85.4	203
More than secondary	(58.2)	(58.2)	(56.4)	35	*	20
Wealth quintile						
Lowest	27.5	27.0	27.0	164	77.2	58
Second	31.8	31.0	30.4	197	84.9	71
Middle	45.1	44.1	40.3	191	85.7	90
Fourth	62.2	61.3	58.6	175	90.7	113
Highest	58.9	51.5	47.6	182	80.4	108
Total	45.1	43.0	40.7	909	84.4	439

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.
[1] An ever-treated net is (1) a factory net that does not require any further treatment or (2) any pretreated net.
[2] An insecticide treated net (ITN) is (1) a factory treated net that does not require any further treatment or (2) a pretreated net obtained within the past 12 months.

Among all women, those living in urban areas (51 percent) are more likely to have slept under a mosquito net the night before the survey than rural women (35 percent); the same pattern is seen for pregnant women, although the proportions are higher (59 and 40 percent, respectively). As with children, use of any mosquito net by all women is highest in Covalima (58 percent) and lowest in Ainaro (19 percent), and a similar pattern is observed regarding the use of an ITN. Among pregnant women, use is highest in Manatuto. Education is positively related to sleeping under a mosquito net, with only 28 percent of women with no education sleeping under a net the night before the survey, compared with 49 percent of women with more than secondary education. A similar pattern is seen among pregnant women. Similarly, women in the higher wealth quintiles are most likely to have slept under an ever-treated net or an ITN.

13.1.4 Prevalence and Management of Childhood Malaria

A common manifestation of malaria is fever, and the presence of fever is used as an entry point to assess and classify a sick child's condition. In the 2009-10 TLDHS, mothers were asked whether their children under age 5 had a fever in the two weeks preceding the survey. Although fever can occur year-round, malaria is more prevalent during the end of the rainy season. The fieldwork for the TLDHS spanned the six months from mid-August 2009 to early February 2010 and did not fully encompass the peak season for malaria transmission of November to May. Such temporal factors should be taken into account when interpreting the occurrence of fever as an indicator of malaria prevalence. If a fever was reported, the mother was asked whether treatment was sought at a health facility and whether the child was given any medication and, if so, how soon the medication was taken after the onset of fever.

Table 13.5 shows the percentage of children under age 5 with fever in the two weeks preceding the survey, and among children with fever, the percentage who received antimalarial drugs and the percentage who took antimalarial drugs the same day or the next, by background characteristics. One in five children under age 5 (19 percent) had a fever in the two weeks preceding the survey. Of these, 6 percent received an antimalarial drug. Only 2 percent of children received antimalarial drugs the same day or the next day after the onset of fever.

Table 13.5 Prevalence and prompt treatment of fever

Percentage of children under age 5 with fever in the two weeks preceding the survey, and among children with fever, the percentage who took antimalarial drugs and the percentage who took the drugs the same or next day following the onset of fever, by background characteristics, Timor-Leste 2009-10

	Among children under age 5:		Among children under age 5 with fever:		
Background characteristic	Percentage with fever in the two weeks preceding the survey	Number of children	Percentage who took antimalarial drugs	Percentage who took antimalarial drugs same or next day	Number of children
Age (in months)					
<12	21.1	1,925	4.0	1.1	407
12-23	23.4	1,752	6.9	2.4	410
24-35	21.3	1,959	6.4	3.3	417
36-47	17.6	1,947	5.8	3.5	342
48-59	12.3	1,745	5.3	1.0	214
Residence					
Urban	24.1	2,269	5.2	1.9	546
Rural	17.6	7,059	5.9	2.6	1,243
District					
Aileu	14.9	340	24.2	9.5	51
Ainaro	4.9	536	(5.9)	(5.9)	26
Baucau	14.9	941	1.1	0.0	140
Bobonaro	26.4	884	1.4	1.4	234
Covalima	20.0	426	8.5	5.3	85
Dili	24.6	1,597	5.1	1.5	392
Ermera	12.7	1,172	15.2	6.5	149
Lautem	29.6	719	1.7	0.0	213
Liquiçá	33.8	550	7.7	4.5	186
Manatutu	19.3	416	1.4	0.7	80
Manufahi	11.3	369	5.8	0.0	42
Oecussi	20.6	734	1.9	0.6	151
Viqueque	6.3	644	(21.9)	(6.1)	41
Mother's education					
No education	17.7	3,122	7.7	3.5	552
Primary	20.6	2,611	3.7	1.6	539
Secondary	19.2	3,381	5.2	1.7	648
More than secondary	23.7	214	(10.9)	(6.9)	51
Wealth quintile					
Lowest	16.1	1,973	5.1	1.7	317
Second	16.9	1,834	4.7	1.3	310
Middle	18.6	1,875	5.6	2.8	348
Fourth	22.6	1,819	6.9	2.1	410
Highest	22.1	1,827	5.9	3.6	404
Total	19.2	9,328	5.7	2.4	1,790

Note: Figures in parentheses are based on 25-49 unweighted cases.

The highest prevalence of fever is reported among children age 12-23 months (23 percent). Fever is least common among children age 48-59 months (12 percent).The proportion of children with fever differs by urban-rural residence, with 24 percent of urban children having fever in the two weeks before the survey as opposed to 18 percent in the rural areas. Liquiçá reported the highest proportions of children with fever (34 percent), while Ainaro had the lowest proportion (5 percent).

Children older than 12 months are most likely to be given antimalarial drugs for the treatment of fever and to receive the drugs the same or the next day. There is hardly any urban-rural variation in getting antimalarial drugs. Children of mothers with no education are more likely to receive anti-malarial drugs (8 percent) than children of mothers with primary and secondary education.

Table 13.6 presents information on the type and timing of antimalarial drugs given to children under age 5 who had fever in the two weeks preceding the survey, by background characteristics. Fansidar is the most common antimalarial drug given to children with fever (3 percent), followed by chloroquine (2 percent), and quinine (1 percent). The very low percentage of children with fever treated with antimalarial drugs can be attributed to the revised protocol put in place since 2007 that advocates treatment for malaria upon confirmation by microscopy testing or Rapid Diagnostic Tests (RDTs). As discussed in Chapter 11, the majority of children with fever are prescribed paracetemol or antibiotics in the absence of the availability of RDTs or while waiting for the laboratory results

Table 13.6 Type and timing of antimalarial drugs

Among children under age 5 with fever in the two weeks preceding the survey, percentage who took specific antimalarial drugs and percentage who took each type of drug the same or next day after developing the fever, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of children who took drug:					Percentage of children who took drug the same or next day:					Number of children with fever
	SP/ Fansidar	Chloro-quine	Quinine	ACT	Other anti-malarial	SP/ Fansidar	Chloro-quine	Quinine	ACT	Other anti-malarial	
Age (in months)											
<12	2.3	1.4	0.9	0.6	0.8	0.9	0.4	0.2	0.0	0.4	407
12-23	3.7	1.5	1.1	0.1	0.5	2.2	0.0	0.2	0.0	0.0	410
24-35	3.1	1.2	2.2	0.2	0.7	1.1	0.9	0.5	0.2	0.7	417
36-47	2.0	2.7	1.1	0.2	0.2	1.7	1.2	0.9	0.0	0.2	342
48-59	2.2	1.8	1.3	0.7	0.0	0.2	0.8	0.0	0.0	0.0	214
Residence											
Urban	2.8	1.5	0.2	0.1	0.7	1.3	0.4	0.0	0.0	0.4	546
Rural	2.7	1.7	1.8	0.5	0.4	1.3	0.7	0.6	0.1	0.2	1,243
District											
Aileu	21.0	0.0	2.1	2.1	1.0	9.5	0.0	0.0	0.0	0.0	51
Ainaro	(0.0)	(3.0)	(0.0)	(0.0)	(3.0)	(0.0)	(3.0)	(0.0)	(0.0)	(3.0)	26
Baucau	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140
Bobonaro	0.8	0.8	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	234
Covalima	0.0	8.5	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	85
Dili	2.6	1.5	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.5	392
Ermera	11.4	1.0	8.4	1.0	1.0	6.5	1.0	1.0	0.0	1.0	149
Lautem	0.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213
Liquiçá	1.6	0.4	4.9	0.8	0.0	1.2	0.4	2.9	0.0	0.0	186
Manatutu	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7	80
Manufahi	3.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42
Oecussi	1.3	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	151
Viqueque	(2.5)	(17.0)	(0.0)	(5.0)	(2.5)	(0.0)	(3.6)	(0.0)	(2.5)	(0.0)	41
Mother's education											
No education	3.8	0.8	3.3	0.6	0.8	2.2	0.5	1.0	0.0	0.3	552
Primary	1.8	1.1	0.3	0.4	0.3	0.7	0.6	0.0	0.0	0.2	539
Secondary	2.5	2.7	0.6	0.2	0.0	1.2	0.5	0.2	0.2	0.0	648
More than secondary	(4.0)	(2.9)	(0.0)	(0.0)	(4.0)	(0.0)	(2.9)	(0.0)	(0.0)	(4.0)	51
Wealth quintile											
Lowest	1.3	2.2	1.4	0.3	0.5	0.3	0.2	1.0	0.0	0.2	317
Second	1.9	0.7	1.7	0.3	0.0	0.2	0.7	0.0	0.3	0.0	310
Middle	3.5	1.3	1.0	0.8	0.4	2.3	0.4	0.0	0.0	0.2	348
Fourth	3.0	1.8	1.8	0.4	0.9	1.1	0.4	0.6	0.0	0.4	410
Highest	3.6	2.2	0.8	0.0	0.5	2.3	1.2	0.4	0.0	0.5	404
Total	2.7	1.7	1.3	0.3	0.5	1.3	0.6	0.4	0.1	0.3	1,790

Note: Figures in parentheses are based on 25-49 unweighted cases.

to arrive. The revised protocol for the treatment of malaria can also explain the large difference between results obtained in the 2003 DHS on treatment of fever among children under age 5 with antimalarials and the 2009-10 TLDHS.

Because of the need to treat malaria quickly, it can be useful for parents to have antimalarial drugs at home. The 2009-10 TLDHS findings show that antimalarial drugs were at home when the child became ill in about 46 percent of cases (data not shown).

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOR

14

Acquired Immune Deficiency Syndrome (AIDS) was first recognized internationally in 1981. According to the Joint United Nations Program on AIDS (UNAIDS), the number of people living with the human immunodeficiency virus (HIV) continued to grow, and it is estimated that in 2008 33.4 million people worldwide were living with HIV, with a threefold increase in prevalence since 1990 (UNAIDS and WHO, 2009). Timor-Leste was free of HIV during most of the time when the developed countries were compiling measures to fight the epidemic. However, as contact with the outside world increases, cases of HIV have been on the rise, although no information to date is available on the prevalence for the country as a whole. According to the Ministry of Health the first reported case of HIV in Timor-Leste was in 2003. Between then and December 2009, there have been 151 cases of HIV reported in the country (DRTL, 2010). Forty-eight percent of HIV-positive cases in the past 12 months were reported among men and 52 percent among women (DRTL, 2010). In addition, 8 percent of HIV-positive cases were among children under age 5.

Epidemiological studies have identified sexual intercourse, intravenous injections, blood transfusions, and fetal transmission from infected mothers as the main routes of transmission of HIV. Integrated bio-behavioral surveys (IBBS) conducted on a regular basis since 2009 among the most at-risk populations, such as female sex workers (FSWs), injecting drug users (IDUs), men having sex with men (MSM), the Policia Nacional de Timor-Leste (PNTL), Falintil-Forças de Defesa de Timor-Leste (F-FDTL) and clients of FSWs, in selected geographical areas of Timor-Leste, indicate a low-level epidemic concentrated in high-risk groups (DRTL, 2010).

To address the challenges posed by HIV, the government of Timor-Leste has identified clear strategic directions under its National HIV/AIDS/STI Strategic Plan for 2006-2010 (MOH, 2006). The National HIV/AIDS/STI Strategic Plan outlines the following principles:

- A strategy based on respect for human rights
- A strategy that is participatory and multi-sectoral
- A strategy that is built on partnership and that draws upon the strengths of government, nongovernment, private-sector, and faith-based organizations and that includes the involvement of HIV-positive people
- A strategy that is evidence-driven but encourages creativity
- A strategy that is consistent with the principles underlying the development of Timor-Leste
- A strategy that is multifaceted, drawing on the underlying tenets of health promotion

The health service delivery is outlined in the Basic Package of Services Policy, which is particularly relevant to HIV/AIDS and STI strategies as it provides a context for planning capacity development actions to address service delivery needs and to identify linkages in service delivery across different policy areas (MOH, 2004d).

Currently, the National HIV/AIDS Program is in the process of revising the strategic plan for the 2011-2016 five-year period. The activities of the National HIV/AIDS Program include screening blood samples; producing strategic information; implementing a comprehensive monitoring and evaluation system, which includes a surveillance plan; generating information, education, and communication (IEC) materials; promoting condoms; offering voluntary counseling and testing (VCT) for screening and treatment of sexually transmitted infections (STIs); providing antiretroviral

(ARV) treatment; providing care and support for people living with HIV and AIDS (PLHA); and training health workers in the clinical management of AIDS patients (MOH, 2006; DRTL, 2010).

The 2009-10 TLDHS included a series of questions on knowledge of HIV/AIDS and attitudes toward people with AIDS. All women and men age 15-49 were first asked if they had ever heard of AIDS. Those who had heard of AIDS were questioned further about their knowledge of HIV transmission and prevention. Respondents were also asked about their perception of the precautions a person can take to avoid getting infected with HIV. Additional questions dealt with common local misconceptions regarding the mode of transmission of HIV.

This chapter presents current levels of HIV/AIDS knowledge, attitudes, and related behaviors in the general adult population. A specific focus is HIV/AIDS knowledge and patterns of sexual activity among youth, who are the main target of many HIV prevention efforts.

14.1 KNOWLEDGE OF HIV/AIDS AND OF TRANSMISSION AND PREVENTION METHODS

14.1.1 Knowledge of AIDS

Respondents in the 2009-10 TLDHS were asked whether they have heard of AIDS. Table 14.1 shows the percentages of women and men age 15-49 who have heard of AIDS. Forty-four

Table 14.1 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Timor-Leste 2009-10

Background characteristic	Women		Men	
	Has heard of AIDS	Number of women	Has heard of AIDS	Number of men
Age				
15-24	53.4	5,487	62.6	1,636
15-19	51.8	3,144	56.8	994
20-24	55.5	2,343	71.6	643
25-29	47.4	1,897	70.6	586
30-39	38.2	3,219	61.6	992
40-49	27.2	2,534	49.4	861
Marital status				
Never married	56.3	4,675	64.2	1,865
Ever had sex	(59.3)	40	83.9	540
Never had sex	56.3	4,635	56.2	1,325
Married/living together	37.3	7,906	58.1	2,158
Divorced/separated/ widowed	29.2	556	41.8	53
Residence				
Urban	70.1	3,439	85.1	1,102
Rural	34.4	9,698	51.7	2,974
District				
Aileu	36.2	554	53.2	181
Ainaro	28.8	619	46.4	217
Baucau	54.3	1,408	64.3	415
Bobonaro	39.5	1,262	61.8	357
Covalima	48.5	781	77.3	236
Dili	79.7	2,466	92.9	797
Ermera	13.8	1,542	20.8	491
Lautem	36.3	864	58.0	308
Liquiçá	33.9	801	52.9	252
Manatuto	52.1	603	98.9	190
Manufahi	36.3	470	46.0	137
Oecussi	27.6	884	51.0	235
Viqueque	26.8	882	31.7	260
Education				
No education	12.8	3,854	22.1	791
Primary	26.8	3,005	43.8	1,046
Secondary	68.8	5,829	80.2	2,009
More than secondary	97.1	449	100.0	230
Wealth quintile				
Lowest	20.1	2,314	35.3	728
Second	26.2	2,468	44.3	781
Middle	34.6	2,590	54.7	786
Fourth	48.9	2,687	68.7	849
Highest	78.8	3,077	92.1	932
Total 15-49	43.8	13,137	60.7	4,076

Note: Figures in parentheses are based on 25-49 unweighted cases

percent of women and 61 percent of men have heard of AIDS. Knowledge is inversely related to age, rising from 27 percent among women age 40-49 to 53 percent among those age 15-24. This pattern is true for men with the exception of those age15-24. Knowledge rises from 49 percent among men age 40-49 to 71 percent among men age 25-29 and then falls to 63 percent among the youngest cohort. Knowledge is higher among never-married than ever-married respondents. Knowledge is twice as high among urban compared with rural women, with the urban-rural difference among men being somewhat less substantial. Women in Dili and men in Manatuto are most likely to have heard of AIDS, and women and men in Ermera are least likely. Knowledge of AIDS increases with level of education and household wealth for both women and men.

14.1.2 Knowledge of HIV Prevention Methods

The promotion of sexual and reproductive health is necessary for the prevention of HIV infection. This includes educating the public to adopt specific prevention behaviors, including:

- Abstinence from sexual activity that can transmit infection
- Being faithful to one partner who is also faithful and uninfected
- Consistent condom use

Table 14.2 presents levels of knowledge about the various HIV prevention methods by background characteristics. Of the prevention methods discussed in the survey, women are most aware that their risk of getting HIV can be reduced by limiting sex to one uninfected partner who has no other partners (36 percent). In addition, 26 percent of women mention that abstaining from sexual intercourse will prevent the transmission of HIV. Among men, the most commonly cited prevention method also is limiting sex to one uninfected partner who has no other partners (49 percent). Knowledge of condoms and the role that they can play in preventing the transmission of AIDS is much more common among men than among women (45 percent versus 30 percent). Fewer men and women (42 percent and 27 percent, respectively) are also aware that both using condoms and limiting sex to one uninfected partner can reduce the risk of getting the AIDS virus.

Young women age 15-24 are relatively more knowledgeable of the various modes of prevention than older women. For instance, 32 percent of women age 15-24 said that using condoms and limiting sex to one uninfected partner can reduce the risk of HIV infection, compared with only 17 percent of women age 40-49. The relationship between age and knowledge of transmission of HIV among men is less clear. Knowledge of HIV prevention methods among both women and men is highest among never-married respondents and lowest among those divorced, separated, or widowed.

Knowledge of HIV prevention methods is consistently higher in urban than in rural areas among women and men. Education has a positive impact on a respondent's knowledge of AIDS. For example, 62 percent of women with more than secondary education know that using condoms and limiting sexual intercourse to one uninfected partner can reduce a person's chances of getting HIV, compared with 8 percent of women with no education. A similar pattern is seen for men, although the gap in knowledge by education is not as large as that observed for women. Similarly, women and men living in households in the higher wealth quintiles are more likely than those in the lower wealth quintiles to be aware of ways to prevent HIV transmission.

Table 14.2 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not infected and has no other partners, and by abstaining from sexual intercourse, by background characteristics, Timor-Leste 2009-10

	Women					Men				
	Percentage who say that HIV can be prevented by					Percentage who say that HIV can be prevented by				
Background characteristic	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of men
Age										
15-24	36.0	42.7	32.2	31.1	5,487	45.7	50.8	42.9	34.3	1,636
15-19	35.4	40.8	31.5	30.3	3,144	38.2	43.9	34.9	29.0	994
20-24	36.9	45.4	33.2	32.1	2,343	57.4	61.5	55.1	42.5	643
25-29	31.0	38.6	27.7	28.5	1,897	55.0	56.2	49.9	36.7	586
30-39	26.8	31.3	24.2	22.8	3,219	46.5	50.2	44.3	33.3	992
40-49	18.2	23.1	17.0	14.9	2,534	37.2	40.5	34.4	25.7	861
Marital status										
Never married	38.1	44.6	34.0	32.5	4,675	47.4	51.9	44.4	35.2	1,865
Ever had sex	(51.4)	(56.1)	(48.2)	(37.8)	40	76.0	76.7	72.1	48.2	540
Never had sex	38.0	44.5	33.9	32.4	4,635	35.8	41.8	33.1	29.9	1,325
Married/living together	25.2	31.1	22.9	22.2	7,906	44.1	47.4	41.2	30.7	2,158
Divorced/separated/ widowed	21.4	23.0	18.7	14.7	556	30.0	29.0	21.7	16.3	53
Residence										
Urban	44.4	55.3	39.6	41.9	3,439	67.0	73.7	62.4	55.4	1,102
Rural	24.4	28.6	22.1	19.8	9,698	37.4	40.2	35.0	24.1	2,974
District										
Aileu	31.1	34.3	30.0	27.1	554	39.6	44.9	38.0	5.0	181
Ainaro	14.8	17.2	11.4	16.6	619	18.6	23.6	12.4	3.1	217
Baucau	35.7	50.2	35.3	10.4	1,408	14.7	22.4	10.7	6.0	415
Bobonaro	24.6	26.0	18.1	23.0	1,262	44.4	47.6	40.5	46.9	357
Covalima	36.6	40.4	33.6	18.6	781	71.7	72.2	67.8	70.0	236
Dili	46.9	62.6	42.0	46.5	2,466	73.0	81.4	67.6	59.5	797
Ermera	13.5	13.7	13.5	13.5	1,542	20.6	20.0	20.0	20.2	491
Lautem	26.5	30.3	23.2	24.8	864	51.6	55.9	51.0	42.0	308
Liquiçá	25.6	28.7	22.4	25.5	801	44.1	47.6	42.1	30.2	252
Manatuto	39.5	41.5	32.9	42.6	603	97.6	98.9	97.6	1.1	190
Manufahi	27.2	31.9	25.6	28.9	470	45.0	44.6	44.2	42.0	137
Oecussi	23.6	24.7	22.1	24.1	884	42.8	45.4	42.1	42.0	235
Viqueque	17.3	18.0	15.8	16.6	882	19.6	17.9	15.5	6.8	260
Education										
No education	8.9	10.1	8.0	6.2	3,854	15.8	15.9	13.1	7.8	791
Primary	18.7	21.5	17.0	14.7	3,005	30.4	34.0	28.4	21.1	1,046
Secondary	46.0	56.0	41.2	41.2	5,829	59.6	65.2	56.0	44.0	2,009
More than secondary	67.4	83.1	61.8	61.5	449	92.2	93.1	88.1	70.1	230
Wealth quintile										
Lowest	14.7	15.7	13.3	11.1	2,314	27.0	27.9	24.5	17.2	728
Second	18.9	21.7	17.5	13.9	2,468	31.2	33.6	28.0	21.3	781
Middle	24.0	27.9	21.4	20.0	2,590	39.8	43.1	38.0	25.7	786
Fourth	34.7	40.3	31.0	29.4	2,687	51.5	57.0	49.1	38.9	849
Highest	49.7	63.9	44.7	47.2	3,077	71.1	77.1	66.2	54.2	932
Total 15-49	29.6	35.6	26.7	25.6	13,137	45.4	49.2	42.4	32.6	4,076

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

14.1.3 Comprehensive Knowledge of HIV Transmission

The 2009-10 TLDHS also included questions to assess the prevalence of common misconceptions about AIDS and HIV transmission. Respondents were asked whether they think it is possible for a healthy-looking person to have the virus that causes AIDS, whether a person can get AIDS from mosquito bites, by sharing food with a person who has AIDS, or by sharing clothes with a person who has AIDS.

The data presented in Tables 14.3.1 and 14.3.2 indicate that many Timorese adults lack accurate knowledge about the ways in which HIV can and cannot be transmitted, with women being much less knowledgeable than men. Only 33 percent of women and 46 percent of men know that a healthy-looking person can have HIV. One in four women and two in five men know that HIV cannot be transmitted by mosquito bites, or that a person cannot become infected by sharing food with a

person who has AIDS or by sharing clothes with a person who has HIV. About twice as many men as women (28 percent and 15 percent, respectively) say that a healthy looking person can have AIDS and reject the two most common local misconceptions (that HIV can be transmitted by mosquito bites and by sharing food with a person who has AIDS).

Table 14.3.1 Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of respondents who say that:				Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of women
	A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	A person cannot become infected by sharing food with a person who has AIDS	AIDS cannot be transmitted by sharing clothes with a person who has AIDS			
Age							
15-24	39.4	31.3	30.0	30.2	17.9	12.2	5,487
15-19	38.5	29.7	29.1	29.3	16.9	11.2	3,144
20-24	40.5	33.4	31.3	31.3	19.3	13.5	2,343
25-29	36.5	25.0	24.9	25.5	14.3	11.5	1,897
30-39	30.6	21.0	22.6	21.5	13.8	10.8	3,219
40-49	20.7	13.8	14.6	14.1	8.1	6.2	2,534
Marital status							
Never married	42.1	33.0	31.7	31.8	18.9	13.0	4,675
Ever had sex	(41.9)	(27.1)	(40.5)	(25.7)	(9.0)	(5.0)	40
Never had sex	42.1	33.0	31.6	31.8	18.9	13.1	4,635
Married/living together	28.9	20.3	20.9	20.5	12.4	9.5	7,906
Divorced/separated/ widowed	20.2	12.1	15.1	15.1	7.5	6.0	556
Residence							
Urban	52.0	35.4	36.8	34.7	18.0	14.0	3,439
Rural	26.5	20.6	20.1	20.5	13.2	9.4	9,698
District							
Aileu	23.9	21.4	22.5	23.9	10.2	8.4	554
Ainaro	20.4	11.4	10.9	11.1	5.2	3.2	619
Baucau	51.0	45.8	42.4	43.6	35.7	23.5	1,408
Bobonaro	26.4	20.6	21.9	21.2	10.4	5.3	1,262
Covalima	31.3	25.0	26.1	24.6	13.2	11.1	781
Dili	59.9	36.3	39.7	35.0	17.3	13.8	2,466
Ermera	12.7	7.3	6.2	6.3	5.2	5.2	1,542
Lautem	24.0	23.0	23.7	26.1	13.2	11.1	864
Liquiçá	24.9	16.9	18.3	19.8	11.3	8.1	801
Manatuto	39.7	30.2	25.0	27.0	15.2	8.9	603
Manufahi	26.9	26.5	28.6	31.2	19.7	16.5	470
Oecussi	19.1	9.6	6.7	8.8	2.8	2.7	884
Viqueque	21.9	21.6	20.4	20.5	17.7	11.5	882
Education							
No education	9.2	6.9	7.4	6.9	4.4	3.5	3,854
Primary	19.7	13.1	13.8	13.6	7.8	5.9	3,005
Secondary	52.4	39.3	38.4	38.3	22.5	15.9	5,829
More than secondary	81.2	58.7	63.4	61.8	41.8	33.9	449
Wealth quintile							
Lowest	15.0	11.4	11.6	11.4	7.7	5.6	2,314
Second	19.9	16.5	16.0	17.1	11.1	8.7	2,468
Middle	25.3	20.3	19.7	19.8	12.0	8.3	2,590
Fourth	37.2	27.6	27.2	27.2	16.3	11.8	2,687
Highest	60.7	41.4	42.8	40.8	22.9	16.7	3,077
Total 15-49	33.2	24.5	24.5	24.3	14.5	10.6	13,137

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Two most common local misconceptions: AIDS can be transmitted by mosquito bites and by sharing food with a person with HIV
[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table 14.3.2 Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of respondents who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	A person cannot become infected by sharing food with a person who has AIDS	AIDS cannot be transmitted by sharing clothes with a person who has AIDS	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of men
Age							
15-24	45.3	43.0	41.8	44.1	28.4	19.7	1,636
15-19	38.1	38.0	37.8	40.8	23.7	14.7	994
20-24	56.3	50.7	47.8	49.3	35.6	27.4	643
25-29	57.2	48.2	51.5	52.2	33.9	23.7	586
30-39	47.7	43.7	43.6	44.8	30.3	21.7	992
40-49	36.3	33.3	34.4	34.9	22.7	16.4	861
Marital status							
Never married	46.7	44.0	43.4	45.6	29.1	20.8	1,865
Ever had sex	63.2	56.7	54.9	57.2	36.3	33.1	540
Never had sex	40.0	38.8	38.7	40.9	26.2	15.8	1,325
Married/living together	45.3	40.3	41.2	42.0	28.0	19.6	2,158
Divorced/separated/ widowed	23.8	33.4	28.0	29.3	19.4	10.5	53
Residence							
Urban	65.1	58.4	64.7	65.3	41.5	34.2	1,102
Rural	38.5	35.8	33.7	35.4	23.6	14.8	2,974
District							
Aileu	43.9	20.4	23.6	23.3	16.9	14.9	181
Ainaro	36.6	35.8	32.1	33.2	30.8	5.7	217
Baucau	60.4	56.3	53.5	54.5	50.3	6.1	415
Bobonaro	41.5	44.8	44.7	45.1	31.1	26.4	357
Covalima	11.5	44.8	49.1	55.4	6.2	5.8	236
Dili	73.3	65.3	73.3	74.4	47.2	40.4	797
Ermera	18.5	12.6	3.4	6.4	2.4	1.9	491
Lautem	36.6	32.2	41.5	43.8	19.4	18.9	308
Liquiçá	42.2	34.5	31.6	34.8	23.5	22.0	252
Manatuto	98.3	90.0	57.2	72.0	56.1	55.5	190
Manufahi	44.2	42.8	44.2	43.8	42.4	42.4	137
Oecussi	41.9	14.0	27.1	15.4	10.7	5.4	235
Viqueque	14.5	24.0	24.2	23.4	11.7	9.0	260
Education							
No education	14.9	11.9	10.4	10.4	4.8	2.6	791
Primary	30.4	26.5	25.9	27.6	14.9	9.6	1,046
Secondary	61.4	57.3	58.2	60.0	41.0	28.3	2,009
More than secondary	83.2	80.0	82.9	85.5	61.6	55.3	230
Wealth quintile							
Lowest	22.2	22.6	22.8	22.4	13.2	8.6	728
Second	32.6	29.1	27.8	29.9	18.4	9.9	781
Middle	40.0	36.3	34.8	37.2	24.3	16.3	786
Fourth	51.9	46.9	47.3	49.3	30.5	20.9	849
Highest	74.1	67.8	70.4	71.3	50.3	39.7	932
Total 15-49	45.7	41.9	42.0	43.5	28.4	20.0	4,076

[1] Two most common local misconceptions: AIDS can be transmitted by mosquito bites and by sharing food with a person with HIV
[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Tables 14.3.1 and 14.3.2 also provide an assessment of the level of comprehensive knowledge of HIV prevention and transmission. Comprehensive knowledge is defined as knowing that both consistent condom use and limiting sexual partners to one uninfected person are HIV prevention methods; being aware that a healthy-looking person can have HIV; and rejecting the two most common local misconceptions—that HIV can be transmitted by mosquito bites or by sharing food with someone who has AIDS. According to the 2009-10 TLDHS results, 11 percent of women and 20 percent of men age 15-49 in Timor-Leste have comprehensive knowledge about AIDS.

Tables 14.3.1 and 14.3.2 document considerable variation in comprehensive knowledge by respondents' background characteristics. Comprehensive knowledge about AIDS decreases with age among both women and men. Comprehensive knowledge is higher among never-married women and men than among ever-married women and men.

Comprehensive knowledge about AIDS is also higher among urban than rural residents, presumably because of better access to information through the mass media in urban than in rural areas. Comprehensive knowledge is positively related to education and wealth, increasing from 4 percent and 3 percent among women and men with no education, to 34 percent and 55 percent among women and men with more than secondary education. A similar pattern is observed with regard to comprehensive knowledge and wealth for both women and men.

14.2 ATTITUDES TOWARD PEOPLE LIVING WITH HIV/AIDS

Knowledge and beliefs about HIV infection affect how people treat those they know to be living with HIV or AIDS. In the 2009-10 TLDHS, a number of questions were posed to respondents to measure their attitudes towards people living with HIV or AIDS (PLHA), including questions about their willingness to buy vegetables from an infected shopkeeper, to let others know the HIV status of family members, and to take care of relatives who have HIV in their own household. They were also asked whether an HIV-positive female teacher who is not sick should be allowed to continue teaching. Tables 14.4.1 and 14.4.2 show the percentages who express positive attitudes towards people living with HIV among women and men who have heard about the virus, by background characteristics.

Table 14.4.1 Accepting attitudes toward those living with HIV/AIDS: Women

Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes toward people with AIDS, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of women who: Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of women who have heard of AIDS
Age						
15-24	54.7	35.1	45.9	82.5	10.8	2,929
15-19	53.2	34.5	44.9	81.0	9.8	1,629
20-24	56.5	35.8	47.2	84.3	12.0	1,299
25-29	56.4	35.0	45.3	84.7	10.3	900
30-39	56.0	33.1	42.7	85.7	12.2	1,229
40-49	53.0	31.7	38.3	87.6	11.4	690
Marital status						
Never married	54.3	35.2	45.1	82.5	10.6	2,634
Ever had sex	*	*	*	*	*	24
Never had sex	54.4	35.4	45.3	82.5	10.7	2,610
Married/living together	55.4	33.0	43.6	85.8	11.4	2,952
Divorced/separated/ widowed	59.2	40.6	41.5	79.7	12.4	162
Residence						
Urban	60.1	36.4	45.3	83.9	13.7	2,410
Rural	51.4	32.6	43.4	84.3	9.2	3,338
District						
Aileu	56.7	38.9	56.0	94.7	16.6	201
Ainaro	68.8	21.6	45.8	76.1	4.0	178
Baucau	25.1	27.2	17.0	94.1	0.2	765
Bobonaro	45.1	48.7	42.7	68.6	9.0	499
Covalima	80.5	41.9	53.7	91.7	15.1	379
Dili	59.9	36.4	41.9	82.7	13.6	1,965
Ermera	48.4	17.0	14.6	89.5	0.5	212
Lautem	53.8	19.4	65.3	67.3	8.5	313
Liquiçá	59.1	40.0	55.6	79.1	15.3	272
Manatuto	61.9	18.9	69.6	89.1	6.9	314
Manufahi	28.7	39.6	49.8	84.5	7.2	171
Oecussi	71.0	36.6	44.2	89.6	19.6	244
Viqueque	75.7	44.4	76.5	92.1	31.1	236
Education						
No education	42.5	29.0	33.5	84.6	9.8	493
Primary	54.2	32.1	39.3	83.0	10.7	806
Secondary	55.8	34.6	46.2	83.7	10.7	4,013
More than secondary	63.7	40.5	47.1	89.3	16.6	436
Wealth quintile						
Lowest	51.0	27.2	41.3	86.0	8.4	465
Second	42.1	26.5	38.7	86.8	7.7	648
Middle	55.5	36.8	44.6	80.9	9.8	897
Fourth	55.2	35.3	46.2	83.2	11.4	1,314
Highest	58.9	36.1	45.1	84.7	12.8	2,425
Total 15-49	55.0	34.2	44.2	84.1	11.1	5,748

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 14.4.2 Accepting attitudes toward those living with HIV/AIDS: Men

Among men age 15-49 who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV/AIDS, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of men who:				Percentage expressing acceptance attitudes on all four indicators	Number of men who have heard of AIDS
	Are willing to care for a family member sick with AIDS in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus		
Age						
15-24	25.4	22.6	28.6	85.9	2.7	1,024
15-19	24.9	21.5	26.8	83.8	2.2	564
20-24	26.1	24.0	30.7	88.5	3.2	460
25-29	27.7	27.0	31.1	87.2	4.1	414
30-39	25.2	18.3	26.9	88.3	3.8	611
40-49	29.0	20.0	24.3	89.1	3.7	425
Marital status						
Never married	25.4	22.3	29.0	86.9	2.8	1,198
Ever had sex	33.8	19.0	35.2	92.4	5.3	453
Never had sex	20.3	24.3	25.2	83.5	1.3	745
Married/living together	27.3	21.2	26.4	87.6	3.9	1,254
Divorced/separated/ widowed	*	*	*	*	*	22
Residence						
Urban	20.1	14.8	25.3	83.3	2.4	938
Rural	30.2	26.2	29.4	89.7	3.9	1,536
District						
Aileu	60.0	49.0	44.7	84.5	30.1	96
Ainaro	15.5	54.5	58.2	98.6	4.8	101
Baucau	2.6	17.4	3.8	97.4	0.0	267
Bobonaro	23.5	37.8	18.3	69.3	1.4	220
Covalima	0.3	5.4	3.9	99.5	0.0	183
Dili	14.6	11.5	22.0	83.6	2.1	740
Ermera	3.5	60.7	6.4	92.9	0.0	102
Lautem	12.9	17.4	36.7	95.6	1.5	179
Liquiçá	37.5	33.1	42.9	92.5	2.3	133
Manatuto	96.3	4.0	60.1	99.7	3.7	187
Manufahi	86.5	49.4	73.9	11.7	0.0	63
Oecussi	77.3	29.1	36.5	94.6	15.0	120
Viqueque	8.5	3.9	41.5	84.4	0.0	83
Education						
No education	36.9	15.6	25.2	78.7	1.5	175
Primary	33.5	19.1	24.6	87.7	2.5	458
Secondary	23.6	23.3	27.8	87.9	3.5	1,611
More than secondary	23.2	21.8	36.4	88.7	5.4	230
Wealth quintile						
Lowest	35.1	17.6	26.2	89.8	2.6	257
Second	26.2	30.6	29.7	86.8	4.6	346
Middle	29.4	25.5	29.2	91.6	3.3	430
Fourth	28.0	25.2	28.5	84.9	2.6	583
Highest	21.2	15.4	26.4	86.2	3.6	858
Total 15-49	26.4	21.8	27.8	87.3	3.4	2,474

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Among those who have heard of AIDS, twice as many women as men (55 percent and 26 percent, respectively) state that they would be willing to care for a family member with AIDS in their home. Eighty-four percent of women and 87 percent of men say that they would not want to keep secret that a family member was infected with HIV, while 44 percent of women and 28 percent of men say that an HIV-positive female teacher should be allowed to continue teaching. A relatively lower proportion of women and men (34 percent and 22 percent, respectively) say they would buy fresh vegetables from a shopkeeper with AIDS. The percentage expressing accepting attitudes on all four measures is low: 11 percent among women and 3 percent among men.

Stigma and attitudes associated with HIV and AIDS differ by respondents' background characteristics. There are small differentials in the percentage expressing accepting attitudes toward those living with HIV/AIDS by age and marital status with one notable exception. Never-married men who have ever had sex are relatively more likely to express accepting attitudes towards people living with HIV or AIDS. Accepting attitudes are higher among women in urban areas than women in rural areas, but this trend is reversed among men. Exhibiting accepting attitudes towards people living with

HIV or AIDS on all four indicators ranges among women from a low of less than one percent in Baucau to a high of 31 percent in Viqueque, and among men from a low of 0 percent in Baucau, Covalima, Ermera, Manufahi, and Viqueque to a high of 30 percent among men in Aileu. Furthermore, women and men with more than secondary education and women living in the wealthiest households are also most likely to accept people living with HIV or AIDS. The relationship between wealth and acceptance among men is less clear.

14.3 RISKY BEHAVIORS

The 2009-10 TLDHS included questions on respondents' sexual partners during the 12 months preceding the survey. For male respondents, an additional question was asked about whether they paid for sex during the 12 months preceding the interview. Information on the use of condoms at the last sexual encounter with each partner in the last 12 months was collected from both women and men. Finally, sexually active women and men were asked about the total number of partners they had had during their lifetime. These questions are, of course, sensitive, and in interpreting the results in this section it is important to remember that respondents' answers may be subject to some reporting bias. The discussion below focuses primarily on men because less than 1 percent of women reported having multiple sexual partners, and a separate analysis is not statistically meaningful.

14.3.1 Multiple Sexual Partners and Higher-risk Sexual Intercourse

Table 14.5 presents information collected from men who had ever had intercourse about the number of sexual partners they had had during the 12-month period before the survey and the mean number of sexual partners that a man has had during his lifetime.

Just over 1 percent of men age 15-49 reported having had two or more sexual partners during the 12 months prior to the survey, with men reporting a mean number of just under two partners in their lifetimes. Among men with two or more partners in the 12 months preceding the survey, 19 percent used a condom at last sex (data not presented). The differentials presented in Table 14.5 show that the percentage of men with two or more partners in the 12 months before the survey is higher among men age 25-29 than among younger and older men; higher among divorced, separated, or widowed men than among currently married or never married men; higher among urban than rural men; higher among highly educated men than among those with little or no education; and higher among men in the fourth and highest wealth quintiles. Due to the low number of men in the survey reporting multiple partners in the past 12 months, it is not possible to examine differentials in use of a condom at last sex among men with multiple partners.

Table 14.5 Multiple sexual partners in the past 12 months: Men

Percentage of men age 15-49 who had sexual intercourse with more than one sexual partner in the past 12 months; and the mean number of sexual partners during his lifetime for men who ever had sexual intercourse, by background characteristics, Timor-Leste 2009-10

Background characteristic	Among all men		Among men who ever had sexual intercourse	
	Percentage who had 2+ partners in the past 12 months	Number of men	Mean number of sexual partners in lifetime	Number of men
Age				
15-24	0.9	1,636	1.8	442
15-19	0.3	994	1.8	98
20-24	1.9	643	1.8	344
25-29	2.5	586	2.0	453
30-39	1.4	992	1.8	866
40-49	1.6	861	1.8	752
Marital status				
Never married	1.8	1,865	2.4	515
Married/living together	1.0	2,158	1.7	1,950
Divorced/separated/ widowed	4.9	53	1.6	47
Residence				
Urban	2.2	1,102	2.4	712
Rural	1.1	2,974	1.6	1,801
District				
Aileu	6.2	181	1.4	125
Ainaro	0.3	217	1.3	108
Baucau	0.4	415	1.0	244
Bobonaro	0.4	357	1.0	173
Covalima	0.0	236	3.3	187
Dili	3.0	797	2.6	542
Ermera	0.4	491	1.6	158
Lautem	2.5	308	1.7	191
Liquiçá	0.0	252	1.6	179
Manatuto	0.4	190	1.3	170
Manufahi	0.4	137	1.2	81
Oecussi	1.1	235	2.5	187
Viqueque	1.9	260	1.1	168
Education				
No education	0.5	791	1.6	518
Primary	1.1	1,046	1.8	686
Secondary	1.6	2,009	1.9	1,111
More than secondary	3.8	230	2.6	197
Wealth quintile				
Lowest	1.4	728	1.7	452
Second	0.8	781	1.6	440
Middle	0.8	786	1.5	458
Fourth	1.5	849	1.9	532
Highest	2.4	932	2.4	631
Total 15-49	1.4	4,076	1.8	2,513

14.3.2 Paid Sex

Paid sex is considered a high-risk sexual behavior. Male respondents in the 2009-10 TLDHS were asked whether they had paid money in exchange for sex in the past 12 months. Five percent of men reported that they had engaged in paid sex in the year before the survey (Table 14.6).

Paid sex occurs most often among men age 20-24, divorced/separated/widowed men, urban men, men residing in Covalima, Manatuto and Dili, highly educated men, and men living in the wealthiest households.

Among those who paid for sex, only 26 percent reported using a condom during their most recent encounter (data not shown). Only small numbers of men reported paying for sex, so an analysis of condom use among men who paid for sex by background characteristics is not statistically meaningful and is not shown in the report.

Table 14.6 Payment for sexual intercourse: Men

Percentage of men age 15-49 reporting payment for sexual intercourse in the past 12 months, by background characteristics, Timor-Leste 2009-10

Background characteristic	Payment for sexual intercourse in the past 12 months: Percentage who paid for sexual intercourse	Payment for sexual intercourse in the past 12 months: Number of men
Age		
15-24	6.1	1,636
15-19	3.0	994
20-24	10.7	643
25-29	8.5	586
30-39	5.2	992
40-49	2.0	861
Marital status		
Never married	9.3	1,865
Married/living together	1.8	2,158
Divorced/separated/ widowed	10.8	53
Residence		
Urban	10.3	1,102
Rural	3.5	2,974
District		
Aileu	1.0	181
Ainaro	1.6	217
Baucau	0.0	415
Bobonaro	0.0	357
Covalima	20.0	236
Dili	12.2	797
Ermera	3.4	491
Lautem	0.7	308
Liquiçá	4.9	252
Manatuto	15.0	190
Manufahi	0.0	137
Oecussi	1.7	235
Viqueque	1.4	260
Education		
No education	3.0	791
Primary	4.5	1,046
Secondary	5.8	2,009
More than secondary	13.5	230
Wealth quintile		
Lowest	2.6	728
Second	2.6	781
Middle	5.2	786
Fourth	4.7	849
Highest	10.4	932
Total 15-49	5.3	4,076

14.4 KNOWLEDGE OF HIV TESTING

Knowledge of one's HIV status helps HIV-negative individuals make specific decisions to reduce their risk and to increase safe sex practices so that they can remain disease-free. For those who are HIV infected, knowledge of their status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future. Testing of pregnant women is especially important to prevent mother-to-child transmission of HIV. Where migration is common, knowing one's HIV status is especially important for curbing the spread of the infection and empowering women to seek preventive and curative measures to protect themselves and their children.

The diagnosis of HIV infection benefits both the individual and the public in general. Advances in medical science have meant that having HIV need not necessarily be fatal, and with appropriate treatment, people with HIV can lead relatively normal lives. The capacity to ensure that all people diagnosed with HIV in Timor–Leste receive such treatment is now being established. Maximizing the diagnosis of HIV infection means that patterns of infection can be better monitored and interventions better targeted. The government of Timor-Leste is prioritizing the provision of

comprehensive voluntary counseling and testing (VCT) services at all levels of the health system. Because fear of discrimination and stigma is a major barrier to VCT access, confidentiality is of utmost importance (MOH, 2006).

In the 2009-10 TLDHS, both male and female respondents were asked whether they know of a place where people can go to get tested for HIV. Table 14.7 shows that, among the adult population age 15-49, men (35 percent) are twice as likely as women (17 percent) to know where to go to be tested for HIV. Knowledge of a place to get an HIV test differs by respondents' background characteristics. For instance, women and men in the oldest cohort are less likely to know of a place where they can get tested for HIV than their younger counterparts. Knowledge of HIV testing facilities is highest among urban women and men, among women who reside in Dili and men who reside in Manatuto (nearly all of whom are aware of a place to go to get tested), among men and women who have more than secondary education, and among respondents in the highest wealth quintile.

Table 14.7 Knowledge of a place to get an HIV test

Percentage of women and men age 15-49 who know where to get an HIV test, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Women		Men	
	Percentage who know where to get an HIV test	Number of women	Percentage who know where to get an HIV test	Number of men
Age				
15-24	19.9	5,487	33.2	1,636
15-19	18.0	3,144	27.3	994
20-24	22.3	2,343	42.4	643
25-29	19.7	1,897	43.0	586
30-39	16.4	3,219	36.0	992
40-49	10.1	2,534	30.2	861
Marital status				
Never married	21.4	4,675	34.5	1,865
Ever had sex	(23.2)	40	52.3	540
Never had sex	21.4	4,635	27.3	1,325
Married/living together	14.9	7,906	35.2	2,158
Divorced/separated/ widowed	12.1	556	17.1	53
Residence				
Urban	29.5	3,439	38.3	1,102
Rural	12.7	9,698	33.3	2,974
District				
Aileu	22.9	554	18.4	181
Ainaro	13.2	619	29.6	217
Baucau	17.2	1,408	58.6	415
Bobonaro	10.5	1,262	28.8	357
Covalima	14.9	781	38.3	236
Dili	33.0	2,466	34.9	797
Ermera	6.3	1,542	18.0	491
Lautem	15.9	864	17.6	308
Liquiçá	9.3	801	37.5	252
Manatuto	21.9	603	98.0	190
Manufahi	19.4	470	22.4	137
Oecussi	7.7	884	48.7	235
Viqueque	15.2	882	12.6	260
Education				
No education	2.8	3,854	9.4	791
Primary	7.7	3,005	21.6	1,046
Secondary	28.5	5,829	47.0	2,009
More than secondary	56.1	449	72.3	230
Wealth quintile				
Lowest	6.5	2,314	21.5	728
Second	7.9	2,468	25.9	781
Middle	12.3	2,590	32.3	786
Fourth	19.7	2,687	41.5	849
Highest	34.2	3,077	48.0	932
Total 15-49	17.1	13,137	34.7	4,076

Note: Figures in parentheses are based on 25-49 unweighted cases.

14.5 MALE CIRCUMCISION

Male circumcision has been shown to be associated with lower transmission of STIs, including HIV (WHO and UNAIDS, 2007). To know the practice of male circumcision in Timor-Leste, men age 15-49 interviewed in the 2009-10 TLDHS were asked if they were circumcised.

As seen in Table 14.8 male circumcision is not widespread in Timor-Leste, and only 6 percent of men have been circumcised. The practice is slightly more common among men age 25 and older, among men with little or no education, and among men in the lowest wealth quintile. The vast majority of circumcised men live in Oecussi.

Table 14.8 Male circumcision

Percentage of men age 15-49 who report having been circumcised, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage circumcised	Number of men
Age		
15-24	4.2	1,636
15-19	4.4	994
20-24	3.8	643
25-29	7.4	586
30-39	8.5	992
40-49	7.5	861
Residence		
Urban	6.6	1,102
Rural	6.3	2,974
District		
Aileu	2.5	181
Ainaro	1.3	217
Baucau	0.8	415
Bobonaro	2.6	357
Covalima	0.8	236
Dili	4.4	797
Ermera	0.6	491
Lautem	0.2	308
Liquiçá	0.8	252
Manatuto	0.7	190
Manufahi	0.0	137
Oecussi	83.0	235
Viqueque	0.9	260
Education		
No education	8.0	791
Primary	9.0	1,046
Secondary	4.5	2,009
More than secondary	5.2	230
Wealth quintile		
Lowest	13.0	728
Second	5.7	781
Middle	4.6	786
Fourth	4.7	849
Highest	4.8	932
Total 15-49	6.4	4,076

14.6 REPORTS OF RECENT SEXUALLY TRANSMITTED INFECTIONS

Information about the prevalence of sexually transmitted infections (STIs) is useful not only as a marker of unprotected sexual intercourse but also as a cofactor for HIV transmission. The 2009-10 TLDHS asked respondents who had ever had sex whether they had had an STI in the past 12 months. They were also asked whether, in the past year, they had experienced a genital sore or ulcer, and whether they had any genital discharge. These symptoms are useful in identifying STIs in men. They are less easily interpreted in women because women are likely to experience more non-STI conditions of the reproductive tract that produce a genital discharge.

In general, STIs are acquired through unprotected sexual intercourse and through the introduction of infected blood and blood products. STIs may also be transmitted from mother to fetus and from mother to neonate/infant during pregnancy and during the postpartum and breastfeeding periods (MOH, 2007).

Table 14.9 shows that self-reported prevalence of STIs and STI symptoms is relatively low, with prevalence among women higher than among men. About 1 percent of women and men reported STI prevalence in the 12 months prior to the survey. It is likely that these figures, which are quite low, underestimate the actual prevalence of STIs among the sexually active population in Timor-Leste. Many STI symptoms are not easily recognized, and often STIs do not have any visible symptoms.

Eight percent of women and 2 percent of men age 15-49 report having had a bad-smelling or abnormal genital discharge, 4 percent of women and 3 percent of men report a genital sore or ulcer, and twice as many women as men (8 percent and 4 percent, respectively) report having had an STI, genital discharge, or sore or ulcer in the past 12 months.

Table 14.9 Self-reported prevalence of sexually-transmitted infections (STIs) and STIs symptoms

Among women and men age 15-49 who ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Timor-Leste 2009-10

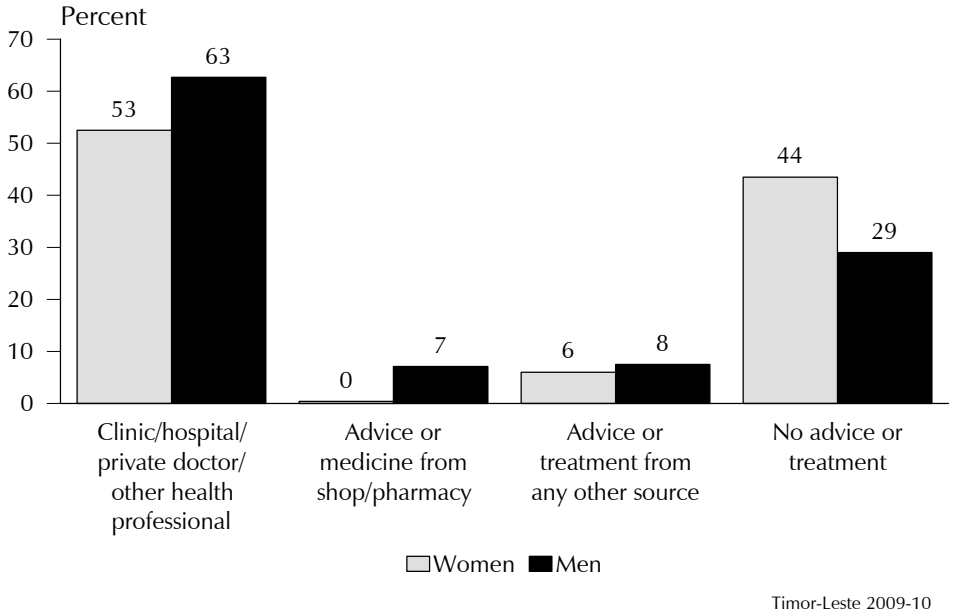
	Women					Men				
	Percentage of women who reported having in the past 12 months:					Percentage of men who reported having in the past 12 months:				
Background characteristic	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/ genital discharge/ sore or ulcer	Number of women who ever had sexual intercourse	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/ genital discharge/ sore or ulcer	Number of men who ever had sexual intercourse
Age										
15-24	1.5	8.5	3.6	9.1	1,428	0.9	2.9	5.2	7.0	461
15-19	1.0	9.2	5.1	9.9	272	0.0	0.0	4.2	4.2	101
20-24	1.7	8.4	3.2	8.9	1,157	1.2	3.7	5.5	7.8	360
25-29	1.4	7.6	4.0	8.3	1,582	0.7	2.4	3.8	4.6	499
30-39	1.1	7.8	3.8	8.6	3,042	0.5	1.7	1.9	2.4	945
40-49	1.3	6.5	3.7	7.6	2,449	0.9	2.5	2.3	3.9	846
Marital status										
Never married	(2.7)	(12.9)	(3.3)	(12.9)	40	1.2	3.5	7.4	9.3	540
Married/living together	1.3	7.4	3.8	8.2	7,905	0.6	1.8	1.7	2.7	2,158
Divorced/separated/ widowed	1.4	8.2	4.1	9.3	556	0.0	7.0	5.9	7.0	53
Male circumcision										
Circumcised	na	na	na	na	na	0.0	4.6	4.2	4.6	214
Not circumcised	na	na	na	na	na	0.7	2.0	2.8	4.0	2,515
Residence										
Urban	2.9	6.4	2.9	8.2	2,180	1.4	4.2	5.4	7.5	774
Rural	0.7	7.9	4.1	8.3	6,322	0.4	1.5	2.0	2.7	1,977
District										
Aileu	2.1	8.1	4.2	8.9	324	0.0	0.0	0.0	0.0	127
Ainaro	0.7	2.8	1.2	3.7	406	0.5	2.7	1.2	3.3	127
Baucau	0.4	5.1	5.1	5.2	893	1.9	1.9	1.9	2.6	249
Bobonaro	0.0	2.6	0.7	2.7	801	0.0	0.0	0.0	0.0	173
Covalima	0.5	12.0	1.1	12.8	511	0.0	2.0	2.7	3.0	191
Dili	3.6	5.2	2.5	7.4	1,568	1.7	4.1	6.2	8.2	589
Ermera	0.3	2.2	0.7	2.2	952	0.0	1.0	0.5	1.0	308
Lautem	0.5	11.3	3.1	12.6	594	0.8	0.8	0.3	1.1	194
Liquiçá	0.6	6.4	1.6	7.0	498	1.3	9.2	7.9	12.1	183
Manatuto	1.0	11.3	2.8	11.9	372	0.0	1.9	8.6	9.8	171
Manufahi	6.0	41.5	33.2	41.9	331	0.7	0.7	0.7	0.7	82
Oecussi	0.6	13.0	7.2	13.6	647	0.0	0.5	0.0	0.5	188
Viqueque	0.1	1.4	1.2	1.9	605	0.0	0.0	0.4	0.4	168
Education										
No education	0.8	7.0	3.7	7.6	3,180	0.0	1.5	2.2	2.6	603
Primary	0.9	8.1	4.3	9.0	2,203	0.6	2.0	1.7	2.7	762
Secondary	2.1	8.0	3.7	9.0	2,863	1.0	3.0	4.1	5.5	1,176
More than secondary	1.3	3.3	1.3	4.4	256	1.9	0.9	3.1	4.9	210
Wealth quintile										
Lowest	0.5	9.0	4.9	9.5	1,601	0.0	1.3	1.1	2.0	482
Second	0.7	7.9	4.6	8.4	1,614	0.3	1.9	1.4	2.0	500
Middle	1.1	7.7	3.5	8.1	1,661	0.5	2.1	3.1	3.8	518
Fourth	0.9	7.5	3.0	7.8	1,675	0.8	1.8	2.9	3.6	581
Highest	2.9	5.9	3.0	7.9	1,950	1.6	3.9	5.4	7.7	670
Total 15-49	1.3	7.5	3.8	8.3	8,501	0.7	2.3	2.9	4.0	2,751

Note: Total includes 22 males with information missing on circumcision. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Self-reported prevalence of STI or symptoms of STI among women vary minimally by age and marital status. But prevalence is distinctly higher among women residing in urban areas and in Manufahi. Prevalence is lowest among women with little to no education and among women in the lowest two wealth quintiles. Among men, prevalence is highest among the 20-24 age cohort, among never married men, circumcised men, those living in urban areas, those living in Baucau, those with more than secondary education, and those in the highest wealth quintile.

In the 2009-10 TLDHS, women and men who reported an STI or STI symptoms in the past 12 months were asked about the advice or treatment they sought for it. Figure 14.1 shows that 44 percent of women and 29 percent of men sought no advice or treatment, while about 53 percent of women and 63 percent of men sought advice or treatment from clinics, hospitals, private doctors, or other health professionals.

Figure 14.1 Women and Men Seeking Advice or Treatment for STIs



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14.7 Prevalence of Medical Injections

Use of nonsterile injections in a health care setting can contribute to the transmission of bloodborne pathogens. To measure the potential risk of transmission of HIV associated with medical injections, respondents in the 2009-10 TLDHS were asked if they had received an injection in the past 12 months, and if so, whether their last injection was given with a syringe from a new, unopened package. It should be noted that medical injections can be self-administered (e.g., insulin for diabetes). These injections were not included in the calculation.

Table 14.10 shows that 22 percent of women and 6 percent of men age 15-49 received a medical injection in the past 12 months. The average number of injections was less than 1 among women and men. The potential risk of transmission of HIV associated with such injections is very low because the vast majority of respondents—98 percent of women and men who received medical injections—reported that the syringe and needle were taken from a new, unopened package. These figures are encouraging for the Timorese population and for the Ministry of Health, because contaminated needles can be one means by which HIV is transmitted.

Table 14.10 Prevalence of medical injections

Percentage of women and men age 15-49 who received at least one medical injection in the last 12 months, the average number of medical injections per person in the last 12 months, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by background characteristics, Timor-Leste 2009-10

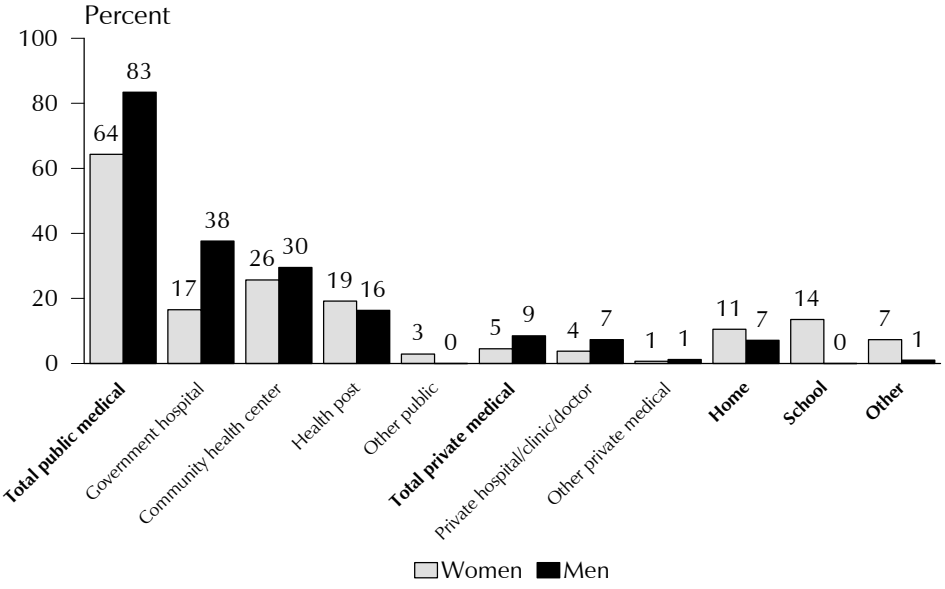
	Women					Men				
Background characteristic	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of women	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of men	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months
Age										
15-24	22.5	0.5	5,487	98.5	1,233	5.1	0.1	1,636	100.0	83
15-19	22.6	0.5	3,144	98.7	712	4.0	0.1	994	(100.0)	40
20-24	22.3	0.5	2,343	98.2	522	6.7	0.2	643	100.0	43
25-29	20.9	0.8	1,897	99.1	396	6.8	0.2	586	(100.0)	40
30-39	22.7	1.0	3,219	97.5	729	7.5	0.2	992	95.3	74
40-49	19.7	1.0	2,534	97.6	499	6.6	0.2	861	96.6	57
Residence										
Urban	18.4	0.4	3,439	98.6	633	9.5	0.3	1,102	98.1	104
Rural	22.9	0.9	9,698	98.1	2,225	5.0	0.1	2,974	97.7	150
District										
Aileu	53.6	1.0	554	98.9	297	8.2	0.1	181	*	15
Ainaro	14.8	0.3	619	99.4	92	1.5	0.0	217	*	3
Baucau	16.9	0.3	1,408	93.8	239	0.8	0.0	415	*	3
Bobonaro	5.5	2.9	1,262	96.1	69	0.0	0.0	357	*	0
Covalima	18.7	0.5	781	98.8	146	11.4	0.3	236	(100.0)	27
Dili	12.8	0.3	2,466	97.8	315	11.2	0.3	797	(96.2)	89
Ermera	3.0	0.1	1,542	(95.3)	45	1.2	0.0	491	*	6
Lautem	15.6	0.3	864	98.1	135	4.9	0.4	308	*	15
Liquiçá	60.3	1.6	801	99.1	483	4.6	0.1	252	*	12
Manatuto	35.0	1.0	603	98.8	211	30.9	0.9	190	99.1	59
Manufahi	30.1	0.7	470	100.0	142	3.7	0.0	137	*	5
Oecussi	68.0	1.7	884	98.5	601	8.6	0.2	235	*	20
Viqueque	9.3	0.2	882	97.5	82	0.0	0.0	260	*	0
Education										
No education	20.2	0.8	3,854	97.4	780	3.1	0.1	791	(93.8)	25
Primary	24.1	1.0	3,005	98.4	725	5.4	0.1	1,046	100.0	56
Secondary	22.0	0.6	5,829	98.4	1,284	7.2	0.2	2,009	98.7	145
More than secondary	15.3	0.4	449	100.0	69	11.9	0.3	230	*	27
Wealth quintile										
Lowest	27.4	0.7	2,314	98.3	635	3.6	0.1	728	(96.4)	26
Second	21.8	1.1	2,468	98.9	538	3.6	0.1	781	(100.0)	28
Middle	20.6	0.7	2,590	98.0	534	4.9	0.1	786	100.0	39
Fourth	21.7	0.9	2,687	97.6	584	6.2	0.2	849	98.9	53
Highest	18.4	0.6	3,077	98.0	567	11.6	0.4	932	96.4	108
Total 15-49	21.8	0.8	13,137	98.2	2,858	6.2	0.2	4,076	97.9	254

Note: Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

There are small variations by age in the likelihood of receiving an injection in the past 12 months among women, but among men it is highest among those age 30-39 (8 percent) and lowest among those age 15-19 (4 percent). The likelihood of receiving an injection in the past 12 months is higher among rural than urban women, but the reverse is true for men. It is highest among women with primary education and among women in the lowest wealth quintile, but highest among men with more than secondary education and men in the highest wealth quintile. Use of injections is highest among women residing in Oecussi and men in Manatuto.

Respondents who had received an injection in the past 12 months were asked where they obtained their last injection. About two in three women (64 percent) and four in five men (83 percent) age 15-49 received their last medical injection from a public sector facility; 5 percent of women and 9 percent of men received their last injection from a private medical facility (Figure 14.2). Within the public sector, women are most likely to obtain their last medical injection at community health centers, while men are most likely to receive theirs from government hospitals.

Figure 14.2 Source of Last Medical Injection



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14.8 HIV/AIDS-RELATED KNOWLEDGE AND BEHAVIOR AMONG YOUTH

Knowledge of HIV/AIDS issues and related sexual behavior among youth age 15-24 is of particular interest because the period between sexual initiation and marriage is for many young people a time of sexual experimentation that may involve high-risk behaviors. This section considers a number of issues that relate to both transmission and prevention of HIV/AIDS among youth, including the extent to which youth have comprehensive knowledge of HIV/AIDS transmission and prevention modes and knowledge of a source where they can obtain condoms. Issues such as abstinence, age at sexual debut, and condom use are also covered in this section.

HIV programming for young people is complex. Social norms place value on sexual abstinence in Timor-Leste. To reinforce these norms, HIV programs targeted at youth must include a strong emphasis on the development of life skills. Youths, especially young women, need skills in assertiveness and negotiation if they are to take actions based on informed decision-making. It is important to educate young people regarding condom use to prevent the risk of HIV and other STI transmission (MOH, 2006).

14.8.1 Comprehensive Knowledge about HIV/AIDS and Source for Condoms

Knowledge of how HIV is transmitted is crucial for enabling young people to avoid HIV infection. Table 14.11 shows that only 12 percent of women and 20 percent of men age 15-24 have comprehensive knowledge about HIV/AIDS. The level of comprehensive knowledge about HIV/AIDS does not vary greatly by marital status within the male population. Among young women, comprehensive knowledge is higher among those who have never been married than among those ever-married. Comprehensive knowledge increases with age, as both men and women age 20-24 have a higher level of comprehensive knowledge of HIV compared to those age 15-19.

Not surprisingly, comprehensive knowledge is higher among urban women (14 percent) than rural women (12 percent) and is twice as high among urban men as among rural men (34 percent and 15 percent, respectively). One in four young women in Baucau has comprehensive knowledge compared with less than 3 percent of young women in Ainaro. Comprehensive knowledge is relatively higher among young men in Manatuto (62 percent). Comprehensive knowledge generally rises with education and wealth quintile among both women and men.

Because of the important role that condoms play in preventing the transmission of HIV, respondents were asked whether they know of a source of condoms. Only responses about "formal" sources were counted, that is, sources other than friends, family members, and home.

Table 14.11 Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Timor-Leste 2009-10

	Women age 15-24			Men age 15-24		
Background characteristic	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of women	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of men
Age						
15-19	11.2	10.6	3,144	14.7	26.0	994
15-17	9.8	9.1	1,980	13.1	20.9	626
18-19	13.7	13.2	1,164	17.3	34.8	367
20-24	13.5	15.4	2,343	27.4	41.8	643
20-22	14.2	14.5	1,476	28.3	41.6	411
23-24	12.4	16.9	867	25.8	42.0	232
Marital status						
Never married	13.4	13.1	4,081	19.7	32.1	1,504
Ever had sex	(8.8)	(16.6)	23	33.6	68.8	329
Never had sex	13.4	13.1	4,058	15.8	21.9	1,175
Ever married	8.7	11.3	1,406	19.4	33.2	132
Residence						
Urban	14.0	18.2	1,456	33.5	37.3	431
Rural	11.6	10.7	4,031	14.7	30.4	1,205
District						
Aileu	10.1	9.6	270	13.8	22.4	76
Ainaro	2.5	9.0	250	3.1	33.1	92
Baucau	24.8	6.9	584	2.1	4.8	151
Bobonaro	6.6	10.6	567	24.1	31.3	161
Covalima	13.8	26.5	341	4.9	73.5	96
Dili	12.6	15.5	1,018	40.0	34.3	296
Ermera	9.3	1.6	673	2.6	22.1	244
Lautem	13.5	28.4	343	19.0	29.4	134
Liquiçá	10.5	10.5	351	24.9	29.0	103
Manatuto	12.0	25.3	267	61.8	98.0	80
Manufahi	20.9	20.6	195	46.4	16.2	53
Oecussi	4.2	10.9	300	5.8	38.3	63
Viqueque	14.5	3.7	328	9.3	17.6	86
Education						
No education	3.6	2.7	736	2.7	11.0	192
Primary	4.4	4.5	1,112	6.8	17.0	336
Secondary	15.6	16.3	3,475	25.6	39.6	1,073
More than secondary	31.0	36.2	164	(55.6)	(67.8)	34
Wealth quintile						
Lowest	8.9	8.1	879	11.4	24.2	289
Second	10.8	6.9	1,031	11.1	25.8	317
Middle	9.7	10.0	1,134	17.8	30.0	327
Fourth	14.5	16.4	1,204	20.8	40.9	351
Highest	15.8	19.5	1,239	34.6	38.0	352
Total	12.2	12.7	5,487	19.7	32.2	1,636

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 14.2, 14.3.1, and 14.3.2.
[2] For this table, the following responses are not considered sources for condoms: friends, family members, and home.

As shown in Table 14.11, young men are more than twice as likely as young women to know where to obtain a condom (32 percent compared with 13 percent). Knowledge of a condom source among youth rises with age, is higher in urban than in rural areas, and varies positively with education and wealth. Young women in Lautem and young men in Manatuto are more likely than their counterparts to know of a source of condoms.

14.8.2 Age at First Sex and Condom Use at First Sexual Intercourse

Information from the 2009-10 TLDHS can be used to examine several important issues relating to the initiation of sexual activity among youth, including age at first sex and condom use at first sexual intercourse.

Table 14.12 shows the proportions of women and men in the 15-24 age cohort who had sex before age 15 and before age 18. Two percent of young women and less than one percent of young men had sex by age 15, while 15 percent of young women and 10 percent of young men had sex by age 18. The female-male difference in the age at first sexual debut is primarily due to the earlier age at marriage of women.

Table 14.12 Age at first sexual intercourse among youth

Percentage of young women and of young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and of young men age 18-24 who had sexual intercourse before age 18, by background characteristics, Timor-Leste 2009-10

	Women age 15-24		Women age 18-24		Men age 15-24		Men age 18-24	
Background characteristic	Percentage who had sexual intercourse before age 15	Number of women	Percentage who had sexual intercourse before age 18	Number of women	Percentage who had sexual intercourse before age 15	Number of men	Percentage who had sexual intercourse before age 18	Number of men
Age								
15-19	1.1	3,144	na	na	0.8	994	na	na
15-17	0.9	1,980	na	na	1.0	626	na	na
18-19	1.5	1,164	12.4	1,164	0.6	367	12.4	367
20-24	2.7	2,343	16.8	2,343	0.1	643	9.2	643
20-22	1.9	1,476	15.9	1,476	0.1	411	10.5	411
23-24	4.2	867	18.4	867	0.0	232	6.9	232
Marital status								
Never married	0.0	4,081	0.4	2,161	0.6	1,504	9.5	878
Ever married	6.9	1,406	39.4	1,347	0.0	132	16.3	132
Knows condom source[1]								
Yes	1.5	694	11.3	515	1.0	527	19.6	396
No	1.8	4,793	16.0	2,992	0.3	1,109	4.4	614
Residence								
Urban	1.9	1,456	11.7	1,015	0.7	431	11.0	286
Rural	1.7	4,031	16.9	2,492	0.5	1,205	10.1	724
District								
Aileu	1.6	270	13.9	158	0.8	76	7.1	54
Ainaro	1.0	250	17.0	157	0.0	92	4.2	46
Baucau	1.1	584	15.2	356	0.0	151	1.8	90
Bobonaro	3.2	567	16.9	368	0.0	161	1.4	95
Covalima	2.4	341	16.0	198	4.9	96	42.8	58
Dili	2.3	1,018	10.8	737	0.0	296	8.8	210
Ermera	0.3	673	13.8	415	0.2	244	4.9	156
Lautem	2.0	343	21.5	200	0.0	134	11.2	65
Liquiçá	1.2	351	13.7	231	2.2	103	21.3	65
Manatuto	1.2	267	15.2	166	0.7	80	24.8	48
Manufahi	1.5	195	14.4	135	0.0	53	3.5	33
Oecussi	3.1	300	26.6	192	0.0	63	(22.6)	37
Viqueque	2.2	328	17.7	195	0.0	86	5.0	53
Education								
No education	3.2	736	21.1	519	0.0	192	7.9	122
Primary	4.1	1,112	30.9	697	0.5	336	10.9	181
Secondary	0.9	3,475	10.0	2,130	0.6	1,073	10.7	674
More than secondary	0.0	164	0.6	162	0.0	34	(9.2)	33
Wealth quintile								
Lowest	2.6	879	21.8	520	0.9	289	9.2	161
Second	1.7	1,031	16.1	649	0.3	317	8.7	190
Middle	1.6	1,134	18.6	716	0.4	327	9.3	205
Fourth	2.3	1,204	13.4	807	0.3	351	12.5	236
Highest	1.0	1,239	9.8	815	0.9	352	11.5	218
Total	1.8	5,487	15.3	3,507	0.5	1,636	10.4	1,010

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Looking at the age patterns for young women, the proportion of women reporting that they had sex before age 15 and 18 are lower among those under age 20 than among those above age 20. Lower percentages of women age 18-19 had initiated sex before age 18 than women age 20-24. This likely reflects the effect of rising age at marriage, because a negligible proportion of never-married young women report that they had sex by age 15 or by age 18.

There are obvious differences in age at first sexual intercourse among youth by district, education, and wealth quintile. For example, 4 percent of young women with primary education had first sexual intercourse before the age of 15, and about 31 percent had initiated sexual intercourse before the age of 18. On the other hand, less than 1 percent of young men with primary and secondary education had sexual intercourse before the age of 15, and 11 percent before age 18.

Table 14.13 Condom use at first sexual intercourse among youth

Among young women and young men age 15-24 who have ever had sexual intercourse, percentage who used a condom the first time they had sexual intercourse, by background characteristics, Timor-Leste 2009-10

	Women age 15-24		Men age 15-24	
Background characteristic	Percentage who used a condom at first sexual intercourse	Number of women who have ever had sexual intercourse	Percentage who used a condom at first sexual intercourse	Number of men who have ever had sexual intercourse
Age				
15-19	3.1	272	6.8	101
15-17	4.9	63	5.1	38
18-19	2.6	209	7.8	62
20-24	1.7	1,157	10.4	360
20-22	1.4	613	9.4	204
23-24	2.0	544	11.6	156
Marital status				
Never married	(4.9)	23	11.2	329
Ever married	1.9	1,406	5.4	132
Knows condom source[1]				
Yes	3.2	162	14.8	270
No	1.8	1,266	2.2	191
Residence				
Urban	1.6	342	12.2	128
Rural	2.1	1,087	8.5	333
District				
Aileu	2.7	60	(17.8)	25
Ainaro	1.1	71	*	15
Baucau	3.7	142	*	22
Bobonaro	3.3	167	*	13
Covalima	0.0	86	8.3	51
Dili	1.7	232	14.3	98
Ermera	1.0	151	(15.1)	67
Lautem	1.7	91	(2.3)	23
Liquiçá	0.8	92	3.4	45
Manatuto	2.3	71	4.8	62
Manufahi	4.8	72	*	9
Oecussi	0.0	97	*	20
Viqueque	2.1	96	*	12
Education				
No education	1.8	264	3.4	44
Primary	3.2	419	2.8	87
Secondary	1.4	717	10.2	303
More than secondary	0.0	29	*	27
Wealth quintile				
Lowest	2.8	243	7.0	64
Second	2.5	295	5.1	75
Middle	1.1	324	11.1	94
Fourth	1.7	319	12.6	114
Highest	2.1	247	9.6	114
Total	2.0	1,428	9.6	461

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicated that a figure is based on fewer than 25 cases and has been suppressed.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

To assess the extent of condom use at first sexual exposure, respondents age 15-24 who had ever had sex were asked whether they had used condoms the first time they had sex. Table 14.13 shows that only 2 percent of young women and 10 percent of young men had used condoms during their first sexual encounter. Never-married male youth were much more likely than ever-married male youth to have used a condom. Among male youth, higher educational attainment, greater wealth, and urban residence are related to the higher use of condoms during the first sexual intercourse. Differences among young women by background characteristics are small.

Table 14.14 Premarital sexual intercourse during premarital sexual intercourse among youth

Among never-married men age 15-24, the percentage who have never had sexual intercourse and the percentage who had sexual intercourse in the past 12 months, by background characteristics, Timor-Leste 2009-10

	Men		
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never- married men
Age			
15-19	90.2	7.1	990
15-17	93.9	4.2	626
18-19	83.8	12.1	364
20-24	54.9	29.5	515
20-22	58.8	27.0	352
23-24	46.6	34.8	162
Knows condom source[1]			
Yes	53.2	35.6	484
No	90.0	4.9	1,021
Residence			
Urban	75.3	17.4	402
Rural	79.2	13.8	1,102
District			
Aileu	71.1	10.0	71
Ainaro	89.3	4.9	87
Baucau	97.6	1.2	132
Bobonaro	100.0	0.0	148
Covalima	49.7	40.0	91
Dili	72.9	20.6	272
Ermera	78.2	10.9	228
Lautem	85.7	9.2	130
Liquiçá	61.9	16.6	95
Manatuto	25.4	73.9	74
Manufahi	95.4	0.0	46
Oecussi	76.0	17.2	57
Viqueque	97.8	0.0	76
Education			
No education	86.4	11.2	171
Primary	84.3	10.8	296
Secondary	76.8	15.2	1,004
More than secondary	(22.9)	(53.5)	34
Wealth quintile			
Lowest	83.9	10.9	268
Second	84.6	9.6	286
Middle	78.8	15.1	296
Fourth	73.2	15.0	323
Highest	72.1	21.8	331
Total	78.1	14.8	1,504

[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

14.8.3 Recent Sexual Activity among Never-married Youth

The period between age at first sex and age at first marriage is often a time of sexual experimentation, which can increase the risk of contracting HIV. Table 14.14 presents data on the percentage of never-married young men age 15-24 who had not yet engaged in sex and the percentage who had had sex in the 12 months preceding the survey. Data for young women is not shown separately because almost all never-married women report not having had sex.

The table shows that about 78 percent of never-married young men have never had sexual intercourse. As a consequence, among male youth, the proportions reporting sexual activity within the 12-month period before the survey are relatively low (about 15 percent). About 12 percent of never-married young men reporting recent sexual activity in the past 12 months said that they used a condom the last time they had sex (data not shown). Premarital sexual intercourse among young men is higher at older ages, in urban areas, in Manatuto, among highly educated youth, and among those in the wealthiest quintiles.

14.8.4 Drunkenness during Sex among Young Adults

Engaging in sexual intercourse while under the influence of alcohol can impair judgment, compromise power relations, and increase risky sexual behavior. Respondents who had sex in the 12 months preceding the survey were asked (for each partner) if they or their partner drank alcohol the last time they had sexual intercourse with that partner, and whether they or their partner was drunk. As shown in Table 14.15, very few young people (less than 1 percent of women and men) reported being drunk during their last sexual intercourse and less than 1 percent each of young women and men said that either they or their partners were drunk. There is little variation by background characteristics of respondents.

Table 14.15 Drunkenness during sexual intercourse among youth

Among all young women and young men age 15-24, the percentage who had sexual intercourse in the past 12 months while being drunk and the percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk, by background characteristics, Timor-Leste 2009-10

Background characteristic	Women age 15-24			Men age 15-24		
	Percentage who had sexual intercourse in the past 12 months when drunk	Percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk	Number of women	Percentage who had sexual intercourse in the past 12 months when drunk	Percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk	Number of men
Age						
15-19	0.0	0.5	3,144	0.2	0.2	994
15-17	0.0	0.3	1,980	0.3	0.3	626
18-19	0.1	0.7	1,164	0.2	0.2	367
20-24	0.1	1.1	2,343	1.5	1.8	643
20-22	0.0	0.9	1,476	1.7	1.7	411
23-24	0.2	1.4	867	1.1	1.9	232
Marital status						
Never married	0.0	0.0	4,081	0.7	0.7	1,504
Ever married	0.2	2.8	1,406	0.6	2.1	132
Knows condom source[1]						
Yes	0.0	0.8	694	1.6	1.6	527
No	0.1	0.7	4,793	0.3	0.5	1,109
Residence						
Urban	0.0	0.4	1,456	1.5	2.0	431
Rural	0.1	0.8	4,031	0.4	0.4	1,205
District						
Aileu	0.0	0.0	270	0.0	0.0	76
Ainaro	0.3	0.5	250	0.6	0.6	92
Baucau	0.3	0.6	584	0.0	0.0	151
Bobonaro	0.0	0.0	567	0.0	0.0	161
Covalima	0.0	0.3	341	0.0	0.0	96
Dili	0.0	0.2	1,018	1.3	2.0	296
Ermera	0.0	0.0	673	0.8	0.8	244
Lautem	0.0	0.3	343	0.0	0.0	134
Liquiçá	0.0	0.7	351	2.6	2.6	103
Manatuto	0.0	0.2	267	3.0	3.0	80
Manufahi	0.0	5.3	195	0.0	0.0	53
Oecussi	0.2	5.4	300	0.0	0.0	63
Viqueque	0.0	0.3	328	0.0	0.0	86
Education						
No education	0.1	1.3	736	0.8	0.8	192
Primary	0.2	1.4	1,112	0.4	0.4	336
Secondary	0.0	0.4	3,475	0.6	0.8	1,073
More than secondary	0.0	0.0	164	(5.7)	(5.7)	34
Wealth quintile						
Lowest	0.1	1.8	879	0.2	0.2	289
Second	0.1	0.7	1,031	0.2	0.2	317
Middle	0.0	0.4	1,134	0.6	0.6	327
Fourth	0.1	0.6	1,204	0.2	0.2	351
Highest	0.0	0.3	1,239	2.1	2.7	352
Total 15-24	0.1	0.7	5,487	0.7	0.8	1,636

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

WOMEN'S EMPOWERMENT AND DEMOGRAPHIC AND HEALTH OUTCOMES

15

This chapter highlights information on additional indicators of women's empowerment, other than education and employment, and relates those indices to demographic and health outcomes. Timorese society assigns strict gender roles for men and women that lead to discriminatory practices against women. In daily life, cultural norms in Timor-Leste assign the dominant role to men (patriarchal system) in planning or making decisions where tradition and customary law favors men over women. As a consequence, women lag behind men in educational attainment, literacy, and exposure to mass media, which are critical to women's empowerment and can exert considerable influence on their development and their ability to strengthen their position within the household and in society in general. In addition, the existing patriarchal system, which is prevalent in Southeast Asia, undermines women vis-à-vis men and subsumes their contribution to society even when they are educated or come from wealthy households (Kandiyoti, 1988). As women's involvement in the nondomestic sphere lessens, they become more dependent on men economically, which exacerbates their inability to participate in the decisionmaking process in the household. On the other hand, women in economically poor households are driven outside the domestic sphere in search of employment to fulfill their economic needs, which could in turn give them some degree of independence and role in the decisionmaking process (Kandiyoti, 1988).

As discussed in Chapter 3, data from the 2009-10 TLDHS show that men have higher educational attainment at all levels than women, that greater proportions of men than women are literate, and that men are more likely to be currently employed than women. In addition, the data show that women who belong to households in the highest wealth quintile are less likely to be employed. In this chapter, we examine other factors that empower women, such as women's control over their own cash earnings and that of their husband's, their participation in decisionmaking, their acceptance of wife beating, and their attitude toward the right of women to refuse sexual intercourse with their husband. These data are used in the estimation of empowerment indicators and the extent to which women's empowerment influences health outcomes (such as their reproductive health care practices, contraceptive use, and unmet need).

15.1 EMPLOYMENT AND FORM OF EARNINGS

Table 15.1 shows the percentage of currently married women and men age 15-49 who were employed in the 12 months before the survey and the percent distribution of the employed respondents by type of earnings they received (cash, in-kind, both, or neither). Forty-four percent of currently married women reported being employed in the past 12 months. The percentage of currently married women who were employed increases with age up to 56 percent for women age 45-49.

Although employment is assumed to go hand in hand with payment for work, not all women receive earnings for the work they do, and even among women who do receive earnings, not all are paid in cash. Only about one in five employed women (19 percent) receives payment in cash, and less than 1 percent receive both cash and payment in-kind. One percent receive payment in-kind only. Four in five employed women do not receive any form of payment for their work. As discussed in Chapter 3, these women are mostly involved in agricultural work and are predominantly working for a family member or are self-employed.

Table 15.1 Employment and cash earnings of currently married women and men

Percentage of currently married women and men age 15-49 who were employed at any time in the past 12 months and the percent distribution of currently married women and men employed in the past 12 months by type of earnings, according to age, Timor-Leste 2009-10

Age	Among currently married respondents: Percentage employed	Among currently married respondents: Number of respondents	Percent distribution of currently married respondents employed in the past 12 months, by type of earnings: Cash only	Cash and in-kind	In-kind only	Not paid	Missing	Total	Number of respondents
				WOMEN					
15-19	30.1	243	5.6	1.3	2.1	90.9	0.0	100.0	73
20-24	31.1	1,100	16.9	1.3	0.4	81.5	0.0	100.0	342
25-29	36.5	1,516	21.4	1.2	1.6	75.4	0.4	100.0	553
30-34	42.4	1,362	22.9	0.5	0.8	75.8	0.0	100.0	578
35-39	47.4	1,514	19.7	0.7	1.2	78.4	0.0	100.0	718
40-44	54.4	1,211	16.7	0.7	1.2	81.5	0.0	100.0	659
45-49	55.7	960	14.8	0.8	0.7	83.7	0.0	100.0	535
Total 15-49	43.7	7,906	18.6	0.8	1.1	79.5	0.1	100.0	3,458
				MEN					
15-19	*	4	*	*	*	*	*	*	4
20-24	98.5	125	24.5	0.4	0.8	74.3	0.0	100.0	123
25-29	97.8	359	38.9	0.2	0.8	60.2	0.0	100.0	351
30-34	97.5	368	38.6	0.5	0.8	60.1	0.0	100.0	358
35-39	96.7	492	34.7	0.8	1.1	63.3	0.2	100.0	476
40-44	97.7	433	33.4	0.5	1.2	64.8	0.0	100.0	424
45-49	96.8	378	24.9	0.9	0.5	73.6	0.0	100.0	366
Total 15-49	97.3	2,158	33.4	0.6	0.9	65.0	0.0	100.0	2,101

Note: Total includes 4 men age 15-19 not shown separately.

Table 15.1 also shows that nearly all men age 15-49 were involved in some type of work in the 12 months preceding the survey. Men are more likely to receive cash for their work than women. About one in three men (33 percent) receive cash only for their work, less than 1 percent receive cash and payment in-kind, less than 1 percent are paid in-kind only, and 65 percent do not receive any payment for their work. This is again because a large proportion of men are involved in agricultural work and self-employed. Payment in-kind is not common in Timor-Leste.

15.2 Control Over and Relative Magnitude of Women's Earnings

In addition to having access to income, women need to be able to have control over their earnings in order to be empowered. As a means to assess this, currently married women who earned cash for their work in the 12 months preceding the survey were asked who the main decisionmaker is with regard to the use of their earnings. Women's perception on the magnitude of their earnings relative to those of their husband is also explored as another measure of their empowerment.

Those data are presented in Table 15.2.1. More than one-third (36 percent) of currently married women who receive cash earnings report that they alone decide how their earnings are used, while more than half (58 percent) say that they decide jointly with their husband. Only 6 percent of women report that their husband alone decides how their earnings will be used. The proportion of currently married women who say that they decide by themselves how their earnings are used tripled from 12 percent in 2003 to the current level of 36 percent. On the other hand, the percentage of currently married women who say that they jointly decide with their husband decreased from 79 percent in the 2003 DHS to 58 percent in 2009-10, and those reporting that only husbands decide also decreased (8 percent and 6 percent, respectively).

Table 15.2.1 Control over women's cash earnings and relative magnitude of women's earnings: Women

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Person who decides how wife's cash earnings are used:				Wife's cash earnings compared with husband's cash earnings:						
	Mainly wife	Wife and husband jointly	Mainly husband	Total	More	Less	About the same	Husband/ partner has no earnings	Don't know/ Missing	Total	Number of women
Age											
20-24	24.8	62.7	12.5	100.0	41.6	28.1	15.5	10.1	4.7	100.0	62
25-29	40.5	55.0	4.4	100.0	26.7	36.5	21.0	14.5	1.3	100.0	125
30-34	33.3	62.0	4.7	100.0	24.6	34.4	31.7	8.7	0.6	100.0	135
35-39	38.9	56.6	4.4	100.0	18.9	41.2	26.2	12.9	0.8	100.0	147
40-44	35.7	58.2	6.1	100.0	22.4	35.1	33.7	8.8	0.0	100.0	115
45-49	39.2	56.3	4.5	100.0	33.2	26.5	27.4	7.6	5.2	100.0	83
Number of living children											
0	35.8	58.1	6.1	100.0	26.4	34.5	24.4	13.0	1.8	100.0	55
1-2	33.3	58.6	8.0	100.0	32.7	29.5	23.3	12.1	2.4	100.0	186
3-4	42.8	54.4	2.9	100.0	24.0	38.7	28.4	8.2	0.7	100.0	232
5+	31.8	62.1	6.0	100.0	21.8	36.2	28.1	12.0	1.9	100.0	199
Residence											
Urban	41.6	54.3	4.1	100.0	26.8	37.7	26.9	7.7	0.9	100.0	344
Rural	30.9	62.2	6.9	100.0	25.0	32.3	26.2	14.1	2.3	100.0	328
Education											
No education	41.8	44.7	13.5	100.0	18.1	27.6	34.5	15.5	4.3	100.0	92
Primary	36.7	58.8	4.4	100.0	28.9	40.3	20.6	8.0	2.3	100.0	83
Secondary	36.2	59.5	4.3	100.0	26.7	37.2	25.2	9.6	1.3	100.0	376
More than secondary	32.5	63.7	3.8	100.0	27.4	30.6	28.9	13.1	0.0	100.0	121
Wealth quintile											
Lowest	(40.4)	(56.3)	(3.4)	100.0	(11.2)	(29.1)	(34.8)	(18.7)	6.2	100.0	47
Second	(37.5)	(52.5)	(10.0)	100.0	(33.8)	(34.3)	(15.0)	(11.9)	5.0	100.0	52
Middle	31.3	60.3	8.5	100.0	25.1	40.0	18.1	14.5	2.3	100.0	66
Fourth	26.5	65.7	7.7	100.0	25.9	36.1	19.8	17.1	1.0	100.0	117
Highest	39.5	56.5	4.0	100.0	26.8	34.7	30.6	7.2	0.7	100.0	391
Total	36.4	58.2	5.5	100.0	25.9	35.1	26.6	10.8	1.6	100.0	672

Note: Figures in parentheses are based on 25-49 unweighted cases. Total includes 5 women age 15-19 not shown separately.

Younger Timorese women are less likely to be involved in how their cash earnings are spent, and this may be attributed to their young age at marriage (20-24). It is also interesting to note that older women (age 45-49) are more likely to decide how their cash earnings are spent relative to younger women, although women in the age group 25-29 seem to be more empowered perhaps due to the fact that they are more highly educated and employed in the lucrative sales and services sector (see Chapter 3). Women with five or more children are less likely to decide on their own how their earnings will be used than women with three to four children and those with no children. On the other hand, 62 percent of currently married women with five or more children make joint decisions with their husbands.

Urban women are much more independent in making decisions than rural women (42 percent and 31 percent, respectively). Alternatively, rural women are more likely than urban women to report that they make this decision jointly with their husband (62 percent versus 54 percent).

However, as education increases, women are less likely to make sole decisions and more likely to make joint decisions about how their cash earnings are spent. This finding reaffirms that education by itself does not guarantee empowerment for women who live in a patriarchal society (Acharya, 2010). It will be interesting to see if this pattern surfaces in the discussion of the relationship between education and domestic violence in the next chapter.

Women's perception of how much they earn vis-à-vis their husband could also impact how empowered they feel. Thirty-five percent of women believe that they earn less than their husband, 27 percent believe that they earn as much as their husband, and 26 percent believe that they earn more.

Women age 20-24, women with any education, women with fewer children, women in the highest wealth quintile, and urban women are more likely than their counterparts to report that they believe that they earn more than their husbands.

15.3 Control Over Men's Cash Earnings

Currently married men age 15-49 who receive cash earnings and currently married women age 15-49 whose husbands receive cash earnings were asked who decides how the husband's cash earnings are spent. Table 15.2.2 shows that 22 percent of men and 26 percent of women say that the wife mainly decides how the husband's earnings are used. Three in four men (75 percent) and more than two in three women (68 percent) say that the husband and wife decide jointly how the husband's cash earnings are used. Younger couples are less likely to share control over the husband's earnings as reported by men. Rural men and women are more likely to say that decisions about how the husband's cash earnings are spent are made jointly by the husband and wife.

In general, men who have higher education and those in the middle wealth quintile are more likely to make decisions jointly about the use of the husband's cash earnings, while more men in the highest wealth quintile said that their wife solely makes the decision (26 percent). This holds true for women also, as 37 percent of women in the highest wealth quintile said that they are responsible for deciding on the use of their husbands' income, compared with 21 percent in the lowest wealth quintile.

Table 15.2.2 Control over men's cash earnings

Percent distributions of currently married men age 15-49 who receive cash earnings and of currently married women age 15-49 whose husbands receive cash earnings, by person who decides how men's cash earnings are used, according to background characteristics, Timor-Leste 2009-10

	Men					Women						
	Person who decides how husband's cash earnings are used:					Person who decides how husband's cash earnings are used:						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Total	Number	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number
Age												
15-19	na	na	na	na	0	21.8	73.6	4.6	0.0	0.0	100.0	212
20-24	27.1	63.9	8.9	100.0	31	24.6	69.5	5.4	0.1	0.4	100.0	987
25-29	31.4	67.1	1.4	100.0	137	29.4	65.3	5.2	0.0	0.1	100.0	1,358
30-34	13.5	82.3	4.2	100.0	140	27.3	67.1	5.4	0.0	0.2	100.0	1,220
35-39	22.0	75.6	2.3	100.0	169	24.5	69.7	5.9	0.0	0.0	100.0	1,329
40-44	19.1	77.5	3.3	100.0	144	24.8	69.0	6.0	0.0	0.2	100.0	1,065
45-49	21.9	76.8	1.3	100.0	95	24.9	67.6	7.1	0.1	0.4	100.0	822
Number of living children												
0	(21.7)	(68.5)	(9.8)	100.0	48	25.0	69.7	5.1	0.0	0.2	100.0	406
1-2	25.7	72.3	2.0	100.0	220	25.5	69.2	5.0	0.1	0.3	100.0	1,897
3-4	19.7	78.5	1.8	100.0	265	25.9	68.2	5.6	0.0	0.2	100.0	2,147
5+	20.1	76.3	3.7	100.0	182	26.4	66.9	6.5	0.0	0.1	100.0	2,541
Residence												
Urban	27.2	70.3	2.6	100.0	372	40.2	53.3	5.9	0.1	0.6	100.0	1,933
Rural	15.9	80.9	3.2	100.0	343	20.5	73.8	5.7	0.0	0.0	100.0	5,059
Education												
No education	(29.3)	(70.7)	(0.0)	100.0	61	21.4	72.0	6.5	0.0	0.1	100.0	2,511
Primary	23.2	70.4	6.4	100.0	151	24.0	70.1	5.8	0.1	0.0	100.0	1,756
Secondary	21.1	76.5	2.5	100.0	395	30.8	63.7	4.9	0.0	0.4	100.0	2,512
More than secondary	18.3	80.7	1.0	100.0	108	38.1	57.4	4.5	0.0	0.0	100.0	213
Wealth quintile												
Lowest	(11.1)	(88.9)	(0.0)	100.0	29	21.3	72.4	6.2	0.0	0.1	100.0	1,209
Second	20.3	69.0	10.7	100.0	49	20.5	72.1	7.2	0.1	0.1	100.0	1,273
Middle	8.9	86.9	4.2	100.0	82	22.2	71.3	6.5	0.0	0.0	100.0	1,350
Fourth	22.3	76.2	1.5	100.0	194	25.0	70.1	4.6	0.0	0.3	100.0	1,409
Highest	25.5	72.0	2.5	100.0	361	36.8	58.1	4.7	0.0	0.3	100.0	1,750
Total 15-49	21.8	75.3	2.9	100.0	715	26.0	68.1	5.7	0.0	0.2	100.0	6,992

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Table 15.3 shows the percent distribution of currently married women age 15-49 who received cash earnings in the past 12 months by the person who decides how their cash earnings are used, and the percent distribution of currently married women age 15-49 whose husbands received cash earnings in the past 12 months by the person who decides how the husband's cash earnings are used, according to the relative magnitude of the earnings of the women and her husband.

Table 15.3 Women's control over her own earnings and over those of her husband

Percent distributions of currently married women age 15-49 with cash earnings in the past 12 months by person who decides how the woman's cash earnings are used and of currently married women age 15-49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between woman's and husband's cash earnings, Timor-Leste 2009-10

	Person who decides how the wife's cash earnings are used:					Person who decides how husband's cash earnings are used:						
Women's earnings relative to husband's earnings	Mainly wife	Wife and husband jointly	Mainly husband	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband/partner	43.0	52.4	4.6	100.0	174	31.4	63.2	5.0	0.3	0.0	100.0	174
Less than husband/partner	32.9	60.4	6.7	100.0	236	31.7	65.6	2.8	0.0	0.0	100.0	234
Same as husband partner	29.9	63.9	6.1	100.0	179	19.3	72.7	8.0	0.0	0.0	100.0	177
Husband/ partner has no cash earnings/did not work	43.4	54.9	1.7	100.0	73	na	na	na	na	na	na	0
Woman has no cash earnings	na	na	na	na	0	18.6	76.0	5.3	0.0	0.1	100.0	2,390
Woman did not work in past 12 months	na	na	na	na	0	30.0	63.6	6.1	0.0	0.3	100.0	4,007
Total[1]	36.4	58.2	5.5	100.0	672	26.0	68.1	5.7	0.0	0.2	100.0	6,992

Note: Totals include 11 women with information missing on earnings relative to husband.
na = Not applicable
[1] Excludes cases where a woman or her husband/partner has no earnings and includes cases where a woman does not know whether she earned more or less than her husband/partner

Women who believe that they earn more than their husband are more likely to also say that they solely decide how their cash earnings are used (43 percent) than women who believe that their cash earnings are the same as their husband's (30 percent) or that their cash earnings are less than their husband's (33 percent). On the other hand, women who believe that they earn about the same amount as their husband are more likely to also say that they make joint decisions with their husband about how their cash earnings and those of their husband are used (64 percent and 73 percent, respectively).

In Timorese culture married women are responsible for managing solely or jointly all cash earnings of their husband, irrespective of their own cash earning status. This is clearly indicated by the finding that 95 percent of women with no cash earnings participate alone or jointly with their husband in deciding how to use their husband's cash earnings.

15.4 WOMEN'S PARTICIPATION IN DECISIONMAKING

Women's participation in the decisionmaking process is an important indicator of their empowerment. In order to assess women's decisionmaking autonomy, the 2009-10 TLDHS sought information on women's participation in four types of household decisions: her own health care, making large household purchases, making household purchases for daily needs, and visits to family or relatives. Table 15.4.1 shows the percent distribution of currently married women according to the person in the household who usually makes decisions concerning these matters. Women are considered to participate in decisionmaking if they make decisions alone or jointly with their husband.

Table 15.4.1 Women's participation in decisionmaking

Percent distribution of currently married women by person who usually makes decisions about four kinds of issues, Timor-Leste 2009-10

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of women
Own health care	22.8	63.8	13.2	0.0	0.0	0.1	100.0	7,906
Major household purchases	20.9	64.9	13.9	0.0	0.1	0.1	100.0	7,906
Purchases of daily household needs	62.9	32.0	4.8	0.0	0.2	0.1	100.0	7,906
Visits to her family or relatives	12.8	78.3	8.7	0.0	0.0	0.1	100.0	7,906

The strength of women's role in decisionmaking varies with the type of decision. Timorese women are usually involved in all four specific decisions, although the extent of their involvement depends on the issue being decided. Sixty-three percent of currently married women reported that they alone made the final decision about daily household purchases, a significant increase from the 2003 DHS where only 44 percent said this. Regarding decisionmaking in other issues like one's own health care, making major household purchases, and visiting family or relatives, women are more likely to decide jointly with their husbands.

In the 2009-10 TLDHS, men were asked who (wife, husband, or both) should have the greater say in five specific decisions—making major household purchases, making daily household purchases, deciding when to visit the wife's family or relatives, deciding what to do with the money the wife earns, and deciding how many children to have. Table 15.4.2 shows the percent distribution of currently married men age 15-49 by the person they think should have the greater say in making decisions about five types of issues.

Table 15.4.2 Women's participation in decisionmaking according to men

Percent distribution of currently married men 15-49 by person who they think should have a greater say in making decisions about five kinds of issues, Timor-Leste 2009-10

Decision	Wife	Wife and husband equally	Husband	Don't know/ depends	Total	Number of men
Major household purchases	4.3	88.4	6.8	0.5	100.0	2,158
Purchases of daily household needs	55.4	42.0	1.8	0.7	100.0	2,158
Visits to wife's family or relatives	9.9	84.3	4.2	1.5	100.0	2,158
What to do with the money wife earns	14.7	76.5	2.6	6.2	100.0	2,158
How many children to have	2.2	94.4	2.3	1.2	100.0	2,158

Table 15.4.2 shows that for most decisions, the majority of currently married men age 15-49 think that the husband and wife should have equal say in making decisions. This is especially true for decisions about the number of children to have (94 percent), decisions on major household purchases (88 percent), and visits to the wife's family or relatives (84 percent). More than half (55 percent) of married men say that the wife should have the greater say in making decisions about small household purchases, while 42 percent think that the husband and wife should have equal say. On the other hand, 7 percent of married men say that the husband should have a greater say in making decisions about major household purchases, although most generally agree that it should not be the wife alone making such decision, with only 4 percent mentioning that the wife should have a greater say.

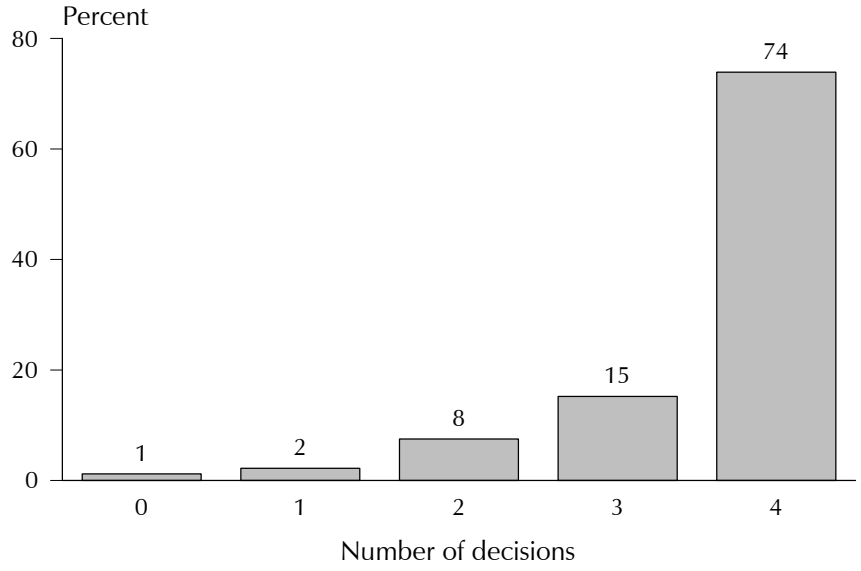
Table 15.5.1 shows the percentage of married women who participate in the four decisions specified for female respondents, according to background characteristics. As noted above, a woman is considered to participate in a decision if she says she usually makes the decision alone or jointly with her husband.

Eighty-seven percent of currently married women age 15-49 say that they make decisions about their own health care either by themselves or jointly with their husbands, and 86 percent say that they participate in decisions about major household purchases. Most currently married women say that they participate in decisions about daily household needs (95 percent) and in decisions about visits to their own family or relatives (91 percent). Overall, 74 percent of currently married women participate in all four decisions, and 1 percent do not participate in any of the four decisions.

There is little difference in participation in decisionmaking among women by age and by the number of children they have. It is interesting to note that women who are employed for cash, those in urban areas, those with higher education, and those belonging to wealthier households are less likely to participate in all four decisions. It will be interesting to see if these women are also vulnerable to domestic violence, which is discussed in greater detail in the next chapter.

The number of decisions in which a woman participates by herself or jointly with her husband is positively related to women's empowerment and reflects the degree of decisionmaking control that women are able to exercise in areas that affect their lives and environments. Figure 15.1 shows the distribution of currently married women according to the number of decisions in which they participate.

Figure 15.1 Number of Household Decisions in Which Women Participate



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Men were also asked about their attitude toward their wives' participation in the decisionmaking process. Table 15.5.2 shows the percentage of currently married men age 15-49 who think that the wife should have a greater or equal say with her husband on five specific kinds of decisions. More than three-quarters (78 percent) of currently married men age 15-49 believe that a wife should independently or jointly with her husband have a say in all five specified decisions. More than 90 percent of men agree on women's participation in each of the decisions specified. This is an indication that Timorese men think that women's participation in household decisionmaking is essential, although the previous table indicated that in reality this was not the case.

Table 15.5.1 Women's participation in decisionmaking by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Timor-Leste 2009-10

Background characteristic	Specific decisions				Percentage who participate in all four decisions	Percentage who participate in none of the four decisions	Number of women
	Own health care	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives			
Age							
15-19	91.0	84.6	96.1	92.2	73.9	0.2	243
20-24	86.1	87.2	96.2	92.3	74.1	0.8	1,100
25-29	85.6	86.3	94.4	90.0	73.9	1.4	1,516
30-34	88.6	86.8	95.0	92.1	75.7	1.2	1,362
35-39	86.9	85.7	95.5	91.7	73.9	1.0	1,514
40-44	85.8	85.1	94.3	91.0	73.2	1.0	1,211
45-49	85.3	84.0	93.4	89.3	72.2	2.1	960
Employment (past 12 months)							
Not employed	85.8	84.2	94.9	90.1	70.9	1.1	4,439
Employed for cash	79.3	83.6	90.3	90.5	66.0	0.5	672
Employed not for cash	90.0	89.4	96.3	93.3	81.0	1.2	2,784
Number of living children							
0	86.1	86.4	94.4	92.2	73.0	1.1	469
1-2	87.2	86.2	94.7	91.8	74.7	1.3	2,103
3-4	85.3	87.1	95.1	90.3	73.8	1.1	2,421
5+	87.3	84.5	94.8	91.2	73.6	1.3	2,913
Residence							
Urban	84.2	86.2	90.2	86.5	68.1	1.3	2,025
Rural	87.4	85.7	96.5	92.7	75.9	1.2	5,881
District							
Aileu	78.6	82.2	84.3	81.9	70.8	9.7	299
Ainaro	93.2	96.5	96.9	88.2	81.5	1.2	382
Baucau	68.6	74.5	97.3	91.3	58.3	1.7	852
Bobonaro	100.0	99.6	99.7	99.9	99.3	0.0	739
Covalima	57.0	77.6	98.8	95.5	49.7	0.4	458
Dili	82.9	87.7	87.1	83.2	67.7	1.5	1,459
Ermera	92.2	90.8	94.9	89.0	82.1	0.7	881
Lautem	87.7	55.7	97.2	95.8	47.1	0.2	541
Liquiçá	90.1	94.6	97.5	95.4	84.9	0.8	460
Manatuto	95.2	97.9	98.8	98.8	93.7	0.7	353
Manufahi	94.3	65.7	91.4	91.1	61.5	0.6	319
Oecussi	97.1	94.2	100.0	96.6	89.5	0.0	603
Viqueque	96.2	90.9	95.4	88.0	78.9	1.3	559
Education							
No education	87.3	87.3	95.4	91.2	76.9	1.4	2,909
Primary	88.1	85.0	95.5	91.7	74.0	1.3	2,027
Secondary	85.2	85.1	94.5	91.1	71.5	1.0	2,739
More than secondary	82.3	84.9	87.0	86.5	64.3	0.9	231
Wealth quintile							
Lowest	88.2	85.3	96.7	92.6	76.6	1.3	1,467
Second	87.3	84.9	95.0	92.2	74.8	1.4	1,487
Middle	86.7	85.5	96.1	92.0	75.5	1.4	1,559
Fourth	87.5	85.9	96.5	92.4	74.1	1.1	1,571
Highest	83.9	87.4	90.8	87.3	69.6	0.9	1,821
Total	86.6	85.9	94.9	91.1	73.9	1.2	7,906

Note: Total includes 11 women with information missing on employment status.

Table 15.5.2 Men's attitude toward wives' participation in decisionmaking

Percentage of currently married men age 15-49 who think that a wife should have the greater say alone or equal say with her husband on five specific kinds of decisions, by background characteristics, Timor-Leste 2009-10

Background characteristic	Specific decision					All five decisions	None of the five decisions	Number of men
	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives	What to do with the money the wife earns	How many children to have			
Age								
20-24	91.7	97.4	94.1	90.7	99.1	78.6	0.5	125
25-29	92.0	97.9	94.9	91.5	97.0	76.7	0.0	359
30-34	93.5	97.9	95.2	93.6	97.5	81.7	0.0	368
35-39	92.9	98.0	94.5	89.7	96.2	76.3	0.1	492
40-44	92.1	97.4	94.4	92.7	96.4	79.9	0.1	433
45-49	93.2	96.2	92.1	89.2	94.8	76.0	0.9	378
Employment (past 12 months)								
Not employed	86.2	98.7	93.2	80.1	99.0	67.6	0.0	57
Employed for cash	92.4	98.0	96.1	90.1	98.3	77.9	0.1	715
Employed not for cash	93.1	97.1	93.3	92.2	95.5	78.6	0.3	1,385
Number of living children								
0	94.5	97.6	95.6	91.9	98.8	81.1	0.0	135
1-2	91.7	97.6	95.0	92.1	96.3	76.7	0.1	620
3-4	92.9	97.9	94.0	90.6	96.1	77.0	0.2	704
5+	93.0	96.9	93.6	90.9	96.7	79.8	0.4	700
Residence								
Urban	90.9	97.0	96.4	84.2	97.5	72.5	0.3	567
Rural	93.3	97.6	93.5	93.7	96.2	80.1	0.2	1,592
District								
Aileu	69.0	94.2	59.4	93.9	96.1	45.2	1.3	92
Ainaro	97.3	97.9	99.2	97.9	95.8	93.1	0.0	101
Baucau	98.7	99.3	94.0	91.1	85.9	75.0	0.0	237
Bobonaro	99.2	94.6	91.2	89.1	96.1	75.1	0.0	170
Covalima	99.6	99.2	100.0	97.0	97.7	94.3	0.0	123
Dili	91.0	96.8	96.0	77.0	98.6	65.6	0.5	416
Ermera	100.0	100.0	100.0	100.0	100.0	100.0	0.0	233
Lautem	96.5	92.7	97.1	91.2	98.8	82.6	0.0	163
Liquiçá	96.9	97.8	92.6	85.5	95.1	77.8	0.0	124
Manatuto	100.0	97.2	99.4	100.0	100.0	96.7	0.0	96
Manufahi	12.7	98.5	97.8	97.8	90.3	9.9	1.5	77
Oecussi	95.4	98.3	87.8	95.4	98.8	81.4	0.6	165
Viqueque	100.0	99.4	97.4	99.4	99.4	96.7	0.0	159
Education								
No education	93.0	96.1	91.9	91.0	95.2	74.5	0.5	523
Primary	93.8	96.9	93.5	91.1	96.8	79.6	0.3	650
Secondary	92.1	98.4	96.0	91.0	96.8	78.9	0.1	853
More than secondary	89.6	99.2	95.6	94.3	98.8	79.1	0.0	132
Wealth quintile								
Lowest	92.8	97.9	91.5	94.6	96.6	79.6	0.2	413
Second	91.8	97.5	93.8	92.2	95.5	76.9	0.1	408
Middle	92.6	96.4	93.3	93.7	96.3	80.0	0.1	411
Fourth	94.6	97.6	95.4	89.6	96.8	78.8	0.3	447
Highest	91.5	97.8	96.7	86.9	97.3	75.4	0.4	479
Total 15-49	92.7	97.5	94.2	91.2	96.5	78.1	0.2	2,158

Note: Total includes 4 men age 15-19 not shown separately and 1 man with information missing on employment status.

15.5 ATTITUDES TOWARD WIFE BEATING

Another measure of women's empowerment derives from the idea that gender equity is essential to empowerment. Women who believe that wife beating is justified seemingly have a lower status than women who think otherwise because they are more accepting of norms that give men the right to use force against women, which is a violation of women's basic human rights. Violence against women has serious consequences for their mental and physical well-being, including their reproductive and sexual health (Heise et al., 1999). The attitude of women and men toward wife beating may be considered a proxy indicator for their attitude toward domestic violence.

Women and men were asked whether a husband is justified in hitting or beating his wife in each of the following five situations: if she burns the food, if she argues with him, if she goes out without telling him, if she neglects the children, and if she refuses to have sexual intercourse with him. The fewer situations, or reasons, that a woman agrees with indicates a greater sense of entitlement, self-esteem, and status, and reflects positively on her sense of empowerment.

A woman who believes that a husband is justified in hitting or beating his wife, for any of the five specified reasons, may consider herself to be of low status both absolutely and relative to men. Such a perception could act as a barrier to accessing health care for herself and for her children, affect her attitude toward contraceptive use, and impact her general well-being.

Table 15.6.1 shows that 86 percent of women believe that a husband is justified in beating his wife for at least one of the specified reasons. The most widely accepted reason for wife beating among women is neglecting the children (76 percent). About 64 percent of women believe that a husband is justified in beating his wife if she argues with him, and 72 percent believe that it is acceptable if she goes out without telling him. A smaller percentage of women believe that the husband is justified in hitting or beating his wife if she burns the food (43 percent) or denies him sexual intercourse (30 percent). Differentials by women's background characteristics are small, except among women in Viqueque, who are least likely to sanction wife beating. Only 59 percent of women in Viqueque believe that a husband is justified in beating his wife for at least one specified reason. Among the Timorese, it is the man and/or his family who pays dowry at marriage to his wife's family (*Belis, Barlaque*). However, once the payment is completed, the wife is often considered the property of the husband, thus losing her independence and status as an individual. In Viqueque, the payment of dowry is less prevalent and as such women in Viqueque may tend to exhibit greater self-esteem.

Men age 15-49 are almost as likely as women to report that they find physical violence against women justifiable (Table 15.6.2). Overall, four in five Timorese men agree with at least one of the reasons for why a man is justified in beating his wife. Men are most likely to justify beating a wife if she neglects the children (71 percent). Like women, men are least likely to say that burning food (38 percent) or refusing to have sex (27 percent) are grounds for wife beating. About 44 percent of men feel that arguing with one's husband is a justifiable reason for wife beating.

Table 15.6.1 Attitude toward wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Timor-Leste 2009-10

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of women
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	43.5	57.9	69.8	73.2	25.2	81.1	3,144
20-24	44.9	65.5	73.4	77.1	28.7	87.3	2,343
25-29	43.4	67.7	73.2	77.4	30.4	89.2	1,897
30-34	41.5	65.5	72.4	77.3	28.4	87.7	1,534
35-39	43.0	65.7	72.7	78.5	33.7	87.5	1,684
40-44	42.3	66.4	73.1	76.3	33.1	87.7	1,388
45-49	42.9	63.6	72.3	78.1	32.1	86.9	1,146
Employment (past 12 months)							
Not employed	44.2	60.0	70.0	74.2	26.3	85.0	7,943
Employed for cash	38.9	60.7	69.5	68.5	26.8	84.6	1,054
Employed not for cash	42.6	72.4	77.0	82.6	36.3	88.9	4,130
Marital status							
Never married	44.2	59.6	70.0	73.4	24.8	82.1	4,675
Married or living together	42.9	66.3	73.4	78.2	32.0	88.7	7,906
Divorced/separated/widowed	40.2	66.9	72.5	76.4	32.9	84.8	556
Number of living children							
0	44.2	59.9	70.3	73.4	25.1	82.4	5,178
1-2	43.1	66.9	74.1	78.2	30.9	89.2	2,350
3-4	42.4	65.9	72.6	77.7	32.4	88.6	2,554
5+	42.4	66.9	73.5	79.0	33.3	88.2	3,055
Residence							
Urban	48.0	63.1	69.5	72.3	21.5	89.3	3,439
Rural	41.6	64.3	73.1	77.9	32.3	85.1	9,698
District							
Aileu	50.6	65.8	78.2	77.4	42.5	86.5	554
Ainaro	36.8	27.6	58.7	59.5	13.9	64.5	619
Baucau	40.1	31.1	68.5	72.9	18.6	83.2	1,408
Bobonaro	19.3	60.2	76.2	85.7	10.2	88.7	1,262
Covalima	58.6	72.0	72.0	77.8	34.4	87.6	781
Dili	53.1	60.9	67.2	67.2	17.3	89.8	2,466
Ermera	51.4	90.9	91.3	92.1	51.1	96.2	1,542
Lautem	19.7	77.4	60.1	80.2	13.1	92.0	864
Liquiçá	70.4	80.9	83.0	82.9	67.8	88.7	801
Manatuto	48.9	78.9	72.9	70.0	44.0	83.0	603
Manufahi	22.4	66.7	62.5	83.2	12.7	91.0	470
Oecussi	60.9	74.3	88.0	90.3	68.5	92.3	884
Viqueque	14.9	49.7	49.5	54.4	10.4	59.1	882
Education							
No education	42.4	65.3	74.0	79.1	35.1	86.4	3,854
Primary	43.3	65.6	72.6	78.7	33.5	86.3	3,005
Secondary	43.8	62.5	71.1	74.0	24.5	85.9	5,829
More than secondary	43.3	59.4	67.4	70.1	19.2	88.1	449
Wealth quintile							
Lowest	38.9	59.1	68.0	74.2	31.8	81.1	2,314
Second	40.7	61.6	74.1	78.6	31.4	84.5	2,468
Middle	42.4	69.5	76.7	80.7	32.8	87.9	2,590
Fourth	44.1	67.1	72.7	78.3	30.6	87.7	2,687
Highest	48.5	62.1	69.5	71.0	22.4	88.5	3,077
Total	43.2	63.9	72.2	76.4	29.5	86.2	13,137

Note: Total includes 11 women with information missing on employment status.

Table 15.6.2 Attitude toward wife beating: Men

Percentage of all men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Timor-Leste 2009-10

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of men
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	36.6	39.5	58.5	61.9	23.9	72.3	994
20-24	37.9	42.9	63.1	70.1	27.6	79.7	643
25-29	38.1	44.2	65.4	72.7	23.2	83.3	586
30-34	39.0	46.9	68.2	77.6	28.0	85.1	439
35-39	36.1	47.5	68.6	78.6	28.5	87.2	553
40-44	37.6	49.4	67.7	73.2	28.9	84.8	462
45-49	38.8	43.8	69.8	72.7	28.5	81.2	400
Employment (past 12 months)							
Not employed	39.3	42.6	64.3	73.8	14.0	80.5	538
Employed for cash	29.3	37.6	61.0	70.8	17.8	78.3	973
Employed not for cash	40.3	46.9	66.3	70.6	32.4	81.7	2,564
Marital status							
Never married	36.6	41.4	60.8	65.8	24.1	76.0	1,865
Married or living together	38.2	46.3	68.1	75.5	28.5	84.7	2,158
Divorced/separated/widowed	45.0	53.9	68.2	78.1	25.6	87.9	53
Number of living children							
0	36.9	42.1	61.2	66.2	24.6	76.7	2,009
1-2	37.9	44.8	67.7	75.8	26.3	84.4	638
3-4	34.5	44.4	67.7	75.9	26.4	85.0	720
5+	41.9	49.1	69.4	75.5	32.0	84.6	709
Residence							
Urban	39.5	48.1	69.4	78.8	16.4	86.1	1,102
Rural	36.8	42.7	63.1	68.2	30.2	78.8	2,974
District							
Aileu	8.1	26.5	43.5	28.9	6.8	47.8	181
Ainaro	68.1	58.8	48.1	77.7	6.8	87.8	217
Baucau	11.0	18.3	58.3	63.6	71.4	93.9	415
Bobonaro	65.9	29.7	95.8	93.8	6.8	99.6	357
Covalima	27.1	64.0	69.3	74.3	33.3	94.7	236
Dili	34.6	45.9	70.7	82.4	8.8	86.0	797
Ermera	53.4	58.8	69.9	67.7	52.5	76.6	491
Lautem	76.1	75.5	90.7	88.5	45.7	94.6	308
Liquiçá	18.9	36.1	45.3	45.7	8.1	53.7	252
Manatuto	0.8	1.1	0.8	1.4	0.8	1.7	190
Manufahi	88.6	85.8	86.6	89.5	18.8	91.4	137
Oecussi	31.8	65.6	79.1	81.8	51.4	91.3	235
Viqueque	1.7	14.5	39.7	79.3	6.2	82.5	260
Education							
No education	37.1	46.5	64.8	72.2	28.7	81.4	791
Primary	35.0	41.3	63.4	68.3	29.0	78.7	1,046
Secondary	39.3	43.9	65.2	71.3	25.7	80.8	2,009
More than secondary	35.2	51.0	67.0	77.2	14.3	87.3	230
Wealth quintile							
Lowest	35.4	45.8	63.8	70.5	28.5	81.3	728
Second	41.1	45.9	63.9	68.6	30.0	80.2	781
Middle	37.4	41.9	62.3	67.3	29.3	79.4	786
Fourth	38.0	43.6	66.7	72.9	28.6	79.5	849
Highest	35.8	43.8	66.7	75.0	17.7	83.0	932
Total 15-49	37.5	44.1	64.8	71.1	26.5	80.7	4,076

Note: Total includes one man missing information on employment status

15.6 ATTITUDES TOWARD REFUSING SEX WITH HUSBAND

Women's sexual empowerment has important implications for demographic and health outcomes such as their exposure to HIV and other sexually transmitted infections. It is also an indicator of women's empowerment in general, as it measures women's level of acceptance of societal norms that socialize them to believe that women do not have the right to refuse sexual intercourse with their husband for any reason. The number of reasons that a wife finds acceptable for refusing sexual intercourse with her husband reflects perceptions of sexual roles and women's rights over their bodies, and relates positively to women's sense of self-esteem.

To measure beliefs about women's sexual empowerment, the 2009-10 TLDHS included questions on whether the respondent thinks that a wife is justified in refusing to have sexual intercourse with her husband under three circumstances: she knows her husband has a sexually transmitted disease, she knows her husband has sexual intercourse with other women, or she is tired or not in the mood. These three circumstances were chosen because they are effective in combining the issues of women's rights and consequences for women's health. Tables 15.7.1 and 15.7.2 show the responses of women and men, respectively.

Table 15.7.1 shows that about two in three women agree with each of the specified circumstances under which a wife is justified in refusing to have sexual intercourse with her husband, and 51 percent agree with all three of the reasons. Women are most likely to agree that a woman can refuse to have sexual intercourse with her husband if she knows her husband has a sexually transmitted infection or if she is tired or not in the mood (67 percent each). Sixty-five percent think that a woman is justified in refusing sexual intercourse if she knows that her husband has intercourse with other women. Twenty percent of women agree with none of the specified reasons, meaning that they think that a woman should not refuse sexual intercourse with her husband under any circumstances.

Women living in urban areas, those with higher education, and those in the highest wealth quintile are least likely to think all of the reasons for refusing sex are acceptable. Interestingly, these women are also less empowered with regard to other indicators, reinforcing the finding that within a patriarchal society educated, wealthy, and urban women are not automatically accorded equality.

Table 15.7.2 shows the percentage of men who think that a wife is justified in refusing to have sexual intercourse with her husband under the same three specified circumstances: she knows her husband has a sexually transmitted disease, she knows her husband has sexual intercourse with other women, or she is tired or not in the mood. The results indicate that the proportion of men who think that a woman is justified in refusing sexual intercourse with her husband for all three specified reasons is almost the same as the proportion of women (53 and 51 percent, respectively). Seventy-two percent of men, compared with 67 percent of women, think that a wife is justified in refusing sexual intercourse with her husband if she knows he has a sexually transmitted infection; 71 percent of men, compared with 65 percent of women, think that a wife is justified in refusing sexual intercourse if she knows that her husband has intercourse with other women; and 75 percent of men, compared with 67 percent of women, think that a woman is justified in refusing sexual intercourse with her husband if she is tired or not in the mood. Men age 15-19, those who have primary education, those who are not employed, those who have never married, and those who have no children are least likely to accept all of the reasons for refusing sex.

Notable differences are seen by education, with highly educated men more likely to agree with all of the specified reasons for women to refuse sexual intercourse. Conversely, these men are also least likely to agree with none of the specified reasons, indicating that urban, educated, and wealthy men are more accepting of women's entitlement to control their sexuality. There are also substantial variations by district, with men in Viqueque less likely to accept all reasons for refusing sex (9 percent), while nearly all men in Manatuto agreed with all the specified reasons for refusing sex (99 percent). In the case of women, it was highest in Ermera (90 percent).

Table 15.7.1 Attitude toward refusing sexual intercourse with husband: Women

Percentage of all women age 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Timor-Leste 2009-10

Background characteristic	Wife is justified in refusing intercourse with her husband if she: Knows husband has a sexually transmitted disease	Knows husband has intercourse with other women	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of women
Age						
15-19	54.5	50.9	48.6	37.9	35.5	3,144
20-24	64.9	62.8	65.3	47.9	20.5	2,343
25-29	71.2	70.2	74.4	53.1	11.7	1,897
30-34	73.9	71.1	75.9	57.4	12.8	1,534
35-39	76.7	72.5	76.0	59.5	11.3	1,684
40-44	73.3	71.7	72.9	56.5	13.4	1,388
45-49	72.1	70.2	71.6	57.1	15.4	1,146
Employment (past 12 months)						
Not employed	65.6	62.4	64.8	48.2	21.0	7,943
Employed for cash	60.7	62.4	68.6	44.4	17.9	1,054
Employed not for cash	72.7	70.1	69.5	56.8	17.2	4,130
Marital status						
Never married	55.1	51.4	49.7	38.0	34.3	4,675
Married or living together	74.3	72.5	76.2	57.5	11.1	7,906
Divorced/separated/widowed	72.4	68.3	71.7	56.9	15.4	556
Number of living children						
0	56.8	53.7	52.2	39.9	32.1	5,178
1-2	72.0	70.1	75.6	54.2	11.1	2,350
3-4	73.6	71.4	74.8	55.6	11.4	2,554
5+	76.7	74.2	77.2	61.6	11.5	3,055
Residence						
Urban	48.7	46.2	56.6	26.6	25.8	3,439
Rural	74.0	71.4	70.1	59.0	17.3	9,698
District						
Aileu	68.7	59.8	74.6	53.6	21.4	554
Ainaro	61.0	59.5	51.5	42.8	30.2	619
Baucau	89.5	89.4	88.8	86.7	8.9	1,408
Bobonaro	63.3	59.7	37.8	25.9	25.7	1,262
Covalima	75.9	60.3	68.4	40.0	8.1	781
Dili	38.6	34.2	51.6	14.2	29.7	2,466
Ermera	90.6	91.7	91.3	89.8	7.3	1,542
Lautem	80.8	66.0	71.1	54.0	11.4	864
Liquiçá	76.8	72.8	73.9	56.3	11.9	801
Manatuto	79.1	78.7	73.7	68.2	15.0	603
Manufahi	23.4	64.1	59.2	20.0	25.5	470
Oecussi	82.6	80.9	79.9	77.4	14.8	884
Viqueque	52.7	48.7	49.5	42.8	41.6	882
Education						
No education	74.3	71.8	70.6	59.1	16.6	3,854
Primary	69.4	67.1	69.7	54.2	18.5	3,005
Secondary	63.2	60.4	62.7	44.6	21.5	5,829
More than secondary	48.9	46.9	61.9	30.3	26.0	449
Wealth quintile						
Lowest	70.4	68.0	67.0	56.9	21.5	2,314
Second	73.5	71.1	69.5	58.7	18.1	2,468
Middle	74.0	71.2	70.1	58.0	17.0	2,590
Fourth	70.1	67.3	67.6	51.5	17.0	2,687
Highest	52.4	49.9	60.1	32.1	23.5	3,077
Total	67.4	64.8	66.6	50.5	19.5	13,137

Note: Total includes 11 women with information missing on employment status.

Table 15.7.2 Attitude toward refusing sexual intercourse with husband: Men

Percentage of all men age 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Timor-Leste 2009-10

Background characteristic	Wife is justified in refusing intercourse with her husband if she: Knows husband has a sexually transmitted disease	Knows husband has intercourse with other women	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
Age						
15-19	58.3	55.7	58.3	39.6	28.0	994
20-24	72.4	68.7	75.0	53.7	13.6	643
25-29	75.4	76.4	82.4	55.8	6.3	586
30-34	80.4	78.6	82.7	59.6	4.8	439
35-39	74.6	78.5	83.9	56.9	4.7	553
40-44	78.9	80.1	83.7	62.0	5.4	462
45-49	79.3	76.3	78.3	57.7	6.7	400
Employment (past 12 months)						
Not employed	66.7	56.0	69.6	45.1	19.3	538
Employed for cash	76.0	77.2	83.0	55.7	5.6	973
Employed not for cash	71.5	71.9	73.6	53.5	13.4	2,564
Marital status						
Never married	64.0	60.2	65.5	44.1	21.3	1,865
Married or living together	78.7	80.2	84.0	60.6	4.6	2,158
Divorced/separated/widowed	75.9	80.0	72.2	54.6	9.1	53
Number of living children						
0	64.8	61.7	66.5	45.1	20.2	2,009
1-2	81.3	81.0	85.2	62.4	3.9	638
3-4	76.6	81.7	84.4	59.3	3.6	720
5+	79.1	77.8	82.4	60.1	6.2	709
Residence						
Urban	75.0	65.1	78.5	51.0	9.8	1,102
Rural	70.9	73.3	74.2	53.7	13.2	2,974
District						
Aileu	54.9	50.2	47.8	37.3	34.9	181
Ainaro	74.1	68.3	78.8	62.9	17.2	217
Baucau	65.3	85.9	79.9	51.3	6.4	415
Bobonaro	68.6	67.3	44.0	11.6	1.7	357
Covalima	86.7	90.1	89.6	78.2	1.8	236
Dili	70.3	60.4	78.6	45.4	11.2	797
Ermera	71.2	71.5	71.9	67.3	25.3	491
Lautem	91.4	73.4	92.8	68.4	2.5	308
Liquiçá	73.9	39.3	61.9	30.2	21.2	252
Manatuto	99.2	99.2	99.4	98.9	0.6	190
Manufahi	95.2	95.3	88.0	87.2	3.4	137
Oecussi	92.5	94.3	95.9	87.2	1.6	235
Viqueque	14.8	57.7	60.3	9.0	30.8	260
Education						
No education	66.9	70.0	72.3	49.1	13.6	791
Primary	70.0	68.2	69.2	48.2	15.4	1,046
Secondary	74.3	72.3	78.9	55.9	10.9	2,009
More than secondary	78.2	77.5	83.3	62.4	5.8	230
Wealth quintile						
Lowest	68.0	72.1	74.4	52.5	13.8	728
Second	67.9	70.1	70.3	50.4	16.2	781
Middle	73.9	73.2	75.4	54.3	11.0	786
Fourth	73.0	73.2	75.8	53.6	11.4	849
Highest	76.0	67.3	79.9	53.7	9.7	932
Total 15-49	72.0	71.1	75.4	53.0	12.3	4,076

Note: Total includes one man missing information on employment status.

Twenty percent of women and 12 percent of men agree with none of the reasons. The two most accepted reasons for refusing to have sex, among women and men, are if the wife knows her husband has a sexually transmitted disease and if a wife is tired or not in the mood. Though not significant, for both women and men, the least acceptable reason for a wife to refuse sex is when she knows that her husband has intercourse with other women.

Women's empowerment is closely associated with the support she receives from her husband and family members. The 2009-10 TLDHS explored men's attitude toward a husband's rights when his wife refuses to have sexual intercourse. Men were asked whether, when a wife refuses to have sexual intercourse with him, a husband has the right to get angry and reprimand her, refuse her financial support, use force to have sex, or have sex with another woman. Table 15.7.3 indicates that the majority of men (55 percent) agree with none of the reasons to justify negative behavior on the part of a man if his wife refuses to have sexual intercourse with him. On the other hand, 6 percent of men agree with all of the specified rights for men to exhibit the specified negative behavior, with men in Ermera reporting this most often (28 percent), followed by men in Oecussi (17 percent).

Table 15.7.3 Men's attitude toward a husband's rights when his wife refuses to have sexual intercourse

Percentage of men age 15-49 who consider that a husband has the right to certain behaviors when a woman refuses to have sex with him when he wants her to, by background characteristics, Timor-Leste 2009-10

Background characteristic	When a woman refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Age							
15-19	31.4	16.0	13.4	15.2	2.7	57.2	994
20-24	29.8	20.3	15.5	19.0	6.1	59.8	643
25-29	31.0	22.3	15.7	23.3	6.9	54.6	586
30-34	34.0	21.7	17.6	24.8	8.4	54.5	439
35-39	35.2	22.6	16.7	25.4	8.2	54.1	553
40-44	35.7	26.1	18.7	28.2	8.9	50.5	462
45-49	35.9	24.7	17.6	24.9	7.2	48.0	400
Employment (past 12 months)							
Not employed	18.9	8.9	5.2	10.1	1.2	72.8	538
Employed for cash	26.6	15.5	11.6	17.4	4.0	63.4	973
Employed not for cash	38.1	25.7	19.9	26.0	8.3	47.9	2,564
Marital status							
Never married	29.6	17.0	13.4	15.7	3.4	59.5	1,865
Married or living together	35.6	24.5	17.8	26.8	8.6	50.8	2,158
Divorced/separated/widowed	33.2	25.5	31.6	32.3	17.2	57.8	53
Number of living children							
0	29.6	17.3	13.6	16.7	3.7	59.1	2,009
1-2	35.5	24.7	18.1	26.4	10.1	52.6	638
3-4	35.3	22.5	17.0	26.5	7.3	52.2	720
5+	37.0	27.3	19.8	27.6	9.5	47.5	709
Residence							
Urban	23.6	12.8	6.2	11.2	2.3	67.6	1,102
Rural	36.2	24.1	19.6	25.7	7.8	50.1	2,974
District							
Aileu	13.0	3.3	1.1	2.7	0.7	85.9	181
Ainaro	8.7	7.4	0.4	7.3	0.0	82.6	217
Baucau	65.7	36.5	56.9	67.5	12.2	9.8	415
Bobonaro	16.6	14.8	34.7	24.2	0.7	35.0	357
Covalima	81.6	66.5	6.6	5.8	2.7	6.8	236
Dili	11.6	4.8	1.2	5.9	0.2	81.0	797
Ermera	41.7	35.1	33.5	44.2	27.7	48.5	491
Lautem	76.4	27.4	7.7	7.0	4.0	22.1	308
Liquiçá	3.8	2.4	2.1	2.3	0.0	92.1	252
Manatuto	1.1	0.3	0.3	0.6	0.3	98.6	190
Manufahi	33.7	5.8	6.2	6.2	5.4	64.6	137
Oecussi	65.5	64.4	23.5	72.9	16.7	17.7	235
Viqueque	10.0	5.6	2.0	6.2	0.0	84.3	260
Education							
No education	29.7	24.6	21.6	27.5	9.5	52.8	791
Primary	32.9	23.0	17.6	25.8	6.3	51.8	1,046
Secondary	35.0	19.7	14.2	19.1	5.6	55.5	2,009
More than secondary	24.6	12.4	5.2	8.2	2.1	69.6	230
Wealth quintile							
Lowest	38.6	24.3	14.1	25.4	5.0	48.7	728
Second	32.7	23.3	19.5	24.1	8.8	52.7	781
Middle	35.3	21.4	21.6	25.5	8.1	50.6	786
Fourth	37.2	24.3	16.5	22.5	7.7	52.0	849
Highest	22.3	13.5	9.3	13.2	2.5	67.6	932
Total 15-49	32.8	21.1	16.0	21.8	6.3	54.9	4,076

Note: Total includes one man missing information on employment status.

Of all the specified reasons, men are most likely to agree that a husband has the right to get angry and reprimand his wife if she refuses to have sex with him (33 percent) and least likely to agree with having forced sex with his wife (16 percent). As men's level of education increases, they are less likely to agree that a husband has the right to exhibit any of the specified behaviors. For example, 10 percent of men with no education condone negative behaviors, compared with 2 percent of men with more than secondary education. A similar relationship is seen with respect to wealth quintile, with the exception of men in the lowest wealth quintile. As household wealth rises from the second quintile to the highest quintile, the percentage of men who support all the specified reasons decreases from 9 percent to 3 percent, respectively. Men therefore exhibit the expected pattern; that is, urban, educated, and wealthy men are more tolerant of women's sexual rights.

Table 15.8 provides a brief overview on how the three basic empowerment indicators—number of decisions in which women participate, number of reasons for which wife beating is justified, and number of reasons for refusing to have sexual intercourse with husband—relate to each other.

The first index shows the number of decisions in which women participate alone or jointly with their husband. This index ranges in value from 0 to 4 and is positively related to women's empowerment. It reflects the degree of decisionmaking control that women are able to exercise in areas that affect their lives and environments.

The second index is the number of reasons for which the respondent thinks that a husband is justified in beating his wife. This index ranges in value from 0 to 5. A lower score on this indicator is interpreted as reflecting a greater sense of entitlement and self-esteem, and higher status for women.

The final index is the number of circumstances in which the respondent feels that a woman is justified in refusing sexual intercourse with her husband or partner. This index ranges in value from 0 to 3 and is positively related to women's sense of self-esteem and empowerment. It reflects perceptions of sexual roles and women's rights over their bodies.

Table 15.8 Indicators of women's empowerment

Percentage of women age 15-49 who participate in all decisionmaking, percentage who disagree with all reasons for justifying wife beating, and percentage who agree with all reasons for refusing sexual intercourse with husband, by value on each of the indicators of women's empowerment, Timor-Leste 2009-10

Empowerment indicator	Currently married women: Percentage who participate in all decision-making[1]	Currently married women: Number of women	Percentage who disagree with all the reasons justifying wife beating	Percentage who agree with all the reasons for refusing sexual intercourse with husband	Number of women
Number of decisions in which women participate[1]					
0	na	95	18.3	65.0	95
1-2	na	765	8.2	53.6	765
3-4	na	7,047	11.6	57.8	7,047
Number of reasons for which wife beating is justified[2]					
0	76.6	895	na	39.4	1,815
1-2	70.2	1,867	na	41.1	2,984
3-4	74.0	3,414	na	47.8	5,552
5	76.5	1,730	na	73.5	2,785
Number of reasons given for refusing to have sexual intercourse with husband[3]					
0	72.2	876	30.6	na	2,566
1-2	74.9	2,484	8.0	na	3,930
3	73.7	4,546	10.8	na	6,640

na = Not applicable
[1] Restricted to currently married women. See Table 15.5.1 for the list of decisions.
[2] See Table 15.6.1 for the list of reasons
[3] See Table 15.7.1 for the list of reasons

Table 15.8 shows these three indicators of women's empowerment and how they relate to each other. It shows the percentage of married women age 15-49 who participate in all decisionmaking, the percentage of women who disagree with all the specified reasons for justifying wife beating, and the percentage of women who agree with all the specified reasons for a wife refusing to have sexual intercourse with her husband, by the value on each of the indicators. In general, the expectation is that women who participate in making household decisions are more likely to have gender-egalitarian beliefs.

The findings on women's empowerment indicate that among women who participate in all the decisions, 58 percent justified their right to refuse sexual intercourse with their husband for all reasons, compared with women who participated in 1-2 decisions (54 percent) and in no decisions (65 percent). Similarly, women who participated in all decisions are more likely to disagree with all the reasons for justifying wife beating (12 percent) than women who participate in fewer decisions (8 percent). However, it is also important to point out that women who participate in no decisions are most likely to disagree with all the reasons for justifying wife beating (18 percent). This anomalous pattern is difficult to explain. Similarly, women who do not support wife beating for any reason at all are most likely to participate in all the decisionmaking in the household (77 percent), but this percentage is similar to women who justify all five reasons for wife beating. The direction of the relationship between participation in decisionmaking and reasons to justify wife beating is not clear. Similarly, there is no strong relationship between participation decisionmaking and the number of reasons for refusing sexual intercourse with a husband. This may be attributed to the fact that Timorese women in general exhibit a culture of tolerance and acceptance of male domination, since the majority of women mentioned that it is acceptable for a man to beat his wife for at least one reason (86 percent as seen in Table 15.6.1).

It is also noteworthy to point out that women who disagree with all the reasons justifying wife beating are also most likely to not accept any reason for a woman to refuse sexual intercourse with her husband (31 percent), and this percentage decreases to 8 percent for women who accept at least one to two reasons and 11 percent for women who accept all three reasons.

15.7 CURRENT USE OF CONTRACEPTION BY WOMEN'S STATUS

A woman's desire and ability to control her fertility and her choice of contraceptive method are in part affected by her status in the household and her own sense of empowerment. A woman who feels that she is unable to control her life may be less likely to feel that she can make and carry out decisions about her fertility. She may also feel the need to choose methods that are less obvious or which do not depend on her husband's cooperation. Table 15.9 shows the distribution of currently married women by contraceptive method used, according to the three empowerment indicators.

The data indicate that there is a positive relationship between use of contraception and participation in household decisionmaking. For example, current use of modern contraceptive methods rises from 13 percent among women who participate in none of the household decisions to 21 percent among women who participate in one or more household decisions. Also noteworthy is the finding that women who believe that wife beating is justified for all of the five specified reasons are most likely to use a method of contraception. There is no clear trend in using a method of contraception and the belief in a woman's right to refuse sexual intercourse with her husband. Perhaps this could also be attributed to the fact that women less often justify a wife refusing sex with her husband for any reason due to cultural norms.

Table 15.9 Current use of contraception by women's status

Percent distribution of currently married women age 15-49 by current contraceptive method, according to selected indicators of women's status, Timor-Leste 2009-10

			Modern methods						
Empowerment indicator	Any method	Any modern method	Female sterilization	Temporary modern female methods[1]	Male condom	Any traditional method	Not currently using	Total	Number of women
Number of decisions in which women participate[2]									
0	16.2	12.5	0.0	12.5	0.0	3.8	83.8	100.0	95
1-2	23.8	21.4	0.7	20.7	0.0	2.4	76.2	100.0	765
3-4	22.2	21.2	0.8	20.1	0.3	1.1	77.8	100.0	7,047
Number of reasons for which wife beating is justified[3]									
0	19.1	18.2	0.8	17.4	0.0	0.9	80.9	100.0	895
1-2	23.0	21.7	1.2	20.2	0.2	1.3	77.0	100.0	1,867
3-4	22.3	21.3	0.7	20.3	0.3	0.9	77.7	100.0	3,414
5	23.5	21.6	0.6	20.8	0.2	1.9	76.5	100.0	1,730
Number of reasons given for refusing to have sexual intercourse with husband[4]									
0	22.5	21.8	0.6	20.5	0.7	0.8	77.5	100.0	876
1-2	27.8	26.3	1.1	24.8	0.3	1.5	72.2	100.0	2,484
3	19.3	18.2	0.6	17.4	0.1	1.2	80.7	100.0	4,546
Total	22.3	21.1	0.8	20.1	0.2	1.2	77.7	100.0	7,906

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly, lactational amenorrhea method and standard days method
[2] See Table 15.5.1 for the list of decisions.
[3] See Table 15.6.1 for the list of reasons
[4] See Table 15.7.1 for the list of reasons

15.8 IDEAL FAMILY SIZE AND UNMET NEED BY WOMEN'S STATUS

The ability of women to make decisions effectively has important implications for their fertility preferences and the practice of family planning. An increase in women's status and empowerment is recognized as important for efforts to reduce fertility through at least two main

pathways: its negative association with desired family size and its positive association with women's ability to meet their own family-size goals through the effective use of contraception.

Table 15.10 shows how women's ideal family size and their unmet need for family planning vary by women's status indicators. The data indicate that there is a positive association between ideal family size and two of the three empowerment indicators. The relationship between ideal family size and decisionmaking is as expected: women who participate in no decisions have higher ideal family size (6.2) than women who participate in any decisions (5.7 or lower). There is little association between ideal family size and attitudes towards wife beating. On the contrary, ideal family size is highest among women who believe that a woman can refuse sexual intercourse with her husband for all specified reasons (5.2 children) and lowest among women who believe that sexual intercourse cannot be refused for any of the three reasons (4.5 children).

Table 15.10 Women's empowerment and ideal number of children and unmet need for family planning

Mean ideal number of children for women age 15-49 and the percentage of currently married women age 15-49 with an unmet need for family planning, by indicators of women's empowerment, Timor-Leste 2009-10

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of currently married women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	6.2	90	12.5	7.5	20.0	95
1-2	5.6	718	14.0	12.1	26.1	765
3-4	5.7	6,846	21.3	10.1	31.4	7,047
Number of reasons for which wife beating is justified[4]						
0	4.9	1,702	23.2	8.3	31.5	895
1-2	5.0	2,881	22.0	9.2	31.3	1,867
3-4	5.0	5,357	19.9	10.3	30.3	3,414
5	5.0	2,682	18.7	12.1	30.8	1,730
Number of reasons given for refusing to have sexual intercourse with husband[5]						
0	4.5	2,374	19.7	11.6	31.2	876
1-2	4.9	3,767	20.1	9.9	30.0	2,484
3	5.2	6,481	20.9	10.2	31.1	4,546
Total	5.0	12,622	20.5	10.2	30.8	7,906

[1] Mean excludes respondents who gave non-numeric responses.
[2] See Table 7.3.1 for the definition of unmet need for family planning.
[3] Restricted to currently married women. See Table 15.5.1 for the list of decisions.
[4] See Table 15.6.1 for the list of reasons.
[5] See Table 15.7.1 for the list of reasons.

Although there is no clear linear relationship between unmet need and women's empowerment, the data show that unmet need is highest among women who participate in three to four household decisions. Again, educated women and those belonging to the highest wealth quintile are less often participating in all specified households decisions, which translates to their having a lower unmet need for family planning.

There is no clear relationship between unmet need and women's belief that refusing sexual intercourse and wife beating is acceptable for any reason.

15.9 REPRODUCTIVE HEALTH CARE BY WOMEN'S STATUS

Table 15.11 shows women's use of antenatal, delivery, and postnatal care services by the three indicators of women's empowerment. In societies where health care is widespread, women's empowerment may not affect their access to reproductive health services. In other societies, however, increased empowerment of women is likely to increase their ability to seek out and use limited health services to better meet their own reproductive health goals, including the goal of safe motherhood.

Table 15.11 Reproductive health care by women's empowerment

Percentage of women age 15-49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance, and postnatal care from health personnel for the most recent birth, by indicators of women's empowerment, Timor-Leste 2009-10

Empowerment indicator	Received antenatal care from health personnel	Received delivery assistance from health personnel	Received postnatal care from health personnel within the first two days since delivery[1]	Number of women with a child born in the past five years
Number of decisions in which women participate[2]				
0	85.3	36.4	20.7	66
1-2	84.5	43.9	34.9	528
3-4	86.6	32.4	23.6	5,208
Number of reasons for which wife beating is justified[3]				
0	80.6	33.2	22.4	658
1-2	87.3	37.0	26.2	1,413
3-4	87.7	34.3	25.8	2,585
5	84.1	27.7	21.8	1,360
Number of reasons given for refusing to have sexual intercourse with husband[4]				
0	85.9	45.0	29.3	642
1-2	89.9	42.9	32.6	1,850
3	84.0	26.2	19.6	3,523
Total	86.0	33.3	24.6	6,015

Note: "Health personnel" includes doctor, nurse, midwife, or assistant nurse.
[1] Includes deliveries in a health facility and not in a health facility
[2] Restricted to currently married women. See Table 15.5.1 for the list of decisions.
[3] See Table 15.6.1 for the list of reasons.
[4] See Table 15.7.1 for the list of reasons.

The data indicate that there is a correlation between women's status, as measured by the number of reasons for justifying wife beating, and utilization of health services. Women who believe that wife beating is justified for all five reasons are less likely to receive antenatal care, delivery assistance, or postnatal care from health personnel than women who believe that wife beating is justified for one to two reasons. The relationship between utilization of health services and the other two women's empowerment indicators is less clear. As antenatal care is widely accessible to most women, differences by empowerment index are not clearly reflected.

DOMESTIC VIOLENCE 16

In the words of former United Nations Secretary General, Kofi Annan, "violence against women is perhaps the most shameful human rights violation. And it is perhaps the most pervasive. It knows no boundaries of geography, culture, or wealth. As long as it continues, we cannot claim to be making real progress towards equality, development, and peace" (UNIFEM, 2003).

The World Health Organization (WHO) defines domestic violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development, or deprivation" (Krug et al., 2002). Domestic violence is defined here as any act of violence resulting in physical, sexual, or psychological harm or suffering to women, girls, and also men, including threats of such acts, coercion, or arbitrary deprivation of liberty.

Domestic violence is the most common form of gender-based violence in Timor-Leste. Studies have indicated that Timor-Leste has a long history of culturally accepted forms of domestic violence. People prefer not to talk about domestic violence, as it is considered a private matter. Therefore, reporting on domestic violence is considered a societal taboo. It is expressed that "Gender-based violence is widespread in Timor-Leste, yet perpetrators are rarely punished. Family disputes and domestic violence is often considered a 'normal,' yet very private occurrence within the family" (Concern.net, 2008).

It is not a common practice to seek justice through traditional justice systems; the perpetrators of gender-based violence cannot simply be punished or removed from the community. Often the family of the perpetrator gives animals (water buffalos, goats, or pigs) to the victim's family. This gift opens an avenue of reconciliation that concludes with a ceremony, usually a feast, indicating that there are no more hard feelings and no need for social disturbances. After the conclusion of such a ceremony, the perpetrator is once again allowed to move around freely. A baseline study conducted in 2007 in the two districts of Covalima and Bobonaro indicated that the patriarchal belief of women's role in society, religion, and preconceived notions of sexuality make discussions of sexual and gender-based violence nearly impossible (UNMIT, 2009).

After a concerted lobbying effort led by the Office of the Secretariat of State for the Promotion of Equality, the United Nations Population Fund (UNFPA), the United Nations Development Fund for Women (UNIFEM), UNMIT and local and international NGOs, the National Parliament in Timor-Leste passed a Law Against Domestic Violence on May 3, 2010, which came into force one month later. These efforts represented the culmination of seven years' work, which involved harmonization with relevant provisions of the Timorese Criminal Code. The Law Against Domestic Violence clearly states that crimes of domestic violence are public crimes and also provides for medical, legal, and psycho-social support for survivors. However, consideration of the law did not occur until 2009 after the penal code was approved which included domestic violence as a punishable crime for the first time under Timorese or Indonesian rule (UNIFEM, 2010). The law was finally promulgated by the President on June 21, 2010.

The 2009-10 TLDHS included a series of questions that focus on specific aspects of domestic and interpersonal violence. The module addresses women's experience of interpersonal violence, including acts of physical, sexual, and emotional violence. Information was collected on both domestic violence (also known as spousal violence or intimate partner violence) and violence by other family members or unrelated individuals. Specifically, this chapter presents the findings on women who ever experienced interpersonal violence—physical violence since the age of 15, lifetime experience of sexual violence—and women who experienced partner violence ever and in the past 12 months. In addition, detailed information is presented on partner violence, including the physical consequences of violence and when partner violence began.

16.1 MEASUREMENT OF VIOLENCE

Collecting valid, reliable, and ethical data on intimate partner violence poses particular challenges because (1) what constitutes violence or abuse varies across cultures and individuals; (2) a culture of silence usually surrounds domestic violence and can affect reporting; and (3) the topic is a sensitive one. Ensuring the safety of respondents and interviewers when asking about domestic violence in a familial setting and protecting women who disclose violence raises specific ethical concerns. The responses to these challenges by the 2009-10 TLDHS are described below.

16.1.1 The Use of Valid Measures of Violence

The 2009-10 TLDHS measures violence committed by spouses and other household members. Accordingly, information was obtained from ever-married women on violence by spouses and by others, and from never-married women on violence by anyone, including boyfriends/ girlfriends.

International research on violence shows that intimate partner violence is one of the most common forms of violence against women. Thus, spousal/partner violence was measured in more detail than violence by other perpetrators by using a modified Conflict Tactics Scale (CTS) (Strauss, 1990). Specifically, spousal violence was measured using the following set of questions for women:

(Does/did) your (last) husband/partner ever do any of the following things to you?

1. *Push you, shake you, or throw something at you?*
2. *Slap you?*
3. *Twist your arm or pull your hair?*
4. *Punch you with his fist or with something that could hurt you?*
5. *Kick you, drag you, or beat you up?*
6. *Try to choke you or burn you on purpose?*
7. *Threaten or attack you with a knife, gun, or any other weapon?*
8. *Physically force you to have sexual intercourse with him even when you did not want to?*
9. *Force you to perform any sexual acts you did not want to?*

When the answer to the question was "yes," women (with the exception of widows) were asked about the frequency of the act in the 12 months preceding the survey. A "yes" answer to one or more of items 1-7 above constitutes evidence of physical violence, while a "yes" answer to items 8 or 9 constitutes evidence of sexual violence.

Emotional violence among ever-married women was measured in a similar way, using the following set of questions:

(Does/did) your (last) husband ever:

1. *Say or do something to humiliate you in front of others?*
2. *Threaten to hurt or harm you or someone close to you?*
3. *Insult you or make you feel bad about yourself?*

This approach of asking about specific acts to measure different forms of violence has the advantage of not being affected by different understandings of what constitutes a summary term such as violence. By including a wide range of acts, this approach has the additional advantage of giving the respondent multiple opportunities to disclose any experience of violence.

In addition to these questions asked only of ever-married women, all women were asked about physical violence from persons other than their current or most recent spouse/partner with the question: *From the time you were 15 years old, has anyone [other than your (current/last) husband/*

partner] hit, slapped, kicked, or done anything else to hurt you physically? Respondents who answered this question in the affirmative were asked who had done this to them and the frequency of such violence during the 12 months preceding the survey.

All women were also asked: *At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts?* Respondents who said "yes" were then asked questions about the age at which this first happened and the person who committed the act.

Although this approach to questioning is generally considered to be optimal, the possibility of underreporting of violence, particularly sexual violence, cannot be entirely ruled out in any survey.

16.1.2 Ethical Considerations

Three specific protections were built into the questionnaire, in accordance with the World Health Organization's ethical and safety recommendations for research on domestic violence (WHO, 2001b):

- Only one eligible person in each household was administered the questions on violence. Individual interviews using TLDHS Women's Questionnaires were carried out in every household selected for the DHS survey (that is, 11,463 households in the sample). The domestic violence module was administered to women in one-third of households selected for the TLDHS individual interview. The DHS protocol specifies that the domestic violence module can only be administered to one randomly selected person per household. Therefore, in households with more than one eligible woman, the respondent for the module was randomly selected through a specially designed simple selection procedure (based on the 'Kish Grid'), which was built into the Household Questionnaire. Interviewing only one person in each household using the domestic violence module provides assurance to the selected respondent that other respondents in the household will not talk about the types of questions the selected respondent was asked.

- Informed consent for the survey was obtained from the respondent at the beginning of the individual interview. In addition, at the beginning of the domestic violence section respondents were read an additional statement informing them that the subsequent questions could be sensitive and reassuring them of the confidentiality of their responses.

- The domestic violence module was implemented only if privacy could be obtained. If privacy could not be obtained, the interviewer was instructed to skip the module, thank the respondent, and end the interview. If a translator was needed to conduct the interview, respondents were not asked questions from the domestic violence module to maintain privacy.

16.1.3 Special Training for Implementing the Domestic Violence Module

Complete privacy is also essential for ensuring the security of the respondent and the interviewer. Asking about or reporting violence, especially in households where the perpetrator may be present at the time of interview, carries the risk of further violence. Accordingly, interviewers were provided specific training for implementing the domestic violence module in order to enable the field staff to collect violence data in a secure, confidential, and ethical manner.

Although most women interviewed do not necessarily ask for help, some abused women may ask the interviewer for assistance. To prepare for this possibility, interviewers were provided with a nationwide list of available network services at the district level for women facing violence. These included contact information on central and regional offices of Psychosocial Recovery and

Development East Timor (PRADET), *Polisia National Timor-Leste* (PNTL), *Forum Komunikasi Untuk Perempuan Timor Lorosa'e* (FOKUPERS), and *Institute Maun Alin iha Kristo* (ISMAIK). PRADET supports victims of violence through its *Fatin Hakmatek* (Safe Place) program. *Fatin Hakmatek* provides services through a treatment facility and coordinates with other agencies to extend services in the country (Trembath and Grenfell, 2007). The Vulnerable Person's Unit under the PNTL provides services to victims of violence, including gender-based violence, and has extensive coverage with an office in each district. The main focus of FOKUPERS is on providing counseling, assistance, and safe house or shelter facilities to individuals who fall victim to domestic and sexual violence in Maliana, Suai, Ermera, and Liquiçá districts (Trembath and Grenfell, 2007). These organizations form the gender-based violence referral network that provides coordinated services in Timor-Leste.

The interviewers were trained to provide respondents with information on where they can seek help from officers at the district level. These officers are responsible for handling social welfare matters in the district, including the welfare of children and families. However, the interviewers were instructed to be very careful when providing such information, as in some cases men in the household may turn more violent towards women when they see such documents.

16.1.4 Characteristics of the Sub-sample of Respondents for the Domestic Violence Module

Given that only one person was administered the domestic violence module in each selected household and that the violence module was not administered if privacy could not be obtained, 65 of the 3,022 women eligible for the violence module had to be excluded because of lack of privacy, and six women refused to be interviewed with the domestic violence module. It is noteworthy that the age, marital status, and residential, regional, educational, and wealth index distributions of the sub-sample of respondents selected for the violence module are virtually identical to the entire TLDHS sample of respondents and therefore representative of the reporting domains selected for the TLDHS (data not shown).

16.2 Experience of Domestic Violence by Women

This section of the chapter discusses women's experience of violence by any individual. The data on domestic violence for women are weighted differently from the rest of the data collected in the Women's Questionnaires. This was done to adjust for the fact that only one person per household was interviewed with the domestic violence module and to cater for nonresponse.

The section begins by examining the experience of physical violence since age 15 and physical violence during pregnancy, and continues with findings on women's lifetime experience of sexual violence. Background characteristics associated with increased risk of violence are also discussed. This report mainly presents information on domestic violence against women.

Table 16.1 shows the percentage of women who have ever experienced physical violence since age 15, and in the past 12 months, by background characteristics. Approximately one-third of women (38 percent) have experienced physical violence since the age 15. Twenty-nine percent of women experienced physical violence often or sometimes in the past 12 months. One percent of women experienced physical violence often, while 28 percent experienced physical violence sometimes in the past 12 months.

Table 16.1 Experience of physical violence

Percentage of women age 15-49 who have ever experienced physical violence since age 15 and percentage who have experienced physical violence during the 12 months preceding the survey, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage who have ever experienced physical violence since age 15[1]	Percentage who have experienced physical violence in the past 12 months			Number of women
		Often	Sometimes	Often or sometimes	
Current age					
15-19	30.3	0.1	24.6	24.7	700
20-24	34.8	1.3	25.7	27.0	513
25-29	48.1	0.7	37.9	38.6	403
30-39	43.6	2.2	31.2	33.4	765
40-49	36.5	1.2	23.3	24.4	570
Employed past 12 months					
Not employed	39.6	0.9	30.1	30.9	1,795
Employed for cash	42.9	4.5	24.6	29.1	219
Employed not for cash	34.3	0.9	25.0	25.9	937
Marital status					
Never married	28.7	0.1	21.4	21.4	992
Married or living together	42.3	1.3	32.4	33.7	1,843
Divorced/separated/widowed	52.9	7.9	16.5	24.4	116
Number of living children					
0	29.4	0.1	22.2	22.3	1,106
1-2	44.3	2.1	34.5	36.6	527
3-4	44.3	1.2	32.0	33.2	594
5+	41.9	2.0	29.0	31.0	724
Residence					
Urban	48.7	0.6	33.7	34.3	700
Rural	34.9	1.3	26.3	27.6	2,251
District					
Aileu	39.8	1.3	19.9	21.2	128
Ainaro	10.5	0.3	7.3	7.6	160
Baucau	44.3	3.5	31.0	34.5	334
Bobonaro	14.4	0.0	14.1	14.1	281
Covalima	57.4	0.4	57.0	57.4	177
Dili	52.7	1.0	31.8	32.8	474
Ermera	24.2	0.7	16.7	17.4	357
Lautem	53.1	1.1	41.2	42.3	192
Liquiçá	34.5	0.0	25.7	25.7	179
Manatuto	16.5	0.0	10.6	10.6	135
Manufahi	75.6	1.6	63.3	65.0	114
Oecussi	56.3	1.5	42.3	43.9	201
Viqueque	21.1	2.3	18.2	20.4	219
Education					
No education	37.4	1.4	27.6	29.0	896
Primary	41.1	1.8	30.6	32.4	695
Secondary	36.6	0.7	27.1	27.8	1,268
More than secondary	45.6	0.0	26.6	26.6	91
Wealth quintile					
Lowest	35.2	1.1	27.4	28.4	567
Second	36.8	2.3	27.0	29.3	572
Middle	36.2	1.2	27.1	28.3	597
Fourth	36.9	0.7	29.7	30.4	594
Highest	45.2	0.5	29.1	29.6	620
Total	38.1	1.1	28.1	29.2	2,951

Note: Includes women who are married by age 15.
[1] Includes in the past 12 months

The proportion of women who have ever experienced physical violence is highest among women age 25-29. These women are also more likely to report having experienced physical violence sometimes or often in the past 12 months (39 percent). Women who are employed for cash are more likely to report having experienced physical violence since age 15 than women who are unemployed or employed but not for cash. This may be an indication that working women who have an independent source of cash income may pose a challenge to the established norm of being dependent

on their male partners for their livelihood, and therefore this role reversal may subject them to greater violence.

Formerly married women (divorced, separated, or widowed) are more likely to have ever experienced physical violence since age 15 than currently married and never-married women (53 percent, compared with 42 and 29 percent, respectively). Formerly married women are also more likely to have experienced physical violence often in the past 12 months (8 percent) than currently married women (1 percent), perhaps indicating the vulnerable position of women who have lost their spouse and become dependent on others for their basic needs.

Women with no living children are the least likely to have experienced physical violence in the past 12 months. There is no clear pattern of rates of physical violence experienced by women with children.

Urban women are more likely to have ever experienced physical violence since the age of 15 compared with rural women (49 percent compared with 35 percent). This is corroborated by the fact that more than half of the women in Dili district, which is primarily urban, reported experiencing physical violence since the age of 15 years. Women in Manufahi (76 percent) are most likely to report having ever experienced physical violence. Experience of physical violence in the past 12 months is highest among women in Manufahi (65 percent) and lowest in Ainaro (8 percent).

The proportion of women who have ever experienced physical violence is highest among women with more than secondary education (46 percent) and those belonging to households in the highest wealth quintile (45 percent). This supports the assumption that highly educated women are usually from wealthier households, primarily located in urban areas and more likely to have access to cash earnings. These women may be victims of spousal violence because they have broken the cultural norms in a patriarchal society. On the other hand, it is also possible that educated, wealthier, and urban women are more likely to report any violence because they recognize that any form of violence is unacceptable, in contrast to their counterparts, who may be more accepting of violence against women as part and parcel of life and hence less likely to report their experience.

16.3 Perpetrators of Physical Violence Against Women

Table 16.2 identifies the perpetrators of physical violence, by women's current marital status. The percentages do not sum to 100 because respondents could have experienced violence at the hands of several people. Among ever-married women who have ever experienced physical violence, 74 percent reported that a current husband or partner committed the physical violence against them, while 6 percent reported that they experienced physical violence by a former husband/partner. Other perpetrators commonly reported by ever-married women were mother/stepmother (34 percent) and father/stepfather (26 percent), sisters and brothers (11 percent), and other relatives (6 percent).

Table 16.2 Persons committing physical violence

Among women age 15-49 who have experienced physical violence since age 15, percentage who report specific persons who committed the violence, according to the respondent's marital status, Timor-Leste 2009-10

Person	Marital status: Ever married	Marital status: Never married	Total
Current husband/partner	73.8	na	55.2
Former husband/partner	6.3	na	4.7
Current boyfriend	0.0	0.4	0.1
Former boyfriend	0.5	0.0	0.4
Father/ stepfather	25.7	59.1	34.2
Mother/ stepmother	34.2	64.5	41.9
Sister/brother	11.3	26.7	15.2
Daughter/ son	0.4	1.6	0.7
Other relative	5.9	8.2	6.5
Mother-in-law	0.2	na	0.2
Father-in-law	0.4	na	0.3
Teacher	1.4	12.8	4.3
Employer/ someone at work	0.0	1.2	0.3
Other	1.1	1.0	1.1
Number of women	842	284	1,126

na= Not applicable

Among women who have never been married, parents are the most common perpetrators of physical violence. Sixty-five percent reported mother/step-mother and 59 percent father/step-father as their perpetrators. Among never-married women, 27 percent also reported physical violence committed by siblings while 13 percent reported teachers as the perpetrators.

16.4 WOMEN'S EXPERIENCE OF FORCE AT SEXUAL INITIATION

The 2009-10 TLDHS investigated women's experience of sexual violence, including a question on whether the respondent's first sexual intercourse was forced against her will. Because the idea of force can be interpreted in various ways, the question was worded as follows: *The first time you had sexual intercourse, would you say that you had it because you wanted to or because you were forced to do it against your will?* Table 16.3 shows that only 1 percent of women said their first sexual experience was forced against their will. This proportion is relatively higher among those who first had sex before age 15 (4 percent).

In addition to the question on whether first sexual intercourse was forced, the 2009-10 TLDHS included two sets of questions on sexual violence. Sexual violence limits women's ability to practice safe sex and to protect themselves from sexually transmitted infections and unwanted pregnancies (Krug et al., 2002). The first set of questions asked about sexual violence committed by their current spouse, if they were currently married, and the most recent spouse, if they were currently divorced, separated, or widowed. The second set of questions asked all respondents, irrespective of marital status, whether they had ever, as a child or as an adult, experienced sexual violence. Sexual violence here includes being forced to have sexual intercourse or perform any other sexual acts against one's will. Tables 16.3 through 16.5 present the results on the experience of any sexual violence. The findings on sexual violence among women by a spouse or intimate partner are explored later in the chapter.

Table 16.3 Force at sexual initiation

Percentage of women age 15-49 who have ever had sexual intercourse who say that their first experience of sexual intercourse was forced against their will, by age at first sexual intercourse and whether the first sexual intercourse was at the time of first marriage or before, Timor-Leste 2009-10

	Percentage whose first sexual intercourse was forced against their will	Number of women who have ever had sex
Age at first sexual intercourse		
<15	3.7	103
15-19	0.9	865
20-24	1.1	682
25-29	0.3	198
30-49	1.9	64
Missing	1.4	54
First sexual intercourse was:		
At the time of first marriage/ first cohabitation	1.1	1,717
Before first marriage/ first cohabitation[1]	1.0	194
Missing	1.4	54
Total	1.1	1,966

[1] Includes never-married women

16.5 EXPERIENCE OF SEXUAL VIOLENCE AND PERPETRATORS OF SEXUAL VIOLENCE

As shown in Table 16.4, about 3 percent of women have experienced sexual violence. Women age 30-39 are slightly more likely than other women to have experienced sexual violence. Women who are employed for cash are twice as likely to face sexual violence compared with women who do not work and those who work but not for cash income. Women who work in a cash economy may be more likely to encounter violence in their workplace compared with women employed in a non-cash economy who usually work for a family member and at home or closer to home.

A higher proportion of women who are divorced/separated/widowed (9 percent) have experienced sexual violence compared with never-married women.

Table 16.4 Experience of sexual violence

Percentage of women age 15-49 who have ever experienced sexual violence, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage who have ever experienced sexual violence[1]	Number of women
Current age		
15-19	2.0	700
20-24	2.4	513
25-29	3.9	403
30-39	5.1	765
40-49	3.3	570
Employed past 12 months		
Not employed	3.3	1,795
Employed for cash	6.1	219
Employed not for cash	2.9	937
Marital status		
Never married	1.3	992
Married or living together	4.1	1,843
Divorced/separated/widowed	9.3	116
Residence		
Urban	3.5	700
Rural	3.3	2,251
District		
Aileu	6.6	128
Ainaro	2.6	160
Baucau	7.0	334
Bobonaro	1.4	281
Covalima	2.6	177
Dili	2.3	474
Ermera	3.4	357
Lautem	6.8	192
Liquiçá	4.5	179
Manatuto	2.3	135
Manufahi	1.4	114
Oecussi	2.9	201
Viqueque	0.4	219
Education		
No education	3.9	896
Primary	3.9	695
Secondary	2.9	1,268
More than secondary	0.0	91
Wealth quintile		
Lowest	3.4	567
Second	4.8	572
Middle	3.2	597
Fourth	3.0	594
Highest	2.5	620
Total	3.4	2,951

[1] Includes those whose sexual initiation was forced against their will

Urban-rural differences in experience of sexual violence are minimal. By district, the proportion of women who have experienced sexual violence ranges from less than 1 percent in Viqueque to 7 percent in Baucau, Lautem, and Aileu. Women with no education (4 percent) are slightly more likely to experience sexual violence than women with secondary or higher levels of education. Sexual violence is also slightly lower among women in the highest wealth quintile than those in the other wealth quintiles.

The 2009-10 TLDHS also collected information on age at first sexual violence and perpetrators of sexual violence. For 16 percent of women who ever experienced sexual violence, the first experience of such violence occurred at age 15-19; 6 percent first experienced sexual violence at age 10-14; and less than 1 percent first experienced sexual violence before age 10. One in ten women

who experienced sexual violence first experienced it at age 20-49 (data not shown). It is important to note that in the 2009-10 TLDHS questionnaire, if a respondent experienced sexual violence committed only by their current spouse/partner (or the most recent spouse if they are currently divorced/separated), and their sexual initiation was not forced against their will, information was not collected on age at first experience of sexual violence.

The main perpetrators of sexual violence against ever-married women are current husbands/partners (71 percent) or former husbands/partners (9 percent). Seven percent of all women who have experienced sexual violence experienced it at the hands of current or former boyfriends, while 6 percent of women each experienced sexual violence committed by a relative other than their husband, boyfriend, father, or step-father; 4 percent experienced sexual violence committed by strangers (data not shown).

16.6 EXPERIENCE OF DIFFERENT TYPES OF VIOLENCE

Table 16.5 shows the percentage of respondents who have experienced different forms of physical and sexual violence, by age. Overall, 36 percent of women age 15-49 have experienced only physical violence, while 1 percent have experienced only sexual violence. About 2 percent of women have experienced both physical and sexual violence, and nearly two in five women (39 percent) have experienced either physical or sexual violence. The likelihood of having experienced either physical or sexual violence increases with age, from 31 percent among women age 15-19 to 49 percent among women age 25-29 before declining to 38 percent among women in their 40s.

Table 16.5 Experience of different forms of violence

Percentage of women age 15-49 who have experienced different forms of violence, by current age, Timor-Leste 2009-10

Age	Physical violence only	Sexual violence only[1]	Physical and sexual violence[1]	Physical or sexual violence[1]	Number of women
15-19	28.5	0.2	1.8	30.5	700
15-17	28.2	0.2	0.1	28.5	446
18-19	29.1	0.1	4.7	33.9	254
20-24	33.9	1.5	0.9	36.3	513
25-29	44.9	0.8	3.1	48.8	403
30-39	40.0	1.4	3.6	45.1	765
40-49	34.5	1.3	2.0	37.8	570
Total	35.8	1.0	2.3	39.2	2,951

[1] Includes forced sexual initiation

16.7 VIOLENCE DURING PREGNANCY

Women who have ever been pregnant were asked about the experience of physical violence during pregnancy. The findings presented in Table 16.6 indicate that overall, 4 percent of women in Timor-Leste experienced physical violence during pregnancy. By background characteristics, the results show that violence during pregnancy is higher among women age 30-39, unemployed women, formerly married women, women with five or more children, rural women, women living in Liquiçá, women with no education, and women in the lowest wealth quintile, than among their counterparts in the other categories.

Table 16.6 Violence during pregnancy

Among women age 15-49 who have ever been pregnant, percentage who have ever experienced physical violence during pregnancy, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage who have ever experienced physical violence during pregnancy	Number of women who have ever been pregnant
Current age		
15-19	3.2	63
20-24	2.6	257
25-29	2.4	329
30-39	4.9	717
40-49	3.5	539
Employed past 12 months		
Not employed	4.3	1,064
Employed for cash	1.5	167
Employed not for cash	3.2	675
Marital status		
Never married	*	1
Married or living together	3.4	1,792
Divorced/separated/widowed	8.8	113
Number of living children		
0	1.1	61
1-2	3.9	527
3-4	3.1	594
5+	4.3	724
Residence		
Urban	2.7	460
Rural	4.0	1,445
District		
Aileu	3.6	72
Ainaro	0.6	99
Baucau	4.7	224
Bobonaro	0.0	170
Covalima	0.9	107
Dili	3.3	326
Ermera	2.8	216
Lautem	11.1	136
Liquiçá	12.3	113
Manatuto	0.5	74
Manufahi	5.1	80
Oecussi	4.1	138
Viqueque	0.0	150
Education		
No education	4.8	733
Primary	3.6	483
Secondary	2.7	636
More than secondary	(1.8)	54
Wealth quintile		
Lowest	5.1	376
Second	3.6	380
Middle	4.3	368
Fourth	3.7	378
Highest	1.9	404
Total	3.7	1,905

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

16.8 MARITAL CONTROL

The International Rescue Committee reported in two studies conducted in 2003 that more than half of Timorese women felt unsafe in their relationship with their husband (IRC, 2003a) and 25 percent had experienced violence from an intimate partner (IRC, 2003b).

Domestic violence is not limited to physical and sexual violence. Verbal abuse, restrictions on freedom of movement, and withholding funds can also constitute violent behavior. This section of the chapter examines women's experiences of marital control. Table 16.7 shows the percentage of ever-married women whose husbands have exhibited various types of behaviors aimed at controlling their wife/partner.

Table 16.7 Degree of marital control exercised by husbands

Percentage of ever-married women age 15-49 whose husband/partner ever demonstrates specific types of controlling behaviors, according to background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of women whose husband: Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Does not trust her with any money	Displays 3 or more of the specific behaviors	Displays none of the specific behaviors	Number of women
Current age									
15-19	21.3	19.7	16.4	8.4	49.0	6.3	16.0	46.8	67
20-24	36.1	17.3	10.7	3.3	36.7	8.5	16.1	49.2	271
25-29	36.4	15.5	9.8	6.3	32.3	9.4	14.5	47.0	341
30-39	27.9	13.4	7.4	3.3	27.5	7.6	11.1	56.6	729
40-49	29.9	15.8	8.0	3.4	29.3	6.2	14.7	55.3	551
Employed past 12 months									
Not employed	33.1	14.0	9.3	4.5	30.8	8.1	13.7	51.6	1,094
Employed for cash	42.3	20.2	10.7	3.4	38.7	17.0	15.6	38.9	170
Employed not for cash	24.5	15.9	7.5	3.5	29.1	4.5	12.9	59.2	695
Number of living children									
0	35.3	23.0	14.9	8.8	35.9	8.8	22.6	50.9	115
1-2	33.9	16.6	9.1	3.7	33.1	8.6	14.0	49.0	527
3-4	32.0	13.7	9.6	3.9	29.2	7.7	13.0	53.8	594
5+	27.0	14.2	6.8	3.6	29.8	6.6	12.3	56.1	724
Marital status and duration									
Currently married woman	30.7	14.3	8.6	3.8	30.6	7.1	13.0	53.6	1,843
Married only once	30.8	14.3	8.6	3.9	30.9	7.1	13.1	53.3	1,817
0-4 years	34.4	16.3	10.5	4.8	36.3	6.8	15.3	48.2	332
5-9 years	34.9	16.1	9.7	4.3	32.4	10.8	14.5	49.8	352
10+ years	28.5	13.2	7.8	3.5	28.8	6.0	12.0	55.8	1,133
Married more than once	(19.1)	(11.6)	(8.2)	(0.0)	(13.5)	(5.6)	(10.8)	(73.6)	26
Divorced/separated/widowed	34.2	29.4	10.5	7.0	34.6	16.4	22.1	47.7	116
Residence									
Urban	51.9	27.6	14.7	6.6	42.8	14.7	24.9	31.3	468
Rural	24.2	11.3	6.9	3.2	27.1	5.4	10.0	60.1	1,491
District									
Aileu	23.2	10.5	11.0	7.0	18.0	7.0	9.0	68.2	74
Ainaro	17.4	7.9	10.7	3.7	29.5	3.1	9.6	62.3	100
Baucau	48.1	9.0	5.5	3.3	30.4	7.8	8.1	43.5	230
Bobonaro	10.6	8.0	5.6	1.2	6.2	3.5	5.9	82.9	172
Covalima	11.1	19.2	4.0	0.6	28.0	0.0	8.0	66.6	115
Dili	66.8	34.0	17.0	6.1	45.2	18.5	30.3	19.8	336
Ermera	37.8	22.4	9.4	4.5	56.2	4.4	22.4	39.4	225
Lautem	28.6	12.3	12.7	10.2	27.8	11.0	16.2	53.6	136
Liquiçá	8.1	3.7	5.4	2.9	8.9	7.7	5.8	77.6	115
Manatuto	13.1	6.6	4.6	2.4	17.5	5.0	7.5	77.9	79
Manufahi	17.5	5.9	4.6	1.6	48.5	2.5	6.5	45.7	84
Oecussi	16.4	11.0	4.8	3.8	8.8	6.1	5.1	74.0	140
Viqueque	15.0	9.6	6.2	2.1	36.6	4.0	8.1	58.2	153
Education									
No education	24.0	13.0	7.3	2.9	28.1	5.1	11.1	59.6	753
Primary	29.2	16.6	9.7	6.0	31.3	8.1	16.0	54.6	495
Secondary	37.5	15.7	9.5	3.7	33.2	8.9	13.7	46.5	656
More than secondary	(60.7)	(27.3)	(11.7)	(5.1)	(37.1)	(22.7)	(23.8)	(32.7)	54
Wealth quintile									
Lowest	17.8	8.9	6.0	2.7	21.4	3.1	7.1	67.5	392
Second	27.6	11.7	8.7	4.5	30.8	8.3	11.8	57.0	389
Middle	26.1	15.2	9.0	3.8	29.5	4.5	12.7	56.1	379
Fourth	30.9	15.9	7.1	3.5	31.3	7.7	14.4	52.5	385
Highest	50.5	23.7	12.6	5.5	40.7	14.0	21.4	34.1	415
Total	30.9	15.2	8.8	4.0	30.9	7.6	13.6	53.2	1,959

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Figures in parentheses are based on 25-49 unweighted cases.

To determine the degree of marital control husbands exercise over their wives, ever-married women were asked whether their current or last husband exhibited each of the following controlling behaviors: a) becomes jealous or gets angry if she talks to other men; b) accuses her of being unfaithful; c) does not permit meetings with female friends; d) tries to limit contact with her family; e) insists on knowing where she is at all times; and f) does not trust her with any money.

The accumulation of such behaviors is more significant than the results for any single behavior and so, the proportion of women whose husbands exhibited at least three of the specified behaviors is highlighted.

The findings show that nearly one in three (31 percent) ever-married women reported that their husbands insist on knowing where they are at all times; a similar proportion (31 percent) said that their husbands get jealous or angry if they talk to other men; and 15 percent said that their husbands frequently accuse them of being unfaithful. Nearly one in 10 women reported that their husbands do not allow them to meet with their female friends, and 8 percent said that their husbands do not trust them with money. Relatively uncommon is a husband's attempt to limit his wife's contact with her family (reported by only 4 percent of ever-married women). Fourteen percent of women said that their husbands exhibit three or more of the above-mentioned controlling behaviors, and 53 percent said that their husbands exhibit none of the controlling behaviors.

There is hardly any difference in the proportion of ever-married women who report that their husbands exhibit three or more of the specified behaviors by age. There is an inverse relationship between the number of living children a woman has and the degree of control her husband exercises over them. For example, 23 percent of women with no living children reported that their husbands exhibit three or more of the specified controlling behaviors, compared with 12 percent of women with five or more children. Women who were formerly married (22 percent) are more likely than currently married women (13 percent) to say that their former husbands exhibited three or more of the controlling behaviors.

The extent to which husbands exhibit three or more controlling behaviors is higher among urban women (25 percent) than the rural women (10 percent). This finding corroborates the fact that women in urban areas more often face domestic violence as discussed earlier in this chapter. Men in Dili (30 percent), Ermera (22 percent), and Lautem (16 percent) are more likely to exercise controlling behavior over their wives. Differences by education are not significant. Women in the highest wealth quintile report higher proportions of controlling behaviors exhibited by their husbands.

16.9 TYPES OF SPOUSAL VIOLENCE

This section of the chapter is devoted to violence perpetrated by intimate partners who are married to the respondent or who live with the respondent as if married. Since spousal or intimate partner violence is the most common form of violence among women age 15-49, the 2009-10 TLDHS collected detailed information on the different types of violence experienced—physical, sexual, and emotional. Currently married women were asked about violence perpetrated by their current husband, and formerly married women were asked about violence perpetrated by their most recent husband. Respondents were asked about seven specific acts of physical violence, two acts of sexual violence, and three acts of emotional violence. The acts are listed in Table 16.8.

The table shows that 34 percent of ever-married women have ever experienced physical violence at the hands of their husband or partner, and 31 percent have experienced physical violence in the past 12 months. Three percent have ever experienced sexual violence, and 2 percent experienced sexual violence in the past 12 months. The findings also show that 8 percent of women have ever experienced emotional violence and have experienced emotional violence in the past 12 months. Overall, 36 percent of ever-married women have experienced some kind of violence (physical, sexual, or emotional) by a husband or partner.

Table 16.8 Forms of spousal violence

Percentage of ever-married women age 15-49 who have experienced various forms of violence ever or in the 12 months preceding the survey, committed by their husband/partner, Timor-Leste 2009-10

		In the past 12 months[1]		
Form of violence	Ever	Often	Sometimes	Often or sometimes
Physical violence				
Any	33.5	1.7	29.0	30.7
Pushed her, shook her, or threw something at her	14.7	0.9	13.1	14.0
Slapped her	30.4	1.1	26.6	27.7
Twisted her arm or pulled her hair	7.9	0.8	6.7	7.4
Punched her with his fist or with something that could hurt her	5.3	0.0	4.8	4.9
Kicked her, dragged her, or beat her up	7.9	0.4	6.8	7.2
Tried to choke her or burn her on purpose	1.2	0.1	1.0	1.1
Threatened her or attacked her with a knife, gun, or any other weapon	0.9	0.0	0.6	0.6
Sexual violence				
Any	2.9	0.1	1.9	2.0
Physically forced her to have sexual intercourse with him even when she did not want to	2.0	0.1	1.6	1.7
Forced her to perform any sexual acts she did not want to	1.2	0.0	0.9	0.9
Sexual initiation was with current or most recent husband and was forced[2]	0.8	na	na	na
Emotional violence				
Any	8.3	1.5	6.2	7.7
Said or did something to humiliate her in front of others	5.8	1.0	4.3	5.3
Threatened to hurt or harm her or someone close to her	3.2	0.5	2.5	3.0
Insulted her or made her feel bad about herself	3.9	1.0	2.5	3.5
Any form of physical and/or sexual violence	34.6	1.7	29.8	31.5
Any form of physical and sexual violence	1.8	0.1	1.0	1.2
Any form of emotional, physical, and/or sexual violence	36.1	2.2	31.1	33.3
Any form of emotional, physical, and sexual violence	1.0	0.1	0.6	0.7
Number of ever married women	1,959	1,890	1,890	1,890

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women.
[1] Excludes widows
[2] Excludes women who have been married more than once since their sexual initiation could not have been with the current/ most recent partner
na= Not applicable

Among the various physical acts of violence experienced by women in the past 12 months, slapping was the most commonly reported act, experienced by 28 percent of women. Fourteen percent of women were pushed, shaken, or had something thrown at them by their husband or partner, 7 percent had their arms twisted or hair pulled by their husband or partner, and 7 percent were kicked, dragged, or beaten up. Two percent of women were forced to have sex by their husband/partner when they did not want to (Figure 16.1).

Figure 16.1 Percentage of Ever-married Women Who Have Experienced Specific Forms of Physical and Sexual Violence Committed by Their Husband/Partner

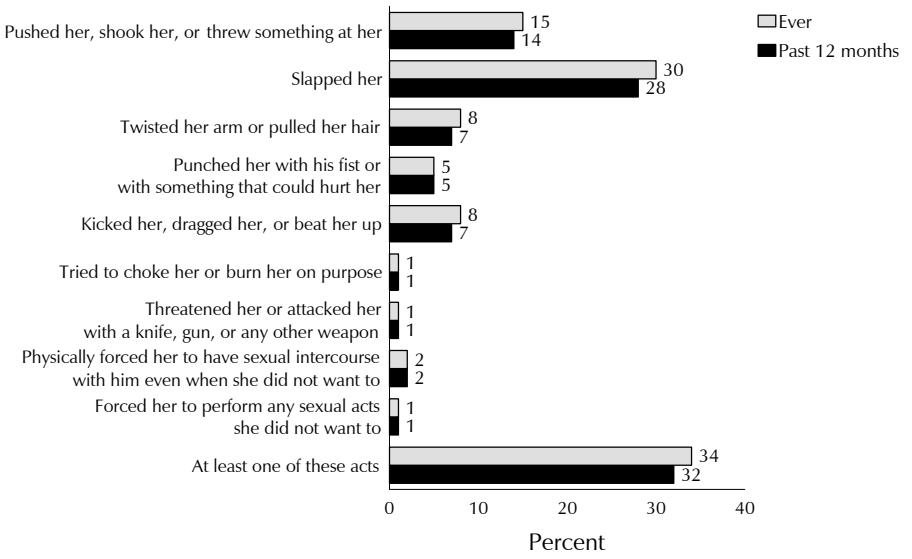

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Table 16.9 shows the experience of spousal violence among ever-married women by background characteristics. Women age 25-29 are generally more likely to have experienced emotional, physical, or sexual violence than those in the older or younger age groups. For instance, more than two in five women age 25-29 experienced all three forms of violence, compared with less than one in three women in the other cohorts. The findings show that women who are unemployed are most likely to experience emotional, physical, or sexual violence (39 percent).

Table 16.9 Spousal violence by background characteristics

Percentage of ever-married women age 15-49 by whether they have ever experienced emotional, physical or sexual violence committed by their husband/partner, according to background characteristics, Timor-Leste 2009-10

	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence	Number of women
Current age						
15-19	12.1	22.7	9.2	29.8	30.9	67
20-24	6.2	30.9	3.0	32.8	33.8	271
25-29	8.2	40.3	2.1	40.9	42.7	341
30-39	8.9	35.3	3.4	35.9	37.1	729
40-49	8.1	29.5	1.8	30.2	32.3	551
Employed last 12 months						
Not employed	9.7	36.2	2.7	36.9	38.6	1,094
Employed for cash	13.0	31.9	6.5	35.7	36.3	170
Employed not for cash	4.9	29.7	2.3	30.7	32.1	695
Number of living children						
0	5.7	24.8	1.8	26.6	26.6	115
1-2	9.8	33.5	3.2	35.3	37.7	527
3-4	6.7	35.4	2.4	36.1	37.3	594
5+	9.0	33.4	3.2	34.0	35.5	724

Continued…

Table 16.9—*Continued*

	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence	Number of women
Marital status and duration						
Currently married woman	7.2	33.3	2.6	34.1	35.3	1,843
..Married only once	7.2	33.4	2.6	34.1	35.4	1,817
....0-4 years	5.6	29.1	2.1	30.1	31.6	332
....5-9 years	6.3	36.5	1.6	36.7	37.6	352
....10+ years	8.0	33.7	3.1	34.5	35.8	1,133
..Married more than once	(7.0)	(30.3)	(0.0)	(30.3)	(30.3)	26
Divorced/separated/widowed	25.5	36.1	7.7	42.5	48.4	116
Residence						
Urban	13.8	43.9	3.4	45.5	48.5	468
Rural	6.6	30.2	2.7	31.1	32.2	1,491
District						
Aileu	7.7	22.5	5.4	26.5	28.0	74
Ainaro	3.1	11.0	0.5	11.5	13.0	100
Baucau	15.4	28.5	7.4	30.5	32.7	230
Bobonaro	3.0	22.1	1.8	23.3	24.2	172
Covalima	3.5	44.7	0.0	44.7	44.7	115
Dili	13.9	43.7	2.5	45.5	48.0	336
Ermera	2.5	16.1	1.2	16.1	17.0	225
Lautem	27.4	55.5	6.5	56.0	61.2	136
Liquiçá	4.0	24.0	4.1	25.3	26.2	115
Manatuto	2.2	10.6	2.1	11.1	12.0	79
Manufahi	4.7	77.0	1.3	77.6	77.6	84
Oecussi	4.6	53.8	2.4	54.8	55.3	140
Viqueque	2.1	25.7	0.5	25.7	26.2	153
Education						
No education	9.2	31.3	2.9	32.4	34.4	753
Primary	7.5	37.5	3.0	38.2	38.7	495
Secondary	8.1	32.4	3.0	33.8	35.5	656
More than secondary	(5.1)	(40.7)	(0.0)	(40.7)	(43.5)	54
Wealth quintile						
Lowest	7.3	33.5	3.4	34.8	35.8	392
Second	8.5	34.5	3.6	35.4	36.5	389
Middle	6.5	28.9	2.9	29.4	30.1	379
Fourth	8.7	33.2	1.6	34.1	37.3	385
Highest	10.5	37.1	2.8	38.7	40.3	415
Respondent's father beat her mother						
Yes	11.6	56.4	4.9	57.8	59.2	632
No	5.9	20.9	1.7	21.9	23.9	999
DK	9.2	28.0	2.5	28.6	28.9	324
Total	8.3	33.5	2.9	34.6	36.1	1,959

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes 4 women with information missing on whether their fathers beat their mothers. Figures in parentheses are based on 25-49 unweighted cases.

As expected, marital status shows a strong association with experience of violence. Women who are divorced, separated, or widowed are more likely to have experienced violence than other women. This finding suggests that the experience of violence may have contributed to the likelihood of the termination of a relationship. Currently married women who have been married for five years or more are more likely to experience emotional, physical, or sexual violence than women who have been married for less than five years.

By residence, urban women are more likely to experience violence than rural women. Women in Manufahi (78 percent), Lautem (61 percent), Oecussi (55 percent), and Dili (48 percent) are more likely to have ever experienced emotional, physical, or sexual violence than their counterparts in other districts. There is no distinct pattern between women experiencing violence committed by their husband by education. Women in the highest wealth quintile are slightly more likely to experience the three types of violence. Women with a history of family violence—whose father beat their mother — are more than twice as likely to experience all three types of violence from a husband or partner than women whose fathers or mothers were not abusive. This indicates that violence is accepted as a normal part of life.

16.10 VIOLENCE BY SPOUSAL CHARACTERISTICS AND EMPOWERMENT INDICATORS

The perpetrators of spousal violence are usually husbands or partners, and it is therefore important to understand their characteristics. It is also useful to examine whether spousal violence varies with indicators of women's status. Table 16.10 shows the percentage of ever-married women who have ever experienced different forms of spousal violence by their current or most recent husband, by spousal characteristics and women's empowerment indicators.

Husbands who have primary education are more likely to exhibit violent behavior against their wives/partners while those with no education and those with higher education are less likely to be violent.

The husband's alcohol consumption is strongly related to the wife's reporting of violence. For example, the proportion of ever-married women who report having experienced emotional, physical, or sexual violence from their husbands varies from 26 percent among those whose husbands do not drink at all to 60 percent among those whose husbands get drunk very often.

Women who are of the same age as their husband are more likely to experience emotional, physical, or sexual violence. Women in marriages in which neither spouse is educated are less likely to report experiencing violence from their husbands than those where both have equal levels of education (31 percent and 40 percent, respectively).

Results show that there is a strong relationship between women's empowerment status and their experience of spousal violence. Women whose husbands display five to six controlling behaviors are more likely to report experiencing emotional, physical, or sexual violence by their husbands than women whose husbands display no controlling behaviors (58 and 29 percent, respectively).

Women who participate in three or four household decisions are less likely to experience spousal violence than women who participate in fewer decisions. Women with one or two reasons justifying the refusal to have sexual intercourse with their husbands are more likely to experience all three types of violence from their husbands than those with no reasons. Views about wife beating also appear to be related to actual experience of physical abuse. Women who believe that wife beating is justified for any of the five specified circumstances are more likely to report having experienced emotional, physical, or sexual violence from their husbands than women who do not think wife beating is justified for any reason (36 and 19 percent, respectively). To some extent, this pattern could be due to women's rationalization of the abuse they have experienced.

Table 16.10 Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever-married women age 15-49 who have ever suffered emotional, physical, or sexual violence committed by their husband/partner, according to his characteristics, marital characteristics, and empowerment indicators, Timor-Leste 2009-10

	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical, or sexual violence	Number of women
Husband's/partner's education						
No education	7.4	27.9	1.5	28.6	30.0	590
Primary	10.0	39.1	3.8	40.4	42.1	573
Secondary	8.3	33.9	3.3	35.0	36.6	701
More than secondary	4.4	31.0	2.2	32.6	33.5	94
Husband's/partner's alcohol consumption						
Does not drink	4.7	24.5	2.7	25.6	26.1	926
Drinks/never gets drunk	2.9	26.0	2.9	26.0	27.1	68
Gets drunk sometimes	10.5	42.2	2.6	43.4	45.1	889
Gets drunk very often	31.6	47.3	8.1	47.3	59.8	76
Spousal age difference[1]						
Wife older	10.4	33.3	2.6	33.5	34.9	200
Wife is same age	5.7	38.1	0.6	38.1	41.1	124
Wife's 1-4 years younger	7.7	34.8	2.0	35.6	37.2	634
Wife's 5-9 years younger	6.0	28.8	3.0	30.0	30.8	544
Wife's 10+ years younger	7.2	36.4	3.7	36.9	37.5	336
Spousal education difference						
Husband better educated	8.5	35.6	4.2	37.0	38.8	737
Wife better educated	8.3	33.1	2.2	33.8	35.2	649
Both equally educated	7.3	39.2	1.2	39.2	40.0	121
Neither educated	7.3	28.5	1.4	29.4	30.7	439
Number of marital control behaviors displayed by husband/partner						
0	3.6	27.4	1.1	27.7	28.7	1,042
1-2	9.0	39.4	3.7	41.2	42.2	651
3-4	23.3	40.9	7.0	43.6	48.4	216
5-6	32.3	51.6	12.0	51.6	58.2	50
Number of decisions in which women participate[1]						
0	(20.4)	(36.3)	(4.5)	(40.8)	(43.8)	25
1-2	15.5	37.8	6.9	38.0	40.2	175
3-4	6.1	32.8	2.1	33.5	34.7	1,643
Number of reasons given for refusing to have sexual intercourse with husband						
0	2.5	29.1	1.7	29.4	30.5	210
1-2	10.2	46.0	2.6	46.6	48.5	592
3	8.4	27.9	3.3	29.3	30.8	1,157
Number of reasons for which wife beating is justified						
0	3.5	15.5	1.0	16.5	18.6	203
1-2	8.4	37.7	3.8	39.6	40.7	530
3-4	8.7	34.5	2.9	35.4	37.5	779
5	9.6	34.9	2.6	35.3	36.1	447
Total	8.3	33.5	2.9	34.6	36.1	1,959

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Total includes 2 women with information missing on husband's education, 5 women with information missing on spousal age difference, and 15 women with information missing on spousal education difference. Figures in parentheses are based on 25-49 unweighted cases.

[1] Includes only currently married women

16.11 FREQUENCY OF SPOUSAL VIOLENCE

The percent distribution of ever-married women (excluding widows) who reported physical or sexual violence by their current or most recent spouse in the 12 months preceding the survey by frequency with which violence was experienced, according to selected background characteristics, is not shown separately because the numbers associated with most cells are too small for meaningful statistical analysis by each background characteristic. Ninety-one percent of women who ever experienced emotional violence by their current or most recent husband have experienced such

violence in the 12 months preceding the survey, and 17 percent of them experienced emotional violence often (data not shown). Similarly, 91 percent of women who have ever experienced physical or sexual violence by their current or most recent husband have experienced such violence in the 12 months preceding the survey, and 5 percent have experienced such violence often.

16.12 ONSET OF SPOUSAL VIOLENCE

To examine the timing of the onset of marital violence, the 2009-10 TLDHS asked ever-married women who had experienced physical or sexual spousal violence when the first episode of violence took place. Violence starts early in marriage in Timor-Leste, with 15 percent of ever-married women reporting the onset of violence within two years of marriage. For about 5 percent of the women who had experienced violence, the violence was initiated three to five years after marriage (data not shown).

16.13 TYPES OF INJURIES TO WOMEN RESULTING FROM SPOUSAL VIOLENCE

In the 2009-10 TLDHS, women who ever experienced spousal physical violence—or sexual violence—were asked about the physical consequences of the violence. Specifically, they were asked if, as a consequence of what their spouse did to them, they ever had: a) cuts, bruises or aches; b) eye injuries, sprains, dislocations, or burns; and c) deep wounds, broken bones, broken teeth, or any other serious injury. Table 16.11 shows the percentage of ever-married women who reported any spousal physical violence or sexual violence, by type of injuries sustained.

About one in five women who have ever experienced physical violence or sexual violence by their current or most recent husband/partner received at least one of the injuries asked about. Cuts, bruises, and aches are the most common injuries sustained by women for any type of violence. One percent of women reported receiving deep wounds, broken bones, broken teeth, or other serious injuries. A similar pattern is seen for women who experienced spousal violence in the past 12 months.

Table 16.11 Injuries to women due to spousal violence

Percentage of ever-married women age 15-49 who have experienced specific types of spousal violence by types of injuries resulting from what their husband/partner did to them, according to the type of violence and whether they have experienced the violence ever and in the 12 months preceding the survey, Timor-Leste 2009-10

Type of violence	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of these injuries	Number of ever married women
Experienced physical violence[1]					
Ever[2]	18.7	4.4	1.0	19.8	656
In the past 12 months[3]	17.8	4.3	0.9	18.9	579
Experienced sexual violence[4]					
Ever[2]	(53.6)	(18.2)	(0.0)	(56.2)	46
In the past 12 months[3]	(59.8)	(21.5)	(0.0)	(62.9)	39
Experienced physical or sexual violence[4]					
Ever[2]	19.3	5.0	1.0	20.4	673
In the past 12 months[3]	18.8	5.1	0.9	19.8	596

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes women who experienced physical violence only during pregnancy
[2] Includes in the past 12 months
[3] Excludes widows
[4] Excludes women whose sexual initiation was forced but who have not experienced any other form of physical or sexual violence

16.14 Physical Violence by Women against Their Spouse

Violence by husbands against wives is not the only form of spousal violence; women may sometimes be the perpetrators of violence. In most cultures, however, the level of spousal violence initiated by wives is only a fraction of the level of spousal violence initiated by husbands. To measure spousal violence by women, the 2009-10 TLDHS also asked women about violence they themselves initiated against their spouse or other intimate partner. Specifically, women were asked: *Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?* Respondents who said yes to this question were asked about the frequency of such violence in the 12 months preceding the survey.

Table 16.12 shows the percentage of ever-married women (excluding widows) who have ever initiated violence against their current or most recent husbands and the percentage of all ever-married women who say that they have initiated spousal violence in the 12 months preceding the survey. Results shown indicate that overall, 6 percent of ever-married women report that they have ever initiated physical violence against their current or most recent husbands, while 5 percent say that they have committed such violence in the 12 months preceding the survey.

Differentials by background characteristics for women who initiate physical violence against their current or most recent husbands are generally small. Women who reported experiencing physical violence at the hands of their husbands in the past 12 months (13 percent), women whose husbands get drunk sometimes (8 percent), and women in urban areas (8 percent) are more likely to initiate physical violence against their husbands than other women.

Table 16.12 Violence by women against their spouse

Percentage of ever-married women age 15-49 who have committed physical violence against their husband/partner when he was not already beating or physically hurting them ever and in the past 12 months, according to women's own experience of spousal violence and their own and husband's/partner's characteristics, Timor-Leste 2009-10

	Percentage who have committed physical violence against their current or most recent husband/partner			
Characteristic	Ever	Number of women	In the past 12 months[1]	Number of women[1]
Woman's experience of spousal physical violence				
Ever	13.1	656	10.6	636
In the past 12 months	13.4	579	11.5	579
Not past 12 months/widow/missing	11.2	77	0.6	56
Never	1.7	1,303	1.5	1,254
Current age				
15-19	10.4	67	7.6	67
20-24	7.1	271	7.2	267
25-29	7.4	341	5.8	335
30-39	4.9	729	3.9	706
40-49	4.0	551	2.9	514
Employed past 12 months				
Not employed	6.2	1,094	4.9	1,076
Employed for cash	8.1	170	7.9	160
Employed not for cash	4.0	695	3.1	654
Number of living children				
0	2.2	115	1.7	111
1-2	7.2	527	6.4	509
3-4	5.4	594	4.3	574
5+	5.0	724	3.8	696
Residence				
Urban	8.2	468	5.9	455
Rural	4.7	1,491	4.1	1,434

Continued…

Table 16.12—*Continued*

Characteristic	Percentage who have committed physical violence against their current or most recent husband/partner: Ever	Number of women	In the past 12 months[1]	Number of women[1]
District				
Aileu	2.0	74	1.0	72
Ainaro	2.1	100	2.2	99
Baucau	3.8	230	3.9	225
Bobonaro	2.1	172	1.9	164
Covalima	4.0	115	4.2	110
Dili	7.8	336	5.5	326
Ermera	5.8	225	5.0	220
Lautem	15.0	136	12.2	131
Liquiçá	10.0	115	9.6	108
Manatuto	2.1	79	1.7	77
Manufahi	12.0	84	11.2	81
Oecussi	3.1	140	0.8	134
Viqueque	0.5	153	0.0	142
Wealth quintile				
Lowest	3.7	392	3.8	373
Second	5.3	389	5.0	372
Middle	5.2	379	2.7	367
Fourth	7.6	385	6.3	378
Highest	5.9	415	4.8	400
Marital status and duration				
Currently married woman	5.3	1,843	4.5	1,843
Married only once	5.2	1,817	4.4	1,817
0-4 years	6.6	332	6.0	332
5-9 years	5.9	352	4.8	352
10+ years	4.6	1,133	3.8	1,133
Married more than once	(11.1)	26	(11.1)	26
Divorced/separated/widowed	9.0	116	7.6	47
Education				
No education	4.3	753	4.0	716
Primary	7.5	495	5.8	481
Secondary	5.3	656	4.0	644
More than secondary	(8.9)	54	(7.3)	49
Husband's/partner's education				
No education	4.1	590	3.6	546
Elementary	5.6	573	3.8	561
High school	6.3	701	5.8	690
College	8.1	94	5.1	92
Husband's/partner's alcohol consumption				
Does not drink	3.5	926	3.0	888
Drinks/never gets drunk	1.1	68	0.0	67
Gets drunk sometimes	7.9	889	6.4	861
Gets drunk very often	7.1	76	6.2	75
Spousal age difference[2]				
Wife older	4.0	200	3.6	200
Wife is same age	6.0	124	6.0	124
Wife's 1-4 years younger	5.6	634	4.9	634
Wife's 5-9 years younger	3.7	544	2.5	544
Wife's 10+ years younger	8.2	336	6.8	336
Spousal education difference				
Husband better educated	5.7	737	5.0	725
Wife better educated	6.0	649	4.5	629
Both equally educated	6.7	121	3.6	117
Neither educated	3.3	439	3.1	405
Total	5.5	1,959	4.5	1,890

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes 2 women with information missing on husband's education, 5 women with information missing on spousal age difference, and 15 women with information missing on spousal education difference. Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes widows
[2] Currently married women

16.15 Help-seeking Behavior of Women who Experience Violence

All respondents who have ever experienced physical or sexual violence by any person were asked a series of questions about whether and from whom they sought help to try to end the violence. This information is presented in Table 16.13.

About one in five women (24 percent) who experience violence seek help. Women who experience both physical and sexual violence[1] (50 percent) are most likely to seek help. The percentage of respondents who seek help varies from 19 percent among women age 15-19 to 27 percent among women age 25-29. Unemployed women are less likely to seek help than those who are employed for cash (24 and 36 percent, respectively). Women with no living children are slightly less likely to seek help than other women. Formerly married women (53 percent) who experienced physical violence are more likely to seek help than other respondents.

District-level differences are large and could be due to differences in the degree of adherence to ingrained cultural norms. For example, 7 percent of women who experienced violence in Manufahi sought help, compared with one in two women in Covalima (51 percent). Women with no education and those in the lowest and second wealth quintiles were less likely to seek help than other women. Urban women were more likely to seek help to end violence.

Women most often sought help from their own family members (82 percent) and from in-laws (27 percent). About 14 percent of women sought help from friends/neighbors. It is interesting to note that only 4 percent of women sought help from the police, while 1 percent of women sought help from social service organizations (data not shown separately).

16.16 Family Support for Abused Women in Need

Women having a strong fallback position could be in a better position than those with no fallback position when faced with domestic

Table 16.13 Help seeking to stop violence

Among women age 15-49 who have ever experienced physical or sexual violence, percentage who fought back physically, fought back verbally or sought help from any source to end the violence according to type of violence and background characteristics, Timor-Leste 2009-10

	Have sought help from any source	Number of women
Type of violence		
Physical only	21.8	1,057
Sexual only	(27.4)	31
Both physical and sexual	50.3	69
Current age		
15-19	19.2	214
20-24	25.1	186
25-29	27.1	197
30-39	24.3	345
40-49	22.7	215
Employed past 12 months		
Not employed	23.7	727
Employed for cash	35.6	96
Employed not for cash	20.1	333
Number of living children		
0	17.1	330
1-2	26.8	240
3-4	25.3	273
5+	26.7	312
Marital status and duration		
Never married	16.8	287
Currently married woman	23.8	805
Married only once	23.8	792
0-4 years	27.9	129
5-9 years	24.5	164
10+ years	22.5	499
Married more than once	21.0	13
Divorced/separated/widowed	52.7	64
Residence		
Urban	31.4	348
Rural	20.3	808
District		
Aileu	11.1	57
Ainaro	(19.1)	20
Baucau	20.5	154
Bobonaro	(31.4)	44
Covalima	50.9	102
Dili	34.4	251
Ermera	(14.2)	88
Lautem	21.7	103
Liquiçá	17.6	65
Manatuto	(22.8)	23
Manufahi	6.8	87
Oecussi	17.9	116
Viqueque	(3.6)	46
Education		
No education	19.9	348
Primary	24.2	294
Secondary	25.2	472
More than secondary	(33.8)	42
Wealth quintile		
Lowest	19.9	208
Second	16.7	218
Middle	23.7	222
Fourth	22.8	226
Highest	32.4	282
Total	23.7	1,156

Note: Excludes women whose sexual initiation was forced but who have not experienced any other form of physical or sexual violence. Figures in parentheses are based on 25-49 unweighted cases.

[1] Physical violence here excludes violence during pregnancy, and sexual violence excludes those whose first sex was forced.

violence. Support from family members, the maternal home, and social service organizations established to support women in vulnerable positions all play an important role. The 2009-10 TLDHS asked women if they needed help or had a problem if they have any family members who could provide shelter for a few nights and provide financial support if needed.

Table 16.14 indicates that 27 percent of women mentioned that they have family members who can provide shelter for them for a few nights if they needed it. However, it is worth noting that the majority of women do not have any family support outside the house, which makes them more vulnerable to their situation. Younger women (age 15-24), women employed for cash, never-married women, rural residents, and women residing in Ainaro are less likely to receive shelter from their families for a few days than their counterparts.

One in five women have family members who can support the women financially if they needed it, again hinting at the fact that a majority of these women do not have such support. Women in Lautem and Ainaro are more vulnerable regarding these types of support systems.

Table 16.14 Family support

Percentage of women age 15-49 whose family can provide them shelter and financial support if they need it, by background characteristics, Timor-Leste 2009-10

Background characteristic	Percentage of women whose family can give them shelter for a few nights if they need it	Percentage of women whose family can give them financial support if they need it	Number of women
Current age			
15-19	23.2	20.6	700
20-24	24.0	16.7	513
25-29	30.5	20.6	403
30-39	26.9	18.9	765
40-49	30.9	23.7	570
Employed last 12 months			
Not employed	27.6	20.9	1,795
Employed for cash	23.0	16.2	219
Employed not for cash	26.0	19.3	937
Marital status			
Never married	23.0	19.1	992
Married or living together	28.5	20.0	1,843
Divorced/separated/widowed	30.9	28.9	116
Residence			
Urban	30.0	19.9	700
Rural	25.7	20.1	2,251
District			
Aileu	38.9	14.2	128
Ainaro	4.8	5.1	160
Baucau	53.2	46.7	334
Bobonaro	30.5	25.5	281
Covalima	43.1	41.2	177
Dili	30.9	18.0	474
Ermera	24.2	23.4	357
Lautem	14.2	2.5	192
Liquiçá	13.6	13.3	179
Manatuto	19.9	10.5	135
Manufahi	9.7	8.6	114
Oecussi	20.5	12.0	201
Viqueque	13.2	8.9	219
Education			
No education	27.9	21.4	896
Primary	26.6	19.2	695
Secondary	25.7	19.6	1,268
More than secondary	31.8	20.7	91
Wealth quintile			
Lowest	23.7	17.4	567
Second	28.1	22.3	572
Middle	25.0	18.9	597
Fourth	27.2	21.1	594
Highest	29.6	20.6	620
Total	26.8	20.1	2,951

16.17 SOCIAL NORMS AND VALUES

The fact that domestic violence is often perceived as a private matter that should not be discussed in public provides a rationale for further exploration of the extent of social norms and values that exists in a society. Studies have shown that the cultural acceptance of gender roles and behavior has led to the reinforcement of violence against women. The 2009-10 TLDHS explored women's attitudes regarding two specific behaviors used as a proxy for justifying patriarchal behavior that puts men in a higher social position than women. The first question asked if women believed that 'men cannot control their sexual behavior.' If women agree that men have no control over their sexual behavior, then they may believe that men's unwanted sexual advances towards women are somehow justified and cannot be construed as violence. The second question asked women if they thought that 'marital rape is allowable,' meaning whether women believe that within marriage they cannot refuse sexual advances from their husband and therefore marital rape does not constitute sexual violence.

It is interesting that nearly half of the women (47 percent) believed that men cannot control their sexual behavior (Table 16.15). Women in the older age cohort are more likely to believe this, with more than half of the women above age 25 years agreeing with the statement. The data shows that women who work for cash, those residing in urban areas, those with higher education and those belonging to wealthier households are least likely to support this belief. Still, the belief is strongly ingrained in the culture. Eighty-three percent of women in Ermera hold this belief compared with 18 percent of women in Bobonaro.

About 29 percent of women in the 2009-10 TLDHS believed that marital rape is allowable, giving the husband authority over a woman's sexuality. Women in the older cohort are more likely to believe this statement. Similarly, women who work but not for cash, who are currently married, who reside in rural areas, and who are not educated are more likely to believe that marital rape is allowable. Women in Manatuto (55 percent) and Ermera (46 percent) are more likely to believe that marital rape is allowable, while those living in Covalima (12 percent) are least likely to believe this.

These findings demonstrate a need to raise awareness among women and men about individual rights in relation to sexuality and how they can work to reduce sexual violence. The responsibility for sexual assault lies with the perpetrators, who choose to engage in inappropriate behavior. Decreases over time in the proportion of women who believe that 'men sometimes cannot control their sexual behavior' or 'marital rape is allowable' may indicate an improvement in the level of awareness and empowerment. The data shown here can be a useful guide for program managers to initiate awareness-raising activities and human rights education interventions.

Table 16.15 Attitudes towards male sexuality and marital rape

Percentage of women age 15-49 who believe that a man cannot control his sexual behavior and percentage who think that marital rape is allowable, by background characteristics, Timor-Leste 2009-10

	Percentage of women who believe that a man cannot control his sexual behavior	Percentage of women who believe that marital rape is allowable	Number of women
Current age			
15-19	33.0	20.8	700
20-24	46.6	29.8	513
25-29	52.3	27.4	403
30-39	54.4	36.4	765
40-49	50.3	28.3	570
Employed last 12 months			
Not employed	45.7	26.4	1,795
Employed for cash	39.8	22.0	219
Employed not for cash	50.8	34.7	937
Marital status			
Never married	33.5	20.9	992
Married or living together	54.8	33.3	1,843
Divorced/separated/widowed	35.0	22.6	116
Residence			
Urban	41.7	20.7	700
Rural	48.5	31.2	2,251
District			
Aileu	38.8	15.6	128
Ainaro	24.5	15.7	160
Baucau	59.1	44.6	334
Bobonaro	17.9	35.2	281
Covalima	42.1	11.9	177
Dili	44.1	14.1	474
Ermera	83.1	46.4	357
Lautem	28.7	24.5	192
Liquiçá	52.9	35.9	179
Manatuto	63.7	55.0	135
Manufahi	25.7	34.6	114
Oecussi	45.9	17.5	201
Viqueque	50.1	18.7	219
Education			
No education	52.0	33.7	896
Primary	46.8	29.9	695
Secondary	43.2	25.8	1,268
More than secondary	48.2	11.4	91
Wealth quintile			
Lowest	40.7	29.9	567
Second	50.9	30.0	572
Middle	51.1	30.3	597
Fourth	45.5	32.0	594
Highest	46.0	21.8	620
Total	46.9	28.7	2,951

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SAMPLE DESIGN

Appendix A

A.1 OBJECTIVES OF THE SURVEY

The 2009 Timor-Leste Demographic and Health Survey (TLDHS 2009-10) was the second of its kind following the survey conducted in 2003. TLDHS 2009-10 selected a nationally representative sample consisting of 12,285 residential households. In sampled households, all women between the ages of 15 and 49 who were members of the households or who stayed in the households the night before the survey were eligible for the individual interview. The survey was designed to yield about 11,800 completed interviews of women age 15-49. The sample was designed to produce representative results for most of the indicators for the country as a whole, for the urban and rural areas, and for each of the thirteen districts.

Apart from the female survey, a male survey was conducted in one-third of the households selected for the female survey. All men age 15-49 who were usual members of the household or who stayed in the household the night before the survey were eligible for the male individual interview. This sampling plan was expected to yield about 3,800 completed interviews of men age 15-49. In this sub-sample, all women who were eligible for the individual interview and all their young children aged 6-59 months were asked consent for an anemia testing.

A.2 SAMPLING FRAME

The sampling frame used for the TLDHS 2009 was the 2004 Timor-Leste Population and Housing Census (TLPHC) (NSD, 2006), provided by the National Statistics Directorate (NSD). The sampling frame is a complete list of 1,163 Enumeration Areas (EAs) created for the 2004 census. Among the 1,163 EAs, 240 are urban residence and 923 are rural residence.

In Timor-Leste, 26.0% of the household population lives in urban areas, and they occupy 23.1% of the residential households.

A.3 SAMPLING PROCEDURE AND SAMPLE ALLOCATION

The sample for TLDHS 2009 was a stratified sample selected in two stages from the TLPHC 2004. Stratification was achieved by separating each of the 13 districts into urban and rural areas. In total, 26 sampling strata were created. Samples were selected independently in every stratum, through a two-stage selection process. Implicit stratification was achieved at each of the lower administrative levels by sorting the sampling frame before sample selection, according to administrative units and by using a probability proportional to size selection at the first stage of sampling.

In the first stage, 455 EAs were selected with probability proportional to the EA size. The EA size was the number of households residing in the EA at the time of the census. Standard DHS procedures call for a new listing of households in the selected EAs before conducting the household selection. However, because of time and other constraints, the households were selected from the TLPHC 2004 census results without conducting a new household listing operation.

In the second stage of selection, a fixed number of 27 households were randomly selected in every cluster by an equal probability systematic sampling procedure. This number was increased from the original design of 24 households per EA to account for the outdated census household listing. The household selection was carried out in the office. The GPS coordinates collected for each household

during the population census were used to relocate the selected households in the field during data collection.

Table A.1 shows the sample allocation of clusters/EAs and households according to district and by type of residence. The final allocation was an equal size allocation of 34 EAs for each of the twelve districts except Dili district; a larger sample size of 47 EAs was allocated to Dili district. Dili district received a higher number of EAs in order to get adequate representation of the urban population of the country. In total, there were 116 urban clusters and 339 rural clusters selected in the TLDHS 2009-10 sample. Table A.2 below shows the sample allocation of expected number completed women and men interviews by district and by type of residence.

Table A.1 Sample allocation of clusters and households according to district and by type of residence, Timor-Leste 2009-10

	Allocation of EA			Allocation of households		
District	Urban	Rural	Total	Urban	Rural	Total
Aileu	2	32	34	54	864	918
Ainaro	8	26	34	216	702	918
Baucau	5	29	34	135	783	918
Bobonaro	8	26	34	216	702	918
Covalima	8	26	34	216	702	918
Dili	40	7	47	1,080	189	1 269
Ermera	6	28	34	162	756	918
Liquica	5	29	34	135	783	918
Lautem	11	23	34	297	621	918
Manufahi	8	26	34	216	702	918
Manatuto	2	32	34	54	864	918
Oecussi	9	25	34	243	675	918
Viqueque	4	30	34	108	810	918
Timor-Leste	116	339	455	3,132	9,153	12,285

Note: The sample allocation has taken into account the reform of the urban EAs in Covalima and Manatuto districts.

Table A.2 Sample allocation of expected number of completed women and men interviews according to district and by type of residence, Timor-Leste 2009-10

	Women 15-49			Men 15-49 (subsample)		
District	Urban	Rural	Total	Urban	Rural	Total
Aileu	52	834	886	17	272	289
Ainaro	209	678	887	68	222	290
Baucau	131	756	887	43	247	290
Bobonaro	209	678	887	68	222	290
Covalima	209	678	887	68	222	290
Dili	1,042	182	1,224	341	60	401
Ermera	157	729	886	51	238	289
Liquica	131	756	887	43	247	290
Lautem	286	599	885	94	196	290
Manufahi	209	678	887	68	222	290
Manatuto	52	834	886	17	272	289
Oecussi	235	652	887	76	212	288
Viqueque	104	782	886	34	255	289
Timor-Leste	3,026	8,836	11,862	988	2,887	3,875

The above sample allocation on expected number of interviews was calculated based on the facts obtained from the TLDHS 2003 and the TLPHC 2004: there were 1.07 women and men aged 15-49 per household. The numbers in Table A.2 assume a female response rate of 97 percent, a male response rate of 95 percent; and a household response rate of 93 percent in both urban and rural areas.

A.4 SAMPLING PROBABILITY AND SAMPLING WEIGHTS

Because of the non-proportional allocation of the sample to the different districts and to their urban-rural areas, sampling weights will be required for any analysis using TLDHS 2009-10 data to ensure the actual representativeness of the sample at the national level as well as district level. Since the TLDHS 2009 sample is a two-stage stratified cluster sample, sampling weights were calculated based on sampling probabilities separately for each sampling stage and for each cluster. We use the following notations:

P_{1hi}: first-stage sampling probability of the ith cluster in stratum h
P_{2hi}: second -stage sampling probability within the ith cluster (households)

Let a_h be the number of clusters selected in stratum h, M_{hi} the number of households according to the sampling frame in the ith cluster, and $\sum M_{hi}$ the total number of households in the stratum h. The probability of selecting the ith cluster in the TLDHS sample is calculated as follows:

$$\frac{a_h\, M_{hi}}{\sum M_{hi}}$$

Let b_{hi} be the proportion of households in the selected segment compared to the total number of households in the EA i in stratum h if the EA is segmented, otherwise $b_{hi} = 1$. Then the probability of selecting cluster i in the sample is:

$$P_{1hi} = \frac{a_h\, M_{hi}}{\sum M_{hi}} \times b_{hi}$$

Let g_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{M_{hi} b_{hi}}$$

The overall selection probability of each household in cluster i of stratum h is therefore the production of the selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

The design weight for each household in cluster i of stratum h is the inverse of its selection probability:

$$W_{hi} = 1 / P_{hi}$$

A spreadsheet containing all sampling parameters and selection probabilities was constructed to facilitate the calculation of sampling weights. Household sampling weights and the individual sampling weights were obtained by adjusting the above calculated design weight to compensate for household non-response and individual non-response, respectively. These weights were further normalized at the national level to achieve the number of un-weighted cases equal to the number of weighted cases for both households and individuals at the national level. The normalized weights are valid for estimating means, proportions, rates and ratios, but not valid for estimation of totals. No special weights were calculated for data collected on children because there was not a child's questionnaire. For child indicators tabulated at the household level, household weights should be used; for child indicators tabulated at the individual level, the child's mother's/guardian's weight should be used.

Sampling errors for selected indicators are calculated and presented in Appendix B.

A.5 SURVEY RESULTS

Table A.3 Sample implementation: Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and districts, Timor-Leste 2009-10

	Residence		District													
Result	Urban	Rural	Aileu	Ainaro	Baucau	Bobonaro	Cova Lima	Dili	Ermera	Lautem	Liquica	Manatuto	Manufahi	Oecussi	Viqueque	Total
Selected households																
Completed (C)	91.1	95.6	92.4	96.2	97.7	97.7	94.0	90.4	95.6	92.8	94.2	96.4	90.3	98.0	93.9	94.5
Household present but no competent respondent at home (HP)	1.2	0.4	1.3	0.0	0.4	0.0	1.2	1.2	0.7	0.3	0.5	0.0	1.4	0.1	0.3	0.6
Postponed (P)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	1.1	0.4	1.3	0.3	0.0	1.0	0.4	1.6	0.1	1.1	0.3	0.2	0.2	0.4	0.1	0.6
Dwelling not found (DNF)	1.2	0.3	0.3	0.1	0.0	0.0	0.7	2.3	0.0	1.5	0.2	0.4	0.3	0.2	0.2	0.5
Household absent (HA)	1.7	0.8	0.4	0.3	0.1	0.4	0.9	2.1	1.2	2.0	1.1	1.2	2.4	0.3	0.4	1.0
Dwelling vacant/address not a dwelling (DV)	2.2	1.2	2.1	2.0	1.7	0.8	2.0	1.1	0.7	0.4	1.9	1.2	2.2	0.4	2.6	1.5
Dwelling destroyed (DD)	1.5	1.3	2.1	1.1	0.0	0.1	0.9	1.3	1.5	1.6	1.7	0.5	3.2	0.4	2.5	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	3,012	9,116	910	918	918	918	918	1,149	912	916	918	918	918	918	897	12,128
Household response rate (HRR)[1]	96.3	98.8	96.9	99.5	99.6	99.0	97.6	94.7	99.0	96.7	98.9	99.3	97.9	99.2	99.3	98.2
Eligible women																
Completed (EWC)	89.2	97.4	94.1	97.9	98.9	98.2	93.8	86.2	95.9	96.6	92.8	98.7	95.3	96.8	96.4	95.2
Not at home (EWNH)	4.4	1.1	2.4	0.1	0.5	0.5	3.2	5.1	1.1	1.3	3.6	0.3	1.6	1.4	2.8	1.9
Postponed (EWP)	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.1
Refused (EWR)	5.2	0.8	2.7	1.0	0.3	1.0	1.4	7.1	2.4	0.8	2.6	0.3	1.9	1.2	0.7	2.0
Partly completed (EWPC)	0.6	0.1	0.3	0.2	0.0	0.3	0.0	1.0	0.0	0.6	0.1	0.1	0.4	0.2	0.2	0.3
Incapacitated (EWI)	0.4	0.6	0.5	0.5	0.3	0.0	1.4	0.3	0.6	0.5	1.0	0.4	0.7	0.5	0.0	0.5
Other (EWO)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	3,625	10,171	1,101	859	1,018	1,081	1,054	1,423	1,128	1,059	1,152	1,150	830	1,033	908	13,796
Eligible women response rate (EWRR)[2]	89.2	97.4	94.1	97.9	98.9	98.2	93.8	86.2	95.9	96.6	92.8	98.7	95.3	96.8	96.4	95.2
Overall response rate (ORR)[3]	85.9	96.2	91.2	97.5	98.5	97.3	91.6	81.7	94.9	93.4	91.7	98.0	93.3	96.1	95.7	93.5

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{100 * EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EWRR/100$$

Table A.4 Sample implementation: Men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men and overall response rates, according to urban-rural residence and district, Timor-Leste 2009-10

	Residence		District													
Result	Urban	Rural	Aileu	Ainaro	Baucau	Bobonaro	Cova Lima	Dili	Ermera	Lautem	Liquica	Manatuto	Manufahi	Oecussi	Viqueque	Total
Selected households																
Completed (C)	91.4	95.7	91.8	97.7	97.4	99.3	93.5	90.1	93.8	93.8	95.4	96.1	90.5	97.7	94.3	94.6
Household present but no competent respondent at home (HP)	1.3	0.5	1.0	0.0	0.7	0.0	1.3	1.8	1.0	0.0	1.0	0.0	1.3	0.0	0.3	0.7
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.9	0.5	2.6	0.3	0.0	0.0	0.7	1.8	0.3	1.3	0.3	0.3	0.0	0.0	0.0	0.6
Dwelling not found (DNF)	1.3	0.3	0.7	0.3	0.0	0.0	0.3	1.8	0.0	1.6	0.0	0.7	0.3	0.3	0.3	0.5
Household absent (HA)	1.7	0.7	0.7	0.3	0.0	0.0	0.3	2.6	0.7	2.0	0.7	1.3	2.9	0.3	0.0	0.9
Dwelling vacant/address not a dwelling (DV)	1.7	1.2	1.3	0.7	2.0	0.7	3.3	1.0	0.7	0.3	1.6	1.6	1.3	1.0	2.0	1.3
Dwelling destroyed (DD)	1.7	1.1	2.0	0.7	0.0	0.0	0.7	0.8	3.3	1.0	1.0	0.0	3.6	0.7	3.0	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	1,004	3,040	304	306	306	306	306	383	304	306	306	306	306	306	299	4,044
Household response rate (HRR)[1]	96.3	98.7	95.5	99.3	99.3	100.0	97.6	94.3	98.3	97.0	98.6	99.0	98.2	99.7	99.3	98.1
Eligible men																
Completed (EMC)	85.8	94.5	81.4	96.1	96.4	98.5	90.0	85.4	97.3	93.6	84.2	98.1	90.8	96.1	95.7	92.2
Not at home (EMNH)	6.1	2.9	6.0	1.9	1.0	0.6	8.5	6.6	0.3	3.3	7.8	1.1	5.6	3.2	1.4	3.8
Postponed (EMP)	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Refused (EMR)	6.4	1.3	8.7	1.3	1.9	0.6	0.6	6.6	1.1	0.8	6.7	0.3	1.2	0.0	1.4	2.6
Partly completed (EMPC)	0.8	0.3	0.3	0.0	0.3	0.3	0.3	0.4	0.3	1.5	0.3	0.5	1.2	0.0	0.4	0.5
Incapacitated (EMI)	0.8	0.9	3.3	0.6	0.3	0.0	0.6	0.6	1.1	0.8	1.1	0.0	1.2	0.7	1.1	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	1,183	3,238	366	308	308	324	330	472	365	391	374	373	251	282	277	4,421
Eligible men response rate (EMRR)[2]	85.8	94.5	81.4	96.1	96.4	98.5	90.0	85.4	97.3	93.6	84.2	98.1	90.8	96.1	95.7	92.2
Overall response rate (ORR)[3]	82.6	93.3	77.8	95.5	95.8	98.5	87.8	80.5	95.6	90.8	83.1	97.1	89.2	95.8	95.0	90.4

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible men falling into specific response categories, the eligible man response rate (EMRR) is calculated as:

$$\frac{100 * EMC}{EMC + EMNH + EMP + EMR + EMPC + EMI + EMO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EMRR/100$$

ESTIMATES OF SAMPLING ERRORS

Appendix B

The estimates from a sample survey are affected by two types of errors: non-sampling errors and sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the Timor-Leste Demographic and Health Survey 2009-10 (TLDHS 2009-10) to minimize this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the TLDHS 2009-10 is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the TLDHS 2009-10 sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the TLDHS 2009-10 is a Macro SAS procedure. This procedure used the Taylor linearization method of variance estimation for survey estimates that are means, proportions or ratios. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of clusters selected in the hth stratum,
y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,
x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the TLDHS 2009-10, there were 455 non-empty clusters. Hence, 455 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 455 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 454 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the design effect (DEFT) for each estimate is calculated, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. The relative standard error and confidence limits for the estimates are also calculated.

Sampling errors for the TLDHS 2009-10 are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the thirteen geographical/administrative districts. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 through B.17 present the value of the statistic (R), its standard error (SE), the number of un-weighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of un-weighted cases is not relevant, as there is no known un-weighted value for woman-years of exposure to child-bearing.

The confidence interval (e.g., as calculated for *children ever born to women aged 40-49*) can be interpreted as follows: the overall average from the national sample is 5.826 and its standard error is 0.073. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 5.826±2×0.073. There is a high probability (95 percent) that the *true* average number of children ever born to all women aged 40 to 49 is between 5.680 and 5.972.

For the total sample, the value of the DEFT, averaged over all variables, is 1.455. This means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.455 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Timor-Leste 2009-10

Variable	Estimate	Base population
	WOMEN	
Urban residence	Proportion	All women 15-49
Literacy	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary education or higher	Proportion	All women 15-49
Net attendance ratio	Ratio	Household population 7-12 years
Never married/in union	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Married before age 20	Proportion	All women 20-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children surviving	Mean	All women 15-49
Children ever born to women age 40-49	Mean	All women 40-49
Knows any contraceptive method	Proportion	Currently married women 15-49
Knows a modern method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using a traditional method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using condoms	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Using public sector source	Proportion	Current users of modern method
Want no more children	Proportion	Currently married women 15-49
Want to delay at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	All women 15-49
Mothers received medical assistance at delivery	Proportion	Births occurring 1-59 months before survey
Mothers protected against tetanus for last birth	Proportion	Women with a live birth in last five years
Had diarrhea in the past 2 weeks	Proportion	Children under 5
Treated with ORS packets	Proportion	Children under 5 with diarrhea in past 2 weeks
Sought medical treatment	Proportion	Children under 5 with diarrhea in ppast 2 weeks
Child having health card	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received measles vaccination	Proportion	Children 12-23 months
Received all vaccinations	Proportion	Children 12-23 months
Height-for-age (-2SD)	Proportion	Children under 5 who are measured
Weight-for-height (-2SD)	Proportion	Children under 5 who are measured
Weight-for-age (-2SD)	Proportion	Children under 5 who are measured
BMI <18.5	Proportion	All women 15-49 who were measured
Prevalence of anemia (children 6-59 months)	Proportion	All children 6-59 months who were tested
Prevalence of anemia (women 14-49)	Proportion	All women 15-49 who were tested
Has heard of HIV/AIDS	Proportion	All women 15-49
Knows about condoms to prevent AIDS	Proportion	All women 15-49
Knows about limiting partners to prevent AIDS	Proportion	All women 15-49
Comprehensive knowledge on HIV transmission	Proportion	All women 15-49
Total fertility rate (3 years)	Rate	Women-years of exposure to childbearing
Neonatal mortality rate[1]	Rate	Children exposed to the risk of mortality
Post-neonatal mortality rate[1]	Rate	Children exposed to the risk of mortality
Infant mortality rate[1]	Rate	Children exposed to the risk of mortality
Child mortality rate[1]	Rate	Children exposed to the risk of mortality
Under-five mortality rate[1]	Rate	Children exposed to the risk of mortality
Maternal mortality ratio	Ratio	Births in last 0-6 years
	MEN	
Urban residence	Proportion	All men 15-49
Literacy	Proportion	All men 15-49
No education	Proportion	All men 15-49
Secondary education or higher	Proportion	All men 15-49
Never married/in union	Proportion	All men 15-49
Currently married/in union	Proportion	All men 15-49
Knows any contraceptive method	Proportion	Currently married men 15-49
Knows a modern method	Proportion	Currently married men 15-49
Ever used any contraceptive method	Proportion	Currently married men 15-49
Currently using any method	Proportion	Currently married men 15-49
Want no more children	Proportion	Currently married men 15-49
Ideal number of children	Mean	All men 15-49
Has heard of HIV/AIDS	Proportion	All men 15-49
Knows about condoms to prevent AIDS	Proportion	All men 15-49
Knows about limiting partners to prevent AIDS	Proportion	All men 15-49
Comprehensive knowledge on HIV transmission	Proportion	All men 15-49

[1] The mortality rates are calculated for 5 years and 10 years before the survey for the national sample and regional samples, respectively

Table B.2 Sampling errors for National sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.262	0.008	13137	13137	2.127	0.031	0.245	0.278
Literacy	0.680	0.008	13137	13137	1.940	0.012	0.664	0.696
No education	0.293	0.008	13137	13137	1.897	0.026	0.278	0.308
Secondary education or higher	0.478	0.009	13137	13137	2.077	0.019	0.460	0.496
Net attendance ratio	0.777	0.009	12279	12228	1.981	0.011	0.760	0.794
Never married/in union	0.356	0.005	13137	13137	1.190	0.014	0.346	0.366
Currently married/in union	0.602	0.005	13137	13137	1.212	0.009	0.591	0.612
Married before age 20	0.406	0.006	9894	9993	1.308	0.016	0.394	0.419
Currently pregnant	0.068	0.002	13137	13137	1.076	0.035	0.064	0.073
Children ever born	2.732	0.032	13137	13137	1.245	0.012	2.667	2.797
Children surviving	2.438	0.028	13137	13137	1.202	0.011	2.383	2.493
Children ever born to women age 40-49	5.826	0.073	2494	2534	1.234	0.013	5.680	5.972
Knows any contraceptive method	0.781	0.008	7877	7906	1.776	0.011	0.765	0.798
Knows a modern method	0.777	0.008	7877	7906	1.786	0.011	0.761	0.794
Ever used any contraceptive method	0.315	0.007	7877	7906	1.413	0.023	0.300	0.330
Currently using any method	0.223	0.007	7877	7906	1.429	0.030	0.210	0.237
Currently using a modern method	0.211	0.007	7877	7906	1.441	0.031	0.198	0.224
Currently using a traditional method	0.012	0.002	7877	7906	1.400	0.142	0.009	0.016
Currently using pill	0.017	0.002	7877	7906	1.238	0.106	0.013	0.021
Currently using IUD	0.013	0.002	7877	7906	1.299	0.126	0.010	0.017
Currently using condoms	0.002	0.001	7877	7906	1.759	0.400	0.000	0.004
Currently use injectables	0.157	0.006	7877	7906	1.382	0.036	0.146	0.168
Currently using female sterilization	0.008	0.001	7877	7906	1.122	0.142	0.006	0.010
Currently using withdrawal	0.004	0.001	7877	7906	1.354	0.246	0.002	0.006
Currently using periodic abstinence	0.006	0.001	7877	7906	1.315	0.199	0.003	0.008
Used public sector source	0.884	0.018	1661	1647	2.293	0.020	0.848	0.920
Want no more children	0.356	0.007	7877	7906	1.333	0.020	0.341	0.370
Want to delay birth at least 2 years	0.351	0.007	7877	7906	1.336	0.020	0.336	0.365
Ideal number of children	5.003	0.027	12584	12622	1.444	0.005	4.948	5.057
Mothers received medical assistance at delivery	0.299	0.010	9806	9828	1.756	0.034	0.279	0.320
Mothers protected against tetanus for last birth	0.798	0.008	5999	6015	1.582	0.010	0.781	0.814
Had diarrhea in the past 2 weeks	0.156	0.006	9294	9328	1.306	0.035	0.145	0.167
Treated with ORS packets	0.710	0.017	1390	1454	1.250	0.024	0.676	0.744
Sought medical treatment	0.722	0.019	1390	1454	1.394	0.026	0.685	0.760
Vaccination card seen	0.496	0.017	1803	1752	1.422	0.034	0.462	0.531
Received BCG vaccination	0.767	0.014	1803	1752	1.353	0.018	0.740	0.795
Received DPT vaccination (3 doses)	0.664	0.016	1803	1752	1.389	0.024	0.633	0.696
Received polio vaccination (3 doses)	0.562	0.017	1803	1752	1.436	0.031	0.527	0.596
Received measles vaccination	0.678	0.016	1803	1752	1.404	0.023	0.646	0.710
Received all vaccinations	0.526	0.017	1803	1752	1.427	0.033	0.492	0.560
Height-for-age (below -2SD)	0.581	0.007	8141	8171	1.261	0.013	0.567	0.596
Weight-for-height (below -2SD)	0.186	0.006	8141	8171	1.316	0.032	0.174	0.199
Weight-for-age (below -2SD)	0.447	0.008	8141	8171	1.296	0.017	0.431	0.462
Prevalence of anemia (children 6-59)	0.382	0.012	2569	2567	1.196	0.031	0.359	0.406
Prevalence of anemia (women 15-49)	0.213	0.008	4113	4059	1.190	0.036	0.198	0.228
BMI <18.5	0.272	0.006	11715	11698	1.408	0.021	0.261	0.284
Has heard of HIV/AIDS	0.438	0.009	13137	13137	2.053	0.020	0.420	0.455
Knows about condoms to prevent AIDS	0.296	0.007	13137	13137	1.667	0.022	0.283	0.309
Konws about limitimg partners to prevent AIDS	0.356	0.009	13137	13137	2.050	0.024	0.339	0.373
Comprehensive knowledge on HIV transmission	0.106	0.005	13137	13137	1.716	0.044	0.097	0.115
Total fertility rate (past 3 years)	5.676	0.100	na	36278	1.328	0.018	5.475	5.877
Neonatal mortality (past 0-4 years)	21.815	1.771	9834	9848	1.111	0.081	18.274	25.356
Post-neonatal mortality (past 0-4 years)	22.771	1.787	9809	9811	1.116	0.078	19.197	26.346
Infant mortality (past 0-4 years)	44.587	2.566	9855	9868	1.137	0.058	39.454	49.719
Child mortality (past 0-4 years)	20.016	1.664	9674	9666	1.147	0.083	16.687	23.345
Under-five mortality (past 0-4 years)	63.710	3.084	9918	9939	1.166	0.048	57.541	69.879
Maternal mortality ratio (past 0-6 years)	557	74	na	na	1.192	0.134	408	706
MEN								
Urban residence	0.270	0.010	4076	4076	1.427	0.037	0.250	0.290
Literacy	0.786	0.008	4076	4076	1.294	0.011	0.770	0.803
No education	0.194	0.008	4076	4076	1.289	0.041	0.178	0.210
With secondary eductation or higher	0.549	0.011	4076	4076	1.403	0.020	0.527	0.571
Never married/in union	0.458	0.009	4076	4076	1.133	0.019	0.440	0.475
Currently married/in union	0.530	0.009	4076	4076	1.128	0.017	0.512	0.547
Knowing any contraceptive method	0.666	0.012	2152	2158	1.177	0.018	0.642	0.690
Ever used any contraceptive method	0.089	0.008	2152	2158	1.229	0.085	0.074	0.104
Currently using any method	0.125	0.009	2152	2158	1.290	0.074	0.106	0.143
Want no more children	0.228	0.010	2152	2158	1.134	0.045	0.208	0.249
Ideal number fo children	5.007	0.048	3943	3954	1.401	0.010	4.910	5.103
Has heard of HIV/AIDS	0.607	0.011	4076	4076	1.411	0.018	0.585	0.629
Knows about condoms to prevent AIDS	0.454	0.012	4076	4076	1.512	0.026	0.431	0.478
Konws about limitimg partners to prevent AIDS	0.492	0.012	4076	4076	1.534	0.024	0.468	0.516
Comprehensive knowledge on HIV transmission	0.200	0.011	4076	4076	1.693	0.053	0.179	0.222

na = Not applicable

Table B.3 Sampling errors for Urban sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	1.000	0.000	3233	3439	na	0.000	1.000	1.000
Literacy	0.838	0.011	3233	3439	1.769	0.014	0.815	0.861
No education	0.145	0.010	3233	3439	1.690	0.072	0.124	0.166
Secondary education or higher	0.696	0.017	3233	3439	2.088	0.024	0.662	0.730
Net attendance ratio	0.811	0.023	2860	2674	2.551	0.028	0.766	0.856
Never married/in union	0.372	0.009	3233	3439	1.078	0.025	0.354	0.391
Currently married/in union	0.589	0.010	3233	3439	1.143	0.017	0.569	0.609
Married before age 20	0.385	0.014	2425	2668	1.377	0.035	0.357	0.412
Currently pregnant	0.071	0.005	3233	3439	0.996	0.063	0.062	0.080
Children ever born	2.460	0.063	3233	3439	1.293	0.026	2.334	2.586
Children surviving	2.263	0.054	3233	3439	1.223	0.024	2.154	2.371
Children ever born to women age 40-49	5.548	0.148	567	611	1.237	0.027	5.253	5.844
Knows any contraceptive method	0.887	0.013	1868	2025	1.756	0.014	0.861	0.913
Knows a modern method	0.883	0.013	1868	2025	1.783	0.015	0.857	0.910
Ever used any contraceptive method	0.452	0.017	1868	2025	1.439	0.037	0.418	0.485
Currently using any method	0.304	0.016	1868	2025	1.491	0.052	0.272	0.336
Currently using a modern method	0.282	0.015	1868	2025	1.474	0.054	0.251	0.313
Currently using a traditional method	0.022	0.005	1868	2025	1.488	0.230	0.012	0.032
Currently using pill	0.037	0.005	1868	2025	1.249	0.147	0.026	0.048
Currently using IUD	0.026	0.005	1868	2025	1.386	0.198	0.016	0.036
Currently using condoms	0.010	0.004	1868	2025	1.631	0.385	0.002	0.017
Currently use injectables	0.177	0.011	1868	2025	1.277	0.064	0.155	0.200
Currently using female sterilization	0.017	0.003	1868	2025	1.130	0.201	0.010	0.023
Currently using withdrawal	0.006	0.002	1868	2025	1.127	0.338	0.002	0.010
Currently using periodic abstinence	0.016	0.004	1868	2025	1.381	0.253	0.008	0.024
Used public sector source	0.751	0.043	497	561	2.215	0.058	0.665	0.837
Want no more children	0.406	0.018	1868	2025	1.553	0.043	0.371	0.441
Want to delay birth at least 2 years	0.351	0.016	1868	2025	1.462	0.046	0.318	0.383
Ideal number of children	4.428	0.050	2994	3204	1.381	0.011	4.327	4.529
Mothers received medical assistance at delivery	0.591	0.025	2204	2353	1.905	0.042	0.541	0.641
Mothers protected against tetanus for last birth	0.843	0.015	1383	1484	1.487	0.017	0.813	0.872
Had diarrhea in the past 2 weeks	0.189	0.012	2120	2269	1.244	0.064	0.165	0.213
Treated with ORS packets	0.650	0.039	376	429	1.381	0.060	0.571	0.728
Sought medical treatment	0.693	0.043	376	429	1.570	0.063	0.607	0.780
Vaccination card seen	0.437	0.032	425	424	1.280	0.074	0.373	0.501
Received BCG vaccination	0.853	0.024	425	424	1.337	0.028	0.805	0.901
Received DPT vaccination (3 doses)	0.709	0.029	425	424	1.258	0.041	0.651	0.767
Received polio vaccination (3 doses)	0.492	0.030	425	424	1.199	0.062	0.432	0.553
Received measles vaccination	0.743	0.029	425	424	1.326	0.040	0.684	0.801
Received all vaccinations	0.477	0.031	425	424	1.214	0.064	0.416	0.539
Height-for-age (below -2SD)	0.492	0.016	1785	1794	1.275	0.032	0.460	0.523
Weight-for-height (below -2SD)	0.149	0.012	1785	1794	1.329	0.080	0.125	0.173
Weight-for-age (below -2SD)	0.349	0.015	1785	1794	1.218	0.042	0.320	0.378
Prevalence of anemia (children 6-59)	0.331	0.033	524	511	1.482	0.098	0.266	0.396
Prevalence of anemia (women 15-49)	0.191	0.016	972	1004	1.212	0.081	0.160	0.223
BMI <18.5	0.244	0.012	2819	2973	1.510	0.050	0.219	0.268
Has heard of HIV/AIDS	0.701	0.014	3233	3439	1.797	0.021	0.672	0.730
Knows about condoms to prevent AIDS	0.444	0.016	3233	3439	1.848	0.036	0.412	0.477
Konws about limitimg partners to prevent AIDS	0.553	0.017	3233	3439	1.897	0.030	0.520	0.586
Comprehensive knowledge on HIV transmission	0.140	0.012	3233	3439	1.944	0.085	0.116	0.163
Total fertility rate (past 3 years)	4.883	0.195	na	9653	1.311	0.040	4.493	5.273
Neonatal mortality (past 0-9 years)	20.945	3.583	4491	4745	1.404	0.171	13.780	28.110
Post-neonatal mortality (past 0-9 years)	20.636	2.701	4494	4730	1.185	0.131	15.234	26.037
Infant mortality (past 0-9 years)	41.581	4.847	4497	4748	1.393	0.117	31.887	51.275
Child mortality (past 0-9 years)	20.019	3.154	4439	4646	1.128	0.158	13.711	26.327
Under-five mortality (past 0-9 years)	60.768	5.680	4517	4775	1.337	0.093	49.407	72.128
MEN								
Urban residence	1.000	0.000	1015	1102	na	0.000	1.000	1.000
Literacy	0.886	0.014	1015	1102	1.367	0.015	0.858	0.913
No education	0.093	0.012	1015	1102	1.369	0.135	0.068	0.118
With secondary eductation or higher	0.734	0.021	1015	1102	1.547	0.029	0.691	0.777
Never married/in union	0.481	0.020	1015	1102	1.268	0.041	0.441	0.521
Currently married/in union	0.514	0.020	1015	1102	1.259	0.038	0.475	0.554
Knowing any contraceptive method	0.840	0.023	515	567	1.423	0.027	0.794	0.886
Ever used any contraceptive method	0.194	0.023	515	567	1.344	0.121	0.147	0.241
Currently using any method	0.232	0.027	515	567	1.444	0.116	0.179	0.286
Want no more children	0.259	0.023	515	567	1.186	0.089	0.213	0.304
Ideal number fo children	4.528	0.128	972	1056	1.777	0.028	4.272	4.785
Has heard of HIV/AIDS	0.851	0.013	1015	1102	1.130	0.015	0.826	0.876
Knows about condoms to prevent AIDS	0.670	0.020	1015	1102	1.368	0.030	0.630	0.711
Konws about limitimg partners to prevent AIDS	0.737	0.020	1015	1102	1.430	0.027	0.697	0.776
Comprehensive knowledge on HIV transmission	0.342	0.028	1015	1102	1.889	0.082	0.286	0.398

na = Not applicable

Table B.4 Sampling errors for Rural sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.000	0.000	9904	9698	na	na	0.000	0.000
Literacy	0.624	0.009	9904	9698	1.925	0.015	0.605	0.643
No education	0.346	0.009	9904	9698	1.908	0.026	0.328	0.364
Secondary education or higher	0.400	0.010	9904	9698	1.939	0.024	0.381	0.420
Net attendance ratio	0.767	0.009	9419	9554	1.821	0.012	0.749	0.785
Never married/in union	0.350	0.006	9904	9698	1.232	0.017	0.338	0.362
Currently married/in union	0.606	0.006	9904	9698	1.238	0.010	0.594	0.619
Married before age 20	0.414	0.007	7469	7325	1.265	0.017	0.400	0.429
Currently pregnant	0.067	0.003	9904	9698	1.105	0.041	0.062	0.073
Children ever born	2.829	0.037	9904	9698	1.224	0.013	2.754	2.903
Children surviving	2.500	0.032	9904	9698	1.196	0.013	2.436	2.564
Children ever born to women age 40-49	5.914	0.083	1927	1923	1.222	0.014	5.747	6.080
Knows any contraceptive method	0.745	0.010	6009	5881	1.785	0.013	0.725	0.765
Knows a modern method	0.741	0.010	6009	5881	1.792	0.014	0.721	0.761
Ever used any contraceptive method	0.268	0.008	6009	5881	1.403	0.030	0.252	0.284
Currently using any method	0.196	0.007	6009	5881	1.404	0.037	0.181	0.210
Currently using a modern method	0.187	0.007	6009	5881	1.429	0.038	0.172	0.201
Currently using a traditional method	0.009	0.002	6009	5881	1.283	0.174	0.006	0.012
Currently using pill	0.010	0.001	6009	5881	1.114	0.142	0.007	0.013
Currently using IUD	0.009	0.001	6009	5881	1.187	0.161	0.006	0.012
Currently using condoms	0.000	0.000	6009	5881	na	na	0.000	0.000
Currently use injectables	0.150	0.007	6009	5881	1.425	0.044	0.137	0.163
Currently using female sterilization	0.005	0.001	6009	5881	1.132	0.209	0.003	0.007
Currently using withdrawal	0.003	0.001	6009	5881	1.480	0.342	0.001	0.005
Currently using periodic abstinence	0.002	0.001	6009	5881	0.962	0.277	0.001	0.003
Used public sector source	0.953	0.012	1164	1086	1.949	0.013	0.929	0.977
Want no more children	0.338	0.007	6009	5881	1.191	0.021	0.324	0.353
Want to delay birth at least 2 years	0.351	0.008	6009	5881	1.282	0.023	0.335	0.366
Ideal number of children	5.198	0.031	9590	9417	1.439	0.006	5.135	5.261
Mothers received medical assistance at delivery	0.207	0.010	7602	7475	1.832	0.051	0.186	0.228
Mothers protected against tetanus for last birth	0.783	0.010	4616	4531	1.595	0.012	0.764	0.802
Had diarrhea in the past 2 weeks	0.145	0.006	7174	7059	1.334	0.042	0.133	0.158
Treated with ORS packets	0.735	0.017	1014	1025	1.127	0.023	0.701	0.769
Sought medical treatment	0.735	0.019	1014	1025	1.258	0.026	0.696	0.773
Vaccination card seen	0.515	0.020	1378	1328	1.467	0.039	0.475	0.555
Received BCG vaccination	0.740	0.016	1378	1328	1.367	0.022	0.707	0.773
Received DPT vaccination (3 doses)	0.650	0.019	1378	1328	1.432	0.029	0.613	0.687
Received polio vaccination (3 doses)	0.584	0.020	1378	1328	1.510	0.035	0.543	0.624
Received measles vaccination	0.657	0.019	1378	1328	1.433	0.028	0.620	0.695
Received all vaccinations	0.541	0.020	1378	1328	1.493	0.038	0.501	0.582
Height-for-age (below -2SD)	0.606	0.008	6356	6377	1.261	0.013	0.590	0.623
Weight-for-height (below -2SD)	0.197	0.007	6356	6377	1.308	0.035	0.183	0.211
Weight-for-age (below -2SD)	0.474	0.009	6356	6377	1.332	0.019	0.456	0.492
Prevalence of anemia (children 6-59)	0.395	0.012	2045	2055	1.108	0.031	0.370	0.419
Prevalence of anemia (women 15-49)	0.220	0.009	3141	3055	1.181	0.040	0.203	0.238
BMI <18.5	0.282	0.007	8896	8725	1.365	0.023	0.269	0.295
Has heard of HIV/AIDS	0.344	0.010	9904	9698	2.041	0.028	0.325	0.364
Knows about condoms to prevent AIDS	0.244	0.007	9904	9698	1.694	0.030	0.229	0.258
Konws about limitimg partners to prevent AIDS	0.286	0.009	9904	9698	2.036	0.032	0.267	0.304
Comprehensive knowledge on HIV transmission	0.094	0.005	9904	9698	1.649	0.051	0.084	0.103
Total fertility rate (past 3 years)	5.962	0.108	na	26625	1.314	0.018	5.747	6.177
Neonatal mortality (past 0-9 years)	27.745	1.539	15122	14854	1.004	0.055	24.666	30.823
Post-neonatal mortality (past 0-9 years)	33.138	1.791	15144	14868	1.087	0.054	29.557	36.719
Infant mortality (past 0-9 years)	60.883	2.298	15152	14883	1.006	0.038	56.288	65.478
Child mortality (past 0-9 years)	27.504	1.695	15022	14747	1.107	0.062	24.115	30.893
Under-five mortality (past 0-9 years)	86.713	3.092	15260	14983	1.103	0.036	80.530	92.896
MEN								
Urban residence	0.000	0.000	3061	2974	na	na	0.000	0.000
Literacy	0.750	0.010	3061	2974	1.322	0.014	0.729	0.770
No education	0.232	0.010	3061	2974	1.339	0.044	0.211	0.252
With secondary eductation or higher	0.481	0.013	3061	2974	1.402	0.026	0.455	0.506
Never married/in union	0.449	0.010	3061	2974	1.061	0.021	0.430	0.468
Currently married/in union	0.535	0.010	3061	2974	1.061	0.018	0.516	0.554
Knowing any contraceptive method	0.604	0.014	1637	1592	1.151	0.023	0.576	0.631
Ever used any contraceptive method	0.051	0.006	1637	1592	1.055	0.112	0.040	0.063
Currently using any method	0.086	0.007	1637	1592	0.981	0.079	0.073	0.100
Want no more children	0.218	0.011	1637	1592	1.106	0.052	0.195	0.240
Ideal number fo children	5.181	0.043	2971	2898	1.110	0.008	5.096	5.267
Has heard of HIV/AIDS	0.517	0.013	3061	2974	1.488	0.026	0.490	0.543
Knows about condoms to prevent AIDS	0.374	0.013	3061	2974	1.531	0.036	0.348	0.401
Konws about limitimg partners to prevent AIDS	0.402	0.014	3061	2974	1.557	0.034	0.374	0.429
Comprehensive knowledge on HIV transmission	0.148	0.009	3061	2974	1.458	0.063	0.129	0.167

na = Not applicable

Table B.5 Sampling errors for Aileu sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.082	0.013	1036	554	1.546	0.161	0.055	0.108
Literacy	0.650	0.023	1036	554	1.535	0.035	0.605	0.696
No education	0.314	0.022	1036	554	1.510	0.069	0.270	0.358
Secondary education or higher	0.436	0.026	1036	554	1.658	0.059	0.385	0.488
Net attendance ratio	0.811	0.022	927	491	1.499	0.027	0.768	0.854
Never married/in union	0.422	0.016	1036	554	1.057	0.038	0.390	0.454
Currently married/in union	0.540	0.018	1036	554	1.171	0.034	0.504	0.576
Married before age 20	0.404	0.015	735	393	0.814	0.036	0.375	0.434
Currently pregnant	0.054	0.007	1036	554	0.963	0.126	0.040	0.067
Children ever born	2.717	0.119	1036	554	1.199	0.044	2.480	2.954
Children surviving	2.409	0.100	1036	554	1.155	0.042	2.208	2.609
Children ever born to women age 40-49	6.256	0.241	211	113	1.202	0.039	5.774	6.739
Knows any contraceptive method	0.688	0.029	561	299	1.492	0.042	0.630	0.747
Knows a modern method	0.687	0.030	561	299	1.507	0.043	0.627	0.746
Ever used any contraceptive method	0.253	0.022	561	299	1.177	0.085	0.210	0.296
Currently using any method	0.207	0.021	561	299	1.230	0.102	0.165	0.249
Currently using a modern method	0.195	0.020	561	299	1.218	0.105	0.154	0.235
Currently using a traditional method	0.012	0.004	561	299	0.944	0.356	0.004	0.021
Currently using pill	0.016	0.005	561	299	0.967	0.321	0.006	0.026
Currently using IUD	0.007	0.003	561	299	0.964	0.484	0.000	0.014
Currently using condoms	0.000	0.000	561	299	na	na	0.000	0.000
Currently use injectables	0.163	0.019	561	299	1.194	0.115	0.125	0.200
Currently using female sterilization	0.002	0.002	561	299	0.982	0.987	0.000	0.005
Currently using withdrawal	0.000	0.000	561	299	na	na	0.000	0.000
Currently using periodic abstinence	0.012	0.004	561	299	0.944	0.356	0.004	0.021
Used public sector source	1.000	0.000	111	59	na	0.000	1.000	1.000
Want no more children	0.360	0.021	561	299	1.024	0.058	0.319	0.402
Want to delay birth at least 2 years	0.354	0.023	561	299	1.133	0.065	0.309	0.400
Ideal number of children	5.306	0.086	1015	543	1.157	0.016	5.135	5.478
Mothers received medical assistance at delivery	0.238	0.028	672	359	1.387	0.117	0.183	0.293
Mothers protected against tetanus for last birth	0.908	0.017	412	220	1.230	0.019	0.874	0.943
Had diarrhea in the past 2 weeks	0.127	0.018	636	340	1.192	0.142	0.091	0.163
Treated with ORS packets	0.799	0.057	81	43	1.134	0.071	0.684	0.913
Sought medical treatment	0.811	0.051	81	43	0.994	0.063	0.709	0.913
Vaccination card seen	0.736	0.047	125	66	1.180	0.063	0.642	0.829
Received BCG vaccination	0.880	0.031	125	66	1.079	0.036	0.817	0.943
Received DPT vaccination (3 doses)	0.864	0.035	125	66	1.131	0.040	0.795	0.934
Received polio vaccination (3 doses)	0.832	0.039	125	66	1.164	0.047	0.754	0.910
Received measles vaccination	0.833	0.033	125	66	0.971	0.039	0.767	0.898
Received all vaccinations	0.792	0.041	125	66	1.132	0.052	0.710	0.875
Height-for-age (below -2SD)	0.314	0.043	511	271	1.949	0.137	0.228	0.400
Weight-for-height (below -2SD)	0.494	0.046	511	271	1.877	0.094	0.401	0.587
Weight-for-age (below -2SD)	0.412	0.030	511	271	1.355	0.073	0.352	0.472
Prevalence of anemia (children 6-59)	0.397	0.037	191	101	1.030	0.093	0.323	0.470
Prevalence of anemia (women 15-49)	0.275	0.032	342	183	1.313	0.115	0.212	0.339
BMI <18.5	0.208	0.014	937	501	1.049	0.067	0.180	0.236
Has heard of HIV/AIDS	0.362	0.023	1036	554	1.529	0.063	0.316	0.408
Knows about condoms to prevent AIDS	0.311	0.021	1036	554	1.431	0.066	0.270	0.352
Konws about limitimg partners to prevent AIDS	0.343	0.021	1036	554	1.455	0.063	0.300	0.386
Comprehensive knowledge on HIV transmission	0.084	0.010	1036	554	1.200	0.123	0.064	0.105
Total fertility rate (past 3 years)	5.570	0.338	na	1480	1.245	0.061	4.894	6.246
Neonatal mortality (past 0-9 years)	26.740	4.833	1392	744	1.007	0.181	17.073	36.407
Post-neonatal mortality (past 0-9 years)	29.486	4.768	1406	752	1.004	0.162	19.949	39.023
Infant mortality (past 0-9 years)	56.226	7.295	1397	747	1.045	0.130	41.635	70.817
Child mortality (past 0-9 years)	20.938	4.275	1396	747	1.015	0.204	12.388	29.488
Under-five mortality (past 0-9 years)	75.986	8.367	1405	751	1.015	0.110	59.252	92.721
MEN								
Urban residence	0.081	0.006	298	181	0.401	0.078	0.069	0.094
Literacy	0.754	0.025	298	181	0.989	0.033	0.704	0.803
No education	0.179	0.023	298	181	1.023	0.127	0.134	0.225
With secondary eductation or higher	0.533	0.040	298	181	1.381	0.075	0.453	0.613
Never married/in union	0.478	0.029	298	181	0.995	0.060	0.420	0.536
Currently married/in union	0.509	0.029	298	181	0.996	0.057	0.451	0.567
Knowing any contraceptive method	0.596	0.035	152	92	0.878	0.059	0.526	0.666
Ever used any contraceptive method	0.042	0.015	152	92	0.948	0.370	0.011	0.072
Currently using any method	0.145	0.030	152	92	1.047	0.206	0.085	0.206
Want no more children	0.305	0.047	152	92	1.262	0.155	0.210	0.400
Ideal number fo children	5.676	0.173	274	166	1.153	0.031	5.329	6.022
Has heard of HIV/AIDS	0.532	0.035	298	181	1.211	0.066	0.462	0.602
Knows about condoms to prevent AIDS	0.396	0.037	298	181	1.291	0.093	0.323	0.470
Konws about limitimg partners to prevent AIDS	0.449	0.035	298	181	1.205	0.077	0.380	0.519
Comprehensive knowledge on HIV transmission	0.149	0.032	298	181	1.541	0.214	0.086	0.213

na = Not applicable

Table B.6 Sampling errors for Ainaro sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.173	0.009	841	619	0.673	0.051	0.155	0.190
Literacy	0.578	0.030	841	619	1.751	0.052	0.518	0.637
No education	0.399	0.026	841	619	1.546	0.066	0.347	0.451
Secondary education or higher	0.435	0.033	841	619	1.942	0.076	0.369	0.502
Net attendance ratio	0.737	0.023	1005	765	1.455	0.031	0.691	0.783
Never married/in union	0.346	0.020	841	619	1.214	0.058	0.306	0.386
Currently married/in union	0.617	0.021	841	619	1.228	0.033	0.576	0.659
Married before age 20	0.429	0.023	633	466	1.183	0.054	0.383	0.476
Currently pregnant	0.084	0.011	841	619	1.160	0.133	0.061	0.106
Children ever born	2.973	0.135	841	619	1.239	0.046	2.702	3.243
Children surviving	2.589	0.108	841	619	1.153	0.042	2.373	2.804
Children ever born to women age 40-49	6.679	0.342	118	87	1.147	0.051	5.995	7.363
Knows any contraceptive method	0.578	0.028	518	382	1.295	0.049	0.522	0.634
Knows a modern method	0.574	0.028	518	382	1.296	0.049	0.518	0.631
Ever used any contraceptive method	0.183	0.023	518	382	1.356	0.126	0.137	0.229
Currently using any method	0.141	0.023	518	382	1.520	0.165	0.094	0.187
Currently using a modern method	0.137	0.023	518	382	1.524	0.168	0.091	0.183
Currently using a traditional method	0.004	0.003	518	382	0.970	0.715	0.000	0.009
Currently using pill	0.009	0.004	518	382	0.924	0.423	0.001	0.017
Currently using IUD	0.008	0.004	518	382	0.964	0.470	0.000	0.016
Currently using condoms	0.000	0.000	518	382	na	na	0.000	0.000
Currently use injectables	0.107	0.020	518	382	1.440	0.184	0.068	0.146
Currently using female sterilization	0.002	0.002	518	382	0.889	1.007	0.000	0.005
Currently using withdrawal	0.000	0.000	518	382	na	na	0.000	0.000
Currently using periodic abstinence	0.000	0.000	518	382	na	na	0.000	0.000
Used public sector source	0.962	0.022	69	51	0.956	0.023	0.918	1.006
Want no more children	0.197	0.018	518	382	1.042	0.093	0.161	0.234
Want to delay birth at least 2 years	0.360	0.025	518	382	1.181	0.069	0.310	0.410
Ideal number of children	6.456	0.123	743	552	1.599	0.019	6.210	6.703
Mothers received medical assistance at delivery	0.105	0.020	789	579	1.432	0.188	0.065	0.144
Mothers protected against tetanus for last birth	0.667	0.034	433	318	1.480	0.050	0.600	0.734
Had diarrhea in the past 2 weeks	0.039	0.008	729	536	0.971	0.193	0.024	0.054
Treated with ORS packets	0.584	0.092	31	21	0.988	0.157	0.400	0.767
Sought medical treatment	0.564	0.105	31	21	1.041	0.187	0.353	0.774
Vaccination card seen	0.323	0.047	152	113	1.242	0.146	0.229	0.417
Received BCG vaccination	0.593	0.066	152	113	1.645	0.111	0.462	0.724
Received DPT vaccination (3 doses)	0.520	0.065	152	113	1.603	0.125	0.390	0.650
Received polio vaccination (3 doses)	0.517	0.065	152	113	1.616	0.127	0.386	0.648
Received measles vaccination	0.504	0.063	152	113	1.546	0.124	0.379	0.630
Received all vaccinations	0.461	0.063	152	113	1.554	0.136	0.336	0.587
Height-for-age (below -2SD)	0.691	0.025	624	482	1.230	0.036	0.641	0.741
Weight-for-height (below -2SD)	0.182	0.014	624	482	0.847	0.075	0.155	0.209
Weight-for-age (below -2SD)	0.477	0.028	624	482	1.299	0.059	0.421	0.533
Prevalence of anemia (children 6-59)	0.311	0.043	208	161	1.226	0.139	0.225	0.397
Prevalence of anemia (women 15-49)	0.101	0.026	279	207	1.438	0.256	0.049	0.153
BMI <18.5	0.210	0.016	736	544	1.094	0.078	0.177	0.242
Has heard of HIV/AIDS	0.288	0.023	841	619	1.494	0.081	0.241	0.335
Knows about condoms to prevent AIDS	0.148	0.018	841	619	1.480	0.123	0.112	0.184
Konws about limitimg partners to prevent AIDS	0.172	0.020	841	619	1.505	0.114	0.133	0.211
Comprehensive knowledge on HIV transmission	0.032	0.009	841	619	1.500	0.283	0.014	0.051
Total fertility rate (past 3 years)	7.234	0.384	na	1711	1.337	0.053	6.466	8.002
Neonatal mortality (past 0-9 years)	30.948	4.321	1497	1099	0.919	0.140	22.305	39.590
Post-neonatal mortality (past 0-9 years)	45.562	7.244	1506	1105	1.220	0.159	31.073	60.051
Infant mortality (past 0-9 years)	76.510	7.501	1502	1102	0.968	0.098	61.507	91.512
Child mortality (past 0-9 years)	22.127	4.092	1490	1096	0.960	0.185	13.943	30.310
Under-five mortality (past 0-9 years)	96.943	9.285	1512	1110	1.035	0.096	78.374	115.513
MEN								
Urban residence	0.154	0.019	296	217	0.911	0.124	0.116	0.192
Literacy	0.697	0.028	296	217	1.050	0.040	0.641	0.753
No education	0.297	0.029	296	217	1.082	0.097	0.239	0.355
With secondary eductation or higher	0.466	0.038	296	217	1.303	0.081	0.390	0.541
Never married/in union	0.508	0.028	296	217	0.971	0.056	0.452	0.565
Currently married/in union	0.467	0.027	296	217	0.939	0.058	0.413	0.522
Knowing any contraceptive method	0.514	0.040	138	101	0.930	0.077	0.435	0.594
Ever used any contraceptive method	0.006	0.006	138	101	0.898	0.996	0.000	0.018
Currently using any method	0.087	0.023	138	101	0.942	0.260	0.042	0.133
Want no more children	0.086	0.027	138	101	1.112	0.311	0.032	0.139
Ideal number fo children	5.948	0.156	265	196	1.152	0.026	5.636	6.261
Has heard of HIV/AIDS	0.464	0.033	296	217	1.134	0.071	0.398	0.530
Knows about condoms to prevent AIDS	0.186	0.033	296	217	1.452	0.177	0.120	0.252
Konws about limitimg partners to prevent AIDS	0.236	0.036	296	217	1.458	0.153	0.163	0.308
Comprehensive knowledge on HIV transmission	0.057	0.015	296	217	1.094	0.260	0.027	0.086

na = Not applicable

Table B.7 Sampling errors for Baucau sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.059	0.007	1007	1408	0.984	0.124	0.044	0.074
Literacy	0.693	0.031	1007	1408	2.100	0.044	0.632	0.754
No education	0.271	0.031	1007	1408	2.197	0.114	0.209	0.332
Secondary education or higher	0.504	0.038	1007	1408	2.376	0.075	0.428	0.579
Net attendance ratio	0.823	0.017	971	1442	1.302	0.021	0.789	0.857
Never married/in union	0.366	0.019	1007	1408	1.259	0.052	0.327	0.404
Currently married/in union	0.605	0.020	1007	1408	1.297	0.033	0.565	0.645
Married before age 20	0.343	0.022	755	1067	1.299	0.065	0.298	0.388
Currently pregnant	0.061	0.007	1007	1408	0.907	0.113	0.047	0.074
Children ever born	2.609	0.125	1007	1408	1.429	0.048	2.359	2.860
Children surviving	2.450	0.112	1007	1408	1.374	0.046	2.225	2.674
Children ever born to women age 40-49	5.034	0.232	226	318	1.299	0.046	4.570	5.498
Knows any contraceptive method	0.562	0.050	597	852	2.450	0.089	0.462	0.662
Knows a modern method	0.558	0.050	597	852	2.444	0.090	0.458	0.658
Ever used any contraceptive method	0.084	0.017	597	852	1.467	0.198	0.051	0.118
Currently using any method	0.080	0.016	597	852	1.426	0.198	0.049	0.112
Currently using a modern method	0.076	0.016	597	852	1.500	0.214	0.043	0.109
Currently using a traditional method	0.004	0.003	597	852	1.006	0.627	0.000	0.010
Currently using pill	0.012	0.005	597	852	1.210	0.453	0.001	0.023
Currently using IUD	0.007	0.004	597	852	1.227	0.611	0.000	0.015
Currently using condoms	0.000	0.000	597	852	na	na	0.000	0.000
Currently use injectables	0.035	0.011	597	852	1.420	0.305	0.014	0.057
Currently using female sterilization	0.010	0.005	597	852	1.112	0.442	0.001	0.020
Currently using withdrawal	0.000	0.000	597	852	na	na	0.000	0.000
Currently using periodic abstinence	0.002	0.002	597	852	0.981	0.816	0.000	0.006
Used public sector source	0.992	0.008	46	60	0.601	0.008	0.977	1.008
Want no more children	0.434	0.023	597	852	1.132	0.053	0.388	0.480
Want to delay birth at least 2 years	0.360	0.018	597	852	0.922	0.050	0.324	0.396
Ideal number of children	4.791	0.078	996	1391	1.230	0.016	4.635	4.947
Mothers received medical assistance at delivery	0.275	0.039	674	970	1.805	0.140	0.198	0.352
Mothers protected against tetanus for last birth	0.824	0.024	420	598	1.276	0.029	0.777	0.872
Had diarrhea in the past 2 weeks	0.151	0.016	653	941	1.014	0.103	0.120	0.182
Treated with ORS packets	0.921	0.034	98	142	1.009	0.037	0.853	0.989
Sought medical treatment	0.850	0.040	98	142	0.939	0.047	0.770	0.930
Vaccination card seen	0.480	0.059	125	180	1.329	0.123	0.362	0.599
Received BCG vaccination	0.582	0.056	125	180	1.270	0.096	0.470	0.694
Received DPT vaccination (3 doses)	0.518	0.056	125	180	1.260	0.108	0.406	0.631
Received polio vaccination (3 doses)	0.507	0.056	125	180	1.255	0.110	0.395	0.619
Received measles vaccination	0.520	0.056	125	180	1.248	0.107	0.409	0.631
Received all vaccinations	0.471	0.051	125	180	1.148	0.108	0.369	0.574
Height-for-age (below -2SD)	0.581	0.026	471	687	1.134	0.045	0.529	0.633
Weight-for-height (below -2SD)	0.216	0.022	471	687	1.172	0.103	0.171	0.260
Weight-for-age (below -2SD)	0.430	0.037	471	687	1.587	0.087	0.355	0.505
Prevalence of anemia (children 6-59)	0.511	0.036	173	252	1.000	0.070	0.440	0.583
Prevalence of anemia (women 15-49)	0.173	0.026	312	424	1.218	0.153	0.120	0.225
BMI <18.5	0.169	0.016	919	1282	1.331	0.098	0.136	0.202
Has heard of HIV/AIDS	0.543	0.036	1007	1408	2.285	0.066	0.471	0.615
Knows about condoms to prevent AIDS	0.357	0.021	1007	1408	1.360	0.058	0.316	0.398
Konws about limitimg partners to prevent AIDS	0.502	0.034	1007	1408	2.126	0.067	0.434	0.569
Comprehensive knowledge on HIV transmission	0.235	0.020	1007	1408	1.532	0.087	0.194	0.276
Total fertility rate (past 3 years)	5.468	0.279	na	3855	1.121	0.051	4.911	6.025
Neonatal mortality (past 0-9 years)	11.410	3.012	1411	2015	1.089	0.264	5.386	17.433
Post-neonatal mortality (past 0-9 years)	18.298	3.508	1418	2026	0.993	0.192	11.282	25.314
Infant mortality (past 0-9 years)	29.708	5.356	1414	2019	1.149	0.180	18.995	40.420
Child mortality (past 0-9 years)	12.418	4.342	1422	2019	1.396	0.350	3.734	21.101
Under-five mortality (past 0-9 years)	41.757	7.527	1417	2024	1.301	0.180	26.703	56.810
MEN								
Urban residence	0.058	0.012	297	415	0.876	0.205	0.034	0.082
Literacy	0.830	0.033	297	415	1.532	0.040	0.764	0.897
No education	0.157	0.033	297	415	1.535	0.207	0.092	0.222
With secondary eductation or higher	0.542	0.045	297	415	1.542	0.083	0.453	0.632
Never married/in union	0.408	0.027	297	415	0.937	0.066	0.354	0.461
Currently married/in union	0.572	0.027	297	415	0.923	0.046	0.519	0.625
Knowing any contraceptive method	0.312	0.056	167	237	1.546	0.179	0.200	0.423
Ever used any contraceptive method	0.000	0.000	167	237	na	na	0.000	0.000
Currently using any method	0.000	0.000	167	237	na	na	0.000	0.000
Want no more children	0.205	0.036	167	237	1.139	0.174	0.134	0.277
Ideal number fo children	5.563	0.103	295	412	0.902	0.019	5.357	5.770
Has heard of HIV/AIDS	0.643	0.045	297	415	1.605	0.070	0.553	0.733
Knows about condoms to prevent AIDS	0.147	0.033	297	415	1.592	0.224	0.081	0.212
Konws about limitimg partners to prevent AIDS	0.224	0.044	297	415	1.796	0.195	0.137	0.312
Comprehensive knowledge on HIV transmission	0.061	0.019	297	415	1.392	0.317	0.022	0.100

na = Not applicable

Table B.8 Sampling errors for Bobonaro sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.100	0.010	1062	1262	1.046	0.096	0.081	0.120
Literacy	0.580	0.031	1062	1262	2.035	0.053	0.519	0.642
No education	0.396	0.032	1062	1262	2.142	0.081	0.332	0.461
Secondary education or higher	0.356	0.025	1062	1262	1.728	0.071	0.305	0.407
Net attendance ratio	0.789	0.023	921	1147	1.560	0.029	0.742	0.835
Never married/in union	0.365	0.014	1062	1262	0.924	0.037	0.338	0.393
Currently married/in union	0.586	0.014	1062	1262	0.953	0.025	0.557	0.614
Married before age 20	0.413	0.018	785	933	1.042	0.044	0.376	0.449
Currently pregnant	0.054	0.007	1062	1262	1.061	0.137	0.039	0.068
Children ever born	2.675	0.100	1062	1262	1.093	0.037	2.475	2.874
Children surviving	2.354	0.088	1062	1262	1.098	0.037	2.178	2.529
Children ever born to women age 40-49	5.988	0.220	219	253	1.143	0.037	5.548	6.428
Knows any contraceptive method	0.788	0.034	614	739	2.030	0.043	0.720	0.855
Knows a modern method	0.783	0.034	614	739	2.019	0.043	0.716	0.851
Ever used any contraceptive method	0.281	0.030	614	739	1.653	0.107	0.221	0.342
Currently using any method	0.204	0.025	614	739	1.513	0.121	0.155	0.253
Currently using a modern method	0.204	0.025	614	739	1.513	0.121	0.155	0.253
Currently using a traditional method	0.000	0.000	614	739	na	na	0.000	0.000
Currently using pill	0.010	0.004	614	739	0.971	0.390	0.002	0.018
Currently using IUD	0.008	0.004	614	739	1.216	0.543	0.000	0.017
Currently using condoms	0.000	0.000	614	739	na	na	0.000	0.000
Currently use injectables	0.161	0.024	614	739	1.592	0.147	0.114	0.209
Currently using female sterilization	0.008	0.003	614	739	0.962	0.429	0.001	0.015
Currently using withdrawal	0.000	0.000	614	739	na	na	0.000	0.000
Currently using periodic abstinence	0.000	0.000	614	739	na	na	0.000	0.000
Used public sector source	0.973	0.019	125	150	1.321	0.020	0.934	1.011
Want no more children	0.269	0.020	614	739	1.105	0.074	0.229	0.308
Want to delay birth at least 2 years	0.208	0.015	614	739	0.903	0.071	0.178	0.237
Ideal number of children	5.219	0.077	1046	1247	1.273	0.015	5.065	5.373
Mothers received medical assistance at delivery	0.256	0.035	748	934	1.815	0.136	0.186	0.325
Mothers protected against tetanus for last birth	0.781	0.022	476	587	1.180	0.028	0.737	0.826
Had diarrhea in the past 2 weeks	0.201	0.014	710	884	0.882	0.072	0.172	0.230
Treated with ORS packets	0.783	0.036	147	178	0.926	0.046	0.712	0.855
Sought medical treatment	0.836	0.042	147	178	1.228	0.050	0.753	0.919
Vaccination card seen	0.497	0.067	131	157	1.523	0.135	0.363	0.630
Received BCG vaccination	0.824	0.039	131	157	1.152	0.047	0.747	0.901
Received DPT vaccination (3 doses)	0.815	0.040	131	157	1.182	0.049	0.735	0.896
Received polio vaccination (3 doses)	0.561	0.067	131	157	1.519	0.119	0.427	0.695
Received measles vaccination	0.798	0.039	131	157	1.092	0.048	0.721	0.875
Received all vaccinations	0.552	0.066	131	157	1.489	0.119	0.421	0.684
Height-for-age (below -2SD)	0.726	0.023	611	792	1.201	0.031	0.681	0.771
Weight-for-height (below -2SD)	0.153	0.017	611	792	1.131	0.109	0.119	0.186
Weight-for-age (below -2SD)	0.525	0.030	611	792	1.438	0.057	0.465	0.585
Prevalence of anemia (children 6-59)	0.441	0.036	205	258	1.102	0.082	0.369	0.513
Prevalence of anemia (women 15-49)	0.256	0.029	313	376	1.183	0.114	0.198	0.314
BMI <18.5	0.394	0.023	969	1149	1.461	0.058	0.348	0.440
Has heard of HIV/AIDS	0.395	0.028	1062	1262	1.875	0.071	0.339	0.452
Knows about condoms to prevent AIDS	0.246	0.022	1062	1262	1.637	0.088	0.203	0.289
Konws about limitimg partners to prevent AIDS	0.260	0.023	1062	1262	1.729	0.090	0.214	0.307
Comprehensive knowledge on HIV transmission	0.053	0.010	1062	1262	1.448	0.187	0.033	0.074
Total fertility rate (past 3 years)	5.970	0.328	na	3471	1.346	0.055	5.315	6.625
Neonatal mortality (past 0-9 years)	27.431	5.062	1466	1805	1.057	0.185	17.306	37.556
Post-neonatal mortality (past 0-9 years)	22.676	4.337	1459	1793	1.031	0.191	14.002	31.350
Infant mortality (past 0-9 years)	50.107	7.126	1467	1806	1.117	0.142	35.855	64.359
Child mortality (past 0-9 years)	36.446	5.114	1433	1758	0.897	0.140	26.219	46.674
Under-five mortality (past 0-9 years)	84.727	9.898	1474	1816	1.166	0.117	64.930	104.523
MEN								
Urban residence	0.113	0.012	319	357	0.663	0.104	0.090	0.137
Literacy	0.798	0.028	319	357	1.252	0.035	0.741	0.854
No education	0.289	0.032	319	357	1.258	0.111	0.225	0.353
With secondary eductation or higher	0.458	0.039	319	357	1.383	0.085	0.380	0.535
Never married/in union	0.514	0.027	319	357	0.967	0.053	0.460	0.568
Currently married/in union	0.477	0.028	319	357	0.998	0.059	0.421	0.533
Knowing any contraceptive method	0.876	0.034	149	170	1.264	0.039	0.807	0.944
Ever used any contraceptive method	0.003	0.003	149	170	0.663	0.997	0.000	0.009
Currently using any method	0.000	0.000	149	170	na	na	0.000	0.000
Want no more children	0.234	0.045	149	170	1.286	0.192	0.144	0.323
Ideal number fo children	4.493	0.145	319	357	1.132	0.032	4.204	4.782
Has heard of HIV/AIDS	0.618	0.041	319	357	1.487	0.066	0.537	0.699
Knows about condoms to prevent AIDS	0.444	0.041	319	357	1.458	0.092	0.362	0.525
Konws about limitimg partners to prevent AIDS	0.476	0.043	319	357	1.541	0.091	0.389	0.562
Comprehensive knowledge on HIV transmission	0.264	0.032	319	357	1.273	0.119	0.201	0.327

na = Not applicable

Table B.9 Sampling errors for Covalima sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.189	0.012	989	781	0.929	0.061	0.166	0.212
Literacy	0.742	0.017	989	781	1.236	0.023	0.708	0.777
No education	0.217	0.017	989	781	1.309	0.079	0.183	0.251
Secondary education or higher	0.527	0.023	989	781	1.417	0.043	0.482	0.572
Net attendance ratio	0.840	0.015	956	760	1.185	0.018	0.810	0.869
Never married/in union	0.350	0.019	989	781	1.265	0.055	0.311	0.388
Currently married/in union	0.586	0.016	989	781	1.024	0.027	0.554	0.619
Married before age 20	0.480	0.023	702	559	1.235	0.049	0.433	0.526
Currently pregnant	0.058	0.009	989	781	1.165	0.149	0.041	0.076
Children ever born	2.562	0.086	989	781	0.976	0.034	2.390	2.734
Children surviving	2.206	0.072	989	781	0.962	0.033	2.062	2.350
Children ever born to women age 40-49	5.499	0.241	163	134	1.098	0.044	5.017	5.981
Knows any contraceptive method	0.955	0.010	572	458	1.147	0.010	0.935	0.975
Knows a modern method	0.955	0.010	572	458	1.147	0.010	0.935	0.975
Ever used any contraceptive method	0.658	0.025	572	458	1.261	0.038	0.608	0.708
Currently using any method	0.438	0.028	572	458	1.345	0.064	0.382	0.494
Currently using a modern method	0.432	0.028	572	458	1.362	0.065	0.375	0.488
Currently using a traditional method	0.006	0.003	572	458	1.011	0.548	0.000	0.012
Currently using pill	0.014	0.005	572	458	1.106	0.388	0.003	0.025
Currently using IUD	0.006	0.003	572	458	0.937	0.497	0.000	0.012
Currently using condoms	0.000	0.000	572	458	na	na	0.000	0.000
Currently use injectables	0.386	0.027	572	458	1.306	0.069	0.333	0.439
Currently using female sterilization	0.009	0.005	572	458	1.216	0.534	0.000	0.019
Currently using withdrawal	0.000	0.000	572	458	na	na	0.000	0.000
Currently using periodic abstinence	0.006	0.003	572	458	1.011	0.548	0.000	0.012
Used public sector source	0.996	0.004	254	203	1.071	0.005	0.987	1.005
Want no more children	0.384	0.023	572	458	1.149	0.061	0.338	0.431
Want to delay birth at least 2 years	0.414	0.022	572	458	1.059	0.053	0.370	0.457
Ideal number of children	4.579	0.100	942	739	1.652	0.022	4.379	4.779
Mothers received medical assistance at delivery	0.406	0.044	569	453	1.853	0.109	0.318	0.495
Mothers protected against tetanus for last birth	0.894	0.018	400	322	1.148	0.020	0.858	0.929
Had diarrhea in the past 2 weeks	0.181	0.020	536	426	1.131	0.111	0.141	0.221
Treated with ORS packets	0.689	0.056	93	77	1.105	0.082	0.576	0.802
Sought medical treatment	0.637	0.056	93	77	1.033	0.088	0.525	0.749
Vaccination card seen	0.412	0.069	90	69	1.267	0.167	0.275	0.549
Received BCG vaccination	0.912	0.031	90	69	1.012	0.034	0.851	0.974
Received DPT vaccination (3 doses)	0.812	0.051	90	69	1.193	0.062	0.711	0.913
Received polio vaccination (3 doses)	0.714	0.059	90	69	1.194	0.082	0.596	0.831
Received measles vaccination	0.797	0.043	90	69	0.985	0.054	0.711	0.883
Received all vaccinations	0.619	0.058	90	69	1.102	0.094	0.502	0.735
Height-for-age (below -2SD)	0.647	0.028	483	373	1.208	0.044	0.590	0.704
Weight-for-height (below -2SD)	0.138	0.015	483	373	0.953	0.110	0.108	0.169
Weight-for-age (below -2SD)	0.474	0.023	483	373	0.932	0.048	0.428	0.519
Prevalence of anemia (children 6-59)	0.361	0.038	140	108	0.951	0.105	0.285	0.437
Prevalence of anemia (women 15-49)	0.254	0.028	311	241	1.132	0.111	0.198	0.311
BMI <18.5	0.314	0.018	912	719	1.155	0.057	0.279	0.350
Has heard of HIV/AIDS	0.485	0.027	989	781	1.674	0.055	0.432	0.538
Knows about condoms to prevent AIDS	0.366	0.022	989	781	1.448	0.061	0.321	0.410
Konws about limitimg partners to prevent AIDS	0.404	0.024	989	781	1.532	0.059	0.356	0.451
Comprehensive knowledge on HIV transmission	0.111	0.012	989	781	1.167	0.105	0.088	0.135
Total fertility rate (past 3 years)	4.393	0.285	na	2119	1.248	0.065	3.823	4.963
Neonatal mortality (past 0-9 years)	37.244	6.710	1270	1021	1.176	0.180	23.825	50.664
Post-neonatal mortality (past 0-9 years)	38.268	6.536	1270	1021	1.137	0.171	25.196	51.340
Infant mortality (past 0-9 years)	75.513	8.493	1271	1022	1.095	0.112	58.526	92.499
Child mortality (past 0-9 years)	20.849	5.352	1279	1030	1.269	0.257	10.144	31.553
Under-five mortality (past 0-9 years)	94.787	9.478	1282	1031	1.093	0.100	75.831	113.743
MEN								
Urban residence	0.196	0.018	297	236	0.774	0.091	0.160	0.231
Literacy	0.817	0.023	297	236	1.023	0.028	0.771	0.863
No education	0.125	0.023	297	236	1.204	0.185	0.079	0.171
With secondary eductation or higher	0.600	0.031	297	236	1.090	0.052	0.538	0.662
Never married/in union	0.473	0.029	297	236	1.008	0.062	0.415	0.532
Currently married/in union	0.521	0.028	297	236	0.959	0.053	0.465	0.576
Knowing any contraceptive method	0.928	0.025	154	123	1.199	0.027	0.878	0.978
Ever used any contraceptive method	0.349	0.040	154	123	1.029	0.114	0.270	0.428
Currently using any method	0.016	0.009	154	123	0.922	0.591	0.000	0.034
Want no more children	0.448	0.050	154	123	1.229	0.111	0.349	0.547
Ideal number fo children	4.560	0.096	288	228	1.135	0.021	4.368	4.753
Has heard of HIV/AIDS	0.773	0.032	297	236	1.308	0.041	0.710	0.837
Knows about condoms to prevent AIDS	0.717	0.036	297	236	1.384	0.051	0.645	0.790
Konws about limitimg partners to prevent AIDS	0.722	0.037	297	236	1.403	0.051	0.648	0.795
Comprehensive knowledge on HIV transmission	0.058	0.015	297	236	1.109	0.260	0.028	0.088

na = Not applicable

Table B.10 Sampling errors for Dili sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.900	0.011	1227	2466	1.262	0.012	0.878	0.921
Literacy	0.892	0.014	1227	2466	1.521	0.015	0.865	0.919
No education	0.105	0.012	1227	2466	1.408	0.118	0.080	0.130
Secondary education or higher	0.745	0.021	1227	2466	1.667	0.028	0.703	0.787
Net attendance ratio	0.764	0.041	975	1774	2.314	0.054	0.682	0.846
Never married/in union	0.371	0.013	1227	2466	0.951	0.035	0.345	0.398
Currently married/in union	0.591	0.014	1227	2466	0.978	0.023	0.564	0.619
Married before age 20	0.366	0.018	965	1960	1.159	0.049	0.331	0.402
Currently pregnant	0.069	0.006	1227	2466	0.820	0.086	0.058	0.081
Children ever born	2.403	0.088	1227	2466	1.138	0.037	2.227	2.580
Children surviving	2.223	0.078	1227	2466	1.087	0.035	2.068	2.379
Children ever born to women age 40-49	5.386	0.183	225	455	0.952	0.034	5.020	5.752
Knows any contraceptive method	0.929	0.016	722	1459	1.685	0.017	0.897	0.961
Knows a modern method	0.926	0.017	722	1459	1.709	0.018	0.893	0.960
Ever used any contraceptive method	0.501	0.023	722	1459	1.223	0.045	0.455	0.546
Currently using any method	0.332	0.022	722	1459	1.239	0.066	0.288	0.375
Currently using a modern method	0.305	0.021	722	1459	1.215	0.068	0.264	0.347
Currently using a traditional method	0.026	0.007	722	1459	1.191	0.270	0.012	0.041
Currently using pill	0.045	0.007	722	1459	0.965	0.166	0.030	0.060
Currently using IUD	0.027	0.007	722	1459	1.122	0.249	0.014	0.041
Currently using condoms	0.013	0.005	722	1459	1.190	0.389	0.003	0.023
Currently use injectables	0.182	0.015	722	1459	1.072	0.085	0.151	0.213
Currently using female sterilization	0.021	0.005	722	1459	0.892	0.225	0.012	0.031
Currently using withdrawal	0.006	0.003	722	1459	0.944	0.436	0.001	0.012
Currently using periodic abstinence	0.020	0.006	722	1459	1.061	0.278	0.009	0.031
Used public sector source	0.681	0.054	219	434	1.709	0.080	0.572	0.789
Want no more children	0.427	0.024	722	1459	1.326	0.057	0.378	0.476
Want to delay birth at least 2 years	0.340	0.023	722	1459	1.297	0.067	0.294	0.386
Ideal number of children	4.304	0.065	1152	2322	1.155	0.015	4.174	4.433
Mothers received medical assistance at delivery	0.689	0.036	817	1652	1.806	0.052	0.618	0.760
Mothers protected against tetanus for last birth	0.868	0.019	512	1043	1.272	0.022	0.830	0.906
Had diarrhea in the past 2 weeks	0.197	0.017	789	1597	1.019	0.084	0.164	0.230
Treated with ORS packets	0.624	0.051	156	315	1.092	0.082	0.522	0.726
Sought medical treatment	0.673	0.057	156	315	1.252	0.085	0.558	0.788
Vaccination card seen	0.405	0.046	141	281	1.110	0.114	0.312	0.498
Received BCG vaccination	0.866	0.034	141	281	1.175	0.039	0.798	0.934
Received DPT vaccination (3 doses)	0.707	0.041	141	281	1.068	0.058	0.624	0.790
Received polio vaccination (3 doses)	0.441	0.045	141	281	1.069	0.102	0.350	0.531
Received measles vaccination	0.733	0.042	141	281	1.122	0.058	0.649	0.818
Received all vaccinations	0.434	0.046	141	281	1.080	0.105	0.343	0.525
Height-for-age (below -2SD)	0.439	0.021	700	1289	1.073	0.048	0.397	0.481
Weight-for-height (below -2SD)	0.145	0.016	700	1289	1.146	0.110	0.113	0.177
Weight-for-age (below -2SD)	0.301	0.019	700	1289	1.049	0.065	0.262	0.340
Prevalence of anemia (children 6-59)	0.253	0.041	200	364	1.278	0.162	0.171	0.336
Prevalence of anemia (women 15-49)	0.167	0.021	352	706	1.050	0.125	0.125	0.209
BMI <18.5	0.216	0.016	1063	2134	1.291	0.076	0.183	0.249
Has heard of HIV/AIDS	0.797	0.017	1227	2466	1.491	0.022	0.762	0.831
Knows about condoms to prevent AIDS	0.469	0.024	1227	2466	1.660	0.050	0.422	0.517
Konws about limitimg partners to prevent AIDS	0.626	0.022	1227	2466	1.591	0.035	0.582	0.670
Comprehensive knowledge on HIV transmission	0.138	0.017	1227	2466	1.685	0.120	0.105	0.171
Total fertility rate (past 3 years)	4.572	0.253	na	6968	1.113	0.055	4.067	5.077
Neonatal mortality (past 0-9 years)	21.071	5.100	1644	3313	1.165	0.242	10.872	31.270
Post-neonatal mortality (past 0-9 years)	17.774	3.462	1630	3286	1.042	0.195	10.850	24.699
Infant mortality (past 0-9 years)	38.845	6.548	1644	3313	1.187	0.169	25.750	51.941
Child mortality (past 0-9 years)	22.442	4.384	1599	3213	0.866	0.195	13.673	31.211
Under-five mortality (past 0-9 years)	60.416	7.727	1654	3333	1.085	0.128	44.963	75.869
MEN								
Urban residence	0.909	0.010	403	797	0.678	0.011	0.889	0.928
Literacy	0.916	0.018	403	797	1.274	0.019	0.880	0.951
No education	0.071	0.016	403	797	1.281	0.231	0.038	0.104
With secondary eductation or higher	0.762	0.028	403	797	1.336	0.037	0.705	0.819
Never married/in union	0.473	0.028	403	797	1.125	0.059	0.417	0.529
Currently married/in union	0.523	0.028	403	797	1.118	0.053	0.467	0.578
Knowing any contraceptive method	0.875	0.029	210	416	1.279	0.034	0.816	0.933
Ever used any contraceptive method	0.203	0.032	210	416	1.138	0.156	0.139	0.266
Currently using any method	0.293	0.035	210	416	1.112	0.120	0.223	0.363
Want no more children	0.281	0.029	210	416	0.944	0.104	0.222	0.340
Ideal number fo children	4.523	0.165	387	768	1.525	0.037	4.193	4.853
Has heard of HIV/AIDS	0.929	0.015	403	797	1.142	0.016	0.900	0.959
Knows about condoms to prevent AIDS	0.730	0.026	403	797	1.176	0.036	0.678	0.782
Konws about limitimg partners to prevent AIDS	0.814	0.025	403	797	1.275	0.030	0.765	0.864
Comprehensive knowledge on HIV transmission	0.404	0.037	403	797	1.527	0.093	0.329	0.479

na = Not applicable

Table B.11 Sampling errors for Ermera sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.058	0.006	1082	1542	0.831	0.102	0.046	0.070
Literacy	0.472	0.028	1082	1542	1.863	0.060	0.415	0.529
No education	0.493	0.026	1082	1542	1.709	0.053	0.441	0.545
Secondary education or higher	0.295	0.024	1082	1542	1.713	0.081	0.248	0.343
Net attendance ratio	0.645	0.031	1103	1582	1.788	0.048	0.583	0.707
Never married/in union	0.383	0.014	1082	1542	0.964	0.037	0.354	0.411
Currently married/in union	0.571	0.016	1082	1542	1.030	0.027	0.540	0.602
Married before age 20	0.399	0.020	807	1144	1.137	0.049	0.360	0.438
Currently pregnant	0.068	0.008	1082	1542	1.062	0.120	0.052	0.084
Children ever born	2.983	0.098	1082	1542	0.954	0.033	2.787	3.179
Children surviving	2.572	0.081	1082	1542	0.925	0.032	2.410	2.734
Children ever born to women age 40-49	6.943	0.237	201	290	1.077	0.034	6.469	7.416
Knows any contraceptive method	0.721	0.021	621	881	1.181	0.029	0.679	0.764
Knows a modern method	0.713	0.022	621	881	1.222	0.031	0.668	0.757
Ever used any contraceptive method	0.217	0.022	621	881	1.332	0.102	0.173	0.261
Currently using any method	0.188	0.021	621	881	1.337	0.112	0.146	0.230
Currently using a modern method	0.153	0.022	621	881	1.528	0.145	0.108	0.197
Currently using a traditional method	0.035	0.009	621	881	1.274	0.269	0.016	0.054
Currently using pill	0.004	0.002	621	881	0.965	0.600	0.000	0.009
Currently using IUD	0.006	0.003	621	881	0.964	0.502	0.000	0.012
Currently using condoms	0.000	0.000	621	881	na	na	0.000	0.000
Currently use injectables	0.139	0.021	621	881	1.528	0.153	0.096	0.181
Currently using female sterilization	0.000	0.000	621	881	na	na	0.000	0.000
Currently using withdrawal	0.018	0.007	621	881	1.335	0.402	0.003	0.032
Currently using periodic abstinence	0.000	0.000	621	881	na	na	0.000	0.000
Used public sector source	0.841	0.079	91	135	2.026	0.094	0.683	1.000
Want no more children	0.314	0.021	621	881	1.130	0.067	0.272	0.356
Want to delay birth at least 2 years	0.487	0.027	621	881	1.335	0.055	0.434	0.541
Ideal number of children	5.753	0.084	1074	1534	1.196	0.015	5.585	5.920
Mothers received medical assistance at delivery	0.121	0.025	891	1252	1.751	0.209	0.071	0.172
Mothers protected against tetanus for last birth	0.655	0.040	508	719	1.865	0.060	0.576	0.734
Had diarrhea in the past 2 weeks	0.128	0.024	837	1172	1.754	0.190	0.079	0.177
Treated with ORS packets	0.722	0.073	113	150	1.480	0.101	0.576	0.869
Sought medical treatment	0.775	0.078	113	150	1.640	0.101	0.619	0.931
Vaccination card seen	0.452	0.068	149	200	1.611	0.151	0.315	0.588
Received BCG vaccination	0.646	0.056	149	200	1.365	0.086	0.535	0.758
Received DPT vaccination (3 doses)	0.515	0.065	149	200	1.519	0.125	0.386	0.645
Received polio vaccination (3 doses)	0.503	0.068	149	200	1.605	0.136	0.366	0.639
Received measles vaccination	0.542	0.067	149	200	1.568	0.123	0.409	0.675
Received all vaccinations	0.446	0.069	149	200	1.641	0.155	0.307	0.585
Height-for-age (below -2SD)	0.685	0.021	740	1077	1.203	0.031	0.642	0.728
Weight-for-height (below -2SD)	0.207	0.023	740	1077	1.435	0.109	0.162	0.252
Weight-for-age (below -2SD)	0.580	0.023	740	1077	1.237	0.039	0.535	0.625
Prevalence of anemia (children 6-59)	0.154	0.024	216	322	1.013	0.159	0.105	0.202
Prevalence of anemia (women 15-49)	0.214	0.023	340	494	1.046	0.108	0.168	0.260
BMI <18.5	0.313	0.019	960	1384	1.274	0.061	0.275	0.351
Has heard of HIV/AIDS	0.138	0.017	1082	1542	1.661	0.127	0.103	0.172
Knows about condoms to prevent AIDS	0.135	0.016	1082	1542	1.570	0.121	0.102	0.168
Konws about limitimg partners to prevent AIDS	0.137	0.017	1082	1542	1.662	0.127	0.102	0.172
Comprehensive knowledge on HIV transmission	0.052	0.008	1082	1542	1.212	0.158	0.036	0.068
Total fertility rate (past 3 years)	6.575	0.319	na	4218	1.383	0.049	5.936	7.214
Neonatal mortality (past 0-9 years)	23.277	3.970	1730	2427	1.005	0.171	15.336	31.218
Post-neonatal mortality (past 0-9 years)	47.167	5.827	1735	2435	1.098	0.124	35.513	58.821
Infant mortality (past 0-9 years)	70.444	6.814	1736	2436	1.058	0.097	56.817	84.071
Child mortality (past 0-9 years)	33.541	4.412	1733	2429	0.936	0.132	24.716	42.366
Under-five mortality (past 0-9 years)	101.622	8.613	1750	2457	1.091	0.085	84.397	118.847
MEN								
Urban residence	0.054	0.007	355	491	0.622	0.138	0.039	0.069
Literacy	0.599	0.036	355	491	1.397	0.061	0.526	0.672
No education	0.371	0.035	355	491	1.376	0.095	0.301	0.442
With secondary eductation or higher	0.350	0.032	355	491	1.265	0.092	0.286	0.415
Never married/in union	0.509	0.024	355	491	0.915	0.048	0.460	0.557
Currently married/in union	0.475	0.024	355	491	0.919	0.051	0.426	0.524
Knowing any contraceptive method	0.175	0.029	167	233	0.994	0.167	0.116	0.234
Ever used any contraceptive method	0.000	0.000	167	233	na	na	0.000	0.000
Currently using any method	0.006	0.006	167	233	1.029	0.997	0.000	0.019
Want no more children	0.100	0.023	167	233	0.980	0.228	0.055	0.146
Ideal number fo children	4.335	0.097	351	488	0.993	0.022	4.141	4.529
Has heard of HIV/AIDS	0.208	0.027	355	491	1.268	0.132	0.153	0.262
Knows about condoms to prevent AIDS	0.206	0.028	355	491	1.277	0.133	0.151	0.261
Konws about limitimg partners to prevent AIDS	0.200	0.028	355	491	1.309	0.139	0.144	0.256
Comprehensive knowledge on HIV transmission	0.019	0.007	355	491	0.986	0.381	0.004	0.033

na = Not applicable

Table B.12 Sampling errors for Lautem sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.232	0.015	1023	864	1.164	0.066	0.201	0.262
Literacy	0.781	0.020	1023	864	1.571	0.026	0.741	0.822
No education	0.202	0.021	1023	864	1.633	0.102	0.161	0.243
Secondary education or higher	0.534	0.023	1023	864	1.487	0.043	0.487	0.580
Net attendance ratio	0.893	0.014	1025	904	1.439	0.015	0.866	0.921
Never married/in union	0.320	0.018	1023	864	1.205	0.055	0.285	0.355
Currently married/in union	0.626	0.017	1023	864	1.117	0.027	0.592	0.660
Married before age 20	0.457	0.022	762	653	1.245	0.049	0.412	0.502
Currently pregnant	0.086	0.010	1023	864	1.122	0.114	0.067	0.106
Children ever born	3.105	0.097	1023	864	0.986	0.031	2.910	3.300
Children surviving	2.723	0.097	1023	864	1.130	0.036	2.529	2.917
Children ever born to women age 40-49	6.503	0.287	178	153	1.253	0.044	5.928	7.077
Knows any contraceptive method	0.880	0.017	629	541	1.325	0.020	0.845	0.914
Knows a modern method	0.876	0.019	629	541	1.416	0.021	0.839	0.913
Ever used any contraceptive method	0.269	0.023	629	541	1.279	0.084	0.223	0.314
Currently using any method	0.177	0.020	629	541	1.306	0.112	0.137	0.217
Currently using a modern method	0.175	0.020	629	541	1.320	0.114	0.135	0.215
Currently using a traditional method	0.002	0.001	629	541	0.750	0.674	0.000	0.005
Currently using pill	0.016	0.005	629	541	0.962	0.297	0.007	0.026
Currently using IUD	0.019	0.008	629	541	1.504	0.430	0.003	0.036
Currently using condoms	0.000	0.000	629	541	na	na	0.000	0.000
Currently use injectables	0.134	0.017	629	541	1.230	0.125	0.100	0.167
Currently using female sterilization	0.003	0.002	629	541	1.005	0.747	0.000	0.007
Currently using withdrawal	0.000	0.000	629	541	na	na	0.000	0.000
Currently using periodic abstinence	0.002	0.001	629	541	0.750	0.674	0.000	0.005
Used public sector source	0.989	0.007	118	95	0.763	0.008	0.974	1.004
Want no more children	0.299	0.015	629	541	0.831	0.051	0.269	0.329
Want to delay birth at least 2 years	0.442	0.018	629	541	0.892	0.040	0.406	0.477
Ideal number of children	5.575	0.096	950	806	1.398	0.017	5.382	5.768
Mothers received medical assistance at delivery	0.259	0.030	860	758	1.632	0.117	0.199	0.320
Mothers protected against tetanus for last birth	0.805	0.026	512	444	1.479	0.032	0.754	0.857
Had diarrhea in the past 2 weeks	0.217	0.016	820	719	1.037	0.072	0.186	0.249
Treated with ORS packets	0.615	0.037	171	156	0.923	0.060	0.541	0.690
Sought medical treatment	0.610	0.040	171	156	1.021	0.066	0.530	0.690
Vaccination card seen	0.738	0.049	161	140	1.381	0.066	0.641	0.836
Received BCG vaccination	0.868	0.036	161	140	1.283	0.041	0.796	0.939
Received DPT vaccination (3 doses)	0.809	0.041	161	140	1.294	0.051	0.727	0.892
Received polio vaccination (3 doses)	0.754	0.048	161	140	1.388	0.064	0.658	0.850
Received measles vaccination	0.801	0.044	161	140	1.374	0.055	0.713	0.890
Received all vaccinations	0.746	0.049	161	140	1.399	0.065	0.648	0.844
Height-for-age (below -2SD)	0.510	0.022	802	714	1.197	0.044	0.465	0.554
Weight-for-height (below -2SD)	0.096	0.013	802	714	1.150	0.131	0.071	0.121
Weight-for-age (below -2SD)	0.321	0.020	802	714	1.121	0.061	0.282	0.360
Prevalence of anemia (children 6-59)	0.463	0.033	277	247	1.091	0.071	0.397	0.529
Prevalence of anemia (women 15-49)	0.255	0.026	343	289	1.123	0.104	0.202	0.308
BMI <18.5	0.278	0.018	885	746	1.193	0.065	0.242	0.314
Has heard of HIV/AIDS	0.363	0.022	1023	864	1.463	0.061	0.319	0.407
Knows about condoms to prevent AIDS	0.265	0.024	1023	864	1.752	0.091	0.216	0.313
Konws about limitimg partners to prevent AIDS	0.303	0.021	1023	864	1.436	0.068	0.261	0.344
Comprehensive knowledge on HIV transmission	0.111	0.018	1023	864	1.796	0.159	0.075	0.146
Total fertility rate (past 3 years)	6.712	0.261	na	2342	1.241	0.039	6.190	7.234
Neonatal mortality (past 0-9 years)	36.086	3.698	1754	1531	0.726	0.102	28.689	43.483
Post-neonatal mortality (past 0-9 years)	33.138	5.261	1756	1531	1.163	0.159	22.616	43.659
Infant mortality (past 0-9 years)	69.224	6.255	1755	1532	0.904	0.090	56.714	81.734
Child mortality (past 0-9 years)	31.398	7.162	1705	1487	1.581	0.228	17.073	45.723
Under-five mortality (past 0-9 years)	98.448	10.174	1762	1539	1.186	0.103	78.099	118.797
MEN								
Urban residence	0.233	0.026	366	308	1.181	0.112	0.181	0.285
Literacy	0.885	0.017	366	308	1.018	0.019	0.851	0.919
No education	0.110	0.017	366	308	1.015	0.151	0.076	0.143
With secondary eductation or higher	0.708	0.032	366	308	1.355	0.046	0.644	0.773
Never married/in union	0.456	0.034	366	308	1.288	0.074	0.389	0.523
Currently married/in union	0.531	0.034	366	308	1.313	0.065	0.462	0.599
Knowing any contraceptive method	0.871	0.022	194	163	0.911	0.025	0.827	0.915
Ever used any contraceptive method	0.057	0.017	194	163	1.027	0.301	0.023	0.091
Currently using any method	0.124	0.027	194	163	1.120	0.215	0.070	0.177
Want no more children	0.073	0.023	194	163	1.211	0.312	0.027	0.118
Ideal number fo children	6.336	0.173	366	308	1.336	0.027	5.989	6.683
Has heard of HIV/AIDS	0.580	0.039	366	308	1.521	0.068	0.502	0.659
Knows about condoms to prevent AIDS	0.516	0.040	366	308	1.516	0.077	0.437	0.596
Konws about limitimg partners to prevent AIDS	0.559	0.041	366	308	1.557	0.073	0.478	0.640
Comprehensive knowledge on HIV transmission	0.189	0.029	366	308	1.423	0.155	0.130	0.247

na = Not applicable

Table B.13 Sampling errors for Liquiçá sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.110	0.016	1069	801	1.635	0.142	0.079	0.142
Literacy	0.628	0.027	1069	801	1.851	0.044	0.573	0.683
No education	0.335	0.024	1069	801	1.647	0.071	0.287	0.383
Secondary education or higher	0.395	0.029	1069	801	1.919	0.073	0.337	0.452
Net attendance ratio	0.743	0.031	962	710	1.936	0.042	0.680	0.805
Never married/in union	0.383	0.014	1069	801	0.935	0.036	0.355	0.410
Currently married/in union	0.574	0.015	1069	801	0.970	0.026	0.545	0.604
Married before age 20	0.409	0.018	815	611	1.019	0.043	0.374	0.444
Currently pregnant	0.070	0.006	1069	801	0.816	0.091	0.058	0.083
Children ever born	2.816	0.111	1069	801	1.115	0.039	2.594	3.037
Children surviving	2.465	0.089	1069	801	1.031	0.036	2.286	2.643
Children ever born to women age 40-49	6.499	0.273	211	158	1.253	0.042	5.953	7.045
Knows any contraceptive method	0.762	0.022	614	460	1.252	0.028	0.719	0.805
Knows a modern method	0.756	0.023	614	460	1.299	0.030	0.711	0.801
Ever used any contraceptive method	0.354	0.030	614	460	1.538	0.084	0.294	0.413
Currently using any method	0.245	0.024	614	460	1.383	0.098	0.197	0.293
Currently using a modern method	0.238	0.023	614	460	1.343	0.097	0.192	0.285
Currently using a traditional method	0.007	0.003	614	460	0.952	0.471	0.000	0.013
Currently using pill	0.028	0.007	614	460	1.096	0.261	0.013	0.043
Currently using IUD	0.016	0.005	614	460	1.071	0.340	0.005	0.027
Currently using condoms	0.000	0.000	614	460	na	na	0.000	0.000
Currently use injectables	0.169	0.020	614	460	1.305	0.117	0.129	0.209
Currently using female sterilization	0.011	0.004	614	460	0.905	0.344	0.003	0.019
Currently using withdrawal	0.000	0.000	614	460	na	na	0.000	0.000
Currently using periodic abstinence	0.000	0.000	614	460	na	na	0.000	0.000
Used public sector source	0.896	0.029	144	107	1.139	0.032	0.838	0.955
Want no more children	0.302	0.027	614	460	1.460	0.090	0.248	0.356
Want to delay birth at least 2 years	0.281	0.028	614	460	1.526	0.099	0.226	0.337
Ideal number of children	4.773	0.084	1005	755	1.373	0.018	4.605	4.941
Mothers received medical assistance at delivery	0.234	0.028	776	582	1.560	0.120	0.178	0.291
Mothers protected against tetanus for last birth	0.843	0.019	477	358	1.148	0.023	0.805	0.881
Had diarrhea in the past 2 weeks	0.253	0.023	733	550	1.264	0.090	0.208	0.298
Treated with ORS packets	0.636	0.036	185	139	0.888	0.056	0.565	0.708
Sought medical treatment	0.689	0.035	185	139	0.891	0.051	0.618	0.760
Vaccination card seen	0.522	0.059	141	106	1.395	0.112	0.405	0.640
Received BCG vaccination	0.856	0.031	141	106	1.040	0.036	0.795	0.918
Received DPT vaccination (3 doses)	0.594	0.048	141	106	1.167	0.081	0.497	0.690
Received polio vaccination (3 doses)	0.502	0.048	141	106	1.151	0.097	0.405	0.599
Received measles vaccination	0.663	0.053	141	106	1.332	0.080	0.557	0.769
Received all vaccinations	0.437	0.051	141	106	1.215	0.116	0.335	0.539
Height-for-age (below -2SD)	0.569	0.036	606	456	1.680	0.063	0.498	0.641
Weight-for-height (below -2SD)	0.151	0.018	606	456	1.182	0.117	0.116	0.187
Weight-for-age (below -2SD)	0.414	0.030	606	456	1.439	0.073	0.354	0.475
Prevalence of anemia (children 6-59)	0.405	0.040	186	142	1.066	0.098	0.325	0.485
Prevalence of anemia (women 15-49)	0.207	0.027	328	247	1.187	0.128	0.154	0.260
BMI <18.5	0.328	0.024	953	715	1.550	0.072	0.281	0.375
Has heard of HIV/AIDS	0.339	0.030	1069	801	2.050	0.088	0.280	0.399
Knows about condoms to prevent AIDS	0.256	0.027	1069	801	2.005	0.105	0.202	0.310
Konws about limitimg partners to prevent AIDS	0.287	0.026	1069	801	1.904	0.092	0.235	0.340
Comprehensive knowledge on HIV transmission	0.081	0.011	1069	801	1.327	0.136	0.059	0.104
Total fertility rate (past 3 years)	5.548	0.280	na	2223	1.014	0.050	4.989	6.108
Neonatal mortality (past 0-9 years)	31.051	4.727	1530	1147	0.999	0.152	21.596	40.506
Post-neonatal mortality (past 0-9 years)	36.721	5.977	1539	1154	1.175	0.163	24.766	48.676
Infant mortality (past 0-9 years)	67.772	6.753	1534	1150	0.985	0.100	54.265	81.279
Child mortality (past 0-9 years)	35.397	6.099	1536	1151	1.096	0.172	23.198	47.595
Under-five mortality (past 0-9 years)	100.770	9.739	1546	1159	1.150	0.097	81.291	120.248
MEN								
Urban residence	0.119	0.011	315	252	0.578	0.089	0.098	0.140
Literacy	0.759	0.036	315	252	1.501	0.048	0.687	0.832
No education	0.175	0.030	315	252	1.407	0.172	0.115	0.236
With secondary eductation or higher	0.515	0.042	315	252	1.500	0.082	0.430	0.600
Never married/in union	0.486	0.028	315	252	0.985	0.057	0.431	0.542
Currently married/in union	0.494	0.025	315	252	0.888	0.051	0.444	0.544
Knowing any contraceptive method	0.750	0.046	157	124	1.331	0.062	0.658	0.842
Ever used any contraceptive method	0.080	0.023	157	124	1.068	0.290	0.034	0.127
Currently using any method	0.185	0.031	157	124	1.000	0.168	0.123	0.247
Want no more children	0.231	0.038	157	124	1.133	0.165	0.155	0.308
Ideal number fo children	5.214	0.146	286	226	1.193	0.028	4.922	5.505
Has heard of HIV/AIDS	0.529	0.063	315	252	2.233	0.120	0.402	0.656
Knows about condoms to prevent AIDS	0.441	0.065	315	252	2.293	0.147	0.311	0.570
Konws about limitimg partners to prevent AIDS	0.476	0.062	315	252	2.186	0.130	0.352	0.600
Comprehensive knowledge on HIV transmission	0.220	0.061	315	252	2.596	0.279	0.097	0.342

na = Not applicable

Table B.14 Sampling errors for Manatuto sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.026	0.007	1135	603	1.491	0.270	0.012	0.041
Literacy	0.737	0.032	1135	603	2.436	0.043	0.674	0.801
No education	0.245	0.032	1135	603	2.503	0.131	0.181	0.309
Secondary education or higher	0.508	0.035	1135	603	2.380	0.070	0.437	0.579
Net attendance ratio	0.809	0.022	944	523	1.545	0.027	0.765	0.853
Never married/in union	0.385	0.017	1135	603	1.206	0.045	0.350	0.420
Currently married/in union	0.585	0.018	1135	603	1.207	0.030	0.549	0.620
Married before age 20	0.379	0.021	834	442	1.222	0.054	0.337	0.420
Currently pregnant	0.066	0.008	1135	603	1.079	0.120	0.050	0.082
Children ever born	2.507	0.091	1135	603	1.090	0.036	2.324	2.690
Children surviving	2.271	0.078	1135	603	1.027	0.034	2.115	2.426
Children ever born to women age 40-49	5.800	0.207	192	102	1.025	0.036	5.385	6.214
Knows any contraceptive method	0.748	0.029	665	353	1.747	0.039	0.689	0.807
Knows a modern method	0.746	0.030	665	353	1.784	0.040	0.686	0.807
Ever used any contraceptive method	0.237	0.026	665	353	1.583	0.110	0.185	0.290
Currently using any method	0.207	0.025	665	353	1.583	0.120	0.157	0.257
Currently using a modern method	0.200	0.024	665	353	1.551	0.120	0.152	0.249
Currently using a traditional method	0.007	0.003	665	353	0.833	0.386	0.002	0.012
Currently using pill	0.018	0.007	665	353	1.268	0.366	0.005	0.031
Currently using IUD	0.022	0.006	665	353	1.028	0.268	0.010	0.033
Currently using condoms	0.000	0.000	665	353	na	na	0.000	0.000
Currently use injectables	0.152	0.020	665	353	1.461	0.134	0.111	0.192
Currently using female sterilization	0.008	0.003	665	353	0.956	0.420	0.001	0.014
Currently using withdrawal	0.002	0.002	665	353	1.017	1.003	0.000	0.005
Currently using periodic abstinence	0.004	0.002	665	353	0.713	0.443	0.000	0.007
Used public sector source	0.988	0.009	135	71	0.964	0.009	0.971	1.006
Want no more children	0.454	0.023	665	353	1.170	0.050	0.409	0.499
Want to delay birth at least 2 years	0.379	0.022	665	353	1.175	0.058	0.335	0.423
Ideal number of children	4.465	0.099	1103	586	1.583	0.022	4.268	4.663
Mothers received medical assistance at delivery	0.369	0.050	818	433	2.296	0.134	0.270	0.468
Mothers protected against tetanus for last birth	0.948	0.012	498	264	1.255	0.013	0.923	0.973
Had diarrhea in the past 2 weeks	0.119	0.012	786	416	0.923	0.098	0.096	0.142
Treated with ORS packets	0.846	0.035	94	50	0.842	0.042	0.776	0.917
Sought medical treatment	0.819	0.073	94	50	1.585	0.089	0.672	0.965
Vaccination card seen	0.489	0.060	165	87	1.499	0.122	0.370	0.608
Received BCG vaccination	0.718	0.049	165	87	1.353	0.068	0.621	0.815
Received DPT vaccination (3 doses)	0.693	0.053	165	87	1.432	0.076	0.587	0.798
Received polio vaccination (3 doses)	0.599	0.056	165	87	1.422	0.093	0.488	0.710
Received measles vaccination	0.649	0.056	165	87	1.482	0.087	0.536	0.762
Received all vaccinations	0.536	0.062	165	87	1.544	0.115	0.413	0.659
Height-for-age (below -2SD)	0.467	0.022	775	429	1.203	0.047	0.423	0.512
Weight-for-height (below -2SD)	0.197	0.019	775	429	1.244	0.095	0.160	0.234
Weight-for-age (below -2SD)	0.344	0.016	775	429	0.869	0.046	0.312	0.375
Prevalence of anemia (children 6-59)	0.679	0.036	238	129	1.200	0.053	0.607	0.751
Prevalence of anemia (women 15-49)	0.326	0.036	372	196	1.493	0.112	0.253	0.399
BMI <18.5	0.211	0.015	1022	544	1.156	0.070	0.182	0.241
Has heard of HIV/AIDS	0.521	0.036	1135	603	2.395	0.068	0.450	0.592
Knows about condoms to prevent AIDS	0.395	0.026	1135	603	1.793	0.066	0.343	0.447
Konws about limitimg partners to prevent AIDS	0.415	0.032	1135	603	2.189	0.077	0.351	0.479
Comprehensive knowledge on HIV transmission	0.089	0.012	1135	603	1.360	0.129	0.066	0.112
Total fertility rate (past 3 years)	5.535	0.260	na	1659	1.253	0.047	5.015	6.055
Neonatal mortality (past 0-9 years)	30.523	5.541	1636	868	1.098	0.182	19.440	41.605
Post-neonatal mortality (past 0-9 years)	19.461	3.719	1633	866	1.000	0.191	12.024	26.899
Infant mortality (past 0-9 years)	49.984	6.503	1638	869	0.982	0.130	36.978	62.990
Child mortality (past 0-9 years)	19.567	3.682	1610	854	1.015	0.188	12.202	26.931
Under-five mortality (past 0-9 years)	68.572	7.030	1654	878	0.951	0.103	54.512	82.632
MEN								
Urban residence	0.030	0.005	366	190	0.604	0.180	0.019	0.040
Literacy	0.811	0.030	366	190	1.484	0.038	0.750	0.872
No education	0.178	0.030	366	190	1.478	0.167	0.118	0.237
With secondary eductation or higher	0.539	0.036	366	190	1.374	0.067	0.467	0.611
Never married/in union	0.486	0.024	366	190	0.930	0.050	0.437	0.535
Currently married/in union	0.508	0.023	366	190	0.889	0.046	0.462	0.555
Knowing any contraceptive method	1.000	0.000	188	96	na	0.000	1.000	1.000
Ever used any contraceptive method	0.050	0.020	188	96	1.242	0.398	0.010	0.089
Currently using any method	0.205	0.042	188	96	1.416	0.205	0.121	0.289
Want no more children	0.444	0.037	188	96	1.016	0.083	0.370	0.517
Ideal number fo children	4.679	0.065	366	190	1.058	0.014	4.549	4.810
Has heard of HIV/AIDS	0.989	0.007	366	190	1.187	0.007	0.976	1.002
Knows about condoms to prevent AIDS	0.976	0.008	366	190	1.001	0.008	0.960	0.992
Konws about limitimg partners to prevent AIDS	0.989	0.007	366	190	1.187	0.007	0.976	1.002
Comprehensive knowledge on HIV transmission	0.555	0.046	366	190	1.753	0.082	0.463	0.646

na = Not applicable

Table B.15 Sampling errors for Manufahi sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.240	0.014	791	470	0.924	0.059	0.212	0.268
Literacy	0.703	0.026	791	470	1.611	0.037	0.651	0.756
No education	0.272	0.024	791	470	1.545	0.090	0.223	0.321
Secondary education or higher	0.503	0.027	791	470	1.529	0.054	0.449	0.558
Net attendance ratio	0.838	0.023	785	469	1.693	0.028	0.792	0.885
Never married/in union	0.299	0.021	791	470	1.284	0.070	0.257	0.340
Currently married/in union	0.679	0.021	791	470	1.244	0.030	0.638	0.720
Married before age 20	0.421	0.021	629	374	1.052	0.049	0.380	0.463
Currently pregnant	0.088	0.011	791	470	1.063	0.122	0.066	0.109
Children ever born	2.753	0.108	791	470	1.069	0.039	2.537	2.969
Children surviving	2.434	0.094	791	470	1.058	0.039	2.245	2.623
Children ever born to women age 40-49	5.542	0.306	134	79	1.339	0.055	4.930	6.153
Knows any contraceptive method	0.786	0.023	537	319	1.304	0.029	0.739	0.832
Knows a modern method	0.778	0.023	537	319	1.279	0.030	0.732	0.824
Ever used any contraceptive method	0.354	0.030	537	319	1.457	0.085	0.294	0.414
Currently using any method	0.253	0.024	537	319	1.287	0.096	0.204	0.301
Currently using a modern method	0.242	0.025	537	319	1.361	0.104	0.192	0.293
Currently using a traditional method	0.010	0.003	537	319	0.708	0.297	0.004	0.017
Currently using pill	0.011	0.005	537	319	1.070	0.443	0.001	0.020
Currently using IUD	0.016	0.007	537	319	1.363	0.464	0.001	0.031
Currently using condoms	0.000	0.000	537	319	na	na	0.000	0.000
Currently use injectables	0.191	0.019	537	319	1.112	0.099	0.153	0.229
Currently using female sterilization	0.002	0.002	537	319	0.992	1.009	0.000	0.005
Currently using withdrawal	0.010	0.003	537	319	0.708	0.297	0.004	0.017
Currently using periodic abstinence	0.000	0.000	537	319	na	na	0.000	0.000
Used public sector source	0.992	0.008	125	76	0.972	0.008	0.977	1.008
Want no more children	0.294	0.018	537	319	0.922	0.062	0.258	0.330
Want to delay birth at least 2 years	0.362	0.022	537	319	1.070	0.061	0.317	0.406
Ideal number of children	4.883	0.099	760	450	1.285	0.020	4.685	5.081
Mothers received medical assistance at delivery	0.190	0.022	660	393	1.217	0.117	0.145	0.234
Mothers protected against tetanus for last birth	0.712	0.030	400	238	1.342	0.043	0.652	0.773
Had diarrhea in the past 2 weeks	0.084	0.010	619	369	0.908	0.121	0.063	0.104
Treated with ORS packets	0.590	0.075	51	31	1.086	0.127	0.440	0.740
Sought medical treatment	0.494	0.062	51	31	0.879	0.126	0.369	0.618
Vaccination card seen	0.391	0.053	134	80	1.258	0.136	0.285	0.497
Received BCG vaccination	0.692	0.050	134	80	1.253	0.072	0.592	0.792
Received DPT vaccination (3 doses)	0.532	0.055	134	80	1.275	0.103	0.422	0.642
Received polio vaccination (3 doses)	0.464	0.054	134	80	1.249	0.116	0.356	0.571
Received measles vaccination	0.684	0.049	134	80	1.220	0.072	0.586	0.782
Received all vaccinations	0.428	0.052	134	80	1.225	0.122	0.323	0.532
Height-for-age (below -2SD)	0.647	0.030	496	296	1.341	0.046	0.588	0.707
Weight-for-height (below -2SD)	0.149	0.015	496	296	0.846	0.098	0.120	0.178
Weight-for-age (below -2SD)	0.437	0.023	496	296	0.985	0.053	0.391	0.484
Prevalence of anemia (children 6-59)	0.377	0.051	130	78	1.147	0.136	0.274	0.480
Prevalence of anemia (women 15-49)	0.128	0.021	231	137	0.962	0.166	0.086	0.171
BMI <18.5	0.298	0.021	689	409	1.181	0.069	0.256	0.339
Has heard of HIV/AIDS	0.363	0.025	791	470	1.433	0.068	0.314	0.412
Knows about condoms to prevent AIDS	0.272	0.023	791	470	1.421	0.083	0.227	0.317
Konws about limitimg partners to prevent AIDS	0.319	0.023	791	470	1.361	0.071	0.274	0.364
Comprehensive knowledge on HIV transmission	0.165	0.019	791	470	1.463	0.117	0.126	0.203
Total fertility rate (past 3 years)	5.853	0.317	na	1316	1.265	0.054	5.219	6.487
Neonatal mortality (past 0-9 years)	43.888	6.169	1262	751	0.942	0.141	31.551	56.226
Post-neonatal mortality (past 0-9 years)	18.530	4.205	1268	755	1.150	0.227	10.120	26.940
Infant mortality (past 0-9 years)	62.418	7.843	1264	752	1.032	0.126	46.733	78.104
Child mortality (past 0-9 years)	25.376	4.894	1259	750	0.955	0.193	15.588	35.164
Under-five mortality (past 0-9 years)	86.211	10.009	1274	758	1.094	0.116	66.193	106.228
MEN								
Urban residence	0.229	0.043	228	137	1.530	0.187	0.144	0.315
Literacy	0.753	0.023	228	137	0.816	0.031	0.707	0.800
No education	0.200	0.027	228	137	1.011	0.134	0.146	0.254
With secondary eductation or higher	0.578	0.028	228	137	0.857	0.049	0.522	0.635
Never married/in union	0.418	0.026	228	137	0.794	0.062	0.366	0.470
Currently married/in union	0.557	0.027	228	137	0.833	0.049	0.502	0.612
Knowing any contraceptive method	0.389	0.048	127	77	1.114	0.125	0.292	0.486
Ever used any contraceptive method	0.054	0.021	127	77	1.028	0.382	0.013	0.096
Currently using any method	0.084	0.025	127	77	0.998	0.294	0.035	0.133
Want no more children	0.153	0.031	127	77	0.978	0.205	0.090	0.216
Ideal number fo children	5.072	0.132	225	135	0.969	0.026	4.808	5.335
Has heard of HIV/AIDS	0.460	0.036	228	137	1.073	0.077	0.389	0.531
Knows about condoms to prevent AIDS	0.450	0.034	228	137	1.035	0.076	0.382	0.518
Konws about limitimg partners to prevent AIDS	0.446	0.034	228	137	1.045	0.077	0.377	0.515
Comprehensive knowledge on HIV transmission	0.424	0.034	228	137	1.052	0.081	0.355	0.493

na = Not applicable

Table B.16 Sampling errors for Oecussi sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.166	0.010	1000	884	0.848	0.060	0.146	0.186
Literacy	0.516	0.027	1000	884	1.675	0.051	0.463	0.569
No education	0.410	0.025	1000	884	1.613	0.061	0.360	0.460
Secondary education or higher	0.230	0.021	1000	884	1.571	0.091	0.188	0.272
Net attendance ratio	0.716	0.031	823	751	1.797	0.043	0.654	0.778
Never married/in union	0.269	0.018	1000	884	1.309	0.068	0.232	0.306
Currently married/in union	0.682	0.019	1000	884	1.305	0.028	0.644	0.721
Married before age 20	0.504	0.024	794	705	1.370	0.048	0.456	0.553
Currently pregnant	0.070	0.008	1000	884	1.028	0.118	0.054	0.087
Children ever born	3.071	0.103	1000	884	1.199	0.034	2.864	3.277
Children surviving	2.734	0.085	1000	884	1.114	0.031	2.564	2.904
Children ever born to women age 40-49	5.436	0.173	238	214	1.089	0.032	5.089	5.783
Knows any contraceptive method	0.951	0.017	675	603	1.993	0.017	0.918	0.984
Knows a modern method	0.949	0.017	675	603	2.015	0.018	0.915	0.983
Ever used any contraceptive method	0.402	0.025	675	603	1.313	0.062	0.352	0.452
Currently using any method	0.241	0.024	675	603	1.432	0.098	0.193	0.288
Currently using a modern method	0.234	0.023	675	603	1.420	0.099	0.187	0.280
Currently using a traditional method	0.007	0.003	675	603	0.930	0.432	0.001	0.013
Currently using pill	0.001	0.001	675	603	0.818	1.004	0.000	0.003
Currently using IUD	0.006	0.003	675	603	0.998	0.475	0.000	0.013
Currently using condoms	0.001	0.001	675	603	0.816	1.001	0.000	0.003
Currently use injectables	0.194	0.021	675	603	1.348	0.106	0.152	0.235
Currently using female sterilization	0.002	0.001	675	603	0.764	0.663	0.000	0.005
Currently using withdrawal	0.003	0.002	675	603	0.960	0.724	0.000	0.006
Currently using periodic abstinence	0.003	0.002	675	603	0.964	0.726	0.000	0.006
Used public sector source	0.936	0.023	155	138	1.159	0.024	0.890	0.982
Want no more children	0.477	0.021	675	603	1.072	0.043	0.436	0.519
Want to delay birth at least 2 years	0.374	0.021	675	603	1.134	0.057	0.331	0.416
Ideal number of children	4.543	0.099	964	855	1.542	0.022	4.346	4.741
Mothers received medical assistance at delivery	0.098	0.019	870	783	1.548	0.190	0.060	0.135
Mothers protected against tetanus for last birth	0.758	0.028	548	492	1.549	0.037	0.701	0.815
Had diarrhea in the past 2 weeks	0.167	0.018	816	734	1.266	0.105	0.132	0.203
Treated with ORS packets	0.730	0.050	140	123	1.255	0.068	0.631	0.829
Sought medical treatment	0.688	0.060	140	123	1.447	0.088	0.568	0.809
Vaccination card seen	0.642	0.048	161	143	1.260	0.075	0.546	0.738
Received BCG vaccination	0.859	0.029	161	143	1.040	0.033	0.801	0.916
Received DPT vaccination (3 doses)	0.741	0.058	161	143	1.666	0.078	0.625	0.857
Received polio vaccination (3 doses)	0.638	0.062	161	143	1.618	0.097	0.514	0.761
Received measles vaccination	0.748	0.055	161	143	1.582	0.073	0.639	0.857
Received all vaccinations	0.600	0.062	161	143	1.591	0.103	0.476	0.723
Height-for-age (below -2SD)	0.691	0.022	754	708	1.285	0.031	0.647	0.734
Weight-for-height (below -2SD)	0.269	0.020	754	708	1.177	0.075	0.228	0.309
Weight-for-age (below -2SD)	0.628	0.022	754	708	1.232	0.035	0.584	0.672
Prevalence of anemia (children 6-59)	0.445	0.033	229	218	1.077	0.073	0.380	0.510
Prevalence of anemia (women 15-49)	0.225	0.027	323	288	1.159	0.119	0.172	0.279
BMI <18.5	0.363	0.022	898	794	1.374	0.061	0.319	0.407
Has heard of HIV/AIDS	0.276	0.024	1000	884	1.725	0.088	0.227	0.325
Knows about condoms to prevent AIDS	0.236	0.022	1000	884	1.640	0.093	0.192	0.280
Konws about limitimg partners to prevent AIDS	0.247	0.023	1000	884	1.670	0.092	0.202	0.293
Comprehensive knowledge on HIV transmission	0.027	0.009	1000	884	1.731	0.330	0.009	0.045
Total fertility rate (past 3 years)	6.641	0.310	na	2493	1.094	0.047	6.020	7.261
Neonatal mortality (past 0-9 years)	24.971	4.980	1654	1487	1.112	0.199	15.012	34.930
Post-neonatal mortality (past 0-9 years)	41.493	4.887	1654	1485	0.906	0.118	31.719	51.266
Infant mortality (past 0-9 years)	66.464	5.174	1658	1489	0.754	0.078	56.115	76.813
Child mortality (past 0-9 years)	27.236	5.124	1617	1454	1.176	0.188	16.988	37.484
Under-five mortality (past 0-9 years)	91.889	7.196	1667	1497	0.858	0.078	77.498	106.281
MEN								
Urban residence	0.151	0.021	271	235	0.972	0.140	0.109	0.193
Literacy	0.559	0.037	271	235	1.225	0.066	0.485	0.633
No education	0.291	0.025	271	235	0.912	0.087	0.241	0.341
With secondary eductation or higher	0.299	0.042	271	235	1.519	0.142	0.214	0.384
Never married/in union	0.297	0.034	271	235	1.218	0.114	0.229	0.364
Currently married/in union	0.703	0.034	271	235	1.218	0.048	0.636	0.771
Knowing any contraceptive method	0.912	0.036	188	165	1.714	0.039	0.841	0.983
Ever used any contraceptive method	0.167	0.034	188	165	1.257	0.206	0.098	0.235
Currently using any method	0.228	0.033	188	165	1.071	0.144	0.162	0.294
Want no more children	0.293	0.032	188	165	0.957	0.109	0.229	0.357
Ideal number fo children	4.683	0.108	270	235	1.024	0.023	4.468	4.899
Has heard of HIV/AIDS	0.510	0.039	271	235	1.275	0.076	0.432	0.587
Knows about condoms to prevent AIDS	0.428	0.041	271	235	1.352	0.095	0.346	0.509
Konws about limitimg partners to prevent AIDS	0.454	0.039	271	235	1.295	0.087	0.376	0.533
Comprehensive knowledge on HIV transmission	0.054	0.021	271	235	1.518	0.387	0.012	0.096

na = Not applicable

Table B.17 Sampling errors for Viqueque sample, Timor-Leste 2009-10

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban	0.065	0.009	875	882	1.058	0.135	0.048	0.083
Literacy	0.666	0.022	875	882	1.356	0.032	0.623	0.710
No education	0.321	0.020	875	882	1.282	0.063	0.280	0.361
Secondary education or higher	0.431	0.023	875	882	1.348	0.052	0.386	0.476
Net attendance ratio	0.815	0.012	882	909	0.865	0.015	0.791	0.840
Never married/in union	0.317	0.021	875	882	1.335	0.066	0.275	0.359
Currently married/in union	0.634	0.024	875	882	1.480	0.038	0.586	0.682
Married before age 20	0.408	0.026	678	685	1.370	0.063	0.356	0.460
Currently pregnant	0.077	0.012	875	882	1.314	0.154	0.053	0.101
Children ever born	2.843	0.116	875	882	1.177	0.041	2.612	3.074
Children surviving	2.535	0.099	875	882	1.148	0.039	2.336	2.733
Children ever born to women age 40-49	5.308	0.284	178	179	1.193	0.054	4.740	5.877
Knows any contraceptive method	0.618	0.035	552	559	1.706	0.057	0.547	0.689
Knows a modern method	0.618	0.035	552	559	1.706	0.057	0.547	0.689
Ever used any contraceptive method	0.165	0.022	552	559	1.411	0.135	0.121	0.210
Currently using any method	0.131	0.020	552	559	1.367	0.150	0.092	0.170
Currently using a modern method	0.127	0.019	552	559	1.374	0.154	0.088	0.166
Currently using a traditional method	0.004	0.003	552	559	0.949	0.641	0.000	0.009
Currently using pill	0.004	0.003	552	559	0.995	0.704	0.000	0.009
Currently using IUD	0.010	0.004	552	559	0.985	0.426	0.001	0.018
Currently using condoms	0.000	0.000	552	559	na	na	0.000	0.000
Currently use injectables	0.103	0.019	552	559	1.435	0.181	0.065	0.140
Currently using female sterilization	0.000	0.000	552	559	na	na	0.000	0.000
Currently using withdrawal	0.000	0.000	552	559	na	na	0.000	0.000
Currently using periodic abstinence	0.004	0.003	552	559	0.949	0.641	0.000	0.009
Used public sector source	0.989	0.011	69	68	0.839	0.011	0.968	1.010
Want no more children	0.256	0.022	552	559	1.176	0.085	0.213	0.300
Want to delay birth at least 2 years	0.197	0.028	552	559	1.632	0.141	0.142	0.252
Ideal number of children	5.377	0.096	834	843	1.341	0.018	5.184	5.569
Mothers received medical assistance at delivery	0.252	0.033	662	678	1.653	0.129	0.187	0.317
Mothers protected against tetanus for last birth	0.774	0.036	403	412	1.751	0.047	0.701	0.847
Had diarrhea in the past 2 weeks	0.046	0.013	630	644	1.370	0.276	0.021	0.071
Treated with ORS packets	0.767	0.076	30	30	0.934	0.099	0.615	0.919
Sought medical treatment	0.860	0.067	30	30	0.865	0.078	0.726	0.993
Vaccination card seen	0.488	0.053	128	130	1.193	0.109	0.382	0.594
Received BCG vaccination	0.744	0.045	128	130	1.162	0.060	0.654	0.834
Received DPT vaccination (3 doses)	0.644	0.056	128	130	1.314	0.088	0.531	0.756
Received polio vaccination (3 doses)	0.602	0.053	128	130	1.206	0.088	0.496	0.707
Received measles vaccination	0.668	0.051	128	130	1.209	0.076	0.566	0.770
Received all vaccinations	0.571	0.059	128	130	1.325	0.103	0.454	0.688
Height-for-age (below -2SD)	0.515	0.025	568	597	1.185	0.049	0.465	0.565
Weight-for-height (below -2SD)	0.194	0.025	568	597	1.445	0.127	0.145	0.243
Weight-for-age (below -2SD)	0.448	0.029	568	597	1.341	0.065	0.390	0.506
Prevalence of anemia (children 6-59)	0.437	0.039	176	185	1.052	0.089	0.359	0.515
Prevalence of anemia (women 15-49)	0.252	0.022	267	271	0.847	0.089	0.207	0.297
BMI <18.5	0.272	0.020	772	777	1.243	0.073	0.232	0.312
Has heard of HIV/AIDS	0.268	0.019	875	882	1.253	0.070	0.230	0.305
Knows about condoms to prevent AIDS	0.173	0.017	875	882	1.291	0.095	0.140	0.206
Konws about limitimg partners to prevent AIDS	0.180	0.017	875	882	1.292	0.093	0.146	0.214
Comprehensive knowledge on HIV transmission	0.115	0.013	875	882	1.198	0.112	0.089	0.141
Total fertility rate (past 3 years)	5.590	0.325	na	2422	1.085	0.058	4.939	6.241
Neonatal mortality (past 0-9 years)	23.936	4.452	1367	1391	1.038	0.186	15.032	32.841
Post-neonatal mortality (past 0-9 years)	30.539	4.675	1364	1388	0.929	0.153	21.190	39.889
Infant mortality (past 0-9 years)	54.476	5.709	1369	1394	0.858	0.105	43.058	65.893
Child mortality (past 0-9 years)	24.139	4.142	1382	1406	0.969	0.172	15.854	32.423
Under-five mortality (past 0-9 years)	77.300	7.657	1380	1405	0.992	0.099	61.985	92.614
MEN								
Urban residence	0.068	0.011	265	260	0.681	0.156	0.047	0.089
Literacy	0.842	0.024	265	260	1.081	0.029	0.793	0.890
No education	0.190	0.032	265	260	1.336	0.170	0.125	0.254
With secondary eductation or higher	0.509	0.040	265	260	1.313	0.080	0.428	0.590
Never married/in union	0.364	0.032	265	260	1.078	0.088	0.300	0.428
Currently married/in union	0.610	0.034	265	260	1.144	0.056	0.541	0.678
Knowing any contraceptive method	0.472	0.053	161	159	1.331	0.112	0.367	0.577
Ever used any contraceptive method	0.024	0.011	161	159	0.940	0.477	0.001	0.046
Currently using any method	0.091	0.025	161	159	1.085	0.271	0.042	0.140
Want no more children	0.182	0.029	161	159	0.947	0.159	0.124	0.239
Ideal number fo children	5.549	0.226	251	246	1.435	0.041	5.096	6.001
Has heard of HIV/AIDS	0.317	0.040	265	260	1.378	0.125	0.238	0.396
Knows about condoms to prevent AIDS	0.196	0.034	265	260	1.392	0.174	0.127	0.264
Konws about limitimg partners to prevent AIDS	0.179	0.034	265	260	1.439	0.190	0.111	0.247
Comprehensive knowledge on HIV transmission	0.090	0.021	265	260	1.168	0.229	0.049	0.131

na = Not applicable

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Timor-Leste 2009-10

	Women		Men	
Age	Number	Percent	Number	Percent
0	974	2.9	1,072	3.2
1	911	2.7	934	2.8
2	1,093	3.3	1,037	3.1
3	1,078	3.2	1,076	3.2
4	924	2.8	993	3.0
5	930	2.8	938	2.8
6	1,198	3.6	1,270	3.8
7	1,030	3.1	1,089	3.2
8	1,132	3.4	1,167	3.5
9	884	2.7	1,006	3.0
10	1,064	3.2	1,168	3.5
11	744	2.2	809	2.4
12	1,074	3.2	1,063	3.2
13	883	2.7	829	2.5
14	797	2.4	825	2.5
15	768	2.3	820	2.4
16	662	2.0	696	2.1
17	657	2.0	791	2.4
18	648	1.9	648	1.9
19	594	1.8	605	1.8
20	653	2.0	617	1.8
21	474	1.4	434	1.3
22	494	1.5	458	1.4
23	419	1.3	417	1.2
24	498	1.5	350	1.0
25	537	1.6	497	1.5
26	389	1.2	351	1.0
27	397	1.2	418	1.2
28	358	1.1	347	1.0
29	319	1.0	294	0.9
30	370	1.1	407	1.2
31	258	0.8	180	0.5
32	328	1.0	316	0.9
33	267	0.8	232	0.7
34	379	1.1	323	1.0
35	426	1.3	452	1.3
36	328	1.0	348	1.0
37	321	1.0	368	1.1
38	326	1.0	303	0.9
39	350	1.1	335	1.0
40	412	1.2	525	1.6
41	252	0.8	264	0.8
42	298	0.9	273	0.8
43	249	0.7	263	0.8
44	240	0.7	220	0.7
45	278	0.8	380	1.1
46	268	0.8	232	0.7
47	189	0.6	230	0.7
48	193	0.6	215	0.6
49	257	0.8	270	0.8
50	455	1.4	367	1.1
51	218	0.7	163	0.5
52	258	0.8	204	0.6
53	203	0.6	174	0.5
54	199	0.6	209	0.6
55	166	0.5	216	0.6
56	150	0.5	165	0.5
57	108	0.3	131	0.4
58	116	0.3	157	0.5
59	161	0.5	174	0.5
60	456	1.4	383	1.1
61	228	0.7	194	0.6
62	256	0.8	235	0.7
63	190	0.6	183	0.5
64	194	0.6	201	0.6
65	234	0.7	249	0.7
66	94	0.3	90	0.3
67	128	0.4	126	0.4
68	89	0.3	87	0.3
69	140	0.4	128	0.4
70+	641	1.9	631	1.9
Don't know	10	0.0	2	0.0
Total	33,265	100.0	33,626	100.0

Note: The de facto population includes all residents and non-residents who stayed in the household the night before the interview.

Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Timor-Leste 2009-10

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percent	
10-14	4,560	na	na	na
15-19	3,329	3,157	24.0	94.8
20-24	2,538	2,352	17.9	92.7
25-29	2,000	1,900	14.4	95.0
30-34	1,601	1,530	11.6	95.5
35-39	1,751	1,690	12.8	96.5
40-44	1,451	1,385	10.5	95.5
45-49	1,186	1,145	8.7	96.5
50-54	1,334	na	na	na
15-49	13,857	13,158	100.0	95.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
na = Not applicable

Table C.2.2 Age distribution of eligible and interviewed men

De facto household population of men aged 10-54, interviewed men age 15-49 and percent of eligible men who were interviewed (weighted), Timor-Leste 2009-10

Age group	Household population of men age 10-54	Interviewed men age 15-49		Percentage of eligible men interviewed
		Number	Percent	
10-14	1,529	na	na	na
15-19	1,095	1,008	24.5	92.1
20-24	722	650	15.8	89.9
25-29	635	585	14.2	92.1
30-34	470	447	10.9	95.1
35-39	593	553	13.5	93.4
40-44	490	467	11.3	95.3
45-49	429	402	9.8	93.8
50-54	378	na	na	na
15-49	4,433	4,112	100.0	92.8

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
na = Not applicable

Table C.3 Completeness of reporting

Percentage of cases missing information for selected demographic and health questions (weighted), Timor-Leste 2009-10

Subject	Reference group	Percentage with information missing	Number of cases
Birth date	Births in past 15 years		
Month only		0.35	26,962
Month and year		0.01	26,962
Age at death	Dead children born in past 15 years	0.00	2,312
Age/date at first union[1]	Ever-married women age 15-49	0.21	8,462
	Ever-married men age 15-49	0.21	2,211
Respondent's education	All women age 15-49	0.00	13,137
	All men age 15-49	0.00	4,076
Diarrhea in past 2 weeks	Living children age 0-59 months	0.38	9,328
Anthropometry	Living children age 0-59 months (from Household Questionnaire)		
Height		11.42	10,104
Weight		8.65	10,104
Height or weight		11.46	10,104
Anemia	Living children 6-59 months (from Household Questionnaire)		
Children		16.24	3,066
Women	All women (from Household Questionnaire)	9.65	4,554

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Timor-Leste 2009-10

	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
Calendar year	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2010	15	0	15	100.0	na	100.0	66.8	na	66.8	na	na	na
2009	1,691	49	1,740	100.0	100.0	100.0	109.5	112.1	109.6	na	na	na
2008	1,835	93	1,929	100.0	100.0	100.0	106.7	142.2	108.2	101.1	117.3	101.8
2007	1,940	109	2,049	100.0	100.0	100.0	93.5	117.0	94.7	101.7	108.8	102.1
2006	1,979	108	2,087	99.9	100.0	99.9	103.2	117.5	103.9	108.1	90.2	107.0
2005	1,721	130	1,851	100.0	100.0	100.0	103.6	152.4	106.4	94.5	116.3	95.8
2004	1,663	115	1,779	100.0	100.0	100.0	104.5	122.1	105.6	86.2	64.2	84.4
2003	2,136	230	2,366	99.5	98.7	99.4	104.3	112.5	105.0	126.6	158.9	129.1
2002	1,712	174	1,886	99.1	98.1	99.0	108.4	92.8	106.9	85.4	87.1	85.6
2001	1,871	169	2,041	99.6	98.6	99.5	104.3	120.6	105.5	117.0	93.9	114.7
2006-2010	7,460	360	7,820	100.0	100.0	100.0	102.7	122.4	103.5	na	na	na
2001-2005	9,105	818	9,922	99.6	98.9	99.6	105.0	116.2	105.9	na	na	na
1996-2000	6,918	963	7,881	99.5	98.6	99.4	104.8	127.7	107.4	na	na	na
1991-1995	4,688	759	5,448	99.5	98.9	99.4	111.0	112.2	111.2	na	na	na
<1991	3,852	968	4,820	99.6	98.5	99.4	106.5	106.6	106.6	na	na	na
All	32,023	3,868	35,890	99.7	98.9	99.6	105.5	116.2	106.6	na	na	na

na = Not applicable

[1] Both year and month of birth given

[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively

[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Timor-Leste 2009-10

Age at death (days)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1	63	81	94	71	309
1	39	82	63	55	239
2	17	39	31	19	106
3	15	14	14	19	61
4	14	7	4	7	32
5	3	9	9	13	33
6	8	7	6	6	28
7	12	16	15	17	59
8	1	1	1	4	8
9	4	11	2	7	24
10	5	1	7	3	17
11	0	1	0	0	1
12	6	3	2	1	11
13	1	0	0	1	2
14	6	8	13	12	39
15	4	1	2	1	8
16	1	2	0	1	3
18	2	0	0	0	2
19	1	0	2	0	3
20	1	3	1	2	6
21	1	2	1	1	4
23	2	1	0	0	2
24	0	1	1	2	3
25	0	0	2	0	2
27	0	0	2	1	2
28	1	0	1	0	2
29	3	1	0	0	3
30	1	0	1	2	4
31+	0	2	0	1	3
Total 0-30	209	290	271	242	1,013
Percent early neonatal[1]	75.7	82.5	81.4	78.3	79.8

[1] ≤6 days / ≤30 days

Table C.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Timor-Leste 2009-10

Age at death (months)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1[a]	209	290	271	242	1,013
1	31	55	46	32	164
2	25	50	58	36	169
3	25	40	28	26	120
4	20	24	34	24	102
5	13	24	38	10	86
6	23	29	25	27	104
7	8	33	22	23	86
8	15	33	26	22	96
9	15	34	53	20	122
10	9	14	12	11	46
11	10	10	9	8	37
12	20	43	47	33	143
13	16	14	28	8	66
14	5	8	13	11	38
15	3	10	10	8	31
16	3	6	2	6	17
17	3	5	5	3	17
18	3	9	7	2	20
19	2	3	3	2	9
20	3	4	3	0	11
21	1	1	2	2	5
22	1	1	1	1	3
23	3	2	1	0	6
24+	0	3	4	1	8
1 year	1	7	7	11	26
Total 0-11	405	637	623	480	2,145
Percent neonatal[1]	51.7	45.5	43.6	50.4	47.2

[a] Includes deaths under one month reported in days
[1] Under one month / under one year

Table C.7 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Timor-Leste 2009-10

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	6.3	16.8	(0.3)	2.8	9.9	14.3	0.1	0.5	5.7	7.4	(0.1)	555
6-8	11.5	26.6	(1.2)	3.4	12.4	8.3	(0.3)	5.4	21.7	0.2	(1.2)	345
9-11	13.2	32.6	(1.5)	2.5	13.1	5.2	(0.6)	12.7	39.6	1.0	(1.6)	389
12-17	29.0	58.5	(1.9)	4.4	20.0	2.7	(0.9)	19.0	57.0	1.1	(2.0)	816
18-23	39.7	68.7	(2.5)	4.0	19.0	3.6	(1.0)	20.0	59.0	1.6	(2.1)	681
24-35	30.7	55.5	(2.1)	4.7	17.3	1.1	(1.0)	18.9	60.1	0.5	(2.1)	1,792
36-47	31.7	60.7	(2.3)	3.7	16.4	1.6	(1.0)	16.7	54.4	0.3	(2.1)	1,872
48-59	27.6	55.3	(2.2)	3.9	19.8	1.4	(1.1)	16.3	59.5	0.1	(2.1)	1,727
Sex												
Male	28.0	54.6	(2.0)	4.3	18.2	3.1	(0.9)	16.3	51.7	0.9	(1.9)	4,144
Female	27.1	51.5	(1.9)	3.5	16.1	3.0	(0.9)	15.4	52.3	1.1	(1.9)	4,033
Birth interval in months[2]												
First birth[3]	26.8	51.8	(1.9)	4.4	19.0	2.1	(1.0)	15.5	53.1	0.8	(1.9)	1,300
<24	28.2	55.0	(2.1)	4.3	16.7	3.3	(0.9)	16.5	51.7	0.6	(1.9)	1,787
24-47	27.8	53.7	(2.0)	3.3	15.8	2.9	(0.9)	15.7	52.5	1.2	(1.9)	3,542
48+	22.8	47.1	(1.7)	4.0	19.9	4.4	(0.9)	14.9	48.0	1.3	(1.8)	958
Size at birth[2]												
Very small	30.1	60.1	(2.1)	4.7	17.7	1.8	(1.1)	23.0	60.6	1.0	(2.1)	401
Small	27.6	54.8	(2.0)	2.7	15.2	2.8	(0.9)	16.3	55.2	0.9	(1.9)	805
Average or larger	27.1	52.5	(2.0)	4.0	17.4	3.3	(0.9)	15.4	51.1	1.1	(1.9)	6,211
Missing	15.3	41.5	(1.6)	1.7	12.3	0.0	(0.9)	9.2	43.3	0.0	(1.7)	168
Mother's interview status												
Interviewed	27.1	52.9	(2.0)	3.8	17.1	3.1	(0.9)	15.8	51.9	1.0	(1.9)	7,586
Not interviewed but in household	29.7	49.9	(2.0)	4.3	16.1	4.9	(0.8)	13.4	46.9	1.6	(1.8)	220
Not interviewed, and not in the household[4]	36.3	59.9	(2.2)	5.6	18.4	1.6	(1.0)	18.7	57.4	0.0	(2.1)	371
Mother's nutritional status[5]												
Thin (BMI<18.5)	31.6	59.7	(2.2)	3.9	20.5	2.2	(1.1)	22.5	62.5	0.7	(2.2)	1,858
Normal (BMI 18.5-24.9)	26.5	51.3	(1.9)	3.9	16.4	3.2	(0.8)	13.9	49.2	1.2	(1.8)	5,258
Overweight/ obese (BMI ≥25)	16.1	43.4	(1.8)	2.2	11.1	4.6	(0.7)	9.6	39.4	0.7	(1.6)	450
Residence												
Urban	17.0	41.4	(1.7)	2.6	13.4	3.2	(0.8)	9.0	41.6	1.1	(1.7)	1,799
Rural	30.5	56.4	(2.1)	4.3	18.2	3.0	(0.9)	17.7	54.9	1.0	(2.0)	6,378
District												
Aileu	14.8	27.9	(0.5)	19.2	46.7	1.0	(1.7)	13.4	50.6	2.5	(1.7)	271
Baucau	35.7	55.6	(2.3)	3.7	19.0	6.4	(0.6)	19.7	52.2	1.8	(1.8)	691
Bobonaro	38.4	68.0	(2.4)	4.3	14.2	5.5	(0.7)	19.0	60.0	1.1	(2.0)	795
Cova Lima	30.6	59.9	(2.2)	1.8	12.5	2.7	(0.8)	13.0	55.1	0.5	(1.9)	372
Ermera	43.0	65.9	(2.5)	2.8	18.2	1.8	(1.0)	24.6	64.7	0.5	(2.2)	1,079
Lautem	15.3	44.8	(1.7)	1.5	8.0	1.3	(0.8)	6.6	41.7	0.1	(1.7)	714
Liquica	28.8	52.7	(2.0)	2.8	14.3	3.4	(0.8)	14.1	49.1	1.3	(1.8)	457
Manufahi	28.9	58.7	(2.1)	3.4	13.8	2.0	(0.9)	14.0	53.1	1.0	(2.0)	298
Oecussi	33.5	64.6	(2.3)	4.4	24.2	1.0	(1.3)	29.2	68.8	0.1	(2.4)	710
Mother's education[6]												
No education	33.6	58.1	(2.1)	4.2	19.0	3.3	(0.9)	19.8	55.7	1.1	(2.0)	2,726
Primary	27.2	54.7	(2.0)	3.9	16.9	3.1	(0.9)	16.0	54.0	0.8	(1.9)	2,174
More than secondary	13.1	38.1	(1.5)	2.4	8.8	3.4	(0.7)	5.2	34.2	2.0	(1.5)	164
Wealth quintile												
Lowest	32.1	57.8	(2.1)	4.6	18.9	2.9	(0.9)	19.7	55.6	0.8	(2.0)	1,757
Middle	30.1	55.5	(2.1)	4.3	17.6	2.3	(0.9)	17.5	55.5	1.0	(2.0)	1,657
Fourth	23.9	50.5	(1.9)	3.7	16.2	2.5	(0.9)	13.1	50.3	0.3	(1.9)	1,609
Highest	16.4	40.2	(1.6)	2.9	15.6	3.6	(0.8)	9.3	42.1	1.6	(1.7)	1,527
Total	27.6	53.1	(2.0)	3.9	17.1	3.0	(0.9)	15.8	52.0	1.0	(1.9)	8,177

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units
(SD) from the median of the NCHS/CDC/WHO international reference population.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 standard deviations (SD) from the international reference population median
[2] Excludes children whose mothers were not interviewed
[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval
[4] Includes children whose mothers are deceased
[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.10
[6] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire

Table C.8: Completeness of information on siblings

Number of sisters and brothers reported by interviewed women and completeness of age data for living siblings and age at death (AD) and years since death (YSD) data for dead siblings, Timor-Leste 2009-10

	Sisters		Brothers		Total	
	Number	Percent	Number	Percent	Number	Percent
All siblings	30,861	100.0	32,621	100.0	63,481	100.0
Living	26,061	84.4	27,258	83.6	53,318	84.0
Dead	4,790	15.5	5,357	16.4	10,147	16.0
Status unknown	10	0.0	7	0.0	16	0.0
Living siblings	26,061	100.0	27,258	100.0	53,318	100.0
Age reported	26,013	99.8	27,215	99.8	53,228	99.8
Age missing	48	0.2	42	0.2	90	0.2
Dead siblings	4,790	100.0	5,357	100.0	10,147	100.0
AD and YSD reported	4,766	99.5	5,319	99.3	10,085	99.4
Missing only AD	4	0.1	9	0.2	13	0.1
Missing only YSD	2	0.0	4	0.1	7	0.1
Missing both	18	0.4	24	0.5	42	0.4

Table C.9 Indicators on data quality

Percent distribution of respondents and siblings by year of birth, Timor-Leste 2009-10

Year of birth	Respondents	Siblings
Before 1950	0.0	0.7
1950-54	0.0	1.3
1955-59	0.1	3.1
1960-64	8.7	5.4
1965-69	10.6	7.7
1970-74	12.9	9.8
1975-79	11.6	10.5
1980-84	14.6	13.6
1985 or later	41.5	48.0
Total	100.0	100.0
Lower range	1,959	1,923
Upper range	1,995	2,009
Median	1,971	1,971
Number of cases	13,137	63,458

Table C.10 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of births, Timor-Leste 2009-10

Year of birth of respondents	Mean sibship size	Sex ratio at birth of siblings
1955-59	5.3	80.0
1960-64	5.1	106.6
1965-69	5.2	101.2
1970-74	5.3	104.3
1975-79	5.5	105.4
1980-84	5.8	101.0
1985-89	6.2	107.9
1990-95	6.5	108.9
Total	5.8	105.7

PERSONS INVOLVED IN THE 2009-10 TIMOR-LESTE DEMOGRAPHIC AND HEALTH SURVEY *Appendix D*

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QUESTIONNAIRES

Appendix ***E***

20 July 2009

TIMOR-LESTE DEMOGRAPHIC AND HEALTH SURVEY (TLDHS)
HOUSEHOLD QUESTIONNAIRE

NATIONAL STATISTICS DIRECTORATE (NSD) AND MINISTRY OF HEALTH

IDENTIFICATION

NAME AND CODE OF DISTRICT _____

NEW SUCO NAME AND NUMBER _____

CLUSTER NUMBER .....

LOCATION ID NUMBER .....

URBAN/RURAL .....
(URBAN=1, RURAL=2)

NAME OF HOUSEHOLD HEAD _____

HOUSEHOLD SELECTED FOR MALE SURVEY (YES=1; NO=2) .....

	DEGREES	DECIMALS
LONGITUDE ..... (E)		.
LATITUDE ..... (S)		.

ALTITUDE METERS

NEW LOCATION YES=1; NO=2

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE

LANGUAGE OF QUESTIONNAIRE .....

LANGUAGE OF INTERVIEW _____

NATIVE LANGUAGE OF RESPONDENT _____

TRANSLATOR USED (YES=1; NO=2) .....

LANGUAGE CODES: TETUM=1; BAHASA=2; PORTUGESE=3; OTHER=4

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

Introduction and Consent

Hello. My name is _____ and I am working with NATIONAL STATISTICS DIRECTORATE. We are conducting a national survey about various health issues. We would very much appreciate your participation in this survey. This information will help the government to plan health services. The survey usually takes between 10 and 15 minutes to complete. As part of the survey we would first like to ask some questions about your household. Whatever information you provide will be kept strictly confidential, and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER						IF AGE 0-17 YEARS				IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				IF AGE 0-4 YEARS
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY				LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGISTRATION
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-23 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF WOMAN SELECTED FOR DOMESTIC VIOLENCE QUESTIONS IN Q. 24	CIRCLE LINE NUMBER OF ALL MEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5		Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the (2008 - 2009/ 2009-2010) school year?	During this/that school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the previous school year, that is, (2007 - 2008/ 2008-2009?	During that school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9A)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
01			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		01	01	01	01	01	Y N DK 1 2 8 GO TO 15		Y N DK 1 2 8 GO TO 17		Y N 1 2 GO TO 23	LEVEL GRADE	Y N 1 2 GO TO 21	LEVEL GRADE	Y N 1 2 GO TO 23	LEVEL GRADE	
02			1 2	1 2	1 2			02	02	02	02	02	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
03			1 2	1 2	1 2			03	03	03	03	03	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
04			1 2	1 2	1 2			04	04	04	04	04	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
05			1 2	1 2	1 2			05	05	05	05	05	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
06			1 2	1 2	1 2			06	06	06	06	06	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
07			1 2	1 2	1 2			07	07	07	07	07	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
08			1 2	1 2	1 2			08	08	08	08	08	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
09			1 2	1 2	1 2			09	09	09	09	09	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
10			1 2	1 2	1 2			10	10	10	10	10	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = NIECE/NEPHEW BY BLOOD
10 = NIECE/NEPHEW BY MARRIAGE
11 = OTHER RELATIVE
12 = ADOPTED/FOSTER/ STEPCHILD
13 = NOT RELATED
98 = DON'T KNOW

CODES FOR Qs. 18, 20, AND 22: EDUCATION

LEVEL
0= KINDERGARTEN
1 = PRIMARY
2 = PRE-SECONDARY
3 = SECONDARY
4=HIGHER
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 18 ONLY. THIS CODE IS NOT ALLOWED FOR QS. 20 AND 22)
98 = DON'T KNOW

							IF AGE 15 OR OLDER						IF AGE 0-17 YEARS				IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				IF AGE 0-4 YEARS
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY				LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGISTRATION
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-23 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF WOMAN SELECTED FOR DOMESTIC VIOLENCE QUESTIONS IN Q. 24	CIRCLE LINE NUMBER OF ALL MEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5		Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the (2008 - 2009/ 2009-2010) school year?	During this/that school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the previous school year, that is, (2007 - 2008/ 2008-2009?	During that school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9A)	(10)	(11)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		11	11	11	11	11	Y N DK 1 2 8 GO TO 15		Y N DK 1 2 8 GO TO 17		Y N 1 2 GO TO 23	LEVEL GRADE	Y N 1 2 GO TO 21	LEVEL GRADE	Y N 1 2 GO TO 23	LEVEL GRADE	
12			1 2	1 2	1 2			12	12	12	12	12	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
13			1 2	1 2	1 2			13	13	13	13	13	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
14			1 2	1 2	1 2			14	14	14	14	14	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
15			1 2	1 2	1 2			15	15	15	15	15	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
16			1 2	1 2	1 2			16	16	16	16	16	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
17			1 2	1 2	1 2			17	17	17	17	17	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
18			1 2	1 2	1 2			18	18	18	18	18	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
19			1 2	1 2	1 2			19	19	19	19	19	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		
20			1 2	1 2	1 2			20	20	20	20	20	1 2 8 GO TO 15		1 2 8 GO TO 17		1 2 GO TO 23		1 2 GO TO 21		1 2 GO TO 23		

TICK HERE IF CONTINUATION SHEET USED ☐

2A) Just to make sure that I have a complete listing. Are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here YES ☐ → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

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GRADE
00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 18 ONLY. THIS CODE IS NOT ALLOWED FOR QS. 20 AND 22)
98 = DON'T KNOW

24. CHECK THE FRONT COVER OF HOUSEHOLD QUESTIONNAIRE. IS HOUSEHOLD SELECTED FOR MALE SURVEY?

HOUSEHOLD SELECTED ☐↓ HOUSEHOLD NOT SELECTED ☐→ 101

24A. TABLE FOR SELECTION OF RESPONDENTS FOR SECTION ON DOMESTIC VIOLENCE

LOOK AT THE LAST DIGIT OF THE HOUSEHOLD LOCATION ID ON THE COVER PAGE. THIS IS THE ROW NUMBER YOU SHOULD GO TO. CHECK THE TOTAL NUMBER OF ELIGIBLE FEMALE RESPONDENTS ON THE COVER SHEET OF THE HOUSEHOLD QUESTIONNAIRE. FOR EACH NON-ZERO NUMBER, THIS IS THE COLUMN NUMBER TO GO TO. THE LINE NUMBER OF THE WOMAN SELECTED FOR THE DOMESTIC VIOLENCE MODULE IS THE NUMBER WHERE THE ROW AND COLUMN MEET.

CIRCLE THE LINE NUMBER FOR THIS WOMAN IN COLUMN 9A

FOR EXAMPLE, IF THE HOUSEHOLD LOCATION ID NUMBER IS '250126', GO TO ROW '6'. IF THERE ARE THREE ELIGIBLE WOMEN AGE 15-49 IN THE HOUSEHOLD, GO TO COLUMN '3'. FIND THE NUMBER IN THE BOX WHERE THE ROW MEETS THE COLUMN ('2'). NOW GO TO THE HOUSEHOLD SCHEDULE AND CIRCLE THE LINE NUMBER FOR THE SECOND WOMAN IN COLUMN 9A

LAST DIGIT OF THE HOUSEHOLD LOCATION ID NUMBER	TOTAL NUMBER OF ELIGIBLE WOMEN 15-49 IN THE HOUSEHOLD							
	1	2	3	4	5	6	7	8
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 OTHER _____ 96 (SPECIFY)	→ 106 → 103 → 106 → 103 → 103
102	What is the main source of water used by your household for other purposes such as cooking and handwashing?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 OTHER _____ 96 (SPECIFY)	→ 106 → 106
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	→ 106
104	How long does it take to go there, get water, and come back?	MINUTES . . . . . ☐☐☐ DON'T KNOW 998	
105	Who usually goes to this source to fetch the water for your household?	ADULT WOMAN . . . . . 1 ADULT MAN . . . . . 2 FEMALE CHILD UNDER 15 YEARS OLD . . . . . 3 MALE CHILD UNDER 15 YEARS OLD . . . . . 4 OTHER _____ 6 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 108
107	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
108	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . 14 FLUSH, DON'T KNOW WHERE . . . 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRINE . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 111
109	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 111
110	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . [0] 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
111	Does your household have:	YES NO	
	Electricity?	ELECTRICITY 1 2	
	A radio?	RADIO 1 2	
	A television?	TELEVISION 1 2	
	A mobile telephone?	MOBILE TELEPHONE 1 2	
	A non-mobile telephone?	NON-MOBILE TELEPHONE . 1 2	
	A refrigerator?	REFRIGERATOR 1 2	
	A tape/CD player?	TAPE/CD PLAYER 1 2	
	A fan?	FAN 1 2	
	A chair?	CHAIR 1 2	
	A sofa?	SOFA 1 2	
	A cupboard?	CUPBOARD 1 2	
	A bed?	BED 1 2	
	A sewing machine?	SEWING MACHINE 1 2	
	An electric iron?	ELECTRIC IRON 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 LPG . . . . . 02 NATURAL GAS . . . . . 03 BIOGAS . . . . . 04 KEROSENE . . . . . 05 COAL, LIGNITE . . . . . 06 CHARCOAL . . . . . 07 WOOD . . . . . 08 STRAW/SHRUBS/GRASS . . . . . 09 AGRICULTURAL CROP . . . . . 10 ANIMAL DUNG . . . . . 11 NO FOOD COOKED IN HOUSEHOLD . . . . . 95 OTHER _____ 96 (SPECIFY)	→ 115 → 117
113	In this household, is food cooked on an open fire, an open stove or a closed stove?	OPEN FIRE . . . . . 1 OPEN STOVE . . . . . 2 CLOSED STOVE WITH CHIMNEY . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 115
114	Does this (fire/stove) have a chimney, a hood, or neither of these?	CHIMNEY . . . . . 1 HOOD . . . . . 2 NEITHER 3	
115	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 117
116	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
117	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND . . . . . 11 DUNG . . . . . 12 RUDIMENTARY FLOOR WOOD PLANKS . . . . . 21 PALM/BAMBOO . . . . . 22 FINISHED FLOOR PARQUET OR POLISHED WOOD . . . . . 31 VINYL OR ASPHALT STRIPS . . . . . 32 CERAMIC TILES . . . . . 33 CEMENT . . . . . 34 CARPET . . . . . 35 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING NO ROOF . . . . . 11 THATCH/PALM LEAF . . . . . 12 SOD . . . . . 13 RUDIMENTARY ROOFING RUSTIC MAT . . . . . 21 PALM/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 CARDBOARD . . . . . 24 FINISHED ROOFING METAL/ZINC . . . . . 31 WOOD . . . . . 32 CALAMINE/CEMENT FIBER . . . . . 33 CERAMIC TILES . . . . . 34 CEMENT . . . . . 35 ROOFING SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
119	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/PALM/TRUNKS/BAMBOO ... 12 DIRT . . . . . 13 RUDIMENTARY WALLS BAMBOO WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
120	How many rooms in this household are used for sleeping?	ROOMS . . . . . ☐☐	
121	Does any member of this household own:	YES NO	
	A watch?	WATCH 1 2	
	A bicycle?	BICYCLE 1 2	
	A motorcycle or motor scooter?	MOTORCYCLE/SCOOTER . . . 1 2	
	An animal-drawn cart?	ANIMAL-DRAWN CART 1 2	
	A car or truck?	CAR/TRUCK 1 2	
	A boat with a motor?	BOAT WITH MOTOR 1 2	
122	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 124

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
123	How many hectares of agricultural land do members of this household own?	HECTARES . . . . . ☐☐ 95 OR MORE HECTARES . . . . . 95 DON'T KNOW 98	
124	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 126
125	How many of the following animals does this household own? IF NONE, ENTER '00'. IF MORE THAN 95, ENTER '95'. IF UNKNOWN, ENTER '98'.		
	Buffalo?	BUFFALO . . . . . ☐☐	
	Milk cows or bulls?	COWS/BULLS . . . . . ☐☐	
	Horses, or donkeys?	HORSES/DONKEYS . . . ☐☐	
	Goats?	GOATS . . . . . ☐☐	
	Sheep?	SHEEP . . . . . ☐☐	
	Pigs?	PIGS . . . . . ☐☐	
	Chickens?	CHICKENS . . . . . ☐☐	
	Ducks?	DUCKS . . . . . ☐☐	
	Other? _____ (SPECIFY)	OTHER . . . . . ☐☐	
126	Does any member of this household have a bank account?	YES . . . . . 1 NO 2	
127	Does your household have any mosquito nets that can be used while sleeping?	YES . . . . . 1 NO 2	→ 201
128	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS ..... ☐	

		NET #1	NET #2	NET #3
129	ASK THE RESPONDENT TO SHOW YOU THE NETS IN THE HOUSEHOLD. IF MORE THAN 3 NETS, USE ADDITIONAL QUESTIONNAIRE(S).	OBSERVED . . . . . 1 NOT OBSERVED . 2	OBSERVED . . . . . 1 NOT OBSERVED . 2	OBSERVED . . . . . 1 NOT OBSERVED . 2
130	How many months ago did your household obtain the mosquito net? IF LESS THAN ONE MONTH, RECORD '00'.	MOS AGO . . . . . [ ][ ] 37 OR MORE MONTHS AGO . . . . . 95 NOT SURE 98	MOS AGO . . . . . [ ][ ] 37 OR MORE MONTHS AGO . . . 95 NOT SURE 98	MOS AGO . . . . . [ ][ ] 37 OR MORE MONTHS AGO . . . 95 NOT SURE 98
131	OBSERVE OR ASK THE BRAND/ TYPE OF MOSQUITO NET.	'PERMANENT' NET OLYSET NET ..... 11 PERMA NET ..... 12 OTHER/ DK BRAND . . . . . 16 'PRETREATED' NET NO BRAND . . . . . 21 DK BRAND . . . . . 26 OTHER . . . . . 31 DK BRAND 98	'PERMANENT' NET OLYSET NET .. 11 PERMA NET .... 12 OTHER/ DK BRAND . . . . . 16 'PRETREATED' NET NO BRAND . . . . . 21 DK BRAND . . . . . 26 OTHER . . . . . 31 DK BRAND 98	'PERMANENT' NET OLYSET NET .. 11 PERMA NET .... 12 OTHER/ DK BRAND . . . . . 16 'PRETREATED' NET NO BRAND . . . . . 21 DK BRAND . . . . . 26 OTHER . . . . . 31 DK BRAND 98
135	Did anyone sleep under this mosquito net last night?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 137) ← NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 137) ← NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 137) ← NOT SURE 8
136	Who slept under this mosquito net last night? RECORD THE PERSON'S LINE NUMBER FROM THE HOUSEHOLD SCHEDULE.	NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ]	NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ]	NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ] NAME_____ LINE NO. . . . . [ ][ ]
137		GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 201.	GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 201.	GO TO 129 IN FIRST COLUMN OF A NEW QUESTIONNAIRE; OR, IF NO MORE NETS, GO TO 201.

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT FOR CHILDREN AGE 0-5

		CHILD 1	CHILD 2	CHILD 3
201	CHECK COLUMN 11. RECORD THE LINE NUMBER AND AGE FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S). A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENT IN 208 AND FOR THE ANEMIA PROCEDURE IN 213			
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2004 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)
205	WEIGHT IN KILOGRAMS	KG. . . . ☐☐.☐	KG. . . . ☐☐.☐	KG. . . . ☐☐.☐
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐	CM. ☐☐☐.☐	CM. ☐☐☐.☐
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2
208	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
209	CHECK 203: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2
210	LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR THE CHILD (COLUMN 1) RECORD '00' IF NOT LISTED.	LINE NUMBER . . . ☐☐	LINE NUMBER . . . ☐☐	LINE NUMBER . . . ☐☐
211	READ CONSENT STATEMENT TO PARENT/OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)
212	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET.	G/DL . ☐☐.☐	G/DL . ☐☐.☐	G/DL . ☐☐.☐
213	RECORD RESULT CODE OF HEMOGLOBIN MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
214		GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 215.		

CONSENT STATEMENT FOR ANEMIA FOR CHILDREN

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

We request that all children born in January 2004 or later participate in the anemia testing part of this survey and give a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you allow (NAME(S) OF CHILD(REN) to participate in the anemia test?

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT FOR CHILDREN AGE 0-5

		CHILD 4	CHILD 5	CHILD 6
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2004 OR LATER	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215)
205	WEIGHT IN KILOGRAMS	KG. . . . ☐☐.☐	KG. . . . ☐☐.☐	KG. . . . ☐☐.☐
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐	CM. ☐☐☐.☐	CM. ☐☐☐.☐
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2
208	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
209	CHECK 203: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, GO TO 215) OLDER 2
210	LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR THE CHILD (COLUMN 1) RECORD '00' IF NOT LISTED.	LINE NUMBER . . . ☐☐	LINE NUMBER . . . ☐☐	LINE NUMBER . . . ☐☐
211	READ CONSENT STATEMENT TO PARENT/OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED . . . . . 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED . . . . . 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)	GRANTED . . . . . 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 213)
212	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET	G/DL . ☐☐.☐	G/DL . ☐☐.☐	G/DL . ☐☐.☐
213	RECORD RESULT CODE OF HEMOGLOBIN MEASUREMENT.	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
214		GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 215.		

WEIGHT, HEIGHT, AND HEMOGLOBIN MEASUREMENT FOR WOMEN AGE 15-49

215	CHECK COLUMN 9. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE WOMEN IN 216. IF THERE ARE MORE THAN THREE WOMEN, USE ADDITIONAL QUESTIONNAIRE(S). A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENT IN 219, FOR THE ANEMIA TEST PROCEDURE IN 228.			
		WOMAN 1	WOMAN 2	WOMAN 3
216	LINE NUMBER (COLUMN 9) NAME (COLUMN 2)	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
217	WEIGHT IN KILOGRAMS	KG. . . . . ☐☐☐.☐	KG. . . . . ☐☐☐.☐	KG. . . . . ☐☐☐.☐
218	HEIGHT IN CENTIMETERS	CM. . . . . ☐☐☐.☐	CM. . . . . ☐☐☐.☐	CM. . . . . ☐☐☐.☐
219	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
220	AGE: CHECK COLUMN 7.	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 223) ↵	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 223) ↵	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 223) ↵
221	MARITAL STATUS: CHECK COLUMN 8.	CODE 4 (NEVER IN UNION . . . . . 1 OTHER . . . . . 2 (GO TO 223) ↵	CODE 4 (NEVER IN UNION . . . . . 1 OTHER . . . . . 2 (GO TO 223) ↵	CODE 4 (NEVER IN UNION . . . . . 1 OTHER . . . . . 2 (GO TO 223) ↵
222	RECORD LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR ADOLESCENT. RECORD '00' IF NOT LISTED.	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . ☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . ☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . ☐☐
223	READ ANEMIA TEST CONSENT STATEMENT. FOR NEVER-IN-UNION WOMEN AGE 15-17, ASK CONSENT FROM PARENT/OTHER ADULT IDENTIFIED IN 222 BEFORE ASKING RESPONDENT'S CONSENT.	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 RESPONDENT REFUSED . . . . . 3 _____ (SIGN) (IF REFUSED, GO TO 228).	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 RESPONDENT REFUSED . . . . . 3 _____ (SIGN) (IF REFUSED, GO TO 228).	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 RESPONDENT REFUSED . . . . . 3 _____ (SIGN) (IF REFUSED, GO TO 228).

CONSENT STATEMENT FOR ANEMIA TEST

READ CONSENT STATEMENT TO EACH RESPONDENT. CIRCLE CODE '1' IN 223 IF RESPONDENT CONSENTS TO THE ANEMIA TEST AND CODE '3' IF SHE REFUSES.

FOR NEVER-IN-UNION WOMEN AGE 15-17, ASK CONSENT FROM THE PARENT OR OTHER ADULT IDENTIFIED AS RESPONSIBLE FOR THE ADOLESCENT (SEE QUESTION 222) BEFORE ASKING THE ADOLESCENT FOR HER CONSENT. CIRCLE CODE '2' IN 223 IF THE PARENT (OTHER ADULT) REFUSES. CONDUCT THE TEST ONLY IF BOTH THE PARENT (OTHER ADULT) AND THE ADOLESCENT CONSENT.

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

For the anemia testing, we will need a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you (allow NAME OF ADOLESCENT to) take the anemia test?

		WOMAN 1	WOMAN 2	WOMAN 3
224	LINE NUMBER (COLUMN 9) NAME (COLUMN 2)	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
225	PREGNANCY STATUS: CHECK 226 IN WOMAN'S QUESTIONNAIRE OR ASK: Are you pregnant?	YES . . . . . 1 NO . . . . . 2 DK 8	YES . . . . . 1 NO . . . . . 2 DK 8	YES . . . . . 1 NO . . . . . 2 DK 8
226	CHECK 223 AND PREPARE EQUIPMENT AND SUPPLIES FOR THE ANIMIA TEST OBTAINED AND PROCEED WITH THE TEST. A FINAL OUTCOME FOR THE THE ANEMIA TEST PROCEDURE MUST BE RECORDED IN 228 FOR EACH ELIGIBLE WOMAN EVEN IF SHE WAS NOT PRESENT, REFUSED, OR COULD NOT BE TESTED FOR SOME OTHER REASON.			
227	RECORD HEMO-GLOBIN LEVEL HERE AND IN ANEMIA PAMPHLET	G/DL . . . . . ☐☐.☐	G/DL . . . . . ☐☐.☐	G/DL . . . . . ☐☐.☐
228	RECORD RESULT CODE OF HEMO-GLOBIN MEASURE-MENT.	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
229	GO BACK TO 217 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMNS OF ADDITIONAL QUESTIONNAIRE(S); IF NO MORE WOMEN, END HERE.			

20 July 2009

TIMOR-LESTE DEMOGRAPHIC AND HEALTH SURVEY (TLDHS)
WOMAN'S QUESTIONNAIRE

NATIONAL STATISTICS DIRECTORATE (NSD) AND MINISTRY OF HEALTH

IDENTIFICATION

NAME AND CODE OF DISTRICT _____

NEW SUCO NAME AND NUMBER _____

CLUSTER NUMBER . . . . . .

LOCATION ID NUMBER . . . . . .

URBAN/RURAL . . . . . .
(URBAN=1, RURAL=2)

NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF WOMAN _____

WOMAN SELECTED FOR DOMESTIC VIOLENCE MODULE . . . . . .
(YES=1; NO=2)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE . . . . . .

LANGUAGE OF INTERVIEW _____

NATIVE LANGUAGE OF RESPONDENT _____

TRANSLATOR USED (YES=1; NO=2) . . . . . .

LANGUAGE CODES: TETUM=1; BAHASA=2; PORTUGESE=3; OTHER=4

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working with NATIONAL STATISTICS DIRECTORATE.
We are conducting a national survey that asks women (and men) about various health issues. We would very much appreciate your participation in this survey. This information will help the government to plan health services. The survey usually takes about 60 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your views are important.
At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2→ END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
102	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . [ ][ ] ALWAYS . . . . . 95 VISITOR 96	→ 106
103	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
106	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
107	How old were you at your last birthday? COMPARE AND CORRECT 106 AND/OR 107 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
108	Have you ever attended school?	YES . . . . . 1 NO 2	→ 112
109	What is the highest level of school you attended: primary, pre-secondary, secondary, or higher?	PRIMARY . . . . . 1 PRE-SECONDARY . . . . . 2 SECONDARY . . . . . 3 HIGHER 4	
110	What is the highest (grade) you completed at that level?	GRADE . . . . . [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
111	CHECK 109: PRIMARY ☐ ↓ PRE-SECONDARY OR HIGHER ☐ → 115		
112	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE. . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
113	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
114	CHECK 112: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ → 116		
115	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
116	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
117	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
118	What is your religion?	ROMAN CATHOLIC . . . . . 1 MUSLIM . . . . . 2 PROTESTANT . . . . . 3 HINDU . . . . . 4 OTHER _____ 6 (SPECIFY)(SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ →		→ 226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (NEXT BIRTH)	DAYS . . . 1 MONTHS 2 YEARS . . 3	
02	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your next baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH(S) IN TABLE.	YES . . . . . 1 NO 2

223 COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK:

NUMBERS ARE SAME → CHECK:

NUMBERS ARE DIFFERENT → (PROBE AND RECONCILE)

CHECK:
- FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED.
- FOR EACH BIRTH SINCE JANUARY 2004: MONTH AND YEAR OF BIRTH ARE RECORDED.
- FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED.
- FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED.
- FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBE TO DETERMINE EXACT NUMBER OF MONTHS.

224 CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN JANUARY 2004 OR LATER.
IF NONE, RECORD '0' AND SKIP TO 226.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE JANUARY 2004, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR. WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.)		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
228	At the time you became pregnant, did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to have any (more) children at all?	THEN . . . . . 1 LATER . . . . . 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 237
230	When did the last such pregnancy end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
231	CHECK 230: LAST PREGNANCY ENDED IN JAN. 2004 OR LATER ↓ LAST PREGNANCY ENDED BEFORE JAN. 2004 →		→ 237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN THE CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
233	Since January 2004, have you had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 235
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 2004 ENTER 'T' IN THE CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any miscarriages, abortions or stillbirths that ended before 2004?	YES . . . . . 1 NO 2	→ 237
236	When did the last such pregnancy that terminated before 2004 end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO . . . . . 1 ☐☐ WEEKS AGO . . . . . 2 ☐☐ MONTHS AGO . . . . . 3 ☐☐ YEARS AGO . . . . . 4 ☐☐ IN MENOPAUSE/ HAS HAD HYSTERECTOMY . . . 994 BEFORE LAST BIRTH . . . . . 995 NEVER MENSTRUATED 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 301
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had a partner who had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
09	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
10	RHYTHM METHOD Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
11	STANDARD DAYS METHOD Women can use a cycle of beads to count the days they are most likely to get pregnant and avoid sexual intercourse during those days.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	EMERGENCY CONTRACEPTION As an emergency measure after unprotected sexual intercourse, women can take special pills at any time within five days to prevent pregnancy.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
14	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2
303	CHECK 302: NOT A SINGLE "YES" (NEVER USED) → AT LEAST ONE "YES" (EVER USED) →		307

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 306
305	ENTER '0' IN THE CALENDAR IN EACH BLANK MONTH. →		333
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN . . . . . ☐☐	
308	CHECK 302 (01): WOMAN NOT STERILIZED ↓ ☐ WOMAN STERILIZED ☐ →		311A
309	CHECK 226: NOT PREGNANT OR UNSURE ↓ ☐ PREGNANT ☐ →		322
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 322
311 311A	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B PILL . . . . . C IUD . . . . . D INJECTABLES . . . . . E IMPLANTS . . . . . F CONDOM . . . . . G FEMALE CONDOM . . . . . H DIAPHRAGM . . . . . I FOAM/JELLY . . . . . J LACTATIONAL AMEN. METHOD . . . . . K RHYTHM METHOD . . . . . L STANDARD DAYS METHOD . . . . . M WITHDRAWAL . . . . . N OTHER _____ X (SPECIFY)	→ 316 → 315 → 315 → 319A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
314	How many (pill cycles/condoms) did you get the last time?	NUMBER OF PILL CYCLES/CONDOMS . . . ☐☐☐ DON'T KNOW 998	
315	The last time you obtained (HIGHEST METHOD ON LIST IN 311), how much did you pay in total, including the cost of the method and any consultation you may have had?	COST . . . . . ☐☐☐ FREE . . . . . 995 DON'T KNOW 998	→ 319A
316	In what facility did the sterilization take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR NATIONAL HOSPITAL 11 REFERRAL HOSPITAL . . . . . 12 COMMUNITY HEALTH CEN. 13 OTHER PUBLIC _____ 16 (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . 21 OTHER NGO _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . 31 PRIVATE DOCTOR'S OFFICE . . . 32 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
317	CHECK 311/311A: CODE 'A' CIRCLED → Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? CODE 'A' NOT CIRCLED → Before the sterilization operation, was your husband/partner told that he would not be able to have any (more) children because of the operation?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
318	How much did you (your husband/partner) pay in total for the sterilization, including any consultation you (he) may have had?	COST (Rp) ☐☐☐☐☐☐☐ COST (USD) . . . . . ☐☐☐☐ FREE . . . . . 9995 DON'T KNOW 9998	
319	In what month and year was the sterilization performed?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
319A	Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?		
320	CHECK 319/319A, 215 AND 230: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 319/319A → YES NO GO BACK TO 319/319A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
321	CHECK 319/319A: YEAR IS 2004 OR LATER ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING.	YEAR IS 2003 OR EARLIER ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND EACH MONTH BACK TO JANUARY 2004. THEN SKIP TO → 331	
322	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 2004 USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. ILLUSTRATIVE QUESTIONS: * When was the last time you used a method? Which method was that? * When did you start using that method? How long after the birth of (NAME)? * How long did you use the method then?		
323	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD 13 WITHDRAWAL . . . . . 14 OTHER METHOD 96	→ 333 → 326 → 335 → 324A → 324A → 324A → 335 → 335
324	Where did you obtain (CURRENT METHOD) when you started using it?	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 11 REFERRAL HOSPITAL . . . . . 12 COMMUNITY HEALTH CEN . . . . . 13 HEALTH POST . . . . . 14 SISCa POST . . . . . 15 MOBILE CLINIC . . . . . 17 CONDOM BOX . . . . . 18 OTHER PUBLIC _____ 16 (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . 21 OTHER NGO _____ 26 (SPECIFY)	
324A	Where did you learn how to use the rhythm/standard days/ lactational amenorhea method? IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . 31 PHARMACY . . . . . 32 PRIVATE DOCTOR . . . . . 33 MOBILE CLINIC . . . . . 34 FIELDWORKER . . . . . 35 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER SOURCE SHOP . . . . . 41 FRIEND/RELATIVE . . . . . 42 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
325	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD 13	→ 332 → 329 → 329 → 329 → 335 → 335 → 335
326	You obtained (CURRENT METHOD FROM 323) from (SOURCE OF METHOD FROM 316 OR 324) in (DATE FROM 319/319A). At that time, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 328
327	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 329
328	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	
329	CHECK 326: CODE '1' CIRCLED → At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED → When you obtained (CURRENT METHOD FROM 323) from (SOURCE OF METHOD FROM 316 OR 324) were you told about other methods of family planning that you could use?	YES . . . . . 1 NO 2	→ 331
330	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES . . . . . 1 NO 2	
331	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD 13 WITHDRAWAL . . . . . 14 OTHER METHOD 96	→ 335 → 335

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
332	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 11 REFERRAL HOSPITAL . . . . . 12 COMMUNITY HEALTH CEN . . . . . 13 HEALTH POST . . . . . 14 SISCa POST . . . . . 15 MOBILE CLINIC . . . . . 17 CONDOM BOX . . . . . 18 OTHER PUBLIC _____ 16 (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . 21 OTHER NGO _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . 31 PHARMACY . . . . . 32 PRIVATE DOCTOR . . . . . 33 MOBILE CLINIC . . . . . 34 FIELDWORKER . . . . . 35 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER SOURCE SHOP . . . . . 41 FRIEND/RELATIVE . . . . . 42 OTHER _____ 96 (SPECIFY)	→ 335
333	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	→ 335
334	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B COMMUNITY HEALTH CEN . . . . . C HEALTH POST . . . . . D SISCa POST . . . . . E MOBILE CLINIC . . . . . F CONDOM BOX G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . I OTHER NGO _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . K PHARMACY . . . . . L PRIVATE DOCTOR . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER SOURCE SHOP . . . . . Q FRIEND/RELATIVE . . . . . R OTHER _____ X (SPECIFY)	
335	In the last 12 months, were you visited by a fieldworker who talked to you about family planning?	YES . . . . . 1 NO 2	
336	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES . . . . . 1 NO 2	→ 401
337	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

SECTION 4. PREGNANCY AND POSTNATAL CARE

401	CHECK 224: ONE OR MORE BIRTHS IN 2004 OR LATER ☐ ↓ NO BIRTHS IN 2004 OR LATER ☐ → 576			
402	CHECK 215: ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2004 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.)			
403	LINE NUMBER FROM 212	LAST BIRTH LINE NO. ☐☐	NEXT-TO-LAST BIRTH LINE NO. ☐☐	SECOND-FROM-LAST BIRTH LINE NO. ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓
405	At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN . . . . . 1 (SKIP TO 407) ↵ LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 407) ↵	THEN . . . . . 1 (SKIP TO 432) ↵ LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 432) ↵	THEN . . . . . 1 (SKIP TO 432) ↵ LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 432) ↵
406	How much longer would you have liked to wait?	MONTHS . .1 ☐☐ YEARS . .2 ☐☐ DON'T KNOW 998	MONTHS . .1 ☐☐ YEARS . .2 ☐☐ DON'T KNOW . . . 998	MONTHS . .1 ☐☐ YEARS . .2 ☐☐ DON'T KNOW . . . 998
407	Did you see anyone for antenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE .... B ASSISTANT NURSE . . . . . C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D COMMUNITY/VILLAGE HEALTH WORKER . . . . . E OTHER_____ X (SPECIFY) NO ONE . . . . . Y (SKIP TO 413A) ↵		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
408	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY TYPE(S) OF SOURCE(S) AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	HOME YOUR HOME . . . . . A OTHER HOME . . . . . B PUBLIC SECTOR NATIONAL HOSPITAL . . . . . C REFERRAL HOSPITAL . . . . . D COMMUNITY HEALTH CEN. .. E HEALTH POSTS .. F SISCa POSTS . . . . . G MOBILE CLINIC H OTHER PUBLIC SEC._____ I (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES .... J OTHER NGOS _____ K SPECIFY PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . L OTHER PRIVATE MED._____ M (SPECIFY) OTHER_____ X (SPECIFY)		
409	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
410	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . ☐☐ DON'T KNOW 98		
411	As part of your antenatal care during this pregnancy, were any of the following done at least once? Were you weighed? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO WEIGHT . . . 1 2 BP . . . . . 1 2 URINE . . . . . 1 2 BLOOD . . . 1 2		
412	During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 413A) ←┤ DON'T KNOW 8		
413	Were you told where to go if you had any of these complications?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
413A	What are the symptoms during pregnancy indicating the need to seek immediate care? PROBE: Any other? RECORD ALL MENTIONED	VAGINAL BLEEDING A SEVERE LOWER ABDOMINAL PAIN B SEVERE HEADACHE C CONVULSION D BLURRED VISION & SWELLING OF HANDS & FACE E OTHER_____ X (SPECIFY) DON'T KNOW Z		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
414	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 417) DON'T KNOW 8		
415	During this pregnancy, how many times did you get this tetanus injection?	TIMES . . . . . [ ] DON'T KNOW 8		
416	CHECK 415:	2 OR MORE TIMES (SKIP TO 421) OTHER		
417	At any time before this pregnancy, did you receive any tetanus injections, either to protect yourself or another baby?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421) DON'T KNOW 8		
418	Before this pregnancy, how many other times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES . . . . . [ ] DON'T KNOW 8		
419	In what month and year did you receive the last tetanus injection before this pregnancy?	MONTH . . . [ ][ ] DK MONTH . . . . . 98 YEAR [ ][ ][ ][ ] (SKIP TO 421) DK YEAR 9998		
420	How many years ago did you receive that tetanus injection?	YEARS AGO . . . . . [ ][ ]		
421	During this pregnancy, were you given or did you buy any iron tablets or syrup? SHOW TABLETS/SYRUP.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 423) DON'T KNOW 8		
422	During the whole pregnancy, for how many days did you take the tablets or syrup? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS . [ ][ ][ ] DON'T KNOW 998		
423	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
424	During this pregnancy, did you have difficulty with your vision during daylight?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
425	During this pregnancy, did you suffer from night blindness [USE LOCAL TERM]?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
425A	During this pregnancy, did you receive supplementary food? During pregnancy? During lactating period?	YES NO PREGNANCY .. 1 2 LACTATION .. 1 2		
432	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8
433	Was (NAME) weighed at birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 435) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 435) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 435) DON'T KNOW 8
434	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 . KG FROM RECALL 2 . DON'T KNOW . 99.998	KG FROM CARD 1 . KG FROM RECALL 2 . DON'T KNOW . 99.998	KG FROM CARD 1 . KG FROM RECALL 2 . DON'T KNOW . 99.998
435	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . B ASSISTANT NURSE C OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE. B ASSISTANT NURSE C OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE. B ASSISTANT NURSE C OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . D RELATIVE/FRIEND E OTHER _____ X (SPECIFY) NO ONE . . . . . Y

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
436	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . . 11 (SKIP TO 443) OTHER HOME . . . . . 12 PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 21 REFERRAL HOSPITAL . . . . . 22 COMMUNITY HEALTH CEN. .. 23 HEALTH POSTS .. 24 SISCa POSTS . . . . . 25 OTHER PUBLIC SEC._____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MED._____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 443)	HOME YOUR HOME . . . 11 (SKIP TO 444) OTHER HOME . . . 12 PUBLIC SECTOR NATIONAL HOSPITAL . . . 21 REFERRAL HOSPITAL . . . 22 COMMUNITY HEALTH CEN. .. 23 HEALTH POSTS .. 24 SISCa POSTS . . . 25 OTHER PUBLIC SEC._____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MED._____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 444)	HOME YOUR HOME . . . 11 (SKIP TO 444) OTHER HOME . . . 12 PUBLIC SECTOR NATIONAL HOSPITAL . . . 21 REFERRAL HOSPITAL . . . 22 COMMUNITY HEALTH CEN. .. 23 HEALTH POSTS .. 24 SISCa POSTS . . . 25 OTHER PUBLIC SEC._____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MED._____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 444)
437	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . 998	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . . . 998	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . . . 998
438	Was (NAME) delivered by caesarean section?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
439	Before you were discharged after (NAME) was born, did any health care provider check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 442)	YES . . . . . 1 (SKIP TO 455) NO 2	YES . . . . . 1 (SKIP TO 455) NO 2
440	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW 998		
441	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE 12 ASSISTANT NURSE . . . . . 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/VILLAGE HEALTH WORKER . . . . . 22 OTHER_____ 96 (SPECIFY) (SKIP TO 452A)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
442	After you were discharged, did any health care provider check on your health?	YES . . . . . 1 (SKIP TO 445) ← NO . . . . . 2 (SKIP TO 452A) ←	YES . . . . . 1 (SKIP TO 455) ← NO 2	YES . . . . . 1 (SKIP TO 455) ← NO 2
443	Why didn't you deliver in a health facility? PROBE: Any other reason? RECORD ALL MENTIONED.	COST TOO MUCH . . . A FACILITY NOT OPEN . B TOO FAR/ NO TRANS- PORTATION ..... C DON'T TRUST FACILITY/POOR QUALITY SERVICE D NO FEMALE PROVID- ER AT FACILITY . . E HUSBAND/FAMILY DID NOT ALLOW . . F NOT NECESSARY . . G NOT CUSTOMARY . . H PLANNED BUT CHILD BORN BEFORE REACHING FACILITY I OTHER _____ X (SPECIFY)		
443A	When (NAME) was born, what instrument was used to cut the umblical cord?	NEW/BOILED BLADE . . . . . 1 USED BLADE . . . . . 2 KNIFE . . . . . 3 SCISSORS . . . . . 4 BAMBOO . . . . . 5 OTHER _____ 6 (SPECIFY) DON'T KNOW 8		
443B	Was anything placed on the stump after the umblical cord was cut?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 443D) ← DON'T KNOW 8		
443C	What was placed on the stump? PROBE: Any other things? RECORD ALL MENTIONED	OIL . . . . . A ASH . . . . . B OINTMENT/POWDER .... C TRADITIONAL MED . . D BETADINE . . . . . E OTHER _____ X (SPECIFY) DON'T KNOW . . Z		
443D	Was (NAME) dried before the placenta was delivered?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
443E	How long after delivery was (NAME) bathed for the first time? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW 998		
444	After (NAME) was born, did any health care provider check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 449) ←	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
445	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW 998		
446	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE 12 ASSISTANT NURSE . . . . . 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/VILLAGE HEALTH WORKER . . . . . 22 OTHER_____ 96 (SPECIFY)		
447	Where did this first check take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . . 11 OTHER HOME . . . . . 12 PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 21 REFERRAL HOSPITAL . . . . . 22 COMMUNITY HEALTH CEN. .. 23 HEALTH POSTS .. 24 SISCa POSTS . . . . . 25 MOBILE CLINIC 27 OTHER PUBLIC SEC._____ 26 (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES .... 31 OTHER NGOS _____ 36 SPECIFY PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 41 OTHER PRIVATE MED._____ 46 (SPECIFY) OTHER_____ 96 (SPECIFY)		
448	CHECK 442:	YES ☐ NOT ASKED ☐ (SKIP TO 452A)		
449	In the two months after (NAME) was born, did any health care provider check on his/her health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 452A) DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
450	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HRS AFTER BIRTH . . 1 ☐☐ DAYS AFTER BIRTH . . 2 ☐☐ WKS AFTER BIRTH . . 3 ☐☐ DON'T KNOW 998		
451	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE 12 ASSISTANT NURSE . . . . . 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/VILLAGE HEALTH WORKER . . . . . 22 OTHER_____ 96 (SPECIFY)		
452	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . . 11 OTHER HOME. . . . . 12 PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 21 REFERRAL HOSPITAL . . . . . 22 COMMUNITY HEALTH CEN. .. 23 HEALTH POSTS .. 24 SISCa POSTS . . . . . 25 MOBILE CLINIC 27 OTHER PUBLIC SEC._____ 26 (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES .... 31 OTHER NGOS _____ 36 SPECIFY PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 41 OTHER PRIVATE MED._____ 46 (SPECIFY) OTHER_____ 96 (SPECIFY)		
452A	What are the symptoms of the infant within one month after delivery indicating the need to seek immediate health care? PROBE: Any other? RECORD ALL MENTIONED	POOR SUCKLING .... A FAST BREATHING .... B SEVERE CHEST INDRAWING ..... C HYPOTHERMIA ..... D FEVER ..... E DIFFICULT TO WAKE/ LETHARGIC ..... F PUSTULES ON SKIN 1 LARGE OR >10 SMALL ONES ... G SEVERE UMBILICAL INFECTION SMELLING DISCHARGE ..... H OTHER_____ X (SPECIFY) DON'T KNOW . . . . . Z		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
453	In the first two months after delivery, did you receive a vitamin A dose (like this/any of these)? SHOW COMMON TYPES OF CAPSULES.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
454	Has your menstrual period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 456) NO . . . . . 2 (SKIP TO 457)		
455	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 459)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 459)
456	For how many months after the birth of (NAME) did you not have a period?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
457	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT ☐ PREGNANT OR UNSURE ☐ (SKIP TO 459)		
458	Have you begun to have sexual intercourse again since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 460)		
459	For how many months after the birth of (NAME) did you not have sexual intercourse?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
460	Did you ever breastfeed (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 467)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 467)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 467)
461	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY . . . . 000 HOURS 1 ☐☐ DAYS 2 ☐☐		
462	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 464)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
463	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) . . A PLAIN WATER . . . . . B SUGAR OR GLUCOSE WATER . . . . . C GRIPE WATER . . . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . . G TEA/INFUSIONS . . . . . H HONEY . . . . . I OTHER _____ X (SPECIFY)		
464	CHECK 404: IS CHILD LIVING?	LIVING DEAD (SKIP TO 466)		
465	Are you still breastfeeding (NAME)?	YES . . . . . 1 (SKIP TO 468) NO 2		
466	For how many months did you breastfeed (NAME)?	MONTHS . . . DON'T KNOW 98	MONTHS . . . STILL BF . . . . . 95 DON'T KNOW . . . 98	MONTHS . . . STILL BF . . . . . 95 DON'T KNOW . . . 98
467	CHECK 404: IS CHILD LIVING?	LIVING DEAD (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501) (SKIP TO 470)	LIVING DEAD (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501) (SKIP TO 470)	LIVING DEAD (GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501) (SKIP TO 470)
468	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS .		
469	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS .		
470	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
471		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501.

SECTION 5. CHILD IMMUNIZATION AND HEALTH AND CHILD'S AND WOMAN'S NUTRITION

501 ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2004 OR LATER.
ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.
(IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
502	LINE NUMBER FROM 212	LINE NUMBER	LINE NUMBER	LINE NUMBER . . . . .
503	FROM 212 AND 216	NAME LIVING / DEAD (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 573)	NAME LIVING / DEAD (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 573)	NAME LIVING / DEAD (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE, OR IF NO MORE BIRTHS, GO TO 573)
504	Do you have a card or (LISIO) where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN . . . . . 1 (SKIP TO 506) YES, NOT SEEN . . . . . 2 (SKIP TO 508) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) YES, NOT SEEN . . . . . 2 (SKIP TO 508) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) YES, NOT SEEN . . . . . 2 (SKIP TO 508) NO CARD 3
505	Did you ever have a card or LISIO for (NAME)?	YES . . . . . 1 (SKIP TO 508) NO 2	YES . . . . . 1 (SKIP TO 508) NO 2	YES . . . . . 1 (SKIP TO 508) NO 2

506 (1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD OR LISIO.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.
(3) IF MORE THAN TWO VITAMIN 'A' DOSES, RECORD DATES FOR MOST RECENT AND SECOND MOST RECENT DOSES.

	LAST BIRTH DAY	LAST BIRTH MONTH	LAST BIRTH YEAR		NEXT-TO-LAST BIRTH DAY	NEXT-TO-LAST BIRTH MONTH	NEXT-TO-LAST BIRTH YEAR		SECOND-FROM-LAST BIRTH DAY	SECOND-FROM-LAST BIRTH MONTH	SECOND-FROM-LAST BIRTH YEAR	
BCG				BCG				BCG				
POLIO 0 (POLIO GIVEN AT BIRTH)				P0				P0				
POLIO 1				P1				P1				
POLIO 2				P2				P2				
POLIO 3				P3				P3				
DPT 1				D1				D1				
DPT 2				D2				D2				
DPT 3				D3				D3				
HEP.B 1				H1				H1				
HEP.B 2				H2				H2				
HEP.B 3				H3				H3				
MEASLES				MEA				MEA				
VITAMIN A (MOST RECENT)				VIT A				VIT A				
VITAMIN A (2nd MOST RECENT)				VIT A				VIT A				

506A	CHECK 506:	BCG TO MEASLES ALL RECORDED → (GO TO 510)	OTHER	BCG TO MEASLES ALL RECORDED → (GO TO 510) / OTHER / BCG TO MEASLES ALL RECORDED → (GO TO 510) / OTHER

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
507	Has (NAME) received any vaccinations that are not recorded on this card (LISIO), including vaccinations received in a national immunization day campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT 1-3, HEP 1-3 AND/OR MEASLES VACCINES.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 510) NO . . . . . 2 (SKIP TO 510) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 510) NO . . . . . 2 (SKIP TO 510) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 510) NO . . . . . 2 (SKIP TO 510) DON'T KNOW 8
508	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization campaign?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512) DON'T KNOW 8
509	Please tell me if (NAME) received any of the following vaccinations:			
509A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
509B	Polio vaccine, that is, drops in the mouth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509E) DON'T KNOW 8
509C	Was the first polio vaccine received in the first two weeks after birth or later?	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2
509D	How many times was the polio vaccine received?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
509E	A DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509G) DON'T KNOW 8
509F	How many times was a DPT vaccination received?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
509G	A HEP.B vaccination, that is, an injection given in the right thigh, given with DPT?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509I) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509I) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 509I) DON'T KNOW 8
509H	How many times was a HEP.B vaccination received?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
509I	A measles injection that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
510	Were any of the vaccinations (NAME) received during the last two years given as part of a national immunization day campaign?	YES . . . . . 1 NO . . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW . . . 8 (SKIP TO 512)	YES . . . . . 1 NO . . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW . . . 8 (SKIP TO 512)	YES . . . . . 1 NO . . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW . . . 8 (SKIP TO 512)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
511	At which national immunization day campaigns did (NAME) receive vaccinations?	MEASLES . . . . . A (JUNE 2009)	MEASLES . . . . . A (JUNE 2009)	MEASLES . . . . . A (JUNE 2009)
512	CHECK 506: DATE SHOWN OR `44' RECORED FOR VITAMIN A DOSE	DATE/`44' FOR MOST RECENT VITAMIN A DOSE OTHER (SKIP TO 514)	DATE/`44' FOR MOST RECENT VITAMIN A DOSE OTHER (SKIP TO 514)	DATE/`44' FOR MOST RECENT VITAMIN A DOSE OTHER (SKIP TO 514)
513	According to (NAME)'s health card, he/she received a vitamin A dose (like this/any of these) in (MONTH AND YEAR OF MOST RECENT DOSE FROM LISIO). Has (NAME) received another vitamin A dose since then? SHOW COMMON TYPE OF CAPSULES.	YES . . . . . 1 (SKIP TO 515) NO . . . . . 2 (SKIP TO 515A) DON'T KNOW 8	YES . . . . . 1 (SKIP TO 515) NO . . . . . 2 (SKIP TO 515A) DON'T KNOW 8	YES . . . . . 1 (SKIP TO 515) NO . . . . . 2 (SKIP TO 515A) DON'T KNOW 8
514	HAS (NAME) ever received a vitamin A dose (like this/ any of these)? SHOW COMMON TYPE OF CAPSULES.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 515A) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 515A) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 515A) DON'T KNOW 8
515	Did (NAME) receive a vitamin A dose within the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
515A	In the last six months, did (NAME) show following symptoms Less movement in evenings? Trip/bump over things in evenings?	YES NO MOVEMENT . . . 1 2 TRIP 1 2	YES NO MOVEMENT . . . 1 2 TRIP 1 2	YES NO MOVEMENT . . . 1 2 TRIP 1 2
516	In the last seven days, did (NAME) take iron pills, sprinkles with iron/ iron syrup (like this/any of these)? SHOW COMMON TYPES OF PILLS/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
517	Has (NAME) taken any drug for intestinal worms in the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
517A	Has (NAME) ever received supplementary food?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
518	Has (NAME) had diarrhea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) DON'T KNOW 8
519	Was there any blood in the stools?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
520	Now I would like to know how much (NAME) was given to drink during the diarrhea (including breastmilk). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8
521	When (NAME) had diarrhea, was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
522	Did you seek advice or treatment for the diarrhea from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527)
523	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSP. A REFERRAL HOSPITAL ..... B COMMUNITY HEALTH CEN. ... C HEALTH POSTS ... D SISCa POST .. ... E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) NON-GOV (NGO) SEC. NGO _____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . I PHARMACY . . . J PVT DOCTOR . . . K MOBILE CLINIC . L FIELDWORKER . M OTHER PRIVATE MED. _____ N (SPECIFY) OTHER SOURCE SHOP . . . . . O TRADITIONAL PRACTITIONER P OTHER _____ X (SPECIFY)	PUBLIC SECTOR NATIONAL HOSP. A REFERRAL HOSPITAL ..... B COMMUNITY HEALTH CEN. ... C HEALTH POSTS ... D SISCa POST .. ... E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) NON-GOV (NGO) SEC. NGO _____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . I PHARMACY . . . J PVT DOCTOR . . . K MOBILE CLINIC . L FIELDWORKER . M OTHER PRIVATE MED. _____ N (SPECIFY) OTHER SOURCE SHOP . . . . . O TRADITIONAL PRACTITIONER P OTHER _____ X (SPECIFY)	PUBLIC SECTOR NATIONAL HOSP. A REFERRAL HOSPITAL ..... B COMMUNITY HEALTH CEN. ... C HEALTH POSTS ... D SISCa POST .. ... E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) NON-GOV (NGO) SEC. NGO _____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC . . . . . I PHARMACY . . . J PVT DOCTOR . . . K MOBILE CLINIC . L FIELDWORKER . M OTHER PRIVATE MED. _____ N (SPECIFY) OTHER SOURCE SHOP . . . . . O TRADITIONAL PRACTITIONER P OTHER _____ X (SPECIFY)
524	CHECK 523:	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 526)	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 526)	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 526)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
525	Where did you first seek advice or treatment? USE LETTER CODE FROM 523.	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐
526	How many days after the diarrhea began did you first seek advice or treatment for (NAME)? IF THE SAME DAY, RECORD '00'.	DAYS . . . . . ☐☐	DAYS . . . . . ☐☐	DAYS . . . . . ☐☐
527	Does (NAME) still have diarrhea?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
528	Was he/she given any of the following to drink at any time since he/she started having the diarrhea: a) A fluid made from a special packet called Oralit? b) A government-recommended homemade fluid?	YES NO DK FLUID FROM ORS PKT . . 1 2 8 HOMEMADE FLUID . . . 1 2 8	YES NO DK FLUID FROM ORS PKT . . 1 2 8 HOMEMADE FLUID . . . 1 2 8	YES NO DK FLUID FROM ORS PKT . . 1 2 8 HOMEMADE FLUID . . . 1 2 8
529	Was anything (else) given to treat the diarrhea?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) ← DON'T KNOW 8
530	What (else) was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . B ZINC . . . . . C OTHER (NOT ANTIBIOTIC, ANTIMOTILITY, OR ZINC) . . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MEDICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . B ZINC . . . . . C OTHER (NOT ANTIBIOTIC, ANTIMOTILITY, OR ZINC) . . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MEDICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . B ZINC . . . . . C OTHER (NOT ANTIBIOTIC, ANTIMOTILITY, OR ZINC) . . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MEDICINE . . . . . J OTHER _____ X (SPECIFY)
531	CHECK 530: GIVEN ZINC?	CODE "C" CIRCLED ↓ CODE "C" NOT CIRCLED → (SKIP TO 533) ←	CODE "C" CIRCLED ↓ CODE "C" NOT CIRCLED → (SKIP TO 533) ←	CODE "C" CIRCLED ↓ CODE "C" NOT CIRCLED → (SKIP TO 533) ←

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
532	How many times was (NAME) given zinc?	TIMES . . . . . ☐☐ DON'T KNOW 98	TIMES . . . . . ☐☐ DON'T KNOW 98	TIMES . . . . . ☐☐ DON'T KNOW 98
533	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
534	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537) DON'T KNOW 8
535	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 538) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 538) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 538) DON'T KNOW 8
536	Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 538)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 538)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 538)
537	CHECK 533: HAD FEVER?	YES ☐ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO OR DK ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
538	Now I would like to know how much (NAME) was given to drink (including breastmilk) during the illness with a (fever/cough). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8
539	When (NAME) had a (fever/cough), was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
540	Did you seek advice or treatment for the illness from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 545)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 545)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 545)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
541	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSP. A REFERRAL HOSPITAL ..... B COMMUNITY HEALTH CEN. ... C HEALTH POSTS ... D SISCa POST .. ... E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) SEC NGO_____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT HOSPITAL/ CLINIC ..... I PHARMACY ... J PVT DOCTOR ... K MOBILE CLINIC . L FIELDWORKER . M OTHER PRIVATE MED._____ N (SPECIFY) OTHER SOURCE SHOP ..... O TRADITIONAL PRACTITIONER P OTHER _____ X (SPECIFY)	PUBLIC SECTOR NATIONAL HOSP. A REFERRAL HOSPITAL ..... B COMMUNITY HEALTH CEN. ... C HEALTH POSTS ... D SISCa POST .. ... E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) SEC NGO_____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT HOSPITAL/ CLINIC ..... I PHARMACY ... J PVT DOCTOR ... K MOBILE CLINIC . L FIELDWORKER . M OTHER PRIVATE MED._____ N (SPECIFY) OTHER SOURCE SHOP ..... O TRADITIONAL PRACTITIONER P OTHER _____ X (SPECIFY)	PUBLIC SECTOR NATIONAL HOSP. A REFERRAL HOSPITAL ..... B COMMUNITY HEALTH CEN. ... C HEALTH POSTS ... D SISCa POST .. ... E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) SEC NGO_____ H (SPECIFY) PRIVATE MEDICAL SECTOR PVT HOSPITAL/ CLINIC ..... I PHARMACY ... J PVT DOCTOR ... K MOBILE CLINIC . L FIELDWORKER . M OTHER PRIVATE MED._____ N (SPECIFY) OTHER SOURCE SHOP ..... O TRADITIONAL PRACTITIONER P OTHER _____ X (SPECIFY)
542	CHECK 541:	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 544)	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 544)	TWO OR MORE CODES CIRCLED / ONLY ONE CODE CIRCLED (SKIP TO 544)
543	Where did you first seek advice or treatment? USE LETTER CODE FROM 541.	FIRST PLACE ... ☐	FIRST PLACE ... ☐	FIRST PLACE ... ☐
544	How many days after the illness began did you first seek advice or treatment for (NAME)? IF THE SAME DAY, RECORD '00'.	DAYS ..... ☐☐	DAYS ..... ☐☐	DAYS ..... ☐☐
545	Is (NAME) still sick with a (fever/ cough)?	FEVER ONLY ..... 1 COUGH ONLY ... 2 BOTH FEVER AND COUGH ..... 3 NO, NEITHER ..... 4 DON'T KNOW ... 8	FEVER ONLY ..... 1 COUGH ONLY ... 2 BOTH FEVER AND COUGH ..... 3 NO, NEITHER ..... 4 DON'T KNOW ... 8	FEVER ONLY ..... 1 COUGH ONLY ... 2 BOTH FEVER AND COUGH ..... 3 NO, NEITHER ..... 4 DON'T KNOW ... 8
546	At any time during the illness, did (NAME) take any drugs for the illness?	YES ..... 1 NO ..... 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573) DON'T KNOW 8	YES ..... 1 NO ..... 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573) DON'T KNOW 8	YES ..... 1 NO ..... 2 (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
547	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED.	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B QUININE . . . . . D COMBINATION WITH ARTEMISININ . E OTHER ANTI-MALARIAL _____ . . . G (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . H INJECTION . . . I OTHER DRUGS PARACETAMOL .. J ACETA-MINOPHEN . . . K IBUPROFEN . . . L OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B QUININE . . . . . D COMBINATION WITH ARTEMISININ . E OTHER ANTI-MALARIAL _____ . . . G (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . H INJECTION . . . I OTHER DRUGS PARACETAMOL .. J ACETA-MINOPHEN . . . K IBUPROFEN . . . L OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B QUININE . . . . . D COMBINATION WITH ARTEMISININ . E OTHER ANTI-MALARIAL _____ . . . G (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . H INJECTION . . . I OTHER DRUGS PARACETAMOL .. J ACETA-MINOPHEN . . . K IBUPROFEN . . . L OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z
548	CHECK 547: ANY CODE A-H CIRCLED?	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
549	Did you already have (NAME OF DRUG FROM 547) at home when the child became ill? ASK SEPARATELY FOR EACH OF THE DRUGS 'A' THROUGH 'H' THAT THE CHILD IS RECORDED AS HAVING TAKEN IN 547. IF YES FOR ANY DRUG, CIRCLE CODE FOR THAT DRUG. IF NO FOR ALL DRUGS, CIRCLE 'Y'.	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B QUININE . . . . . D COMBINATION WITH ARTEMISININ . E OTHER ANTI-MALARIAL . . . G ANTIBIOTIC PILL/SYRUP . . . . . H NO DRUG AT HOME . Y	ANTIMALARIAL DRUGS SP/FANSIDAR . . A CHLOROQUINE . B QUININE . . . . . D COMBINATION WITH ARTEMISININ . E OTHER ANTI-MALARIAL . . . G ANTIBIOTIC PILL/SYRUP . . . . . H NO DRUG AT HOME . Y	ANTIMALARIAL DRUGS SP/FANSIDAR . . . A CHLOROQUINE . B QUININE . . . . . D COMBINATION WITH ARTEMISININ . E OTHER ANTI-MALARIAL . . . G ANTIBIOTIC PILL/SYRUP . . . . . H NO DRUG AT HOME . Y
550	CHECK 547: ANY CODE A-G CIRCLED?	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
551	CHECK 547: SP/FANSIDAR ('A') GIVEN	CODE 'A' CIRCLED ☐ → (SKIP TO 554) CODE 'A' NOT CIRCLED ☐ → (SKIP TO 554)	CODE 'A' CIRCLED ☐ → (SKIP TO 554) CODE 'A' NOT CIRCLED ☐ → (SKIP TO 554)	CODE 'A' CIRCLED ☐ → (SKIP TO 554) CODE 'A' NOT CIRCLED ☐ → (SKIP TO 554)
552	How long after the fever started did (NAME) first take SP/Fansidar?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
553	For how many days did (NAME) take the SP/Fansidar? IF 7 DAYS OR MORE, RECORD 7.	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8
554	CHECK 547: CHLOROQUINE ('B') GIVEN	CODE 'B' CIRCLED ☐ → (SKIP TO 560) CODE 'B' NOT CIRCLED ☐ → (SKIP TO 560)	CODE 'B' CIRCLED ☐ → (SKIP TO 560) CODE 'B' NOT CIRCLED ☐ → (SKIP TO 560)	CODE 'B' CIRCLED ☐ → (SKIP TO 560) CODE 'B' NOT CIRCLED ☐ → (SKIP TO 560)
555	How long after the fever started did (NAME) first take chloroquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
556	For how many days did (NAME) take the chloroquine? IF 7 DAYS OR MORE, RECORD 7.	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8
560	CHECK 547: QUININE ('D') GIVEN	CODE 'D' CIRCLED ☐ → (SKIP TO 563) CODE 'D' NOT CIRCLED ☐ → (SKIP TO 563)	CODE 'D' CIRCLED ☐ → (SKIP TO 563) CODE 'D' NOT CIRCLED ☐ → (SKIP TO 563)	CODE 'D' CIRCLED ☐ → (SKIP TO 563) CODE 'D' NOT CIRCLED ☐ → (SKIP TO 563)
561	How long after the fever started did (NAME) first take quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
562	For how many days did (NAME) take the quinine? IF 7 DAYS OR MORE, RECORD 7.	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8
563	CHECK 547: COMBINATION WITH ARTEMISININ ('E') GIVEN	CODE 'E' CIRCLED ☐ / CODE 'E' NOT CIRCLED ☐ → (SKIP TO 569)	CODE 'E' CIRCLED ☐ / CODE 'E' NOT CIRCLED ☐ → (SKIP TO 569)	CODE 'E' CIRCLED ☐ / CODE 'E' NOT CIRCLED ☐ → (SKIP TO 569)
564	How long after the fever started did (NAME) first take (COMBINATION WITH ARTEMISININ)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
565	For how many days did (NAME) take the (COMBINATION WITH ARTEMISININ)? IF 7 DAYS OR MORE, RECORD 7.	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8
569	CHECK 547: OTHER ANTIMALARIAL ('G') GIVEN	CODE 'G' CIRCLED ☐ / CODE 'G' NOT CIRCLED ☐ → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	CODE 'G' CIRCLED ☐ / CODE 'G' NOT CIRCLED ☐ → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	CODE 'G' CIRCLED ☐ / CODE 'G' NOT CIRCLED ☐ → (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
570	How long after the fever started did (NAME) first take (OTHER ANTIMALARIAL)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
571	For how many days did (NAME) take the (OTHER ANTIMALARIAL)? IF 7 DAYS OR MORE, RECORD 7.	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . . ☐ DON'T KNOW . . . 8
572		GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
573	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2004 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ NONE ☐ → 576 RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 574) _____ (NAME)		
574	The last time (NAME FROM 573) passed stools, what was done to dispose of the stools?	CHILD USED TOILET OR LATRINE . . . 01 PUT/RINSED INTO TOILET OR LATRINE . . . . . 02 PUT/RINSED INTO DRAIN OR DITCH . . . . . 03 THROWN INTO GARBAGE . . . . . 04 BURIED . . . . . 05 LEFT IN THE OPEN . . . . . 06 OTHER _____ 96 (SPECIFY)	
575	CHECK 528(a) AND 528(b), ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐ → 577		
576	Have you ever heard of a special product called [LOCAL NAME FOR ORS PACKET] you can get for the treatment of diarrhea?	YES . . . . . 1 NO 2	
577	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2006 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ NONE ☐ → 601 RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 578) _____ (NAME)		
578	Now I would like to ask you about liquids or foods (NAME FROM 577) had yesterday during the day or at night. Did (NAME FROM 577) (drink/eat): Plain water? Commercially produced infant formula? Any fortified baby food such as Cerelac, Sun? Any (other) porridge or gruel?	YES NO DK PLAIN WATER . . . . . 1 2 8 FORMULA . . . . . 1 2 8 BABY CEREAL . . . . . 1 2 8 OTHER PORRIDGE/GRUEL. . 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
579	Now I would like to ask you about (other) liquids or foods that (NAME FROM 577)/you may have had yesterday during the day or at night. I am interested in whether your child/you had the item even if it was combined with other foods.		

Did (NAME FROM 577)/you drink (eat):		CHILD YES NO DK	MOTHER YES NO DK
a)	Milk such as tinned, powdered, or fresh animal milk?	**a** 1 2 8	1 2 8
b)	Tea or coffee?	**b** 1 2 8	1 2 8
c)	Any other liquids?	**c** 1 2 8	1 2 8
d)	Bread, rice, noodles, or other foods made from grains?	**d** 1 2 8	1 2 8
e)	Pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside?	**e** 1 2 8	1 2 8
f)	White potatoes, cassava, or any other foods made from roots?	**f** 1 2 8	1 2 8
g)	Any dark green, leafy vegetables?	**g** 1 2 8	1 2 8
h)	Ripe mangoes or papayas?	**h** 1 2 8	1 2 8
i)	Any other fruits or vegetables?	**i** 1 2 8	1 2 8
j)	Liver, kidney, heart or other organ meats?	**j** 1 2 8	1 2 8
k)	Any meat, such as beef, pork, lamb, goat, chicken, or duck?	**k** 1 2 8	1 2 8
l)	Eggs?	**l** 1 2 8	1 2 8
m)	Fresh or dried fish or shellfish?	**m** 1 2 8	1 2 8
n)	Any foods made from beans, peas, lentils, or nuts?	**n** 1 2 8	1 2 8
o)	Cheese, other milk products?	**o** 1 2 8	1 2 8
p)	Any oil, fats, or butter, or foods made with any of these?	**p** 1 2 8	1 2 8
q)	Any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits?	**q** 1 2 8	1 2 8
r)	Any other solid or semi-solid food?	**r** 1 2 8	1 2 8

580	CHECK 578 (LAST 2 CATEGORIES: BABY CEREAL OR OTHER PORRIDGE/GRUEL) AND 579 (CATEGORIES d THROUGH r FOR CHILD): AT LEAST ONE "YES' ☐ NOT A SINGLE "YES" ☐ → 601		
581	How many times did (NAME FROM 577) eat solid, semisolid, or soft foods yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8	

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 604
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 617
603	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 609
604	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
605	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO.	
606	Does your husband/partner have other wives or does he live with other women as if married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 609
607	Including yourself, in total, how many wives or partners does your husband live with now as if married?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . . . DON'T KNOW 98	
608	Are you the first, second, ... wife?	RANK	
609	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
615	CHECK 609: MARRIED/ LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → Now I would like to ask about when you started living with your first husband/partner. In what month and year was that?	MONTH . . . . . DON'T KNOW MONTH . . . . . 98 YEAR . . . . . DON'T KNOW YEAR 9998	→ 617
616	How old were you when you first started living with him?	AGE	
617	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
618	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . → 621 FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER . . . . . 95 → 621	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
619	CHECK 107: AGE 15-24 ↓ AGE 25-49 →		641
620	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	641
621	CHECK 107: AGE 15-24 ↓ AGE 25-49 →		626
622	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
623	How old was the person you first had sexual intercourse with?	AGE OF PARTNER . . . . . [ ][ ] DON'T KNOW 98	626
624	Was this person older than you, younger than you, or about the same age as you?	OLDER . . . . . 1 YOUNGER . . . . . 2 ABOUT THE SAME AGE . . . . . 3 DON'T KNOW/DON'T REMEMBER . . . 8	626
625	Would you say this person was ten or more years older than you or less than ten years older than you?	TEN OR MORE YEARS OLDER . . . . . 1 LESS THAN TEN YEARS OLDER . . . 2 OLDER, UNSURE HOW MUCH 3	
626	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ]	640

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
626A	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question. → SKIP TO 628			
627	When was the last time you had sexual intercourse with this person?		DAYS . 1 WEEKS 2 MONTHS 3 ☐☐	DAYS . 1 WEEKS 2 MONTHS 3 ☐☐
628	The last time you had sexual intercourse (with this second/third person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 630)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 630)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 630)
629	Did you use a condom every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
630	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	HUSBAND . . . . . 1 (SKIP TO 636) LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 SEX WORKER . . . . . 5 OTHER _____ 6 (SPECIFY)	HUSBAND . . . . . 1 (SKIP TO 636) LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 SEX WORKER . . . . . 5 OTHER _____ 6 (SPECIFY)	HUSBAND . . . . . 1 (SKIP TO 636) LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 SEX WORKER . . . . . 5 OTHER _____ 6 (SPECIFY)
631	For how long (have you had/did you have) a sexual relationship with this person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS . 1 MONTHS 2 YEARS 3 ☐☐	DAYS . 1 MONTHS 2 YEARS 3 ☐☐	DAYS . 1 MONTHS 2 YEARS 3 ☐☐
632	CHECK 107:	AGE 15-24 / AGE 25-49 (SKIP TO 636)	AGE 15-24 / AGE 25-49 (SKIP TO 636)	AGE 15-24 / AGE 25-49 (SKIP TO 636)
633	How old is this person?	AGE OF PARTNER ☐☐ (SKIP TO 636) DON'T KNOW 98	AGE OF PARTNER ☐☐ (SKIP TO 636) DON'T KNOW 98	AGE OF PARTNER ☐☐ (SKIP TO 636) DON'T KNOW 98
634	Is this person older than you, younger than you, or about the same age?	OLDER . . . . . 1 YOUNGER . . . . . 2 SAME AGE . . . . . 3 DON'T KNOW . . . 8 (SKIP TO 636)	OLDER . . . . . 1 YOUNGER . . . . . 2 SAME AGE . . . . . 3 DON'T KNOW . . . 8 (SKIP TO 636)	OLDER . . . . . 1 YOUNGER . . . . . 2 SAME AGE . . . . . 3 DON'T KNOW . . . 8 (SKIP TO 636)
635	Would you say this person is ten or more years older than you or less than ten years older than you?	TEN OR MORE YEARS OLDER . 1 LESS THAN TEN YEARS OLDER . 2 OLDER, UNSURE HOW MUCH . . . 3	TEN OR MORE YEARS OLDER . 1 LESS THAN TEN YEARS OLDER . 2 OLDER, UNSURE HOW MUCH . . . 3	TEN OR MORE YEARS OLDER . 1 LESS THAN TEN YEARS OLDER . 2 OLDER, UNSURE HOW MUCH . . . 3

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
636	The last time you had sexual intercourse with this person, did you or this person drink alcohol?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 638)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 638)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 639)
637	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4
638	Apart from [this person/these two people], have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 627 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 640)	YES . . . . . 1 (GO BACK TO 627 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 640)	
639	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'			NUMBER OF PARTNERS LAST 12 MONTHS . . . ☐☐ DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
640	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME . . . . . [ ][ ] DON'T KNOW 98	
641	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 701
642	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B COMMUNITY HEALTH CEN . . . . . C HEALTH POST . . . . . D SISCa POST . . . . . E MOBILE CLINIC . . . . . F CONDOM BOX . . . . . G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . I OTHER NGO _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . K PHARMACY . . . . . L PRIVATE DOCTOR . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER SOURCE SHOP . . . . . Q FRIENDS/RELATIVES . . . . . R OTHER _____ X (SPECIFY)	
643	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 311/311A: NEITHER STERILIZED ☐ ↓ HE OR SHE STERILIZED ☐ →		713
702	CHECK 226: NOT PREGNANT OR UNSURE ☐ ↓ PREGNANT ☐ ↓ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS SHE CAN'T GET PREGNANT . 3 UNDECIDED/DON'T KNOW AND PREGNANT . . . . . 4 UNDECIDED/DON'T KNOW AND NOT PREGNANT OR UNSURE 5	 → 704 → 713 → 709 → 708
703	CHECK 226: NOT PREGNANT OR UNSURE ☐ ↓ PREGNANT ☐ ↓ How long would you like to wait from now before the birth of (a/another) child? After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 SAYS SHE CAN'T GET PREGNANT 994 AFTER MARRIAGE . . . . . 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 → 708 → 713 → 708
704	CHECK 226: NOT PREGNANT OR UNSURE ☐ ↓ PREGNANT ☐ →		709
705	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ ↓ NOT CURRENTLY USING ☐ ↓ CURRENTLY USING ☐ →		713
706	CHECK 703: NOT ASKED ☐ ↓ 24 OR MORE MONTHS OR 02 OR MORE YEARS ☐ ↓ 00-23 MONTHS OR 00-01 YEAR ☐ →		709

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
707	CHECK 702: WANTS TO HAVE A/ANOTHER CHILD → You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? WANTS NO MORE/ NONE → You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOMY . D SUBFECUND/INFECUND . . . . . E POSTPARTUM AMENORRHEIC . . . F BREASTFEEDING . . . . . G FATALISTIC . . . . . H OPPOSITION TO USE RESPONDENT OPPOSED . . . . . I HUSBAND/PARTNER OPPOSED . J OTHERS OPPOSED . . . . . K RELIGIOUS PROHIBITION . . . . . L LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N METHOD-RELATED REASONS HEALTH CONCERNS . . . . . O FEAR OF SIDE EFFECTS . . . . . P LACK OF ACCESS/TOO FAR . . . . . Q COSTS TOO MUCH . . . . . R INCONVENIENT TO USE . . . . . S INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . T OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
708	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED → NO, NOT CURRENTLY USING → YES, CURRENTLY USING → 713		
709	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 → 711 DON'T KNOW . . . . . 8 → 713	
710	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD . . . . . 13 WITHDRAWAL . . . . . 14 OTHER _____ 96 (SPECIFY) UNSURE 98	→ 713

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED . . . . . 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX . . . 22 MENOPAUSAL/HYSTERECTOMY 23 SUBFECUND/INFECUND . . . . . 24 WANTS AS MANY CHILDREN AS POSSIBLE . . . . . 26 OPPOSITION TO USE RESPONDENT OPPOSED . . . . . 31 HUSBAND/PARTNER OPPOSED 32 OTHERS OPPOSED . . . . . 33 RELIGIOUS PROHIBITION . . . . . 34 LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . 41 KNOWS NO SOURCE . . . . . 42 METHOD-RELATED REASONS HEALTH CONCERNS . . . . . 51 FEAR OF SIDE EFFECTS . . . . . 52 LACK OF ACCESS/TOO FAR . . . 53 COSTS TOO MUCH . . . . . 54 INCONVENIENT TO USE . . . . . 55 INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 713
712	Would you ever use a contraceptive method if you were married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
713	CHECK 216: HAS LIVING CHILDREN ☐ → If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 715 → 715
714	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
715	In the last few months have you: Heard about family planning on the radio? Seen about family planning on the television? Read about family planning in a newspaper or magazine? Seen about family planning in poster/billboard? Seen Street drama? Watched film ?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE . . . 1 2 POSTER/BILLBOARD . . . . . 1 2 STREET DRAMA . . . . . 1 2 FILM 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
717	CHECK 601: YES, CURRENTLY MARRIED YES, LIVING WITH A MAN NO, NOT IN UNION → 801		
718	CHECK 311/311A: CODE B, G, OR N CIRCLED → 720 NO CODE CIRCLED → 722 OTHER		
719	Does your husband/partner know that you are using a method of family planning?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
720	Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
721	CHECK 311/311A: NEITHER STERILIZED HE OR SHE STERILIZED → 801		
722	Does your husband/partner want the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ↓ FORMERLY MARRIED/ LIVED WITH A MAN → 803 NEVER MARRIED AND NEVER LIVED WITH A MAN → 807		
802	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
803	Did your (last) husband/partner ever attend school?	YES . . . . . 1 NO 2	→ 806
804	What was the highest level of school he attended: primary, pre-secondary, secondary, or higher?	PRIMARY . . . . . 1 PRE-SECONDARY 2 SECONDARY . . . . . 3 HIGHER . . . . . 4 DON'T KNOW 8	→ 806
805	What was the highest (grade) he completed at that level?	GRADE . . . . . ☐☐ DON'T KNOW 98	
806	CHECK 801: CURRENTLY MARRIED/ LIVING WITH A MAN ↓ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ↓ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	_____ ☐☐ _____ _____	
807	Aside from your own housework, have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 811
808	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?	YES . . . . . 1 NO 2	→ 811
809	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave or any other such reason?	YES . . . . . 1 NO 2	→ 811
810	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 818
811	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
812	CHECK 811: WORKS IN AGRICULTURE ↓ DOES NOT WORK IN AGRICULTURE → 814		
813	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND 4	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
814	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
815	Do you usually work at home or away from home?	HOME . . . . . 1 AWAY 2	
816	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
817	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
818	CHECK 601: CURRENTLY MARRIED/LIVING WITH A MAN ☐ NOT IN UNION ☐		→ 827
819	CHECK 817: CODE 1 OR 2 CIRCLED ☐ OTHER ☐		→ 822
820	Who usually decides how the money you earn will be used: mainly you, mainly your husband/partner, or you and your husband/partner jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 OTHER _____ 6 (SPECIFY)	
821	Would you say that the money that you earn is more than what your husband/partner earns, less than what he earns, or about the same?	MORE THAN HIM . . . . . 1 LESS THAN HIM . . . . . 2 ABOUT THE SAME . . . . . 3 HUSBAND/PARTNER DOESN'T BRING IN ANY MONEY . . . . . 4 DON'T KNOW 8	→ 823
822	Who usually decides how your husband's/partner's earnings will be used: you, your husband/partner, or you and your husband/partner jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 OTHER _____ 6 (SPECIFY)	
823	Who usually makes decisions about health care for yourself: you, your husband/partner, you and your husband/partner jointly, or someone else?	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 OTHER = 6 1 2 3 4 6	
824	Who usually makes decisions about making major household purchases?	1 2 3 4 6	
825	Who usually makes decisions about making purchases for daily household needs?	1 2 3 4 6	
826	Who usually makes decisions about visits to your family or relatives?	1 2 3 4 6	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
827	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)	PRES./ LISTEN. / PRES./ NOT LISTEN. / NOT PRES. CHILDREN < 10 . . . . . 1 2 3 HUSBAND . . . . . 1 2 3 OTHER MALES . . . . . 1 2 3 OTHER FEMALES . . . 1 2 3	
828	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES / NO / DK	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN . . . 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	

SECTION 9. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 915
902	Can people reduce their chance of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
906	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907	Can people get the AIDS virus by sharing clothes with a person who has AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
908	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
908A	Can HIV/AIDS be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
909	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 911
910	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B VCT CENTER . . . . . C COMMUNITY HEALTH CEN . . . . . D HEALTH POST . . . . . E SISCa POST . . . . . F MOBILE CLINIC . . . . . G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT(NGO) SECTOR MARIE STOPES . . . . . I OTHER NGOS _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . K VCT CENTER . . . . . L PHARMACY . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER _____ X (SPECIFY)	
911	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
912	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
913	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
914	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
915	CHECK 901: HEARD ABOUT AIDS → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
916	CHECK 618: HAS HAD SEXUAL INTERCOURSE HAS NOT HAD SEXUAL INTERCOURSE → 924		
917	CHECK 915: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES NO → 919		
918	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
919	Sometimes women experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
920	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
921	CHECK 918, 919, AND 920: HAS HAD AN INFECTION (ANY 'YES') HAS NOT HAD AN INFECTION OR DOES NOT KNOW → 924		
922	The last time you had (PROBLEM FROM 918/919/920), did you seek any kind of advice or treatment?	YES . . . . . 1 NO . . . . . 2 → 924	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
923	Where did you go? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B VCT CENTER . . . C COMMUNITY HEALTH CEN . . . . . D HEALTH POST . . . . . E SISCa POST . . . . . F MOBILE CLINIC . . . . . G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT(NGO) SECTOR MARIE STOPES . . . . . I OTHER NGOS _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . K VCT CENTER . . . . . L PHARMACY . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER SOURCE SHOP . . . . . Q OTHER _____ X (SPECIFY)	
924	Husbands and wives do not always agree on everything. If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in refusing to have sex with him?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
925	Is a wife justified in refusing to have sex with her husband when she is tired or not in the mood?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
926	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 10. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 1005
1002	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
1003	Can tuberculosis be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1004	If a member of your family got tuberculosis, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/ DEPENDS 8	
1005	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 1009
1006	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 1009
1007	The last time you had an injection given to you by a health worker, where did you go to get the injection? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 11 REFERRAL HOSPITAL . . . . . 12 COMMUNITY HEALTH CEN. . . . . 13 HEALTH POST . . . . . 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 DENTAL CLINIC/OFFICE . . . . . 22 PHARMACY . . . . . 23 OFFICE OR HOME OF NURSE/ HEALTH WORKER . . . . . 24 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER PLACE AT HOME . . . . . 31 OTHER _____ 96 (SPECIFY)	
1008	Did the person who gave you that injection take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1009	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 1011
1010	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES	
1011	Do you currently smoke or use any other type of tobacco?	YES . . . . . 1 NO 2	→ 1013
1012	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C ROLLED TOBACCO . . . . . D OTHER _____ X (SPECIFY)	
1013	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROB-LEM / NOT A BIG PROB-LEM	
	Getting permission to go?	PERMISSION TO GO . . . 1 2	
	Getting money needed for treatment?	GETTING MONEY 1 2	
	The distance to the health facility?	DISTANCE 1 2	
	Having to take transport?	TAKING TRANSPORT . . . 1 2	
	Not wanting to go alone?	GO ALONE 1 2	
	Concern that there may not be a female health provider?	NO FEMALE PROV . . . 1 2	
	Concern that there may not be any health provider?	NO PROVIDER . . . 1 2	
	Concern that there may be no drugs available?	NO DRUGS . . . 1 2	
1014	Did you use soap for any purpose yesterday?	YES . . . . . 1 NO 2	→ 1101
1015	For what purpose did you use soap? Any other purpose? RECORD ALL MENTIONED.	HANDWASHING . . . . . A WASHING OWN BODY . . . . . B WASHING CHILD'S HANDS . . . . . C WASHING CHILD'S BODY . . . . . D WASHING CLOTHES . . . . . E WASHING COOKING POTS F OTHER _____ X (SPECIFY)	
1016	CHECK 1015: CODE 'A' CIRCLED ↓ ☐ CODE 'A' NOT CIRCLED ☐ →		1101
1017	How many times did you wash your hands with soap yesterday? IF MORE THAN 7 TIMES, RECORD '7.'	TIMES . . . . . ☐☐ DON'T KNOW 8	

SECTION 11. MATERNAL MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1101	Now I would like to ask you some questions about you brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER	
1102	CHECK 1101: TWO OR MORE BIRTHS ☐ ONLY ONE BIRTH (RESPONDENT ONLY) ☐ → 1200		
1103	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS	

1104	What was the name given to your oldest (next oldest) brother or sister?	(1) _____	(2) _____	(3) _____	(4) _____	(5) _____	(6) _____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (2)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (3)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (4)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (5)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (6)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (7)
1107	How old is (NAME)?	☐☐ GO TO (2)	☐☐ GO TO (3)	☐☐ GO TO (4)	☐☐ GO TO (5)	☐☐ GO TO (6)	☐☐ GO TO (7)
1108	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1109	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (2)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (3)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (4)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (5)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (6)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (7)
1110	Was (NAME) pregnant when she died?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐

IF NO MORE BROTHERS OR SISTERS, GO TO 1200.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES					SKIP
1104	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (8)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (9)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (10)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (11)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (12)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (13)
1107	How old is (NAME)?	☐☐ GO TO (8)	☐☐ GO TO (9)	☐☐ GO TO (10)	☐☐ GO TO (11)	☐☐ GO TO (12)	☐☐ GO TO (13)
1108	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1109	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (8)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (9)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (10)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (11)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (12)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (13)
1110	Was (NAME) pregnant when she died?	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
IF NO MORE BROTHERS OR SISTERS, GO TO 1200.							

SECTION 12. DOMESTIC VIOLENCE MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1200	CHECK COLUMN 9A OF HOUSEHOLD QUESTIONNAIRE AND THE FRONT COVER OF WOMAN QUESTIONNAIRE. IS WOMAN SELECTED FOR THIS SECTION? WOMAN SELECTED FOR THIS SECTION WOMAN NOT SELECTED		1235
1201	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL EFFECTIVE PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 PRIVACY NOT POSSIBLE 2		1234
	READ TO THE RESPONDENT Now I would like to ask you questions about some other important aspects of a woman's life. I know that some of these questions are very personal. However, your answers are crucial for helping to understand the condition of women in Timor-Leste. Let me assure you that your answers are completely confidential and will not be told to anyone and no one else will know that you were asked these questions.		
1202	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN FORMERLY MARRIED/ LIVED WITH A MAN (READ IN PAST TENSE) NEVER MARRIED/ NEVER LIVED WITH A MAN		1214
1203	First, I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your (last) husband/partner? a) He (is/was) jealous or angry if you (talk/talked) to other men? b) He frequently (accuses/accused) you of being unfaithful? c) He (does/did) not permit you to meet your female friends? d) He (tries/tried) to limit your contact with your family? e) He (insists/insisted) on knowing where you (are/were) at all times? f) He (does/did) not trust you with any money?	YES NO DK JEALOUS . . . . . 1 2 8 ACCUSES . . . . . 1 2 8 NOT MEET FRIENDS . . . 1 2 8 NO FAMILY . . . . . 1 2 8 WHERE YOU ARE . . . 1 2 8 MONEY 1 2 8	
1204	Now if you will permit me, I need to ask some more questions about your relationship with your (last) husband/partner. If we should come to any question that you do not want to answer, just let me know and we will go on to the next question. A (Does/did) your (last) husband/partner ever: a) say or do something to humiliate you in front of others? b) threaten to hurt or harm you or someone close to you? c) insult you or make you feel bad about yourself?	B CHECK 603: ASK ONLY **IF RESPONDENT IS NOT A WIDOW** How often did this happen during the last 12 months: often, only sometimes, or not at all? YES 1 / NO 2 OFTEN 1 / SOMETIMES 2 / NOT AT ALL 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1205	A (Does/did) your (last) husband/partner ever do any of the following things to you:	B CHECK 603: ASK ONLY **IF RESPONDENT IS NOT A WIDOW** How often did this happen during the last 12 months: often, only sometimes, or not at all?	

			OFTEN	SOME-TIMES	NOT AT ALL
a)	push you, shake you, or throw something at you?	YES 1 → NO 2	1	2	3
b)	slap you?	YES 1 → NO 2	1	2	3
c)	twist your arm or pull your hair?	YES 1 → NO 2	1	2	3
d)	punch you with his fist or with something that could hurt you?	YES 1 → NO 2	1	2	3
e)	kick you, drag you or beat you up?	YES 1 → NO 2	1	2	3
f)	try to choke you or burn you on purpose?	YES 1 → NO 2	1	2	3
g)	threaten or attack you with a knife, gun, or any other weapon?	YES 1 → NO 2	1	2	3
h)	physically force you to have sexual intercourse with him even when you did not want to?	YES 1 → NO 2	1	2	3
i)	force you to perform any sexual acts you did not want to?	YES 1 → NO 2	1	2	3

1206	CHECK 1205A (a-i): AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		1209
1207	How long after you first (got married to/started living with) your (last) husband/partner did (this/any of these things) first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS . . . . . ☐☐ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95	
1208	Did the following ever happen as a result of what your (last) husband/partner did to you:		
	a) You had cuts, bruises or aches?	YES . . . . . 1 NO 2	
	b) You had eye injuries, sprains, dislocations, or burns?	YES . . . . . 1 NO 2	
	c) You had deep wounds, broken bones, broken teeth, or any other serious injury?	YES . . . . . 1 NO 2	
1209	Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?	YES . . . . . 1 NO 2	→ 1212
1210	CHECK 603: RESPONDENT IS **NOT** A WIDOW ☐ ↓ RESPONDENT IS A WIDOW ☐ →		1212
1211	In the last 12 months, how often have you done this to your husband/partner: often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1212	(Does/Did) your husband/partner drink alcohol?	YES . . . . . 1 NO 2	→ 1214
1213	How often (does/did) he get drunk: often, only sometimes, or never?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1214	CHECK 601 AND 602: EVER MARRIED/LIVED WITH A MAN → From the time you were 15 years old has anyone other than your (current/last) husband/partner hit, slapped, kicked, or done anything else to hurt you physically? NEVER MARRIED/ NEVER LIVED WITH A MAN → From the time you were 15 years old has anyone ever hit, slapped, kicked, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 1217
1215	Who has hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER/STEP-MOTHER . . . . . A FATHER/STEP-FATHER . . . . . B SISTER/BROTHER . . . . . C DAUGHTER/SON . . . . . D OTHER RELATIVE . . . . . E FORMER HUSBAND/ LIVE-IN PARTNER . . . . . F CURRENT BOYFRIEND . . . . . G FORMER BOYFRIEND . . . . . H MOTHER-IN-LAW . . . . . I FATHER-IN-LAW . . . . . J OTHER IN-LAW . . . . . K TEACHER . . . . . L EMPLOYER/SOMEONE AT WORK . . M POLICE/MILITARY . . . . . N OTHER _____ (SPECIFY) X	
1216	In the last 12 months, how often have you been hit, slapped, kicked, or physically hurt by this/these person(s): often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1217	CHECK 201, 226, AND 229: EVER BEEN PREGNANT (YES ON 201 OR 226 OR 229) → NEVER BEEN PREGNANT →		1220
1218	Has any one ever hit, slapped, kicked, or done anything else to hurt you physically while you were pregnant?	YES . . . . . 1 NO 2	→ 1220
1219	Who has done any of these things to physically hurt you while you were pregnant? Anyone else? RECORD ALL MENTIONED.	CURRENT HUSBAND/ LIVE-IN PARTNER . . . . . A MOTHER/STEP-MOTHER . . . . . B FATHER/STEP-FATHER . . . . . C SISTER/BROTHER . . . . . D DAUGHTER/SON . . . . . E OTHER RELATIVE . . . . . F FORMER HUSBAND/ LIVE-IN PARTNER . . . . . G CURRENT BOYFRIEND . . . . . H FORMER BOYFRIEND . . . . . I MOTHER-IN-LAW . . . . . J FATHER-IN-LAW . . . . . K OTHER IN-LAW . . . . . L TEACHER . . . . . M EMPLOYER/SOMEONE AT WORK . . N POLICE/MILITARY . . . . . O OTHER _____ (SPECIFY) X	
1220	CHECK 618: EVER HAD SEX? HAS EVER HAD SEX → NEVER HAD SEX →		1225
1221	The first time you had sexual intercourse, would you say that you had it because you wanted to, or because you were forced to have it against your will?	WANTED TO . . . . . 1 FORCED TO . . . . . 2 REFUSED TO ANSWER/ NO RESPONSE 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1222	CHECK 601 AND 602: EVER MARRIED/LIVED WITH A MAN → In the last 12 months, has anyone other than your (current/last) husband/ partner forced you to have sexual intercourse against your will? NEVER MARRIED/ NEVER LIVED WITH A MAN → In the last 12 months has anyone forced you to have sexual intercourse against your will?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	
1223	CHECK 1221 AND 1222: 1221 ='1' OR '3' **AND** 1222 ='2' OR '3'	OTHER	→ 1226
1224	CHECK 1205(h) and 1205(i): 1205(h) IS NOT '1' **AND** 1205(i) IS NOT '1'	OTHER	→ 1228
1225	At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 1228
1226	How old were you the first first time you were forced to have sexual intercourse or perform any other sexual acts?	AGE IN COMPLETED YEARS . . . [ ][ ] DON'T KNOW 98	
1227	Who was the person who was forcing you at that time?	CURRENT HUSBAND/ LIVE-IN PARTNER . . . . . 01 FORMER HUSBAND/ LIVE-IN PARTNER . . . . . 02 CURRENT/FORMER BOYFRIEND . . 03 FATHER . . . . . 04 STEP-FATHER . . . . . 05 OTHER RELATIVE . . . . . 06 IN-LAW . . . . . 07 OWN FRIEND/ACQUAINTANCE . . 08 FAMILY FRIEND . . . . . 09 TEACHER . . . . . 10 EMPLOYER/SOMEONE AT WORK . 11 POLICE/MILITARY . . . . . 12 PRIEST/RELIGIOUS LEADER . . . . . 13 STRANGER . . . . . 14 OTHER _____ (SPECIFY) 96	
1228	CHECK 1205A (a-i), 1214, 1218, 1221, 1222 AND 1225: AT LEAST ONE 'YES' OR 1221=2 NOT A SINGLE 'YES' AND 1221 IS NOT EQUAL TO 2		→ 1231A
1229	Thinking about what you yourself have experienced among the different things we have been talking about, have you ever tried to seek help to stop (the/these) person(s) from doing this to you again?	YES . . . . . 1 NO 2	→ 1231
1230	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	OWN FAMILY . . . . . A HUSBAND/LIVE-IN PARTNER'S FAMILY . . . . . B CURRENT/LAST/LATE HUSBAND/LIVE-IN PARTNER . . C CURRENT/FORMER BOYFRIEND . . D FRIEND . . . . . E NEIGHBOR . . . . . F RELIGIOUS LEADER . . . . . G DOCTOR/MEDICAL PERSONNEL . . H POLICE . . . . . I LAWYER . . . . . J SOCIAL SERVICE ORGANIZATION . K OTHER _____ (SPECIFY) X	→ 1231A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1231	Have you ever told any one else about this?	YES . . . . . 1 NO 2	
1231A	If you need help or have a problem, is there someone from your family who you can depend on to: a) give you shelter for a few nights if you need it? b) give you financial support if you need it?	YES NO DK SHELTER 1 2 8 ECONOMIC SUPPORT 1 2 8	
1231B	Do you believe that a man cannot control his sexual behaviour?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1231C	Do you think marital rape is allowable?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1232	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

THANK THE RESPONDENT FOR HER COOPERATION AND REASSURE HER ABOUT THE CONFIDENTIALITY OF HER ANSWERS. FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE DOMESTIC VIOLENCE MODULE ONLY.

1233	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?		YES ONCE	YES, MORE THAN ONCE	NO
		HUSBAND	1	2	3
		OTHER MALE ADULT	1	2	3
		FEMALE ADULT	1	2	3
1234	INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE MODULE _____ _____				
1235	RECORD THE TIME.	HOURS . . . . . □□ MINUTES . . . . . □□			

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
ALL MONTHS SHOULD BE FILLED IN.

INFORMATION TO BE CODED FOR EACH COLUMN

BIRTHS, PREGNANCIES, CONTRACEPTIVE USE **

B	BIRTHS
P	PREGNANCIES
T	TERMINATIONS
0	NO METHOD
1	FEMALE STERILIZATION
2	MALE STERILIZATION
3	PILL
4	IUD
5	INJECTABLES
6	IMPLANTS
7	CONDOM
8	FEMALE CONDOM
9	DIAPHRAGM
J	FOAM OR JELLY
K	LACTATIONAL AMENORRHEA METHOD
L	RHYTHM METHOD
M	STANDARD DAYS METHOD
N	WITHDRAWAL
X	OTHER _____ (SPECIFY)

2	04	APR	01		2
0	03	MAR	02		0
1	02	FEB	03		1
0	01	JAN	04		0
	12	DEC	05		
	11	NOV	06		
	10	OCT	07		
	09	SEP	08		
2	08	AUG	09		2
0	07	JUL	10		0
0	06	JUN	11		0
9	05	MAY	12		9
	04	APR	13		
	03	MAR	14		
	02	FEB	15		
	01	JAN	16		
	12	DEC	17		
	11	NOV	18		
	10	OCT	19		
	09	SEP	20		
2	08	AUG	21		2
0	07	JUL	22		0
0	06	JUN	23		0
8	05	MAY	24		8
	04	APR	25		
	03	MAR	26		
	02	FEB	27		
	01	JAN	28		
	12	DEC	29		
	11	NOV	30		
	10	OCT	31		
	09	SEP	32		
2	08	AUG	33		2
0	07	JUL	34		0
0	06	JUN	35		0
7	05	MAY	36		7
	04	APR	37		
	03	MAR	38		
	02	FEB	39		
	01	JAN	40		
	12	DEC	41		
	11	NOV	42		
	10	OCT	43		
	09	SEP	44		
2	08	AUG	45		2
0	07	JUL	46		0
0	06	JUN	47		0
6	05	MAY	48		6
	04	APR	49		
	03	MAR	50		
	02	FEB	51		
	01	JAN	52		
	12	DEC	53		
	11	NOV	54		
	10	OCT	55		
	09	SEP	56		
2	08	AUG	57		2
0	07	JUL	58		0
0	06	JUN	59		0
5	05	MAY	60		5
	04	APR	61		
	03	MAR	62		
	02	FEB	63		
	01	JAN	64		
	12	DEC	65		
	11	NOV	66		
	10	OCT	67		
	09	SEP	68		
2	08	AUG	69		2
0	07	JUL	70		0
0	06	JUN	71		0
4	05	MAY	72		4
	04	APR	73		
	03	MAR	74		
	02	FEB	75		
	01	JAN	76		

20 July 2009

TIMOR-LESTE DEMOGRAPHIC AND HEALTH SURVEY (TLDHS)
MAN'S QUESTIONNAIRE

NATIONAL STATISTICS DIRECTORATE (NSD) AND MINISTRY OF HEALTH

IDENTIFICATION

NAME AND CODE OF DISTRICT _____

NEW SUCO NAME AND NUMBER _____

CLUSTER NUMBER . . . . . .

LOCATION ID NUMBER . . . . . .

URBAN/RURAL . . . . . .
(URBAN=1, RURAL=2)

NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF MAN _____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE .....

LANGUAGE OF INTERVIEW _____

NATIVE LANGUAGE OF RESPONDENT _____

TRANSLATOR USED (YES=1; NO=2) .....

LANGUAGE CODES: TETUM=1; BAHASA=2; PORTUGESE=3; OTHER=4

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working with NATIONAL STATISTICS DIRECTORATE.We are conducting a national survey that asks men and women about various health issues. We would very much appreciate your participation in this survey. This information will help the government to plan health services. The survey usually takes about 20 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	
102	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . ☐☐ ALWAYS . . . . . 95 VISITOR 96	→ 106
103	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
106	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
107	How old were you at your last birthday? COMPARE AND CORRECT 106 AND/OR 107 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
108	Have you ever attended school?	YES . . . . . 1 NO 2	→ 112
109	What is the highest level of school you attended: primary, pre-secondary, secondary or higher?	PRIMARY . . . . . 1 PRE-SECONDARY . . . . . 2 SECONDARY . . . . . 3 HIGHER 4	
110	What is the highest (grade) you completed at that level?	GRADE . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
111	CHECK 109: PRIMARY ☐ PRE-SECONDARY OR HIGHER ☐ → 115		
112	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE. . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
113	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
114	CHECK 112: CODE '2', '3' OR '4' CIRCLED ☐ CODE '1' OR '5' CIRCLED ☐ → 116		
115	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
116	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
117	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
118	What is your religion?	ROMAN CATHOLIC . . . . . 1 MUSLIM . . . . . 2 PROTESTANT . . . . . 3 HINDU . . . . . 4 OTHER _____ 6 (SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had during your life. I am interested in all of the children that are biologically yours, even if they are not legally yours or do not have your last name. Have you ever fathered any children with any woman?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters that you have fathered who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . . . . [ ][ ]	
206	Have you ever fathered a son or a daughter who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL CHILDREN . . . . . [ ][ ]	
209	CHECK 208: HAS HAD MORE THAN ONE CHILD ↓ HAS HAD ONLY ONE CHILD → 212 HAS NOT HAD ANY CHILDREN → 301		
210	Did all of the children you have fathered have the same biological mother?	YES . . . . . 1 NO 2	→ 212
211	In all, how many women have you fathered children with?	NUMBER OF WOMEN . . . . . [ ][ ]	
212	How old were you when your (first) child was born?	AGE IN YEARS . . . . . [ ][ ]	
213	CHECK 203 AND 205: AT LEAST ONE LIVING CHILD ↓ NO LIVING CHILDREN → 301		
214	How many years old is your (youngest) child?	AGE IN YEARS . . . . . [ ][ ]	
215	CHECK 214: (YOUNGEST) CHILD IS AGE 0-3 YEARS ↓ OTHER → 301		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
216	What is the name of your (youngest) child? WRITE NAME OF (YOUNGEST) CHILD _____ (NAME OF (YOUNGEST) CHILD)		
217	When (NAME)'s mother was pregnant with (NAME), did she have any antenatal check-ups?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 3	→ 219
218	Were you ever present during any of those antenatal check-ups?	PRESENT . . . . . 1 NOT PRESENT 2	
219	Was (NAME) born in a hospital or health facility?	HOSPITAL/HEALTH FACILITY . . . . . 1 OTHER 2	→ 221
220	What was the main reason why (NAME)'s mother did not deliver in a hospital or health facility?	COST TOO MUCH . . . . . 01 FACILITY CLOSED . . . . . 02 TOO FAR/NO TRANSPORTATION . 03 DON'T TRUST FACILITY/POOR QUALITY SERVICE . . . . . 04 NO FEMALE PROVIDER . . . . . 05 NOT THE FIRST CHILD . . . . . 06 CHILD'S MOTHER DID NOT THINK IT WAS NECESSARY . . . . . 07 HE DID NOT THINK IT WAS NECESSARY . . . . . 08 FAMILY DID NOT THINK IT WAS NECESSARY . . . . . 09 OTHER _____ 96 (SPECIFY) DON"T KNOW 98	
221	When a child has diarrhea, how much should he or she be given to drink: more than usual, the same amount as usual, less than usual, or should he or she not be given anything to drink at all?	MORE THAN USUAL . . . . . 1 ABOUT THE SAME . . . . . 2 LESS THAN USUAL . . . . . 3 NOTHING TO DRINK . . . . . 4 DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR METHODS 02, 07, 10, AND 11, ASK 302 IF 301 HAS CODE 1 CIRCLED.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
07	CONDOM Men can put a rubber sheath on their penis before sexual ntercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	
10	RHYTHM METHOD Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
11	STANDARD DAYS METHOD	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	EMERGENCY CONTRACEPTION As an emergency measure after sexual intercourse, women can take special pills at any time within 5 days to prevent pregnancy.	YES . . . . . 1 NO 2	
14	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
303	In the last few months have you: Heard about family planning on the radio? Seen about family planning on the television? Read about family planning in a newspaper or magazine? Seen about family planning in poster/billboard? Seen Street drama? Watched film ?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE 1 2 POSTER/BILLBOARD . . . . . 1 2 STREET DRAMA . . . . . 1 2 FILM 1 2	
304	In the last few months, have you discussed the practice of family planning with a health worker or health professional?	YES . . . . . 1 NO 2	
305	Now I would like to ask you about a woman's risk of pregnancy. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 307
306	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
307	Do you think that a woman who is breastfeeding her baby can become pregnant?	YES . . . . . 1 NO . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	
308	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is women's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous.	AGREE / DISAGREE / DK CONTRACEPTION WOMAN'S BUSINESS . 1 2 8 WOMAN MAY BECOME PROMISCUOUS . . . 1 2 8	
309	CHECK 301 (07) KNOWS MALE CONDOM YES ↓ NO →		→ 401
310	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 401

311	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B COMMUNITY HEALTH CEI . . . . . C HEALTH POST . . . . . D SISCa POST . . . . . E MOBILE CLINIC . . . . . F CONDOM BOX . . . . . G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . I OTHER NGO _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . K PHARMACY . . . . . L PRIVATE DOCTOR . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER SOURCE SHOP . . . . . Q FRIENDS/RELATIVES . . . . . R OTHER _____ X (SPECIFY)	
312	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO 2	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living together with a woman as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A WOMAN . . . . . 2 NO, NOT IN UNION 3	→ 404
402	Have you ever been married or lived together with a woman as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A WOMAN . . . . . 2 NO 3	→ 413
403	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 410
404	Is your wife/partner living with you now or is she staying elsewhere?	LIVING WITH HIM . . . . . 1 STAYING ELSEWHERE 2	
405	Do you have more than one wife or woman you live with as if married?	YES . . . . . 1 NO 2	→ 407
406	Altogether, how many wives do you have or other partners do you live with as if married?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . .	
407	CHECK 405: ONE WIFE/ PARTNER → Please tell me the name of your wife (the woman you are living with as if married). MORE THAN ONE WIFE/ PARTNER → Please tell me the name of each of your current wives (and/or of each woman you are living with as if married). RECORD THE NAME AND THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE AND LIVE-IN PARTNER. IF A WOMAN IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'. ASK 408 FOR EACH PERSON.	NAME / LINE NUMBER / 408 How old was (NAME) on her last birthday? AGE _____ ☐☐ ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐	
409	CHECK 407: ONE WIFE/ PARTNER MORE THAN ONE WIFE/ PARTNER →	→ 411A
410	Have you been married or lived with a woman only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	→ 411A
411 411A	In what month and year did you start living with your (wife/ partner)? Now I would like to ask a question about your first wife/partner. In what month and year did you start living with your first wife/ partner?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	→ 413
412	How old were you when you first started living with her?	AGE . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
413	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
414	Now I would like to ask you some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	→ 417 → 417
415	CHECK 107: AGE 15-24 ☐ ↓ AGE 25-49 ☐		→ 501
416	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	→ 501
417	CHECK 107: AGE 15-24 ☐ ↓ AGE 25-49 ☐		→ 419
418	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
419	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 ☐☐ WEEKS AGO . . . . . 2 ☐☐ MONTHS AGO . . . . . 3 ☐☐ YEARS AGO . . . . . 4 ☐☐	→ 435

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
420	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question. → SKIP TO 422			
421	When was the last time you had sexual intercourse with this person?		DAYS . 1 WEEKS 2 MONTHS 3	DAYS . 1 WEEKS 2 MONTHS 3
422	The last time you had sexual intercourse (with this second/third person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 424)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 424)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 424)
423	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
424	What was your relationship to this (second/third) person with whom you had sexual intercourse? IF GIRLFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	WIFE . . . . . 1 (SKIP TO 426) LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 SEX WORKER . . . . . 5 OTHER _____ 6 (SPECIFY)	WIFE . . . . . 1 (SKIP TO 426) LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 SEX WORKER . . . . . 5 OTHER _____ 6 (SPECIFY)	WIFE . . . . . 1 (SKIP TO 426) LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 SEX WORKER . . . . . 5 OTHER _____ 6 (SPECIFY)
425	For how long (have you had/did you have) a sexual relationship with this (second/third) person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS . 1 MONTHS 2 YEARS 3	DAYS . 1 MONTHS 2 YEARS 3	DAYS . 1 MONTHS 2 YEARS 3
426	The last time you had sexual intercourse with this (second/third) person, did you or this person drink alcohol?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 428)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 428)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 429)
427	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4
428	Apart from [this person/these two people], have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 421 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 430)	YES . . . . . 1 (GO BACK TO 421 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 430)	
429	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'			NUMBER OF PARTNERS LAST 12 MONTHS . . . DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
430	CHECK 424 (ALL COLUMNS): AT LEAST ONE PARTNER IS SEX WORKER ☐ NO PARTNERS ARE SEX WORKERS ☐ → 432		
431	CHECK 424 AND 422 (ALL COLUMNS): CONDOM USED WITH EVERY SEX WORKER ☐ → 434 OTHER ☐ → 435		
432	In the last 12 months, did you pay anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	→435
433	The last time you paid someone in exchange for having sexual intercourse, was a condom used?	YES . . . . . 1 NO 2	→435
434	Was a condom used during sexual intercourse every time you paid someone in exchange for having sexual intercourse in the last 12 months?	YES . . . . . 1 NO . . . . . 2 DK 8	
435	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
436	CHECK 422, MOST RECENT PARTNER (FIRST COLUMN): NOT ASKED ☐ → 442 CONDOM USED ☐ NO CONDOM USED ☐ → 442		
439	How many condoms did you get the last time?	NUMBER OF CONDOMS . . . . . ☐☐☐ DON'T KNOW 998	
440	The last time you obtained the condoms, how much did you pay in total, including the cost of the condom(s) and any consultation you may have had?	COST . . . . . ☐☐☐ FREE . . . . . 995 DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
441	From where did you obtain the condom the last time? PROBE TO IDENTIFY TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 11 REFERRAL HOSPITAL . . . . . 12 COMMUNITY HEALTH CEN . . . . . 13 HEALTH POST . . . . . 14 SISCa POST . . . . . 15 MOBILE CLINIC . . . . . 17 CONDOM BOX 18 OTHER PUBLIC _____ 16 (SPECIFY) NON-GOVT (NGO) SECTOR MARIE STOPES . . . . . 21 OTHER NGO _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 31 PHARMACY . . . . . 32 PRIVATE DOCTOR ..... 33 MOBILE CLINIC . . . . . 34 FIELDWORKER . . . . . 35 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER SOURCE SHOP . . . . . 41 FRIENDS/RELATIVES . . . . . 42 OTHER _____ 96 (SPECIFY)	
442	CHECK 302 (02): RESPONDENT EVER STERILIZED NO ☐ YES ☐ → 501		
443	The last time you had sex did you or your partner use any method (other than a condom) to avoid or prevent a pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 501
444	What method did you or your partner use? PROBE: Did you or your partner use any other method to prevent pregnancy? RECORD ALL MENTIONED.	FEMALE STERILIZATION . . . . . A PILL . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E FEMALE CONDOM . . . . . F DIAPHRAGM . . . . . G FOAM/JELLY . . . . . H LAM . . . . . I RHYTHM METHOD . . . . . J STANDARD DAYS METHOD K WITHDRAWAL . . . . . L OTHER _____ X (SPECIFY)	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 407: ONE OR MORE WIVES/PARTNERS ☐	QUESTION NOT ASKED ☐ →	508
502	CHECK 302: MAN NOT STERILIZED ☐	MAN STERILIZED ☐ →	508
503	(Is your wife (partner)/Are any of your wives (partners)) currently pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
504	CHECK 503: NO WIFE/PARTNER PREGNANT OR DON'T KNOW ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children?	WIFE(WIVES)/ PARTNER(S) PREGNANT ☐ Now I have some questions about the future. After the child(ren) you and your (wife(wives)/partner(s)) are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 COUPLE INFECUND . . . . . 3 WIFE (WIVES)/PARTNER(S) STERILIZED . . . . . 4 UNDECIDED/DON'T KNOW . . . . . 8 → 508
505	CHECK 407: ONE WIFE/ PARTNER ☐	MORE THAN ONE WIFE/ PARTNER ☐ →	507
506	CHECK 503: WIFE/PARTNER NOT PREGNANT OR DON'T KNOW ☐ How long would you like to wait from now before the birth of (a/another) child?	WIFE/PARTNER PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 COUPLE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW . . . . . 998 → 508
507	How long would you like to wait from now before the birth of (a/another) child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 HE/ALL HIS WIVES/PARTNERS ARE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
508	CHECK 203 AND 205: HAS LIVING CHILDREN ☐ → If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 601 → 601
509	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 6. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 604
602	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, or any other such reason?	YES . . . . . 1 NO 2	→ 604
603	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 613
604	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
605	CHECK 604: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐ → 607		
606	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND 4	
607	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
608	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
609	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
610	CHECK 407: ONE OR MORE WIVES/PARTNERS ☐ ↓ QUESTION NOT ASKED ☐ → 613		
611	CHECK 609: CODE 1 OR 2 CIRCLED ☐ ↓ OTHER ☐ → 613		
612	Who usually decides how the money you earn will be used: mainly you, mainly your (wife (wives)/partner(s)), or you and your (wife (wives)/partner(s)) jointly?	RESPONDENT . . . . . 1 WIFE(WIVES)/PARTNER(S) . . . . . 2 RESPONDENT AND WIFE (WIVES)/ PARTNER(S) JOINTLY . . . . . 3 OTHER _____ 6 SPECIFY	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	In a couple, who do you think should have the greater say in each of the following decisions: the husband, the wife or both equally: a) making major household purchases? b) making purchases for daily household needs? c) deciding about visits to the wife's family or relatives? d) deciding what to do with the money she earns for her work? e) deciding how many children to have?	HUS-BAND / WIFE / BOTH EQUALLY / DON'T KNOW/ DEPENDS a) 1 2 3 8 b) 1 2 3 8 c) 1 2 3 8 d) 1 2 3 8 e) 1 2 3 8	
614	I will now read you some statements about pregnancy. Please tell me if you agree or disagree with them. a) Childbearing is a woman's concern and there is no need for the father to get involved. b) It is crucial for the mother's and child's health that a woman have assistance from a doctor or nurse at delivery.	AGREE / DIS-AGREE / DK CHILDBEARING WOMAN'S CONCERN 1 2 8 DOCTOR/NURSE'S ASSISTANCE CRUCIAL 1 2 8	
615	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations: If she goes out without telling him? If she neglects the children? If she argues with him? If she refuses to have sex with him? If she burns the food?	YES / NO / DK GOES OUT . . . . . 1 2 8 NEGL. CHILDREN . . . 1 2 8 ARGUES . . . . . 1 2 8 REFUSES SEX . . . . . 1 2 8 BURNS FOOD 1 2 8	
616	Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to… a) Get angry and reprimand her? b) Refuse to give her money or other means of support? c) Use force and have sex with her even if she doesn't want to? d) Go ahead and have sex with another woman?	YES / NO / DON'T KNOW/ DEPENDS a) 1 2 8 b) 1 2 8 c) 1 2 8 d) 1 2 8	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 715
702	Can people reduce their chances of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
703	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
704	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
705	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
706	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707	Can people get the AIDS virus by sharing clothes with a person who has AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
708	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
708A	Can HIV/AIDS be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
709	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 711
710	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B VCT CENTER . . . C COMMUNITY HEALTH CEN . . . . . D HEALTH POST . . . . . E SISCa POST . . . . . F MOBILE CLINIC . . . . . G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT(NGO) SECTOR MARIE STOPES . . . . . I OTHER NGOS _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . K VCT CENTER . . . L PHARMACY . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER _____ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
712	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
713	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
714	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
715	CHECK 701: HEARD ABOUT AIDS → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
716	CHECK 414: HAS HAD SEXUAL INTERCOURSE HAS NOT HAD SEXUAL INTERCOURSE → 724		
717	CHECK 715: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES NO → 719		
718	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
719	Sometimes men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
720	Sometimes men have a sore or ulcer near their penis. During the last 12 months, have you had a sore or ulcer near your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
721	CHECK 718, 719, AND 720: HAS HAD AN INFECTION (ANY 'YES') ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW →		→ 724
722	The last time you had (PROBLEM FROM 718/719/720), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 724
723	Where did you go? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . A REFERRAL HOSPITAL . . . . . B VCT CENTER . . . C COMMUNITY HEALTH CEN . . . . . D HEALTH POST . . . . . E SISCa POST . . . . . F MOBILE CLINIC . . . . . G OTHER PUBLIC _____ H (SPECIFY) NON-GOVT(NGO) SECTOR MARIE STOPES . . . . . I OTHER NGOS _____ J (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . K VCT CENTER . . . L PHARMACY . . . . . M MOBILE CLINIC . . . . . N FIELDWORKER . . . . . O OTHER PRIVATE MEDICAL _____ P (SPECIFY) OTHER SOURCE SHOP . . . . . Q OTHER _____ X (SPECIFY)	
724	Husband and wives do not always agree in everything. If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in refusing to have sex with him?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
725	Is a wife justified in refusing to have sex with her husband when she is tired or not in the mood?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
726	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 805
802	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS ... B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT ..... E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
803	Can tuberculosis be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
804	If a member of your family got tuberculosis, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/ DEPENDS 8	
805	Some men are circumcised. Are you circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
806	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS ... ☐☐ NONE 00	→ 810
807	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 810
808	The last time you had an injection given to you by a health worker, where did you go to get the injection? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR NATIONAL HOSPITAL . . . . . 11 REFERRAL HOSPITAL . . . . . 12 COMMUNITY HEALTH CEN. . . . . 13 HEALTH POST . . . . . 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 DENTAL CLINIC/OFFICE . . . . . 22 PHARMACY . . . . . 23 OFFICE OR HOME OF NURSE/ HEALTH WORKER . . . . . 24 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER PLACE AT HOME . . . . . 31 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
809	Did the person who gave you that injection take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
810	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 812
811	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES	
812	Do you currently smoke or use any other type of tobacco?	YES . . . . . 1 NO 2	→ 814
813	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C ROLLED TOBACCO . . . . . D OTHER _____ X (SPECIFY)	
814	RECORD THE TIME.	HOUR . . . . . MINUTES	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____