KINGDOM OF CAMBODIA
NATION RELIGION KING

Cambodia
Demographic and Health Survey
2014

Key Indicators Report

National Institute of Statistics
Ministry of Planning
Phnom Penh, Cambodia

Directorate General for Health
Ministry of Health
Phnom Penh, Cambodia

The DHS Program
ICF International
Rockville, Maryland, USA

February 2015

Sponsored by USAID, Australia-DFAT, UNFPA, UNICEF, JICA, KOICA, and HSSP-2

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The 2014 Cambodia Demographic and Health Survey (2014 CDHS) was implemented by the National Institute of Statistics from June to November 2014. The funding for the CDHS was provided by United States Agency for International Development (USAID), the Australian Department of Foreign Affairs and Trade (Australia-DFAT), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Japan International Cooperation Agency **(**JICA**),** the Korean International Cooperation Agency (KOICA), and the Health Sector Support Program – Second Phase (HSSP-2). ICF International provided technical assistance as well as funding to the project through The DHS Program, a USAID-funded project providing support and technical assistance in the implementation of population and health surveys in countries worldwide.

Additional information about the 2014 CDHS may be obtained from the National Institute of Statistics; 386 Monivong Boulevard, Sangkat Beong Keng Kang 1, Chamkar Mon, Phnom Penh, Cambodia; Telephone: (855) 23213650; E-mail: linahang2002@gmail.com; Internet: www.ins.gov.kh and the Directorate General for Health, Ministry of Health, 80 Samdech Penn Nouth Boulevard (289), Sangkat Boeungkak 2, Toul Kork District, Phnom Penh, Cambodia; Telephone: (855) 885970; Fax: (855) 884 909; E-mail: webmaster@moh.gov.kh; Internet: www.moh.gov.kh.

Information about The DHS Program may be obtained from ICF International, 530 Gaither Road, Suite 500, Rockville, MD 20850 USA; Telephone: 301-407-6500; Fax: 301-407-6501; E-mail: info@DHSprogram.com; Internet: www.DHSprogram.com.

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PREFACE

This Key Indicators report (KIR) presents the preliminary findings from the 2014 Cambodia Demographic and Health Survey (CDHS). Survey findings will be used by policy makers to evaluate the demographic and health status of the Cambodian population in order to formulate appropriate population and health policies and programs in Cambodia. The forthcoming final report of the CDHS will contain more detailed findings.

This survey was sponsored by the United States Agency for International Development (USAID), the Australian Department of Foreign Affairs and Trade (Australia-DFAT), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Japan International Cooperation Agency **(**JICA**),** the Korean International Cooperation Agency (KOICA), and the Health Sector Support Program – Second Phase (HSSP-2). Technical assistance was provided by ICF International through the Demographic and Health Surveys program (the DHS Program). The Directorate General for Health (DGH) of the Ministry of Health and the National Institute of Statistics (NIS) of the Ministry of Planning were the implementing agencies of the survey. The fieldwork for the CDHS took place over about five months from June 2, 2014, to November 14, 2014. The data processing took place from August 26, 2014, to January 23, 2015.

The main objective of the 2014 CDHS was to obtain current information on demography, family planning, maternal mortality, infant and child mortality, and health related information such as breastfeeding, antenatal care, delivery, children's immunization, childhood diseases, and HIV/AIDS. In addition, the survey was designed to evaluate the nutritional status of mothers and children and to measure the prevalence of anemia.

We thank USAID, Autralia-DFAT, UNFPA, UNICEF, JICA, KOICA, and HSSP-2 for financing the project. We gratefully acknowledge the support and encouragement extended by H.E. Prof. Eng Huot, Secretary of State, Ministry of Health, H.E. San Sy Than, Secretary of State, Ministry of Planning, and other members of the Executive Committee and Technical Committee who contributed to the successful implementation of the survey.

We greatly appreciate the work carried out by all persons involved in the CDHS and especially the NIS staff at the central and provincial offices and the DGH staff who worked with dedication and enthusiasm to make the survey a success.

Finally, we would like to express our special thanks to all the local authorities involved and all study participants who gave their valuable time to make this survey possible.

Her Excellency Hang Lina
Director General
National Institute of Statistics

Dr. Lo Veasnakiry
Director
Department of Planning and Health Information System

INTRODUCTION 1

The 2014 Cambodia Demographic and Health Survey (CDHS) was carried out by the National Institute of Statistics (NIS) and the Directorate General for Health (DGH). ICF International provided technical assistance to the project through the Demographic and Health Surveys Program (the DHS Program). The survey was funded by the United States Agency for International Development (USAID), the Australian Department of Foreign Affairs and Trade (Australia-DFAT), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Japan International Cooperation Agency (JICA), the Korean International Cooperation Agency (KOICA), and the Health Sector Support Program – Second Phase (HSSP-2). Data collection was conducted from June 2, 2014, to December 12, 2014, on a nationally representative sample of 16,344 households. All women age 15-49 in these households and all men age 15-49 in a sub-sample of one-third of the households were eligible to be individually interviewed.

The 2014 CDHS, the fourth of its kind, follows the CDHS surveys that were successfully conducted in 2000, 2005, and 2010. The 2014 CDHS provides data to monitor the population and health situation in Cambodia. Specifically, the 2014 CDHS collected information on a broad range of demographic, health, and social issues such as household characteristics, utilization of health services, maternal and child health, breastfeeding practices, early childhood mortality, maternal mortality, nutritional status of women and young children, fertility levels and preferences, marriage, awareness and use of family planning methods, sexual activity, and awareness and behavior regarding AIDS and other sexually transmitted infections. In the follow-up visits in about one-sixth of sampled clusters, UNCEF organized the collection of blood, urine, and stool specimens among women and children for micronutrient testing.

This key indicators report presents only a sub-set of results of the 2014 CDHS. A comprehensive analysis of the data is forthcoming. Although they are considered provisional, the results presented here are not expected to differ significantly from those to be presented in the final report.

SURVEY IMPLEMENTATION 2

2.1 SAMPLE DESIGN

The sample was designed such that resulting statistics can be calculated for the country as a whole and for urban and rural areas. Survey estimates can also be reported for 19 study domains. Fourteen of the 19 domains are individual administrative provinces: Banteay Mean Chey, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kandal, Kratie, Phnom Penh, Prey Veng, Pursat, Siem Reap, Svay Rieng, Takeo, and Otdar Mean Chey. The remaining ten provinces are paired into five groups:

Group 1: Battambang, and Pailin
Group 2: Kampot and Kep
Group 3: Preah Sihanouk and Kaoh Kong
Group 4: Preah Vihear and Steung Treng
Group 5: Mondol Kiri and Rattanak Kiri

It should be noted that the domains are defined in the same way that the domains were defined in the previous CDHS reports of 2005 and 2010.

A representative sample of 16,356 households was selected for the 2014 CDHS. The sample was selected in two stages. In the first stage, 611 villages (also known as clusters or enumeration areas) were selected with probability proportional to village size. Village size is the number of households residing in the village. Then, a complete mapping and listing of all households existing in the selected villages was conducted. The resulting lists of households served as the sampling frame for the second stage of sample selection. Households were systematically selected from those lists for participation in the survey.

All women age 15-49 who were either permanent residents of the households or visitors present in the household on the night before the survey were eligible to be interviewed. In a sub-sample of one-third of all households selected for the survey, all men age 15-49 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey. In addition, in about one-sixth of sampled clusters, in the follow-on visits, UNCEF organized the collection of blood, urine and stool specimens among women and children for micronutrient testing.

2.2 QUESTIONNAIRES

Four questionnaires were used for the 2014 CDHS: the Household Questionnaire, the Woman's Questionnaire, the Man's Questionnaire, and the Micronutrient Questionnaire. The questionnaires are based on the questionnaires developed by the worldwide Demographic and Health Surveys (DHS) Program and on the questionnaires used during the 2010 CDHS survey. To reflect relevant issues in population and health in Cambodia, the questionnaires were adapted during a series of technical meetings with various stakeholders from government ministries and agencies, nongovernmental organizations, and international donors. The final drafts of the questionnaires were discussed at a stakeholders' meeting organized by the National Institute of Statistics (NIS). The adapted questionnaires were translated from English into Khmer and pre-tested in February – March 2014.

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 18, survival status of the parents was determined. The Household Questionnaire also collected information on the following topics:

- Dwelling characteristics
- Accidental death and injury
- Physical impairment
- Utilization of health services and health expenditures for recent illness and injury
- Possession of iodized salt
- Height and weight of women and children
- Hemoglobin measurement of women and children for diagnosing anemia

The Household Questionnaire was used to identify women and men eligible for an individual interview. The Woman's Questionnaire was used to collect information from all women age 15-49 and was organized into the following sections:

- Respondent background characteristics
- Reproduction, including a complete birth and death history of respondents' live births, and information on abortion
- Contraception
- Pregnancy, postnatal care, and women's nutrition
- Immunization, health, and children's nutrition
- Marriage and sexual activity
- Fertility preferences
- Husband's background and woman's work
- HIV/AIDS and other sexually transmitted infections
- Maternal mortality

The Man's Questionnaire was administered to all men age 15-49 living in one-third of households in the CDHS sample. The Man's Questionnaire was organized into the following sections:

- Respondent background characteristics
- Reproduction
- Marriage and sexual activity
- HIV/AIDS
- Other health issues

The Micronutrient Questionnaire was used to identify clusters selected for the collection of micronutrient specimens and to identify eligible women and children.

Administration of Questionnaires to Respondents

Not all sections of the four questionnaires were administered to all households or to all respondents. The woman qnnaire was administered in all HHs in which there was an eligible woman. Men were interviewed in one-third of the households. In the other two-thirds of the sample, the survey collected anthropometric measurements (height and weight) of women age 15-49 and children under age 5. The survey also tested for hemoglobin level among women age 15-49 and children age 6-59 months in the same two-thirds of the subsample. Micronutrient samples were collected in one-sixth of the households. The entire sample was comprised of over 16,000 households, resulting in interviews with 15,667 households, 18,754 women, and 8,239 men.

2.3 TRAINING OF FIELD STAFF

All aspects of data collection were pre-tested in February and March 2014. Forty-four women and men were trained from February 27, 2014, to March 17, 2014, in the administration of the CDHS survey instruments, taking of anthropometric measurements, and hemoglobin testing. Five days of fieldwork were followed by three days of interviewer debriefing and correction of questionnaires. Pre-test fieldwork was

conducted in 79 households in two rural and two urban villages. The majority of pretest participants also attended the training for the main survey, with many of them serving as field editors and team leaders for the main survey.

The main training was conducted from May 1 to 31, 2014. The objective was to produce 114 field personnel to staff 19 teams; 109 field personnel were retained at the end of training. Each team was comprised of a team leader, a field editor, three female interviewers, a male interviewer, and a driver. Training of field teams included classroom training and four days of field practice.

2.4 BIOMARKER TESTING

2.4.1 Anthropometric Measurement

The 2014 CDHS included an anthropometric component in which children under age 5 in a subsample of two-thirds of the households were measured for height and weight. Weight measurements were taken using a lightweight, electronic SECA scale designed and manufactured under the guidance of the United Nations Children's Fund (UNICEF). The scale allowed for the weighing of very young children through an automatic mother-child adjustment that eliminates the mother's weight while she is standing on the scale with her baby. Height measurements were carried out using a SECA measuring board, which is also produced under the guidance of UNICEF. Children younger than 24 months were measured lying down (recumbent length) on the board, whereas standing height was measured for older children. Three nutritional indices were calculated using children's age, height, and weight: height-for-age (stunting), weight-for-height (wasting), and weight-for-age (underweight).

The height and weight of women age 15-49 were measured among the two-thirds subsample of households selected in the 2014 CDHS.

2.4.2 Hemoglobin Testing

Hemoglobin testing is the primary method for anemia diagnosis. The 2014 CDHS included anemia testing of children age 6 to 59 months and women age 15-49 in the two-thirds of CDHS households that were not selected for men's interview. A consent statement was read to the eligible respondent, or to the parent or responsible adult of children and young unmarried women age 15-17. This statement explained the purpose of the test, informed them that the results would be made available as soon as the test was completed, and requested permission for the test to be carried out.

Anemia levels were determined by measuring the level of hemoglobin in the blood; a decreased concentration characterizes anemia. The concentration of hemoglobin in the blood was measured in the field using the HemoCue system. The HemoCue instrument is a special purpose photometer designed specifically for the determination of hemoglobin levels. A capillary blood sample was taken from the palm side of the end of a finger, by puncturing with a sterile, nonreusable, self-retractable lancet. The blood drop was collected in a HemoCue microcuvette, which serves as a measuring tool, and placed in the HemoCue photometer to determine the level of hemoglobin in the blood. A pamphlet was given to each respondent, explaining symptoms of anemia, prevention methods, and the individual results of the hemoglobin measurement of the respondent and any children for whom she gave permission to be measured. Each person whose hemoglobin level was lower than the recommended cutoff point (testing severely anemic) was advised to visit a health facility for follow-up with a health professional.

2.4.3 Micronutrient Testing

The 2014 CDHS includes a micronutrient component that was implemented in 1 out of 6 clusters selected for the main survey. In these clusters, blood, urine, and stool samples were collected by a special team from women who had given birth in the five years preceding the survey, and from their children age 6-59 months. The blood/urine/stool samples were sent to several laboratories inside and outside of Cambodia

for analysis. Test results will be reported separately for women and children at the national level and by urban-rural residence in the final report.

2.5 FIELDWORK

Fieldwork was launched immediately upon the conclusion of field staff training. Each of the 19 teams was assigned to one of the 19 sampling domains. Fieldwork supervision was conducted by NIS, DGH, and ICF International through regular visits to teams to review their work and monitor data quality. Additional contact between the central office and the teams was maintained through the use of cell phones. In most teams, the team leader was the same person who had implemented the mapping and listing of households in the 2014 CDHS selected clusters, and thus this person was well acquainted with the data collection sites assigned to the team. Fieldwork was conducted from June 2, 2014, to December 12, 2014. Questionnaires were regularly delivered to NIS headquarters.

2.6 DATA PROCESSING

The processing of the 2014 CDHS data began as soon as questionnaires were received from the field. Completed questionnaires were returned from the field to NIS headquarters, where they were entered and edited by data processing personnel who were specially trained for this task and had also attended questionnaire training of field staff. Processing the data concurrently with data collection allowed for regular monitoring of team performance and data quality. Field check tables were generated regularly during the data processing to check various data quality parameters. As a result, feedback was given on a regular basis, encouraging teams to continue in areas of high quality and to correct areas of needed improvement. Feedback was individually tailored to each team. Data entry, which included 100 percent double entry to minimize keying error, and data editing, were completed on January 8, 2015. Data cleaning and finalization were completed on January 23, 2015.

SURVEY FINDINGS 3

3.1 RESPONSE RATES

Table 3.1 shows household and individual response rates for the 2014 CDHS. A total of 16,356 households were selected for the sample, of which 15,937 were occupied during data collection. Of the 15,937 occupied households, 15,825 were successfully interviewed, yielding a household response rate of 99 percent.

In these interviewed households, 18,012 women were identified as eligible for the individual interview. Interviews were completed with 98 percent of them. Of the 5,484 eligible men identified in one-third of households, 95 percent (5,190) were successfully interviewed. There is little variation in response rates by urban-rural residence.

Table 3.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Cambodia 2014

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	4,512	11,844	16,356
Households occupied	4,399	11,538	15,937
Households interviewed	4,366	11,459	15,825
Household response rate[1]	99.2	99.3	99.3
Interviews with women age 15-49			
Number of eligible women	5,842	12,170	18,012
Number of eligible women interviewed	5,667	11,911	17,578
Eligible women response rate[2]	97.0	97.9	97.6
Interviews with men age 15-49			
Number of eligible men	1,641	3,843	5,484
Number of eligible men interviewed	1,540	3,650	5,190
Eligible men response rate[2]	93.8	95.0	94.6

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

3.2 CHARACTERISTICS OF RESPONDENTS

The distribution of women age 15-49 and men age 15-49 by background characteristics is shown in Table 3.2. The distribution by age shows a decline in numbers of women and men with increasing age. About 34 percent of both women and men are age 15-24. Sixty-eight percent of women are currently married or living with a man as married, as are 66 percent of men. Because men tend to marry later in life than women, 32 percent of men in the sample have never been married compared with 25 percent of women. A higher percentage of women (7 percent) are divorced, separated, or widowed, compared with 2 percent of men.

Table 3.2 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Cambodia 2014

Background characteristic	Women			Men		
	Weighted percentage	Weighted number	Unweighted number	Weighted percentage	Weighted number	Unweighted number
Age						
15-19	16.5	2,893	3,006	17.8	926	946
20-24	17.2	3,017	3,038	16.1	835	881
25-29	16.1	2,836	2,866	15.7	815	796
30-34	17.3	3,046	2,996	17.5	907	888
35-39	10.5	1,839	1,776	10.7	556	528
40-44	11.6	2,030	1,995	11.5	595	603
45-49	10.9	1,916	1,901	10.7	556	548
Religion						
Buddhist	96.0	16,882	16,699	95.4	4,949	4,888
Muslim	1.9	335	338	2.6	133	124
Christian	0.9	157	151	0.9	47	48
Other/missing	1.2	204	390	1.2	61	130
Marital status						
Never married	25.2	4,428	4,651	32.0	1,663	1,746
Married	67.2	11,808	11,574	65.3	3,388	3,306
Living together	0.5	91	94	0.3	17	14
Divorced/separated	3.8	664	697	1.8	95	97
Widowed	3.3	588	562	0.5	26	27
Residence						
Urban	18.5	3,251	5,667	16.7	869	1,540
Rural	81.5	14,327	11,911	83.3	4,321	3,650
Province						
Banteay Mean Chey	3.9	689	810	3.7	192	223
Kampong Cham	11.5	2,021	853	12.8	663	300
Kampong Chhnang	3.8	662	899	3.5	182	251
Kampong Speu	6.8	1,196	1,022	6.2	323	269
Kampong Thom	4.8	851	905	4.5	232	261
Kandal	7.6	1,330	875	8.0	413	239
Kratie	2.8	488	874	2.8	143	258
Phnom Penh	11.3	1,994	1,400	10.6	550	391
Prey Veng	6.8	1,188	819	6.6	342	244
Pursat	3.6	631	859	3.5	184	261
Siem Reap	6.5	1,137	943	6.5	337	282
Svay Rieng	3.7	654	822	3.5	183	237
Takeo	6.2	1,082	868	6.4	334	252
Otdar Mean Chey	1.7	294	823	1.9	99	277
Battambang/Pailin	7.6	1,333	867	7.8	405	249
Kampot/Kep	4.4	770	880	4.6	241	284
Preah Sihanouk/Kaoh Kong	2.4	422	1,010	2.3	120	288
Preah Vihear/Steung Treng	2.6	462	1,085	2.2	112	274
Mondol Kiri/Rattanak Kiri	2.1	372	964	2.6	134	350
Education						
No education	12.8	2,250	2,233	6.2	324	327
Primary	47.1	8,281	7,826	41.8	2,167	2,026
Secondary	35.5	6,237	6,535	44.4	2,304	2,362
More than secondary	4.6	810	984	7.6	395	475
Wealth quintile						
Lowest	17.9	3,143	3,050	17.4	901	885
Second	18.9	3,314	3,057	18.4	954	930
Middle	19.2	3,381	2,798	20.0	1,040	867
Fourth	20.6	3,612	3,450	21.7	1,124	1,037
Highest	23.5	4,128	5,223	22.6	1,171	1,471
Total 15-49	100.0	17,578	17,578	100.0	5,190	5,190

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

Cambodia's population is predominantly rural, with slightly more than four in five Cambodians living in rural areas. Nineteen percent of women and seventeen percent of men live in urban areas. Overall, 47 percent of women and 42 percent of men have attended some primary school without having gone on to secondary school. Slightly more than one in every two men (52 percent) has attended secondary or higher education and two in five women (40 percent) have done so. But school experience is not universal; 6 percent of men and 13 percent of women have never attended school.

3.3 FERTILITY

Fertility data were collected by asking each of the women interviewed for a complete history of her live births. Information obtained about each woman's births included the month and year of the birth. These data were used to calculate the measures of current fertility, the total fertility rate (TFR) and its component age-specific fertility rates. The TFR, which is the sum of the age-specific fertility rates, is interpreted as the number of children the average woman would bear in her lifetime if she experienced the currently observed age-specific fertility rates throughout her reproductive years.

Table 3.3 Current fertility

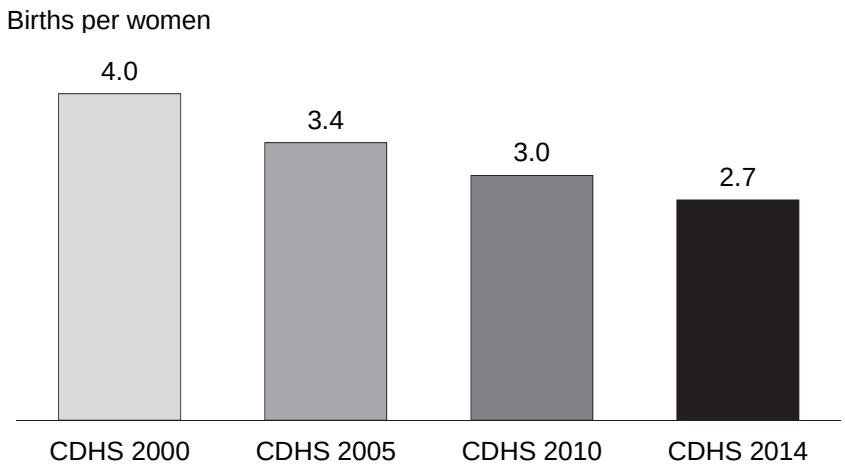
Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Cambodia 2014

	Residence		
Age group	Urban	Rural	Total
15-19	21	66	57
20-24	101	179	162
25-29	135	156	151
30-34	92	104	102
35-39	56	50	51
40-44	11	18	17
45-49	3	5	4
TFR (15-49)	2.1	2.9	2.7
GFR	76	103	98
CBR	20.2	22.4	22.0

Note: 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 age 15-44
CBR: Crude birth rate, expressed per 1,000 population

As of 2014, the TFR in Cambodia is 2.7 children per woman (Table 3.3). On average, rural women would give birth to approximately 2.9 children during their reproductive years, while urban women would give birth to only 2.1 children during their reproductive years if they were to follow current levels of fertility throughout their life. The total fertility rate has declined over the past 15 years. The 2000 CDHS and 2005 CDHS each estimated the number of children the average woman would bear in her lifetime to be 4.0 and 3.4 children per women, respectively. By 2010, the TFR further declined to 3.0 children per women (Figure 3.1).

Figure 3.1 **Trends in total fertility rate, 2000-2014**



Teenage fertility is a major health concern and may have severe social consequences for women and their children. Table 3.4 presents the proportion of women age 15-19 (teenagers) who are mothers or pregnant with their first child, by background characteristics. About one in eight women age 15-19 has become a mothers or is currently pregnant with her first child (12 percent). The percentage of women who have begun childbearing increases with age, from less than 1 percent among women age 15 to 31 percent among women age 19. Six percent of urban girls and 13 percent of rural girls begin childbearing before age 20. The level of teenage fertility is strongly associated with education. More than one-third of teenagers who have never been to school have begun childbearing (37 percent), compared with 18 percent of teenagers who have a primary school education, and fewer than 1 in 10 teenagers with a secondary education.

Table 3.4 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, Cambodia 2014

Background characteristic	Percentage of women age 15-19 who: Have had a live birth	Are pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	0.2	0.4	0.6	640
16	1.4	2.4	3.8	556
17	3.5	4.4	7.9	577
18	10.0	8.4	18.4	577
19	23.2	8.2	31.3	542
Residence				
Urban	4.3	1.9	6.2	532
Rural	8.0	5.2	13.3	2,361
Province				
Banteay Mean Chey	16.5	2.5	18.9	113
Kampong Cham	13.1	2.9	16.1	327
Kampong Chhnang	6.3	2.9	9.1	129
Kampong Speu	2.0	6.2	8.2	202
Kampong Thom	4.1	4.4	8.6	156
Kandal	8.8	3.1	11.9	225
Kratie	14.5	5.0	19.5	80
Phnom Penh	3.8	2.1	5.9	316
Prey Veng	6.7	4.2	10.9	141
Pursat	3.8	4.8	8.6	100
Siem Reap	4.8	10.5	15.3	191
Svay Rieng	6.5	4.4	10.9	73
Takeo	2.5	5.2	7.8	193
Otdar Mean Chey	11.0	5.8	16.8	50
Battambang/Pailin	3.1	1.2	4.3	217
Kampot/Kep	7.3	4.3	11.6	114
Preah Sihanouk/Kaoh Kong	7.5	5.5	12.9	88
Preah Vihear/Steung Treng	12.1	13.1	25.1	102
Mondol Kiri/Rattanak Kiri	23.2	10.6	33.8	75
Education				
No education	25.5	11.6	37.1	82
Primary	11.8	6.7	18.4	852
Secondary	4.9	3.6	8.5	1,875
More than secondary	0.0	0.0	0.0	84
Wealth quintile				
Lowest	11.2	7.0	18.1	458
Second	9.8	5.1	14.9	552
Middle	7.5	6.2	13.8	578
Fourth	4.9	3.7	8.6	630
Highest	4.9	2.2	7.1	675
Total	7.3	4.6	12.0	2,893

3.4 FERTILITY PREFERENCES

Several questions were asked to determine women's fertility preferences, namely whether the respondent wanted another child and, if so, when. The answers allow an estimation of the potential demand for family planning services, either to limit or space births.

Table 3.5 indicates that nearly one in two (48 percent) currently married women do not want to bear any more children. These women and the women who want to delay the birth of their next child are considered to be in need of family planning. Seventy-five percent of married women say that they either want to delay the birth of their next child or want to have no more children at all. Fertility preferences are closely related to the number of living children a woman already has. In general, as the number of living children increases, the desire to stop childbearing increases substantially. For example, 1 in 10 currently married women with one living child (10 percent) say they do not want to have more children compared with nearly one in two married women who have two children (48 percent). On the other hand, most married women with no children want to have a child; three-quarters say that they want to have a child soon.

Table 3.5 Fertility preferences by number of living children

Percent distribution of currently married women age 15-49 by desire for children, according to number of living children, Cambodia 2014

	Number of living children[1]							
Desire for children	0	1	2	3	4	5	6+	Total
Have another soon[2]	73.2	19.2	8.7	4.0	2.5	2.2	0.5	12.4
Have another later[3]	12.1	62.5	30.5	11.0	3.4	1.3	0.6	27.0
Have another, undecided when	4.3	3.3	2.3	1.5	1.0	0.8	0.1	2.1
Undecided	1.3	3.1	4.7	3.2	1.3	1.5	0.5	3.1
Want no more	4.4	9.6	48.4	71.0	79.3	81.8	85.7	48.4
Sterilized[4]	0.4	0.6	1.9	4.9	6.4	7.3	6.5	3.1
Declare infecund	4.3	1.8	3.2	4.5	6.1	5.0	6.2	3.8
Missing	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	673	2,824	3,452	2,283	1,392	713	563	11,898

[1] Number of living children includes current pregnancy
[2] Wants next birth within two years
[3] Wants to delay next birth for two or more years
[4] Includes both female and male sterilization

3.5 FAMILY PLANNING

Information about use of contraceptive methods was collected from female respondents by asking them if they (or their partner) were currently using a method. Contraceptive methods are grouped into two types in the table: modern and traditional. Modern methods include female sterilization, male sterilization, IUDs, injectables, implants, daily pills, monthly pill, male condom, female condom, and lactational amenorrhea method (LAM). Traditional methods include rhythm and withdrawal.

Table 3.6 shows the level of contraceptive use and key differentials by method as reported by currently married women. Overall, 56 percent of currently married women are using some method of contraception. The majority of users rely on a modern method. Use of modern contraceptive methods has increased over the past 10 years, from 27 percent of currently married women in 2005, to 35 percent in 2010, and to 39 percent in 2014. The most commonly used modern methods are the daily pill and injectables (18 percent and 9 percent, respectively). Fifteen percent of women report using withdrawal.

Four percent of women without any children are using a modern method of contraception. However, in general, women do not begin to use contraception until they have had at least one child. Slightly more than two out of five currently married women with one to two children (42 percent) and three to four children (45 percent) are currently using a modern method of contraception. The use of traditional contraception increases with increasing level of education. Twenty-one percent of women with some secondary education and 27 percent of women with higher education use rhythm or withdrawal methods, in contrast with 12 percent of women with no education. The association of education and use of modern contraception does not show this kind of relationship.

Table 3.6 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, Cambodia 2014

				Modern method									Traditional method					
Background characteristic	Any method	Any modern method	Female sterili-zation	Male sterili-zation	IUD	Inject-ables	Implants	Daily pill	Monthly pill	Male condom	Other[1]	Any tradi-tional method	Rhythm	With-drawal	Other	Not currently using	Total	Number of women
Age																		
15-19	29.1	20.2	0.0	0.0	2.2	8.0	2.1	7.2	0.0	0.7	0.0	8.9	0.4	8.5	0.0	70.9	100.0	450
20-24	47.8	34.4	0.1	0.0	3.9	10.1	2.5	16.4	0.1	1.2	0.2	13.4	1.2	12.2	0.0	52.2	100.0	1,833
25-29	61.6	43.8	0.9	0.0	5.2	9.8	2.8	22.3	0.1	2.5	0.1	17.9	2.3	15.4	0.2	38.4	100.0	2,249
30-34	68.0	47.5	2.9	0.0	5.5	10.9	2.7	21.8	0.2	3.3	0.2	20.5	3.5	17.0	0.0	32.0	100.0	2,625
35-39	67.2	47.4	6.2	0.4	6.0	9.9	2.4	19.5	0.1	2.5	0.4	19.7	3.5	16.1	0.1	32.8	100.0	1,573
40-44	59.6	38.4	6.2	0.2	3.7	8.6	1.7	16.1	0.2	1.7	0.0	21.3	5.5	15.8	0.0	40.4	100.0	1,673
45-49	31.3	18.6	4.2	0.0	1.8	4.0	0.1	7.1	0.4	0.9	0.0	12.7	2.6	10.0	0.1	68.7	100.0	1,495
Residence																		
Urban	59.8	32.8	3.7	0.1	5.0	2.9	2.3	13.3	0.3	5.1	0.0	27.0	7.0	19.9	0.1	40.2	100.0	1,818
Rural	55.7	39.9	2.9	0.1	4.3	10.3	2.1	18.3	0.1	1.6	0.1	15.8	2.2	13.5	0.1	44.3	100.0	10,080
Province																		
Banteay Mean Chey	61.4	51.0	4.7	0.1	3.6	14.7	2.4	22.9	0.3	2.2	0.0	10.4	0.8	9.5	0.0	38.6	100.0	503
Kampong Cham	44.7	27.6	2.3	0.0	3.6	5.4	2.7	11.4	0.1	1.8	0.3	17.0	3.8	13.2	0.0	55.3	100.0	1,490
Kampong Chhnang	56.0	33.5	2.3	0.0	5.8	7.7	1.4	14.7	0.0	1.7	0.0	22.5	2.0	20.5	0.0	44.0	100.0	396
Kampong Speu	65.4	41.2	4.5	0.2	3.4	5.2	0.3	25.2	0.0	2.3	0.2	24.3	0.7	23.6	0.0	34.6	100.0	843
Kampong Thom	58.4	44.1	3.8	0.0	5.8	14.9	3.1	15.5	0.2	0.7	0.0	14.3	4.7	9.6	0.0	41.6	100.0	572
Kandal	61.0	40.4	2.0	0.1	4.5	12.2	0.5	19.5	0.0	1.6	0.0	20.6	0.8	19.8	0.0	39.0	100.0	870
Kratie	47.9	30.7	2.5	0.0	5.0	8.8	1.7	11.6	0.0	1.0	0.0	17.2	2.3	14.4	0.5	52.1	100.0	359
Phnom Penh	63.3	28.7	2.7	0.0	5.1	1.5	1.3	11.8	0.5	5.6	0.2	34.5	7.9	26.4	0.2	36.7	100.0	1,084
Prey Veng	55.4	41.3	2.5	0.2	3.7	11.6	2.7	19.4	0.0	1.2	0.0	14.1	1.5	12.5	0.0	44.6	100.0	889
Pursat	51.0	40.1	1.6	0.3	5.6	11.1	0.7	18.8	0.3	1.7	0.0	11.0	1.5	9.5	0.0	49.0	100.0	425
Siem Reap	59.0	46.5	4.2	0.2	5.3	10.2	3.3	19.5	0.0	3.8	0.0	12.6	2.4	10.2	0.0	41.0	100.0	765
Svay Rieng	57.9	40.7	3.0	0.0	3.9	9.3	2.2	19.7	0.2	1.7	0.6	17.2	2.6	14.6	0.0	42.1	100.0	483
Takeo	60.1	48.2	4.8	0.2	6.8	10.6	3.3	19.6	1.0	1.7	0.2	12.0	4.0	7.9	0.0	39.9	100.0	677
Otdar Mean Chey	56.6	49.7	3.6	0.0	3.2	15.6	1.5	24.4	0.0	1.3	0.1	6.9	0.3	6.4	0.2	43.4	100.0	218
Battambang/Pailin	58.3	40.6	4.2	0.1	4.7	8.2	2.6	19.2	0.0	1.5	0.0	17.7	4.0	13.2	0.4	41.7	100.0	890
Kampot/Kep	53.8	38.3	1.4	0.0	4.9	10.7	3.0	16.3	0.2	1.7	0.2	15.5	2.3	13.2	0.0	46.2	100.0	574
Preah Sihanouk/Kaoh Kong	60.6	41.5	2.7	0.0	5.4	6.5	5.5	18.8	0.4	2.0	0.1	19.1	3.4	15.5	0.1	39.4	100.0	266
Preah Vihear/Steung Treng	42.0	34.9	1.2	0.0	0.9	13.2	0.3	17.8	0.0	1.4	0.0	7.1	1.4	5.7	0.0	58.0	100.0	314
Mondol Kiri/Rattanak Kiri	50.0	42.7	2.5	0.0	1.3	16.3	3.6	18.5	0.0	0.5	0.0	7.3	3.1	4.0	0.2	50.0	100.0	281
Education																		
No education	52.0	39.9	4.2	0.0	2.7	12.2	1.4	17.8	0.4	1.2	0.0	12.1	1.1	10.9	0.2	48.0	100.0	1,774
Primary	56.5	39.8	2.9	0.1	4.5	9.6	2.2	18.5	0.1	1.7	0.2	16.7	2.0	14.7	0.1	43.5	100.0	6,399
Secondary	58.4	37.6	2.9	0.1	5.1	7.3	2.7	16.5	0.2	2.7	0.1	20.9	5.1	15.8	0.0	41.6	100.0	3,431
More than secondary	53.7	26.3	1.5	0.0	5.7	1.9	0.8	8.2	0.0	8.1	0.1	27.4	11.3	16.1	0.0	46.3	100.0	295
Wealth quintile																		
Lowest	52.7	39.6	2.0	0.0	3.9	11.9	1.8	18.9	0.1	0.7	0.1	13.2	1.1	12.0	0.1	47.3	100.0	2,294
Second	55.4	42.4	2.6	0.1	4.4	11.5	1.6	20.1	0.2	1.8	0.1	13.0	1.4	11.6	0.0	44.6	100.0	2,404
Middle	53.6	38.3	3.2	0.0	3.2	9.3	2.3	18.6	0.1	1.5	0.1	15.3	1.9	13.2	0.2	46.4	100.0	2,365
Fourth	57.7	39.2	3.2	0.2	4.4	8.6	2.7	18.1	0.3	1.6	0.1	18.5	3.0	15.5	0.0	42.3	100.0	2,393
Highest	61.8	34.6	4.1	0.1	6.1	4.5	2.4	12.3	0.2	4.8	0.1	27.2	7.3	19.8	0.1	38.2	100.0	2,443

Continued…

Table 3.6—*Continued*

Background characteristic	Any method	Any modern method	Female sterilization	Modern method: Male sterilization	IUD	Injectables	Implants	Daily pill	Monthly pill	Male condom	Other[1]	Any traditional method	Traditional method: Rhythm	Withdrawal	Other	Not currently using	Total	Number of women
Number of living children																		
0	11.8	4.3	0.2	0.0	0.2	0.7	0.4	2.5	0.0	0.4	0.0	7.5	0.9	6.5	0.0	88.2	100.0	1,128
1-2	60.4	42.3	1.3	0.1	5.0	10.1	2.5	20.6	0.2	2.5	0.1	18.0	2.9	15.1	0.1	39.6	100.0	5,942
3-4	65.9	45.3	5.4	0.1	5.1	10.3	2.7	18.8	0.2	2.4	0.2	20.5	4.1	16.4	0.0	34.1	100.0	3,572
5+	49.9	34.6	6.9	0.1	3.6	8.9	0.7	13.1	0.1	1.0	0.0	15.4	1.9	13.1	0.3	50.1	100.0	1,257
Total	56.3	38.8	3.0	0.1	4.4	9.1	2.2	17.6	0.2	2.1	0.1	17.5	3.0	14.5	0.1	43.7	100.0	11,898

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Including female condom, lactational amenorrhea method, and other modern methods.

The use of modern methods is low for women age 15-19 (20 percent) but increases steadily as age increases and peaks at ages 30-34 (48 percent) and 35-39 (47 percent) before dropping off in the older age groups. The use of modern methods is higher in the rural areas than in the urban areas (40 versus 33 percent). In contrast, the use of traditional methods is higher in the urban areas than in the rural areas (27 versus 16 percent). Method use varies across the provinces.

Currently married women who say they either want no more children or want to wait at least two years before having another child, but are not using contraception (modern or traditional), are considered to have an unmet need for family planning. Women who are currently using family planning methods are defined as having a met need for family planning. The sum of women with unmet need and met need constitutes the total demand for family planning. Demand satisfied is met need divided by total demand.

Table 3.7 presents need and demand for family planning services by background characteristics. Thirteen percent of currently married women have an unmet need for family planning. The level of unmet need is lower than in 2010, when 17 percent of currently married women had an unmet need for family planning. This change, coupled with the increase in contraceptive prevalence, reflects a decline in fertility. The level of unmet need for family planning varies by age of women, and it is lowest among those age 30-34 (10 percent).

Demand for family planning is the sum of unmet need and met need (with all methods). The total demand for family planning in 2014 in Cambodia is 69 percent, which is the same level as in the 2010 CDHS (68 percent). Total demand for family planning increases by age group, from age 15-19 to age 35-39; and peaks among women age 35-39 (80 percent). It then declines to 46 percent among those age 45-49. Total demand for family planning does not vary greatly by residence, education, or wealth index quintile.

Demand satisfied is the proportion of met need divided among total demand for family planning. In 2014, the total demand satisfied for all methods is 82 percent and for a modern method is 56 percent. Rural women and women with no education have the highest percentage of demand satisfied for modern family planning methods (59 percent and 61 percent respectively). Demand satisfied for any method and a modern method has a bell-shape relationship with the age of women, and is at its peak among women age 30-34. Women who live in rural areas (58 percent) and women with no formal education (61 percent), have the highest level of demand satisfied for family planning compared with other women.

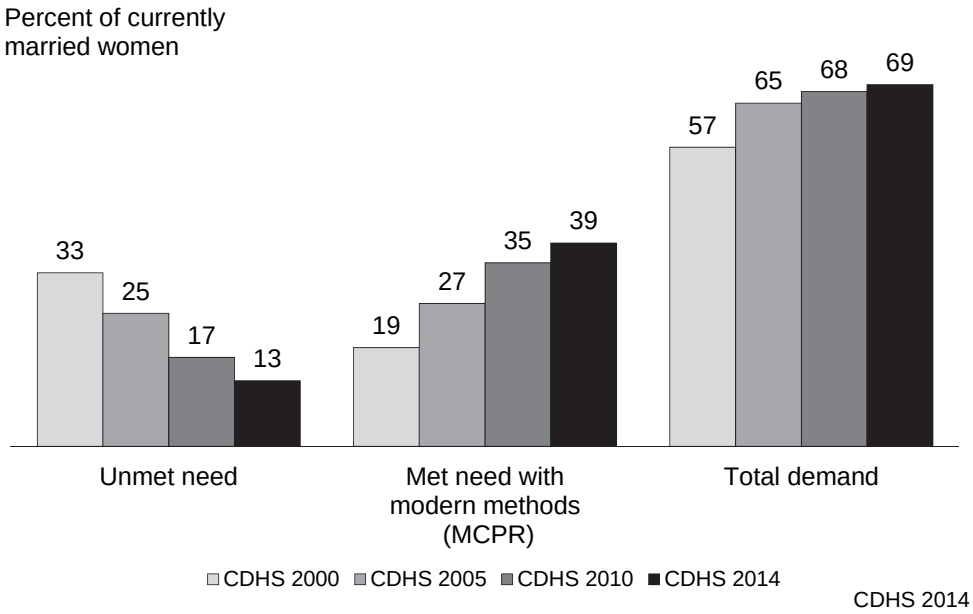
Table 3.7 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, percentage with met need for family planning who are using modern methods, percentage with demand for family planning, percentage of the demand for family planning that is satisfied, and percentage of the demand for family planning that is satisfied with modern methods, by background characteristics, Cambodia 2014

Background characteristic	Unmet need	Met need for family planning (currently using)		Total demand for family planning[3]	Percentage of demand satisfied[1]		Number of women
		All methods	Modern methods[2]		All methods	Modern methods[2]	
Age							
15-19	14.9	29.1	20.2	44.0	66.0	45.8	450
20-24	13.6	47.8	34.2	61.5	77.8	55.7	1,833
25-29	11.4	61.6	43.7	73.0	84.4	59.8	2,249
30-34	9.7	68.0	47.4	77.7	87.5	61.0	2,625
35-39	12.9	67.2	47.4	80.1	83.9	59.2	1,573
40-44	13.9	59.6	38.4	73.6	81.1	52.1	1,673
45-49	14.5	31.3	18.6	45.8	68.3	40.6	1,495
Residence							
Urban	10.8	59.8	32.8	70.6	84.7	46.5	1,818
Rural	12.8	55.7	39.8	68.4	81.4	58.2	10,080
Province							
Banteay Mean Chey	9.5	61.4	51.0	70.9	86.6	72.0	503
Kampong Cham	17.6	44.7	27.6	62.3	71.7	44.4	1,490
Kampong Chhnang	8.2	56.0	33.5	64.2	87.3	52.2	396
Kampong Speu	9.8	65.4	41.0	75.2	87.0	54.5	843
Kampong Thom	10.1	58.4	44.1	68.5	85.2	64.3	572
Kandal	12.0	61.0	40.4	73.0	83.5	55.4	870
Kratie	12.1	47.9	30.7	60.0	79.8	51.1	359
Phnom Penh	10.7	63.3	28.7	74.0	85.5	38.8	1,084
Prey Veng	11.5	55.4	41.3	66.8	82.9	61.8	889
Pursat	13.7	51.0	40.1	64.8	78.8	61.8	425
Siem Reap	11.9	59.0	46.5	70.9	83.2	65.5	765
Svay Rieng	14.1	57.9	40.1	71.9	80.5	55.7	483
Takeo	8.3	60.1	47.9	68.4	87.9	70.0	677
Otdar Mean Chey	14.6	56.6	49.6	71.2	79.5	69.7	218
Battambang/Pailin	12.5	58.3	40.6	70.8	82.3	57.3	890
Kampot/Kep	15.6	53.8	38.1	69.4	77.5	54.9	574
Preah Sihanouk/Kaoh Kong	11.7	60.6	41.4	72.3	83.8	57.2	266
Preah Vihear/Steung Treng	17.9	42.0	34.9	59.9	70.1	58.2	314
Mondol Kiri/Rattanak Kiri	14.1	50.0	42.7	64.1	78.0	66.7	281
Education							
No education	13.7	52.0	39.9	65.7	79.2	60.7	1,774
Primary	13.1	56.5	39.7	69.6	81.1	57.1	6,399
Secondary	10.9	58.4	37.4	69.3	84.3	54.0	3,431
More than secondary	9.0	53.7	26.3	62.7	85.6	42.0	295
Wealth quintile							
Lowest	17.0	52.7	39.5	69.8	75.6	56.6	2,294
Second	11.2	55.4	42.3	66.6	83.2	63.5	2,404
Middle	13.5	53.6	38.3	67.1	79.9	57.1	2,365
Fourth	10.8	57.7	39.1	68.5	84.2	57.1	2,393
Highest	10.1	61.8	34.6	71.8	86.0	48.1	2,443
Total	12.5	56.3	38.7	68.8	81.9	56.3	11,898

Note: Numbers in this table correspond with the revised definition of unmet need described in Bradley et al., 2012.
[1] Percentage of demand satisfied is met need divided by total demand.
[2] Modern methods include female and male sterilization, IUD, implants, injectables, daily and monthly pill, male and female condom, and lactational amenorrhea method (LAM).
[3] Total demand is the sum of unmet need and met need (with all methods).

Figure 3.2 **Trends in unmet need, met need with modern methods, and total demand, 2000-2014**



3.6 CHILDHOOD MORTALITY

An important objective of the CDHS was to measure the level of and trends in mortality among children. Estimates of childhood mortality are based on information elicited when the birth history section of the questionnaire was administered to individual women. The section began with questions about the aggregate childbearing experience of respondents (i.e., the numbers of sons and daughters who live with the mother, the number who live elsewhere, and the number who have died). For each of these births, information was then collected on sex, month, and year of birth, survivorship status and current age, or, if the child had died, age at death. This information was used to directly estimate the following five mortality rates:

- Neonatal mortality (NN): the probability of dying within the first month of life
- Postneonatal mortality (PNN): the difference between infant and neonatal mortality
- Infant mortality (${}_1q_0$): the probability of dying before the first birthday
- Child mortality (${}_4q_1$): the probability of dying between the first and fifth birthdays
- Under-five mortality (${}_5q_0$): the probability of dying between birth and the fifth birthday

All rates are expressed per 1,000 live births.

Table 3.8 presents early childhood mortality rates for the 14 years preceding the survey. Under-five mortality for the period 0-4 years before the survey (which roughly corresponds to the years 2010-2014) is 35 per 1,000. This means that about 1 in every 29 children born in Cambodia dies before reaching the fifth birthday. Most of the mortality occurs during the first year of life: infant mortality is 28 deaths per 1,000, while mortality between the first and fifth birthday is 7 per 1,000. Mortality during the first month, or neonatal mortality, is 18 per 1,000; while postneonatal mortality (between the first month and the first birthday) is 10 per 1,000.

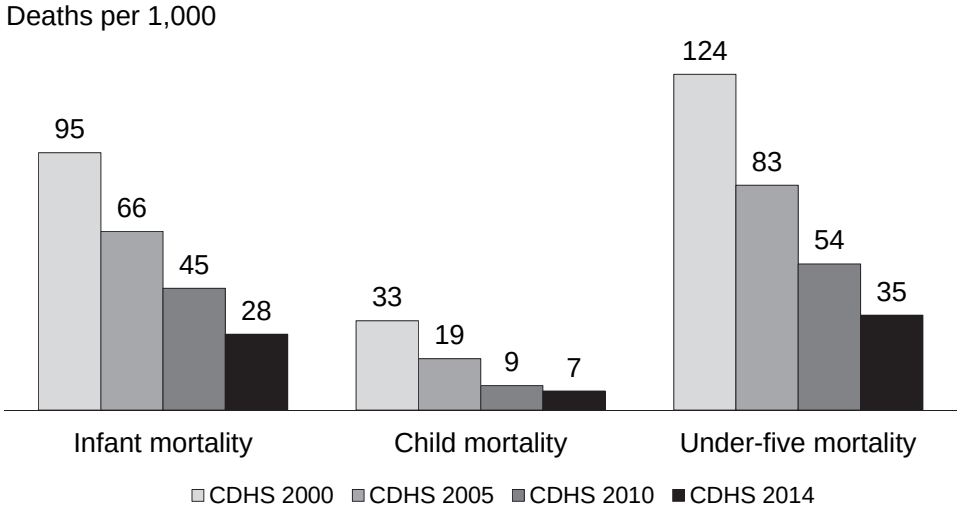
Table 3.8 Early childhood mortality rates

Neonatal, post-neonatal, infant, child and under-5 mortality rates for five year periods preceding the survey, Cambodia 2014

	Mortality rates				
	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Period preceding survey					
0-4	18	10	28	7	35
5-9	24	24	49	12	60
10-14	24	40	63	17	79

Figure 3.3 compares the mortality rates of the 2014 CDHS with those of the 2010 CDHS, the 2005 CDHS, and the 2000 CDHS. All figures refer to the five years before each survey; therefore, the 2014 CDHS measures mortality during the period since the CDHS 2010.

Figure 3.3 **Trends in childhood mortality, 2000-2014**



3.7 MATERNAL HEALTH INDICATORS

Proper care during pregnancy and delivery are important for the health of both the mother and the baby. Women who had given birth in the five years preceding the survey were asked a number of questions about maternal health care. For the last live birth in that period, mothers were asked whether they had obtained antenatal care during the pregnancy and whether they had received tetanus toxoid injections. For each birth in the same period, mothers were also asked what type of assistance they received at the time of delivery and where the delivery took place. Table 3.9 presents the information on these key maternal care indicators.

3.7.1 Antenatal Care

Antenatal care from a trained professional reduces potential risk for the mother and child during pregnancy and delivery. Nearly all pregnant women (95 percent) who gave birth in the five years preceding the survey received antenatal care at least once from a health professional (doctor, nurse, or midwife). The percentage of women who saw a health professional for antenatal care differed by level of education, with the proportion of women seeing someone for antenatal care increasing steadily with rising education level and reaching 100 percent for those who had more than a secondary education. However, only 76 percent of women received four or more antenatal care visits from a health professional during the course of their last pregnancy. The percentage of women receiving 4 or more antenatal care visits, as is the number recommended by the World Health Organization, also increased by level of education and was higher among women living in urban areas (85 percent) than those living in rural areas (74 percent).

3.7.2 Prevention of Neonatal Tetanus

Mothers are given tetanus toxoid injections during pregnancy to prevent neonatal tetanus, a potential cause of death among infants. Data in Table 3.9 displays tetanus toxoid coverage data that come from respondents' verbal reports of receiving a tetanus toxoid injection during pregnancy. To ensure protection for the newborn, the mother must have at least two tetanus toxoid injections during pregnancy or a single one if she has already received an injection during the preceding pregnancy. Women with coverage include mothers with two injections during the pregnancy of the last live 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 live birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections prior to the last live birth.

Eighty-nine percent of mothers received protection against tetanus for their newborns. This figure is slightly higher than that in the 2010 CDHS (85 percent). The differential in receiving protection against tetanus by level of mother's education and residence are similar to those seen for women receiving antenatal care. The percentage of women protected against tetanus during pregnancy increases substantially with an increasing level of education and the percentage of women receiving protection against tetanus for their newborns is higher in urban areas than in rural areas.

3.7.3 Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause death or serious illness of the mother, the baby, or both. The percentage of babies delivered by a health professional has increased substantially, from 44 percent in the 2005 CDHS to 71 percent in the 2010 CDHS, and to 89 percent in the 2014 CDHS. The proportion of babies delivered at a health facility doubled between 2005 and 2010 (22 percent in 2005 versus 54 percent in 2010), and nearly quadrupled between 2005 and 2014 (22 percent in 2005 versus 83 percent in 2014). As expected, there are significant regional variations in whether or not births are delivered in a health facility; 96 percent of births to urban women were delivered in a health facility compared with 81 percent of births to rural women. The percentage of births delivered in a health facility increases steadily with increasing education of the mother. Sixty-eight percent of births to women with no education were delivered in a health facility, as were 81 percent of births to women with at least some primary education, 92 percent of births to women with some secondary schooling, and practically all births to women with more than secondary education.

3.7.4 Postnatal Care

A large proportion of maternal deaths occur during the first 48 hours after delivery. Safe motherhood programs emphasize the importance of postnatal care and recommend that all women receive a health checkup within two days of delivery. To assess the extent of postnatal care utilization, respondents who gave birth in the two years preceding the survey were asked whether they had received a health checkup after the delivery of their last birth. Table 3.9 shows the percentage of women who had a birth in the past two years and received a postnatal checkup in the first two days after birth.

The large majority of women (88 percent) received a postnatal checkup within the crucial first two days after birth. Urban women are more likely to receive postnatal care (96 percent) than rural women during the first two days after delivery (87 percent). Women with secondary and higher education (92 percent and 97 percent, respectively) are more likely to receive postnatal care within two days of delivery than women with either no education (76 percent) or only primary education (87 percent).

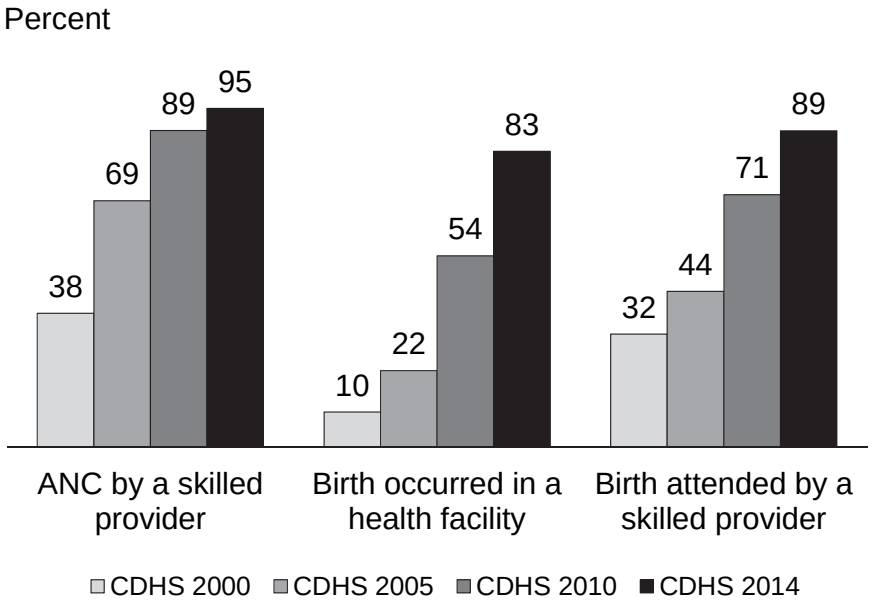
Table 3.9 Maternal care indicators

Among women age 15-49 who had a live birth in the five years preceding the survey, percentage who received antenatal care from a skilled provider for the last live birth, percentage with four or more ANC visits for the last live birth, and percentage whose last live birth was protected against neonatal tetanus; among all live births in the five years before the survey, percentage delivered by a skilled provider and percentage delivered in a health facility; and among women age 15-49 who had a live birth in the two years preceding the survey, percentage who received a postnatal checkup in the first two days after the last live birth, by background characteristics, Cambodia 2014

	Women who had a live birth in the five years preceding the survey				Live births in the five years preceding the survey			Women who had a live birth in the two years preceding the survey	
Background characteristic	Percentage with antenatal care from a skilled provider[1]	Percentage with 4+ ANC visits	Percentage whose last live birth was protected against neonatal tetanus[2]	Number of women	Percentage delivered by a skilled provider[1]	Percentage delivered in a health facility	Number of births	Percentage of women who had a postnatal checkup in the first two days after birth	Number of women
Mother's age at birth									
<20	95.5	72.1	83.1	620	89.3	83.3	814	86.9	333
20-34	96.2	77.6	90.3	4,749	89.9	84.5	5,777	88.4	2,447
35+	88.6	63.7	80.8	603	81.3	71.6	662	84.1	246
Residence									
Urban	98.6	85.4	92.9	876	97.8	96.0	1,041	96.4	421
Rural	94.8	73.9	87.8	5,096	87.6	81.0	6,212	86.5	2,605
Province									
Banteay Mean Chey	98.9	77.4	93.8	219	95.8	87.9	253	87.0	123
Kampong Cham	96.9	75.8	84.6	819	91.5	84.5	1,008	82.0	421
Kampong Chhnang	99.5	86.4	97.9	203	97.6	97.1	248	99.2	111
Kampong Speu	97.8	80.0	90.5	395	89.3	84.1	469	90.6	183
Kampong Thom	95.6	73.1	92.7	279	80.4	74.3	337	95.7	148
Kandal	96.3	77.9	88.3	420	95.7	80.8	523	80.7	205
Kratie	72.8	35.2	83.6	214	51.9	46.3	269	89.9	110
Phnom Penh	98.5	88.0	94.3	535	96.1	95.9	626	97.5	263
Prey Veng	99.0	74.3	91.2	405	97.6	90.0	499	93.0	206
Pursat	94.7	73.6	89.8	245	86.1	78.4	298	95.3	122
Siem Reap	96.1	77.3	86.4	379	93.0	91.6	487	83.8	191
Svay Rieng	98.1	84.3	93.1	229	94.3	82.4	261	88.7	110
Takeo	97.6	78.3	93.9	321	97.4	92.2	386	92.7	171
Otdar Mean Chey	96.7	77.4	90.9	116	88.7	88.4	137	91.3	56
Battambang/Pailin	97.1	89.0	79.7	460	94.1	90.2	553	92.4	255
Kampot/Kep	93.9	69.4	86.7	236	90.5	80.9	276	90.5	119
Preah Sihanouk/Kaoh Kong	97.6	74.9	89.6	142	97.5	88.9	168	93.5	62
Preah Vihear/Steung Treng	85.5	47.1	88.8	188	54.6	51.1	239	67.2	93
Mondol Kiri/Rattanak Kiri	76.0	48.4	71.8	169	53.6	51.2	217	38.5	76
Mother's education									
No education	86.3	54.9	79.8	805	71.8	67.8	1,017	76.3	383
Primary	95.3	74.0	87.6	3,100	88.5	81.0	3,795	87.3	1,538
Secondary	98.7	85.2	93.1	1,905	96.8	92.3	2,240	92.2	1,008
More than secondary	100.0	96.9	97.4	163	99.2	99.3	201	97.3	97
Wealth quintile									
Lowest	89.7	60.5	83.2	1,359	75.2	68.4	1,771	81.0	722
Second	94.7	69.6	87.5	1,215	87.0	78.8	1,453	85.6	603
Middle	96.2	76.6	87.3	1,133	92.7	86.8	1,362	90.4	585
Fourth	98.1	85.8	92.4	1,069	96.5	90.8	1,252	90.5	546
Highest	99.3	88.9	93.5	1,196	98.4	95.9	1,415	93.9	571
Total	95.3	75.6	88.6	5,973	89.0	83.2	7,253	87.9	3,027

[1] Skilled provider includes doctor, nurse, midwife, or auxiliary midwife
[2] Includes mothers with two injections during the pregnancy of her last live 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 live birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections at any time prior to the last live birth

Figure 3.4 **Trends in maternal health care, 2000-2014**



3.8 CHILD HEALTH INDICATORS

3.8.1 Vaccination of Children

According to the World Health Organization a child is considered fully vaccinated if he or she has received a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, tetanus, and pertussis; three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. Since 2006, the Cambodian National Immunization Program has replaced DPT vaccines with a tetravalent vaccine that includes DPT and Hemophilus Influenza type b vaccine (Hib) and a pentavalent vaccine that includes DPT, Hib, and Hepatitis type b vaccine (HepB). The 2014 CDHS collected information on the coverage for these vaccinations among all children under age five.

Information on vaccination coverage was obtained in two ways—from health cards and from verbal reports of mothers. All mothers were asked by interviewers to show the health cards on which their children's vaccinations were recorded. If the card was available, the interviewer copied into the questionnaire the date on which each vaccination was received. If a vaccination was not recorded on the health card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a health card for her child, she was asked to recall whether the child had received BCG, polio, tetravalent/pentavalent, and measles vaccines. If she indicated that the child had received the polio or tetravalent/pentavalent vaccines, she was asked the number of doses that the child received.

Taking into consideration the vaccination schedule, Table 3.10 presents information on vaccination coverage for children age 12-23 months. The percentage of data coming directly from health cards is 77 percent (the 2010 CDHS fieldwork recorded dates directly from health cards for the same proportion of children age 12-23). By this age, children should be fully vaccinated against the major preventable childhood illnesses. Coverage levels include data from both health cards and verbal reports of mothers. Seventy-three percent of children age 12-23 months are fully vaccinated. This coverage has somewhat declined recently, as the 2010 CDHS recorded 79 percent of children age 12-23 as fully vaccinated (the figure was 67 percent in the 2005 CDHS). Ninety percent or more of children receive BCG, two doses of tetravalent or pentavalent vaccine, and two doses of polio vaccine. The proportions of children receiving the third doses of tetravalent or pentavalent and polio vaccines are 84 percent and 82 percent, respectively. Only 79 percent of the children received a measles vaccination.

Table 3.10 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 seen, by background characteristics, Cambodia 2014

Background characteristic	BCG	Tetravalent/Pentavalent[1] 1	2	3	Hepatitis B 0[2]	Polio 1	2	3	Measles	All basic vaccinations[3]	No vaccinations	Percentage with a vaccination card	Number of children
Sex													
Male	96.2	93.4	90.4	83.0	81.8	94.3	90.3	82.6	79.1	73.9	2.7	77.2	750
Female	96.0	94.5	90.4	84.3	83.8	95.3	88.7	82.0	78.1	73.0	2.2	77.4	711
Residence													
Urban	97.6	99.1	97.3	92.9	87.9	98.5	96.8	90.0	90.7	86.4	0.5	71.3	217
Rural	95.8	93.1	89.2	82.1	81.9	94.1	88.3	80.9	76.5	71.2	2.8	78.3	1,244
Province													
Banteay Mean Chey	96.4	96.6	95.4	94.0	86.3	96.6	95.4	94.0	93.4	91.3	1.6	88.8	63
Kampong Cham	95.0	81.1	81.1	70.6	77.1	86.6	78.7	71.1	64.1	56.8	4.7	67.6	182
Kampong Chhnang	100.0	98.2	92.9	86.3	98.3	98.2	92.9	86.3	74.6	74.6	0.0	77.5	52
Kampong Speu	97.1	97.3	90.1	78.2	74.5	97.3	88.4	78.2	66.5	66.5	1.4	87.9	90
Kampong Thom	97.6	94.8	90.3	82.0	96.0	96.4	91.9	82.0	74.1	70.9	2.4	86.3	77
Kandal	100.0	100.0	97.3	81.5	83.9	100.0	91.3	74.1	75.2	64.5	0.0	80.9	89
Kratie	86.5	89.5	81.8	72.8	62.3	88.6	83.9	72.5	79.7	65.1	7.7	72.1	57
Phnom Penh	98.6	100.0	98.6	93.1	86.3	98.6	98.2	90.0	91.0	89.1	0.0	69.6	145
Prey Veng	95.2	89.8	79.2	76.0	60.2	89.8	79.2	76.0	63.2	61.7	4.8	68.8	101
Pursat	95.3	94.0	90.6	83.3	88.0	95.6	92.2	84.5	88.9	79.7	4.4	84.4	60
Siem Reap	98.2	99.0	93.7	90.9	95.4	99.0	93.7	86.6	85.1	78.6	1.0	91.9	100
Svay Rieng	92.4	90.9	90.9	88.8	71.5	90.9	90.9	88.8	86.7	82.7	5.6	72.4	53
Takeo	96.5	99.8	99.5	97.9	98.1	99.8	94.8	93.1	94.2	87.8	0.2	89.7	84
Otdar Mean Chey	97.4	92.7	85.6	83.4	77.2	94.8	87.7	81.8	85.3	75.0	2.6	71.7	27
Battambang/Pailin	99.5	98.4	98.4	95.4	88.5	98.4	98.4	95.4	89.6	89.2	0.0	81.2	120
Kampot/Kep	94.0	93.1	88.6	80.0	93.8	93.1	88.6	80.0	81.1	72.0	2.0	70.7	54
Preah Sihanouk/Kaoh Kong	98.0	98.0	96.2	92.0	93.3	98.0	96.2	89.9	86.4	82.6	2.0	79.7	28
Preah Vihear/Steung Treng	91.9	93.1	89.5	79.3	72.8	93.1	87.8	77.7	62.8	55.6	1.2	74.6	44
Mondol Kiri/Rattanak Kiri	81.4	79.7	67.4	55.9	62.8	83.9	65.2	54.1	56.1	43.9	10.6	41.1	35
Education													
No education	91.6	85.4	78.6	69.0	70.1	83.8	76.3	68.9	65.5	58.4	5.9	73.6	197
Primary	96.0	93.2	88.8	80.0	83.0	94.6	88.5	78.7	75.3	69.7	2.9	79.1	732
Secondary	98.0	98.0	96.8	93.7	86.5	99.0	95.6	91.6	87.0	83.4	0.5	76.5	485
More than secondary	97.0	100.0	99.5	98.8	93.6	100.0	99.1	97.0	98.1	92.0	0.0	73.9	47
Wealth quintile													
Lowest	93.1	88.3	81.1	71.6	75.2	89.1	80.5	71.7	65.9	60.9	4.5	72.4	369
Second	92.4	91.9	86.7	78.3	77.9	93.1	86.0	77.0	71.7	65.4	5.5	76.5	285
Middle	98.8	93.1	91.0	82.5	84.7	95.7	89.8	80.2	77.7	70.0	0.4	84.1	267
Fourth	99.3	99.2	98.0	94.3	88.3	98.7	97.7	93.7	87.6	85.2	0.5	83.5	253
Highest	98.3	99.4	98.9	96.2	90.7	99.5	97.2	92.9	94.7	90.5	0.2	72.6	286
Total	96.1	94.0	90.4	83.7	82.8	94.8	89.5	82.3	78.6	73.4	2.4	77.3	1,460

[1] Tetravalent is DPT-Hib, and pentavalent is DPT-HepB-Hib
[2] Hepatitis B given at birth
[3] BCG, measles, and three doses each of tetravalent/pentavalent and polio vaccine

Full vaccination coverage varies by mother's education, increasing from 58 percent among children of mothers with no education, to 70 percent among children of mothers with primary education, to 83 percent among mothers with secondary education, and to 92 percent among mothers with higher education. Full coverage is higher in urban areas (86 percent) than in rural areas (71 percent).

3.8.2 Treatment of Childhood Illnesses

Acute respiratory illness, fever, and dehydration from severe diarrhea are major causes of childhood morbidity and mortality. Prompt medical attention for children experiencing the symptoms of these illnesses is, therefore, crucial to increase child well-being and reduce child deaths. To obtain information on how childhood illnesses are treated, mothers were asked (for each child under age 5) whether in the two weeks before the survey the child had experienced a cough with short, rapid breathing or difficulty breathing due to chest congestion (symptoms of acute respiratory infection), fever, and diarrhea. The survey found that 28 percent of children under age 5 had a fever in the two weeks before the interview and about 6 percent had symptoms of acute respiratory infection (ARI), while 13 percent of them suffered from diarrhea.

Table 3.11 shows treatment sought for children with these illnesses. Treatment may have been sought from either the public or private medical sectors. Treatment was sought from a health facility or a health provider for slightly more than two-thirds (69 percent) of the children with ARI symptoms. Treatment was sought from a health facility or health provider for 61 percent of children with fever and for 56 percent of children with diarrhea. When left untreated, the dehydrating effect of diarrhea can and often does lead to death in young children. The administration of oral rehydration therapy (ORT) is a simple means of counteracting the effects of dehydration. Effective therapy can be achieved by administering a solution prepared by mixing with water a commercially prepared packet of oral rehydration salts (ORS), in the form of powder or a tablet. Mothers with children who had experienced diarrhea in the two weeks before the survey were asked whether they gave the children a solution made from ORS powder or an ORS tablet to treat the diarrhea. One in three children (35 percent) with diarrhea was given fluids made from ORS powder or an ORS tablet. The percentage of children with diarrhea who sought treatment from a health facility or health provider is higher in rural areas (57 percent) than in urban areas (47 percent). The proportion who receive ORS fluid for treatment of diarrhea is also higher in rural areas than in urban areas (36 percent versus 30 percent respectively). This indicator varies substantially across provinces.

Table 3.11 Treatment for acute respiratory infection, fever, and diarrhea

Among children under age 5 who had symptoms of acute respiratory infection (ARI) or had fever in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, and among children under age 5 who had diarrhea during the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given a fluid made from oral rehydration salt (ORS) packets or given pre-packaged ORS fluid, the percentage given zinc, and the percentage given ORS and zinc, by background characteristics, Cambodia 2014

	Children with symptoms of ARI[1]		Children with fever		Children with diarrhea				
Background characteristic	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with ARI	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with fever	Percentage for whom treatment was sought from a health facility/ provider[2]	Percentage given fluid from ORS packet or pre-packaged ORS fluid	Percentage given zinc	Percentage given any ORS and zinc	Number of children
Age in months									
<6	*	22	54.5	146	43.6	18.7	4.1	2.4	94
6-11	(75.9)	45	64.5	267	58.1	39.2	9.7	4.2	152
12-23	68.8	109	61.7	521	57.4	35.9	6.6	3.8	277
24-35	64.6	82	58.6	412	54.8	33.5	1.7	1.4	188
36-47	61.8	73	61.8	332	57.3	38.5	3.5	2.5	100
48-59	78.2	56	59.7	289	56.7	43.5	5.6	5.0	91
Sex									
Male	62.2	201	57.4	1,030	53.1	37.4	5.6	3.5	473
Female	75.9	186	64.1	937	58.1	32.9	5.2	2.9	429
Residence									
Urban	69.6	56	57.9	292	47.0	30.2	3.3	3.0	129
Rural	68.6	332	61.1	1,675	56.9	36.1	5.8	3.2	772
Province									
Banteay Mean Chey	*	14	48.9	59	(52.1)	(34.9)	(0.0)	(0.0)	32
Kampong Cham	*	56	53.6	302	(52.6)	(34.1)	(0.0)	(0.0)	124
Kampong Chhnang	(94.6)	28	94.9	71	(84.7)	(77.2)	(20.4)	(20.4)	25
Kampong Speu	*	18	49.4	98	(63.3)	(23.6)	(0.7)	(0.7)	48
Kampong Thom	*	13	76.9	67	*	*	*	*	20
Kandal	*	18	68.2	132	*	*	*	*	46
Kratie	(59.6)	27	71.7	87	59.8	20.2	18.4	5.1	43
Phnom Penh	(62.8)	39	59.5	229	57.5	33.5	3.1	1.6	107
Prey Veng	*	18	(85.2)	69	*	*	*	*	23
Pursat	*	10	47.0	58	(31.0)	(49.7)	(11.0)	(2.6)	24
Siem Reap	(75.0)	48	49.5	163	48.1	54.4	27.7	20.2	79
Svay Rieng	*	14	84.9	44	*	*	*	*	14
Takeo	*	24	53.5	126	52.5	57.7	0.0	0.0	71
Otdar Mean Chey	*	5	53.7	22	(29.9)	(22.6)	(3.5)	(0.0)	14
Battambang/Pailin	*	18	57.3	218	48.3	22.3	1.4	0.0	114
Kampot/Kep	*	11	(68.1)	30	*	*	*	*	14
Preah Sihanouk/Kaoh Kong	(78.4)	19	69.3	59	58.8	47.9	8.4	5.8	28
Preah Vihear/Steung Treng	*	4	67.4	74	60.3	28.4	0.0	0.0	44
Mondol Kiri/Rattanak Kiri	*	3	44.1	60	53.3	42.8	0.0	0.0	32

Continued…

Table 3.11—*Continued*

Background characteristic	Children with symptoms of ARI[1]		Children with fever		Children with diarrhea				
	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with ARI	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with fever	Percentage for whom treatment was sought from a health facility/ provider[2]	Percentage given fluid from ORS packet or pre-packaged ORS fluid	Percentage given zinc	Percentage given any ORS and zinc	Number of children
Mother's education									
No education	(66.1)	52	56.2	237	58.8	46.3	7.6	6.1	129
Primary	66.8	239	60.8	1,064	55.2	34.6	5.3	3.3	477
Secondary	73.9	91	61.2	633	54.4	30.8	4.7	1.8	277
More than secondary	*	5	(74.1)	33	(53.6)	(40.1)	(2.7)	(1.9)	19
Wealth quintile									
Lowest	67.9	119	61.8	493	62.0	39.8	6.3	4.7	271
Second	64.9	74	67.0	351	53.6	35.2	5.5	3.3	166
Middle	78.1	67	55.8	381	57.8	41.6	4.8	3.3	140
Fourth	67.3	66	59.1	339	55.7	30.6	4.4	1.9	166
Highest	66.5	61	59.3	404	43.8	26.7	5.3	1.9	158
Total	68.8	387	60.6	1,967	55.5	35.2	5.4	3.2	902

[1] Symptoms of ARI (cough accompanied by short, rapid breathing that was chest-related and/or by difficult breathing that was chest-related) is considered a proxy for pneumonia
[2] Excludes pharmacy, shop, and traditional practitioner
* Figure based on fewer than 25 unweighted cases and has been suppressed.
( ) Figure in parentheses based on 25-49 unweighted cases.

3.9 NUTRITION

3.9.1 Nutritional Status of Children

Poor nutrition places children at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for all children born in the five years preceding the CDHS. The height and weight data were used to compute three summary indices of nutritional status: height-for-age, weight-for-height, and weight-for-age. These three indices are expressed as standard deviation units from the median for the international reference population recommended by the World Health Organization (WHO). The child growth standards applied here are new international growth standards adopted by WHO on April 27, 2006, and are comparable to those published in the 2010 CDHS report. However, they are not comparable to those based on the NCHS/CDC/WHO reference standards in use prior to 2006, and published in the 2000 and 2005 CDHS reports.

Children whose indices of nutritional status are more than two standard deviations below (-2 SD) the reference median are regarded as undernourished, while those whose indices of nutritional status are more than three standard deviations below (-3 SD) the reference median are considered severely undernourished. Table 3.12 shows the nutritional status of children under age 5 by selected background characteristics.

Table 3.12 Nutritional status of children

Percentage of children under age 5 classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Cambodia 2014

	Height-for-age[1]			Weight-for-height				Weight-for-age				
Background characteristic	Percent-age below -3 SD	Percent-age below -2 SD[2]	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-score (SD)	Percent-age below -3 SD	Percent-age below -2 SD[2]	Percent-age above +2 SD	Mean Z-Score (SD)	Number of children
Age in months												
<6	6.1	16.1	-0.4	5.4	12.8	6.0	-0.3	3.2	11.5	1.3	-0.6	426
6-8	1.2	13.1	-0.6	2.3	6.5	4.8	-0.3	1.9	8.5	2.2	-0.6	252
9-11	3.9	16.6	-0.9	2.3	14.2	3.1	-0.7	3.0	15.4	0.5	-1.0	225
12-17	6.4	28.1	-1.3	3.1	10.6	3.5	-0.7	2.6	21.2	1.0	-1.1	515
18-23	11.3	33.8	-1.5	2.8	10.9	0.7	-0.7	5.4	19.6	0.3	-1.2	545
24-35	10.8	38.5	-1.6	1.8	8.0	1.8	-0.6	4.3	24.9	0.9	-1.3	1,013
36-47	10.9	39.8	-1.8	1.9	9.3	0.7	-0.8	7.1	31.4	0.1	-1.5	978
48-59	9.4	36.0	-1.7	1.2	8.7	0.5	-0.8	5.1	30.9	0.2	-1.6	939
Sex												
Male	9.4	32.9	-1.4	2.7	9.9	2.3	-0.6	4.5	23.2	0.8	-1.2	2,497
Female	8.4	31.9	-1.4	1.9	9.3	1.6	-0.7	4.8	24.6	0.5	-1.3	2,395
Residence												
Urban	5.9	23.7	-1.1	2.0	7.5	3.1	-0.4	2.6	14.8	1.9	-0.9	674
Rural	9.4	33.8	-1.5	2.4	9.9	1.8	-0.7	5.0	25.4	0.4	-1.3	4,219
Province												
Banteay Mean Chey	6.9	28.6	-1.3	0.7	7.8	0.7	-0.5	5.3	17.0	0.0	-1.1	241
Kampong Cham	8.6	33.5	-1.4	1.5	8.1	2.2	-0.7	4.2	25.7	0.8	-1.3	692
Kampong Chhnang	13.5	42.8	-1.7	3.1	11.2	2.2	-0.9	5.1	35.6	0.0	-1.5	173
Kampong Speu	10.0	40.5	-1.7	2.5	11.5	1.3	-0.8	6.9	29.4	0.0	-1.5	318
Kampong Thom	10.7	36.4	-1.3	3.1	13.0	3.4	-0.8	7.1	27.7	1.9	-1.3	217
Kandal	3.5	28.1	-1.3	3.2	9.2	0.2	-0.8	4.7	26.2	0.0	-1.3	298
Kratie	10.5	38.4	-1.6	2.7	6.5	0.5	-0.7	4.4	25.1	0.0	-1.4	180
Phnom Penh	4.9	17.9	-0.9	1.0	8.4	3.7	-0.4	2.2	12.9	3.4	-0.8	391
Prey Veng	8.7	32.7	-1.5	2.9	8.6	1.8	-0.6	3.4	22.2	0.3	-1.3	379
Pursat	18.4	38.8	-1.8	5.7	12.3	4.7	-0.6	7.9	31.6	0.4	-1.4	200
Siem Reap	11.3	35.9	-1.5	2.3	9.5	1.0	-0.7	6.9	26.2	0.4	-1.3	323
Svay Rieng	8.2	32.8	-1.4	2.7	7.6	3.6	-0.6	3.6	20.8	0.5	-1.2	190
Takeo	6.4	30.7	-1.3	5.0	14.6	1.5	-0.8	4.4	22.7	0.0	-1.3	258
Otdar Mean Chey	14.0	36.3	-1.3	7.2	15.1	5.3	-0.7	5.2	26.4	0.0	-1.3	78
Battambang/Pailin	5.0	24.9	-1.2	0.3	7.9	0.7	-0.6	1.8	18.2	0.5	-1.1	388
Kampot/Kep	8.3	25.2	-1.4	0.9	8.2	1.9	-0.7	3.5	21.1	0.7	-1.3	195
Preah Sihanouk/Kaoh Kong	10.4	33.4	-1.4	3.1	10.5	1.8	-0.6	6.5	22.0	0.0	-1.2	105
Preah Vihear/Steung Treng	14.0	44.3	-1.8	1.3	13.8	2.3	-0.7	5.9	30.7	0.1	-1.5	142
Mondol Kiri/Rattanak Kiri	14.6	39.8	-1.6	1.4	8.2	1.2	-0.6	6.0	26.2	0.3	-1.4	125
Mother's education[3]												
No education	13.3	38.5	-1.6	2.8	12.2	1.5	-0.7	7.4	29.7	0.4	-1.4	577
Primary	8.7	34.1	-1.5	2.1	9.3	2.1	-0.7	4.7	24.6	0.6	-1.3	2,397
Secondary	6.8	26.8	-1.3	2.7	9.9	2.0	-0.7	3.5	22.4	0.6	-1.2	1,275
More than secondary	2.8	16.6	-0.7	1.3	4.1	7.1	-0.0	0.3	6.4	5.4	-0.4	114
Mother's interview status												
Interviewed	8.7	32.0	-1.4	2.4	9.7	2.0	-0.7	4.6	24.1	0.6	-1.3	4,261
Not interviewed, but in household	2.5	36.0	-1.2	1.4	11.4	5.1	-0.5	2.7	23.1	2.1	-1.0	107
Not interviewed, not in household[4]	11.9	35.2	-1.5	1.6	8.4	0.8	-0.5	5.3	22.3	0.2	-1.2	525
Wealth quintile												
Lowest	14.1	41.9	-1.7	2.8	11.0	1.1	-0.8	7.1	31.0	0.0	-1.5	1,182
Second	9.8	37.1	-1.6	2.3	11.4	2.1	-0.7	5.7	27.5	0.5	-1.4	998
Middle	7.8	31.7	-1.4	2.1	8.4	1.3	-0.7	4.3	23.3	0.2	-1.3	978
Fourth	6.9	29.1	-1.3	2.5	9.3	2.4	-0.7	3.5	22.0	0.8	-1.2	844
Highest	4.1	18.5	-0.9	1.9	7.4	3.3	-0.4	1.7	13.0	2.1	-0.8	891
Total	8.9	32.4	-1.4	2.3	9.6	2.0	-0.7	4.7	23.9	0.6	-1.3	4,893

Note: Table is based on children who stayed 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 1977 NCHS/CDC/WHO reference standard. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Recumbent length is measured for children under age 2 or in the few cases when the age of the child is unknown and the child is less than 85 cm; standing height is measured for all other children

[2] Includes children who are below 3 standard deviations (SD) from the WHO Child Growth Standards population median

[3] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire and 5 missing cases.

[4] Includes children whose mothers are deceased.

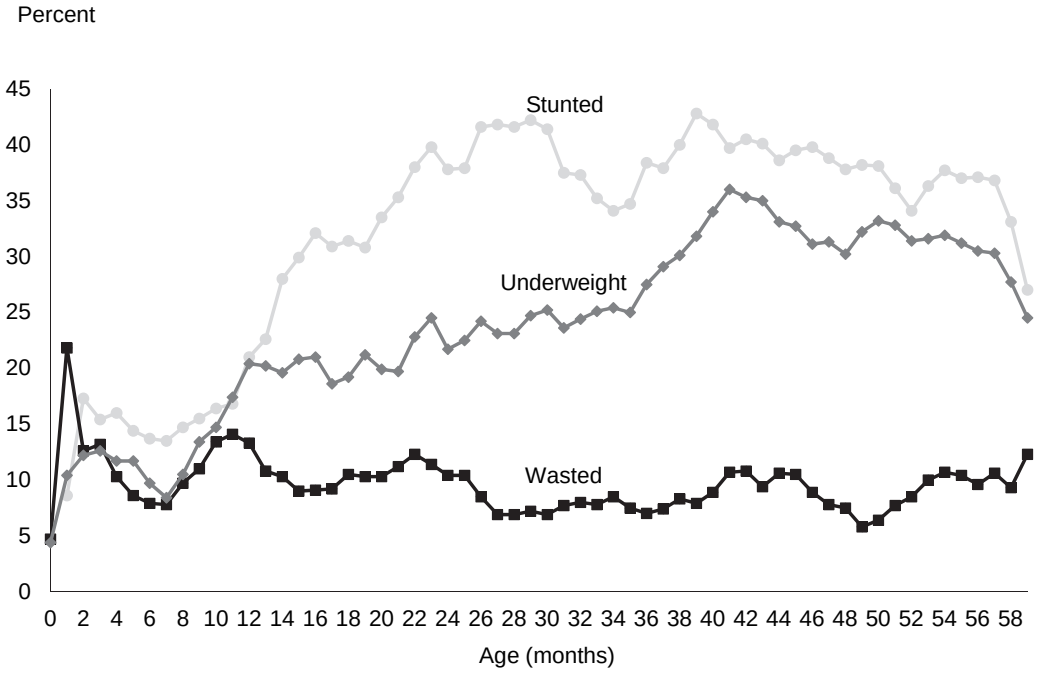
Children whose height-for-age is more than two standard deviations below the median of the reference population are considered stunted, and are short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended time. Recurrent or chronic illness also may contribute to the effect. Thirty-two percent of children under age 5 are short for their age; the figure reported in the 2010 CDHS was higher (40 percent). Approximately one-tenth (9 percent of all children) are severely stunted. The prevalence of stunting is 10 percentage points higher among rural children (34 percent) than among urban children (24 percent). More than half of the provinces in Cambodia have percentages of underweight

children above the national average. A mother's wealth status and educational level correlate negatively with the likelihood that her child is stunted. Stunting is more common among children whose mother never attended school (39 percent) than among those whose mothers have at least some education. Children born to mothers in the lowest wealth quintile are more than twice as likely (42 percent) to be stunted as children born to mothers in the highest wealth quintile (19 percent).

Children whose weight-for-height is more than two standard deviations below the median of the reference population are considered wasted or thin. Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness, especially diarrhea, or the effect of a rapid deterioration in food supplies. In Cambodia, 10 percent of children were wasted at the time of the survey. This figure has not changed significantly from that in 2010 CDHS (11 percent).

Children whose weight-for-age is more than two standard deviations below the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic undernutrition. Approximately one in four children (24 percent) is underweight. This figure has improved slightly compared with that found in the 2010 CDHS. The distributions of wasting and underweight by residence and province share patterns similar to those of stunting. Also, children raised by mothers with less education and live in poor households are more likely to be wasted and underweight. Figure 3.5 shows the nutritional status of children by age.

Figure 3.5 **Nutritional status of children by age**



Note: *Stunting* reflects chronic malnutrition; *wasting* reflects acute malnutrition; *underweight* reflects chronic or acute malnutrition or a combination of both. Plotted values are smoothed by a five-month moving average.

CDHS 2014

3.9.2 Breastfeeding and Supplementation

Breast milk is the optimal source of nutrients for infants. Children who are exclusively breastfed receive only breast milk. Exclusive breastfeeding is recommended during the first 6 months of a child's life because it limits exposure to disease agents as well as provides all of the nutrients that a baby requires. Table 3.13 shows the breastfeeding practices of mothers of children under age 2.

Breastfeeding is nearly universal in Cambodia, as 93 percent of children age 0-5 months are breastfed. The results indicate that breastfeeding continues for the majority of Cambodian children well beyond the first year of life. At age 12-17 months, around 78 percent of children are still breastfed, and 40 percent of children 18-23 months continue to be breastfed.

Exclusive breastfeeding is common but not universal in very early infancy in Cambodia. Among infants under age 2 months, 80 percent received only breast milk. But this proportion declines rapidly among older infants. By age 4-5 months, around two in five babies are receiving supplements, including one in five being given complementary foods. The majority of Cambodian children age 6 months and older are receiving other foods or milk in addition to breast milk.

Table 3.13 Breastfeeding status by age

Percent distribution of children under age 2 living with their mother, by breastfeeding status, the percentage currently breastfeeding; and the percentage using a bottle with a nipple, according to age in months, Cambodia 2014

	Breastfeeding status										
Age in months	Not breast-feeding	Exclusively breast-feeding	Breast-feeding and consuming plain water only	Breast-feeding and consuming nonmilk liquids[1]	Breast-feeding and consuming other milk	Breast-feeding and consuming complement ary foods	Total	Percent-age currently breast-feeding	Number of youngest children under 2 living with the mother	Percent-age using a bottle with a nipple	Number of all children under 2
0-1	3.6	79.9	5.6	0.4	6.5	4.0	100.0	96.4	210	8.6	213
2-3	6.6	67.1	12.9	2.1	5.9	5.4	100.0	93.4	257	16.2	262
4-5	9.4	50.4	12.5	0.3	6.7	20.6	100.0	90.6	249	32.5	260
6-8	7.2	9.0	5.4	0.1	1.3	76.8	100.0	92.8	396	38.4	403
9-11	11.4	0.4	1.3	0.0	0.9	86.0	100.0	88.6	349	38.3	357
12-17	22.2	0.3	0.2	0.0	0.0	77.3	100.0	77.8	673	34.1	689
18-23	60.3	0.0	0.0	0.0	0.2	39.4	100.0	39.7	724	33.0	771
0-3	5.2	72.9	9.6	1.3	6.2	4.8	100.0	94.8	467	12.8	475
0-5	6.7	65.0	10.6	1.0	6.4	10.3	100.0	93.3	717	19.8	736
6-9	8.8	7.1	4.2	0.1	1.1	78.8	100.0	91.2	514	38.8	523
12-15	20.0	0.4	0.1	0.0	0.0	79.5	100.0	80.0	461	34.9	467
12-23	42.0	0.1	0.1	0.0	0.1	57.6	100.0	58.0	1,398	33.5	1,460
20-23	62.9	0.0	0.0	0.0	0.1	37.0	100.0	37.1	484	32.3	519

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, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and nonmilk liquids and who do not receive other milk and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

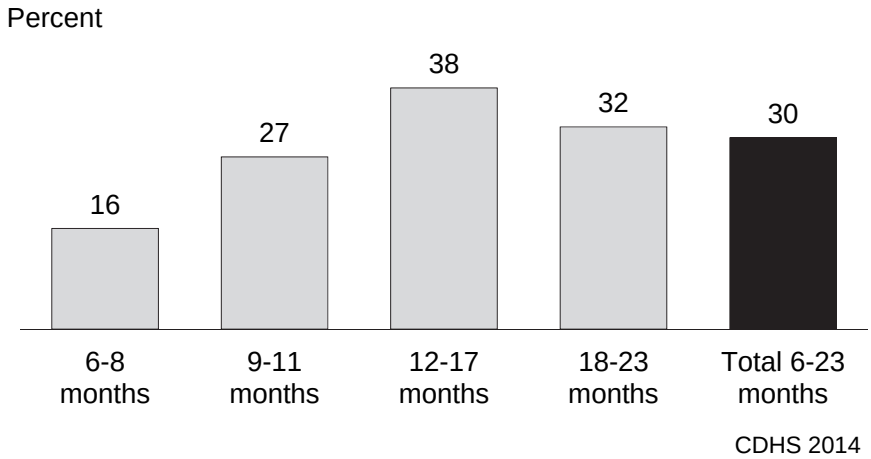
[1] Non-milk liquids include juice, juice drinks, clear broth or other liquids

Figure 3.6 shows the percentage of children 6-23 months given a minimum acceptable diet. A child who is considered to be receiving this diet must be given all of the following:

- Breast milk; or if not breastfeeding must receiving two or more feedings of commercial infant formula; fresh, tinned, or powdered animal milk; or yogurt.
- Foods from four or more of the following groups: (1) infant formula, milk other than breast milk, cheese or yogurt, or other milk products; (2) foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; (3) vitamin A-rich fruits and vegetables (and red palm oil); (4) other fruits and vegetables; (5) eggs; (6)meat, poultry, fish, and shellfish (and organ meats); and (7) legumes and nuts.
- The minimum number of recommended meals per day, according to age and breastfeeding status. For breastfed children, the minimum meal frequency is solid or semisolid food at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months. For nonbreastfed children, the minimum meal frequency is solid or semisolid food or milk at least four times a day for children 6-23 months.

According to the 2014 CDHS, about one in three (30 percent) of Cambodian children age 6-23 months (breastfed and nonbreastfed) receive this minimum acceptable diet (Figure 3.6).

Figure 3.6 **Minimum acceptable diet by age, in months**



3.9.3 Anemia

Anemia is characterized by a low level of hemoglobin in the blood. Hemoglobin transports oxygen from the lungs to other tissues and organs in the body. Anemia can result from a nutritional deficiency of iron, folate, vitamin B12, or other nutrients. This type of anemia is commonly referred to as iron-deficiency anemia and is the most widespread form of malnutrition in the world. Anemia can also be the result of hemorrhage, chronic disease, malaria, parasitic infection, or genetic disorders such as hemoglobin E trait, beta-thalassemia, and alpha-thalassemia.

Table 3.14 presents the anemia levels for children under age 5 (6-59 months) and for women age 15-49. Levels of anemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization (DeMaeyer et al., 1989). Children with < 7.0 g/dl of hemoglobin are classified as having severe anemia, with 7.0 – 9.9 g/dl having moderate anemia, and with 10.0 – 10.9 g/dl having mild anemia. Women with < 7.0 g/dl are classified as having severe anemia, with 7.0 – 9.9 g/dl as having moderate anemia, and nonpregnant women with 10.0 – 11.9 g/dl and pregnant women with 10.0 – 10.9 g/dl as having mild anemia.

Anemia is common among children in Cambodia; more than one-half of children (56 percent) are anemic. Nearly all who suffer from anemia are moderately anemic (25 percent) or mildly anemic (30 percent). Less than 1 percent of children are severely anemic. Anemia is slightly less common among women. About 45 percent of women have evidence of anemia, although the majority is mildly anemic (38 percent of all women). As with children, the prevalence of anemia among women found in the 2014 CDHS is almost the same as that found in the 2010 CDHS. The prevalence of anemia varies substantially by residence and by region among both children and women.

Table 3.14 Anemia among children and women

Percentage of children age 6-59 months and women age 15-49 classified as having anemia, by background characteristics, Cambodia 2014

Background characteristic	Any anemia	Percentage with anemia: Mild anemia	Moderate anemia	Severe anemia	Number
CHILDREN					
Sex					
Male	56.7	28.8	27.4	0.5	2,280
Female	54.2	30.8	23.0	0.5	2,176
Age in months					
<6	79.9	30.8	48.4	0.7	474
6-11	72.3	29.7	41.7	1.0	1,057
12-23	50.5	28.2	21.9	0.4	1,013
24-35	45.3	31.0	14.0	0.3	976
36-47	40.3	29.9	10.3	0.1	936
Residence					
Urban	43.4	25.7	17.5	0.2	591
Rural	57.4	30.4	26.4	0.5	3,864
Province					
Banteay Mean Chey	39.7	21.1	17.2	1.4	222
Kampong Cham	62.7	40.3	22.4	0.0	625
Kampong Chhnang	59.2	27.9	31.2	0.0	161
Kampong Speu	63.9	35.2	27.8	0.9	301
Kampong Thom	66.0	36.2	29.3	0.4	197
Kandal	58.6	24.9	33.7	0.0	267
Kratie	50.2	28.5	21.7	0.0	157
Phnom Penh	41.0	24.5	16.5	0.0	335
Prey Veng	51.3	26.5	24.2	0.5	345
Pursat	64.8	25.7	36.8	2.3	192
Siem Reap	52.3	29.1	22.8	0.4	306
Svay Rieng	49.8	22.9	26.3	0.6	168
Takeo	53.1	29.0	23.5	0.6	245
Otdar Mean Chey	64.3	37.1	27.3	0.0	77
Battambang/Krong Pailin	49.0	26.8	22.2	0.0	344
Kampot/Krong Kep	57.3	31.8	25.0	0.5	177
Krong Preah Sihanouk/Kaoh Kong	58.1	29.4	27.5	1.2	92
Preah Vihear/Steung Treng	68.8	27.1	41.0	0.7	128
Mondol Kiri/Rattanak Kiri	57.7	30.3	25.8	1.6	117
Total	55.5	29.8	25.2	0.5	4,456
WOMEN					
Residence					
Urban	39.4	34.9	4.3	0.2	2,156
Rural	46.8	39.2	7.3	0.3	9,130
Province					
Banteay Mean Chey	30.5	26.3	3.7	0.6	450
Kampong Cham	52.0	42.2	9.6	0.2	1,226
Kampong Chhnang	53.0	45.2	6.9	0.9	418
Kampong Speu	53.3	44.2	9.1	0.0	784
Kampong Thom	44.6	36.6	7.2	0.8	567
Kandal	49.4	41.3	7.9	0.2	867
Kratie	46.2	36.3	8.8	1.0	318
Phnom Penh	41.7	37.4	4.0	0.3	1,316
Prey Veng	46.9	39.8	7.1	0.0	749
Pursat	46.6	37.6	8.8	0.2	418
Siem Reap	41.1	34.3	6.3	0.4	722
Svay Rieng	45.7	38.2	7.3	0.3	427
Takeo	35.4	32.2	3.2	0.0	693
Otdar Mean Chey	48.3	40.7	7.6	0.0	189
Battambang/Pailin	42.5	38.2	4.3	0.0	843
Kampot/Kep	44.1	39.1	4.7	0.3	479
Preah Sihanouk/Kaoh Kong	43.7	37.4	6.2	0.1	267
Preah Vihear/Steung Treng	53.7	41.4	12.2	0.0	313
Mondol Kiri/Rattanak Kiri	41.7	34.4	7.2	0.1	239
Total	45.4	38.4	6.7	0.2	11,286

Note: Table is based on children and women who stayed in the household the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude (for children and women) and smoking (for women) using CDC formulas (CDC, 1998). Women and children with <7.0 g/dl of hemoglobin have severe anemia, women and children with 7.0-9.9 g/dl have moderate anemia, and nonpregnant women with 10.0-11.9 g/dl and children and pregnant women with 10.0-10.9 g/dl have mild anemia. For purposes of the smoking adjustment, if a woman is not interviewed or if information is not available on whether or not a woman smokes, we assume that she is a non-smoker. In ever-married samples or in countries where smoking among women is common, this assumption may have to be modified.

3.10 HIV/AIDS

The HIV/AIDS epidemic is a serious threat to social and economic development around the world. The CDHS included a series of questions that addressed respondents' knowledge about AIDS and their awareness of modes of transmission of the human immunodeficiency virus that causes AIDS, and of behaviors that can prevent the spread of HIV.

3.10.1 Knowledge of HIV Prevention Methods

Table 3.15 presents knowledge of HIV/AIDS prevention methods among women and men age 15-49, by background characteristics. Eighty-four percent of women and 90 percent of men are aware that their chance of contracting the AIDS virus can be reduced by using condoms when having sex. About the same proportion of women (85 percent) and men (93 percent) know that by limiting sex to one uninfected partner who has no other partners can prevent transmission of the AIDS virus. Approximately 77 percent of women and 87 percent of men have knowledge of both HIV prevention methods.

Table 3.15 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 and by having one partner who is not infected and has no other partners, by background characteristics, Cambodia 2014

	Percentage of women who say HIV can be prevented by:				Percentage of men who say 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[2]	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[2]	Number of men
Age								
15-24	83.2	84.5	76.2	5,910	88.1	90.6	84.1	1,760
15-19	80.1	81.0	72.4	2,893	86.0	88.0	82.0	926
20-24	86.2	87.9	79.9	3,017	90.3	93.5	86.5	835
25-29	86.6	87.5	80.4	2,836	93.2	96.8	91.4	815
30-39	85.2	86.4	78.6	4,886	90.9	94.3	88.0	1,463
40-49	80.6	82.5	73.7	3,947	88.9	94.3	86.3	1,152
Marital status								
Never married	81.9	83.1	75.6	4,428	88.9	90.7	85.0	1,663
Ever had sex	87.2	85.7	80.8	56	94.9	95.0	90.6	303
Never had sex	81.8	83.1	75.6	4,372	87.6	89.8	83.8	1,360
Married or living together	84.7	85.9	77.8	11,898	90.2	94.8	87.7	3,405
Divorced/separated/widowed	81.3	84.3	74.0	1,252	92.8	93.4	89.6	122
Residence								
Urban	90.4	91.1	85.7	3,251	96.8	97.4	95.2	869
Rural	82.2	83.7	75.0	14,327	88.5	92.6	85.2	4,321
Province								
Banteay Mean Chey	56.9	40.1	33.3	689	85.7	87.7	79.2	192
Kampong Cham	74.5	77.9	66.4	2,021	93.7	89.6	87.6	663
Kampong Chhnang	88.8	99.0	88.6	662	93.6	98.4	92.5	182
Kampong Speu	80.6	85.9	73.3	1,196	86.7	90.7	80.2	323
Kampong Thom	96.3	93.7	90.5	851	96.7	99.6	96.5	232
Kandal	92.1	93.3	87.3	1,330	83.2	95.6	82.8	413
Kratie	84.4	87.1	76.9	488	75.4	83.7	68.3	143
Phnom Penh	95.7	97.0	93.7	1,994	98.7	99.0	98.4	550
Prey Veng	84.4	91.6	81.5	1,188	94.9	97.3	93.7	342
Pursat	73.7	71.4	62.0	631	87.6	96.9	87.6	184
Siem Reap	79.8	80.6	70.0	1,137	68.9	89.5	63.8	337
Svay Rieng	81.0	90.8	76.5	654	87.2	93.0	84.0	183
Takeo	84.9	91.0	81.6	1,082	93.1	89.3	85.8	334
Otdar Mean Chey	69.7	70.3	62.4	294	97.5	98.9	96.9	99
Battambang/Pailin	91.2	87.8	83.5	1,333	97.5	99.6	97.5	405
Kampot/Kep	93.4	90.5	86.9	770	90.1	94.3	88.3	241
Preah Sihanouk/Kaoh Kong	86.1	83.6	77.2	422	98.2	97.1	95.4	120
Preah Vihear/Steung Treng	74.8	68.1	61.1	462	81.1	79.9	77.7	112
Mondol Kiri/Rattanak Kiri	61.7	66.5	57.4	372	76.6	80.8	74.1	134

Continued…

Table 3.15—*Continued*

Background characteristic	Percentage of women who say HIV can be prevented by: Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[2]	Number of women	Percentage of men who say HIV can be prevented by: Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[2]	Number of men
Education								
No education	70.9	74.6	63.1	2,250	70.1	84.8	66.6	324
Primary	82.7	83.0	74.8	8,281	87.1	90.3	82.6	2,167
Secondary	88.3	90.0	82.8	6,237	94.0	96.6	92.0	2,304
More than secondary	95.4	97.3	93.6	810	97.7	99.4	97.3	395
Wealth quintile								
Lowest	76.8	78.2	68.4	3,143	78.2	87.6	74.8	901
Second	79.5	82.2	72.3	3,314	86.6	90.7	82.2	954
Middle	82.2	83.6	74.5	3,381	93.3	94.4	89.7	1,040
Fourth	86.3	86.5	79.3	3,612	93.0	94.8	89.7	1,124
Highest	91.3	92.5	87.4	4,128	95.5	98.0	94.6	1,171
Total 15-49	83.7	85.1	77.0	17,578	89.9	93.4	86.9	5,190

[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Knowledge of both HIV prevention methods is lower among women and men living in rural areas than among those living in urban areas. Only 75 percent of rural women and 85 percent of rural men know both HIV prevention methods compared to 86 percent and 95 percent of their urban counterparts, respectively. There is considerable variability across provinces in knowledge of prevention methods. Among women, knowledge of the two HIV prevention methods is lowest in Banteay Mean Chey (33 percent). Among men, knowledge of the two methods is lowest in Siem Reap (64 percent). Level of educational attainment strongly relates to a respondent's knowledge of HIV prevention methods. Women and men with higher levels of schooling are more likely than those with less schooling to be aware of various preventive methods. The data also show that women and men in higher wealth quintiles are more likely than those in lower quintiles to be aware of ways to prevent transmission of the HIV virus.

A comprehensive knowledge about HIV prevention means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about transmission or prevention of HIV (HIV cannot be transmitted by mosquito bites and a person cannot become infected by sharing food with a person who has HIV). Many national and international programs combatting HIV/AIDS track progress and evaluate the extent to which youth and young adults age 15-24 in Cambodia have comprehensive correct knowledge of AIDS. Table 3.16 shows that only around two in five young women (38 percent) and nearly one in two young men (46 percent) had such knowledge. The proportions of female and male youth and young adults with comprehensive correct AIDS knowledge was higher in urban than in rural areas. This proportion also rose significantly with level of education and wealth quintile.

Table 3.16 Knowledge about HIV prevention among young people

Percentage of young women and young men age 15-24 with knowledge about HIV prevention, by background characteristics, Cambodia 2014

Background characteristic	Women age 15-24		Men age 15-24	
	Percentage with knowledge about HIV prevention[1]	Number of women	Percentage with knowledge about HIV prevention[1]	Number of men
Age				
15-19	32.7	2,893	42.4	926
15-17	31.7	1,774	42.0	581
18-19	34.2	1,119	43.0	345
20-24	42.4	3,017	49.9	835
20-22	38.6	1,811	50.3	545
23-24	48.0	1,206	49.2	289
Marital status				
Never married	38.5	3,495	46.4	1,392
Ever had sex	(48.5)	37	53.5	158
Never had sex	38.4	3,458	45.5	1,234
Ever married	36.4	2,415	44.2	368
Residence				
Urban	55.0	1,171	63.9	324
Rural	33.3	4,739	41.9	1,436
Education				
No education	16.3	243	17.8	57
Primary	24.7	1,955	28.8	572
Secondary	42.1	3,287	53.0	987
More than secondary	74.6	425	76.2	144
Wealth quintile				
Lowest	26.6	956	28.2	323
Second	27.7	1,057	40.0	304
Middle	28.5	1,139	44.1	354
Fourth	42.1	1,262	50.0	384
Highest	54.9	1,496	62.7	396
Total 15-24	37.6	5,910	45.9	1,760

[1] Knowledge about HIV prevention means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV; knowing that a healthy-looking person can have HIV; and rejecting the two most common local misconceptions about transmission or prevention of HIV.

3.10.2 Multiple and Lifetime Sexual Partners

HIV prevention initiatives focus their messages and efforts on two important aspects of sexual behavior, namely faithfulness (having only one sexual partner) and use of condoms. The CDHS asked a series of questions to women and men related to these behaviors in order to monitor certain HIV/AIDS indicators.

Tables 3.17.1 and 3.17.2 present information on multiple sexual partners among women and men and give the mean number of sexual partners for each sex in their lifetime. In general Cambodian women have only one sexual partner over their lifetime. However, Cambodian men reported that they have had an average of four sexual partners in their lifetime. Men who have never been married, live in urban areas, have more than secondary education, and belong to the highest wealth quintile have more lifetime sexual partners than other men. About 3 percent of men reported that they had sexual intercourse with more than one sexual partner in the past 12 months. The distribution of multiple sexual partners in the past twelve months by marital status, residence, education, and wealth quintile is similar to that of lifetime sexual partners.

Table 3.17.1 Multiple sexual partners in the past 12 months: Women

Among all women age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months, and the mean number of sexual partners during her lifetime for women who ever had sexual intercourse, by background characteristics, Cambodia 2014

	All women		Women who ever had sexual intercourse[1]	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of women	Mean number of sexual partners in lifetime	Number of women
Age				
15-24	0.1	5,910	1.2	2,443
15-19	0.0	2,893	1.0	490
20-24	0.3	3,017	1.2	1,953
25-29	0.1	2,836	1.1	2,411
30-39	0.0	4,886	1.1	4,561
40-49	0.0	3,947	1.2	3,762
Marital status				
Never married	0.0	4,428	1.4	48
Married/living together	0.0	11,898	1.1	11,883
Divorced/separated/widowed	0.4	1,252	1.4	1,246
Residence				
Urban	0.2	3,251	1.3	2,095
Rural	0.0	14,327	1.1	11,082
Education				
No education	0.1	2,250	1.2	2,034
Primary	0.1	8,281	1.2	7,032
Secondary	0.0	6,237	1.1	3,790
More than secondary	0.0	810	1.0	321
Wealth quintile				
Lowest	0.0	3,143	1.1	2,555
Second	0.0	3,314	1.1	2,620
Middle	0.0	3,381	1.1	2,601
Fourth	0.0	3,612	1.1	2,645
Highest	0.2	4,128	1.3	2,756
Total	0.1	17,578	1.1	13,177

[1] Means are calculated excluding respondents who gave non-numeric responses.

To obtain information on the prevalence of HIV testing, all respondents were asked whether they know where to get an HIV test, and whether they had ever been tested for HIV. If they said that they had been tested, they were asked whether they had received the results of their last test. For those who have ever tested, they were asked if they have been tested for HIV in the past 12 months and whether they received the results of the last test.

Table 3.17.2 Multiple sexual partners in the past 12 months: Men

Among all men age 15-49, the percentage who had sexual intercourse with more than one sexual partner; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during his lifetime for men who ever had sexual intercourse, by background characteristics, Cambodia 2014

	All men		Men who had 2+ partners in the past 12 months		Men who ever had sexual intercourse[1]	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of men	Percentage who reported using a condom during last sexual intercourse	Number of men	Mean number of sexual partners in lifetime	Number of men
Age						
15-24	1.1	1,760	(46.2)	19	2.1	524
15-19	0.2	926	*	2	1.4	69
20-24	2.1	835	(43.4)	18	2.2	455
25-29	2.9	815	*	24	3.0	715
30-39	3.2	1,463	(28.9)	47	3.6	1,438
40-49	4.3	1,152	(18.8)	50	4.4	1,144
Marital status						
Never married	1.5	1,663	(84.2)	25	4.7	302
Married/living together	3.1	3,405	14.9	107	3.4	3,400
Divorced/separated/widowed	6.2	122	*	8	2.8	120
Residence						
Urban	7.1	869	47.7	61	8.0	605
Rural	1.8	4,321	16.3	78	2.7	3,216
Education						
No education	2.7	324	*	9	1.4	284
Primary	1.9	2,167	(14.4)	41	2.5	1,747
Secondary	2.7	2,304	30.8	62	4.5	1,528
More than secondary	7.1	395	(47.6)	28	6.9	262
Wealth quintile						
Lowest	1.6	901	*	14	1.9	663
Second	0.9	954	*	9	2.3	716
Middle	2.0	1,040	*	20	2.7	778
Fourth	2.4	1,124	*	26	3.1	827
Highest	6.0	1,171	41.5	70	7.0	837
Total 15-49	2.7	5,190	30.1	140	3.5	3,821

[1] Means are calculated excluding respondents who gave non-numeric responses.

Tables 3.18.1 and 3.18.2 show that, among the adult population age 15-49, about three in four women (78 percent) and men (76 percent) know where to get an HIV test. Forty-two percent of women and 36 percent of men reported having been tested for HIV at some time in the past. The majority of women and men who were tested indicated that they had received the results of their last test. Ten percent of women and 9 percent of men said that they had received results from an HIV test taken during the 12 months prior to the survey. The proportions of both women and men ever tested were higher among those age 20 and older than among those younger than 20. Testing rates were highest among women and men who are currently married, those who never married but have had sexual experiences, and those who are widowed, divorced, or separated. Adult populations living in urban areas, those who have some education, and those in the highest wealth quintile had higher testing rates than their counterparts.

Table 3.18.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, percentage ever tested, and percentage who were tested in the past 12 months and received the results of the last test, according to background characteristics, Cambodia 2014

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women/men by testing status and by whether they received the results of the last test: Ever tested and received results	Ever tested, did not receive results	Never tested[1]	Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of women
Age								
15-24	76.4	32.4	1.8	65.7	100.0	34.3	12.1	5,910
15-19	67.2	13.6	1.0	85.4	100.0	14.7	6.7	2,893
20-24	85.2	50.5	2.6	46.9	100.0	53.2	17.3	3,017
25-29	87.7	63.2	1.9	34.9	100.0	65.1	14.8	2,836
30-39	81.0	50.3	2.0	47.6	100.0	52.4	8.2	4,886
40-49	70.0	24.0	0.5	75.4	100.0	24.6	3.2	3,947
Marital status								
Never married	70.2	10.8	0.8	88.4	100.0	11.6	3.8	4,428
Ever had sex	81.8	41.8	0.0	58.2	100.0	41.8	24.6	56
Never had sex	70.0	10.4	0.8	88.8	100.0	11.2	3.6	4,372
Married or living together	81.5	51.6	2.0	46.4	100.0	53.6	11.9	11,898
Divorced/separated/widowed	73.7	39.7	1.0	59.4	100.0	40.7	6.6	1,252
Residence								
Urban	90.3	51.4	1.2	47.4	100.0	52.6	12.8	3,251
Rural	75.3	38.0	1.7	60.3	100.0	39.7	8.7	14,327
Education								
No education	59.1	29.8	1.6	68.6	100.0	31.4	6.3	2,250
Primary	76.8	40.6	1.8	57.6	100.0	42.5	8.5	8,281
Secondary	84.2	43.4	1.5	55.2	100.0	44.8	11.2	6,237
More than secondary	96.6	46.7	1.1	52.2	100.0	47.8	14.6	810
Wealth quintile								
Lowest	65.0	32.9	1.5	65.6	100.0	34.5	7.0	3,143
Second	72.0	34.5	2.0	63.5	100.0	36.5	9.0	3,314
Middle	77.3	38.1	1.9	60.0	100.0	40.0	8.2	3,381
Fourth	80.8	40.6	1.8	57.6	100.0	42.4	9.5	3,612
Highest	91.2	52.9	1.0	46.1	100.0	54.0	12.7	4,128
Total	78.1	40.5	1.6	57.9	100.0	42.1	9.5	17,578

[1] Includes “don’t know/missing’” responses

Table 3.18.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, percentage ever tested, and percentage who were tested in the past 12 months and received the results of the last test, according to background characteristics, Cambodia 2014

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women/men by testing status and by whether they received the results of the last test: Ever tested and received results	Ever tested, did not receive results	Never tested[1]	Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of men
Age								
15-24	70.0	18.1	0.8	81.1	100.0	18.9	6.6	1,760
15-19	61.6	6.7	0.8	92.5	100.0	7.5	2.9	926
20-24	79.2	30.8	0.8	68.5	100.0	31.5	10.7	835
25-29	86.3	56.9	0.3	42.8	100.0	57.4	17.3	815
30-39	78.9	48.5	1.4	50.1	100.0	50.1	8.2	1,463
40-49	72.1	29.9	1.0	69.1	100.0	30.9	6.4	1,152
Marital status								
Never married	69.4	15.0	1.0	84.0	100.0	16.0	5.4	1,663
Ever had sex	86.0	45.0	2.2	52.8	100.0	47.2	17.7	303
Never had sex	65.7	8.4	0.7	90.9	100.0	9.1	2.6	1,360
Married or living together	78.2	44.9	1.0	54.2	100.0	46.0	10.2	3,405
Divorced/separated/widowed	82.3	47.8	0.0	52.2	100.0	47.8	12.4	122
Residence								
Urban	89.8	52.7	1.0	46.4	100.0	53.7	12.4	869
Rural	72.6	31.9	0.9	67.2	100.0	32.9	7.9	4,321
Education								
No education	52.8	17.1	0.2	82.7	100.0	17.3	3.1	324
Primary	67.2	29.9	1.1	69.0	100.0	31.1	6.9	2,167
Secondary	82.9	39.1	1.0	59.9	100.0	40.2	9.3	2,304
More than secondary	96.1	58.8	0.5	40.7	100.0	59.3	19.4	395
Wealth quintile								
Lowest	58.7	22.4	0.9	76.7	100.0	23.5	5.4	901
Second	67.6	26.4	1.0	72.6	100.0	27.4	4.9	954
Middle	72.5	29.2	0.6	70.2	100.0	29.8	7.2	1,040
Fourth	82.4	39.8	1.0	59.2	100.0	41.0	10.3	1,124
Highest	90.8	54.0	1.1	44.9	100.0	55.1	14.1	1,171
Total 15-49	75.5	35.4	0.9	63.7	100.0	36.4	8.7	5,190

[1] Includes 'don't know/missing'

3.11 MATERNAL MORTALITY

Estimates of maternal mortality for the period 0-6 years before the survey are shown in Table 3.19. Age-specific mortality rates are calculated by dividing the number of maternal deaths by years of exposure. Maternal deaths are defined as any death that occurred during pregnancy, childbirth, or within 6 weeks after the birth or termination of a pregnancy, not including deaths that occurred during the specified period due to non-pregnancy-related causes. Maternal deaths are a relatively rare occurrence, and as such should be interpreted with caution.

There were 32 maternal deaths in the reference period. The maternal mortality rate, which is the annual number of maternal deaths per 1,000 women age 15-49, for the period 1999-2005 is 0.15. Maternal deaths accounted for 9 percent of all deaths to women age 15-49; in other words, about one in ten Cambodian women who died in the 0-6 years preceding the survey died from pregnancy or pregnancy-related causes.

The maternal mortality ratio, 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 since it measures the obstetric risk associated with each live birth. Table 3.19 shows that the maternal mortality ratio for Cambodia for the period 2008-2014 is 170 deaths per 100,000 live births (or alternatively, 1.70 deaths per 1,000 live births). The maternal mortality ratio can be converted to an estimate of the lifetime risk of dying from maternal causes: 0.005 or, in other words, a risk of dying of 1 in 200.

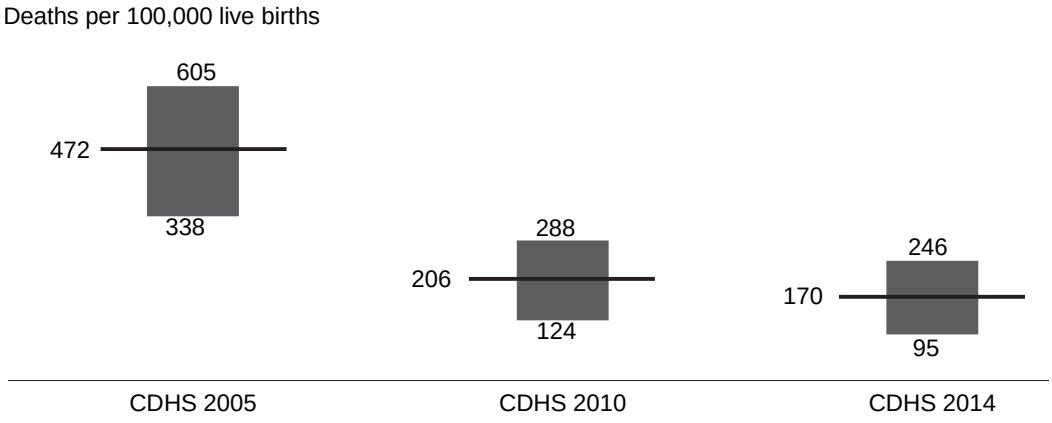
Table 3.19 Maternal mortality

Direct estimates of maternal mortality rates for the 0-6 years preceding the survey, by five-year age groups, Cambodia 2014

Age	Percentage of female deaths that are maternal	Maternal deaths	Exposure years	Maternal mortality rate[1]
15-19	0.0	0	33,159	0.00
20-24	13.2	4	40,909	0.10
25-29	27.1	11	40,901	0.27
30-34	10.5	5	30,606	0.16
35-39	16.1	8	23,590	0.32
40-44	2.8	2	19,321	0.11
45-49	3.0	2	14,071	0.16
15-49	9.1	32	202,557	0.15[a]
General fertility rate (GFR)[2]	89			
Maternal mortality ratio (MMR)[3]	170			
Lifetime risk of maternal death[4]	0.005			

CI: Confidence interval
[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per 1,000 woman age 15-49
[3] Expressed per 100,000 live births; calculated as the age-adjusted maternal mortality rate times 100 divided by the age-adjusted general fertility rate
[4] Calculated as $1-(1-MMR)^{TFR}$ where TFR represents the total fertility rate for the seven years preceding the survey
[a] Age-adjusted rate

Figure 3.7 Level and confidence interval of maternal mortality ratios



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