

# AFGHANISTAN MORTALITY SURVEY 2010



## KEY FINDINGS

This report presents findings of the Afghanistan Mortality Survey (AMS) 2010 which was carried out by the Afghan Public Health Institute (APHI) of the Ministry of Public Health (MoPH) and the Central Statistics Organization (CSO) Afghanistan. Technical assistance for the survey was provided by ICF Macro, the Indian Institute of Health Management Research (IIHMR) and the World Health Organization Regional Office for the Eastern Mediterranean (WHO/EMRO). The 2010 AMS is part of the worldwide MEASURE DHS project that assists countries in the collection of data to monitor and evaluate population, health, and nutrition programs. Financial support for the survey was received from the United States Agency for International Development (USAID) and the United Nations Children's Fund (UNICEF). WHO/EMRO's contribution to the survey was supported with funds from USAID and the UK Department for International Development and the Health Metrics Network (DFID/HMN).

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## What is the AMS?

The Afghanistan Mortality Survey (AMS) 2010 is a nationally representative survey of 22,351 households, 47,848 women age 12-49, and verbal autopsies of 3,157 deaths in the three years preceding the survey. The AMS 2010 is the first comprehensive survey conducted in Afghanistan as part of the worldwide Demographic and Health Surveys (DHS) project. The AMS 2010 provides current data on childhood, adult, and maternal mortality levels and cause of death, fertility, knowledge and use of family planning methods, and utilization of antenatal, delivery and postnatal care services.

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The AMS 2010 was implemented by the Afghan Public Health Institute (APHI) of the Ministry of Public Health (MoPH) and the Central Statistics Organization (CSO). Coordination, oversight, advice and decisions on all major aspects of the survey were provided by the Steering Committee made up of representatives from various Afghan government ministries and key stakeholders including MoPH, CSO, the United States Agency for International Development (USAID), ICF Macro, the Indian Institute of Health Management Research (IIHMR), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the World Health Organization (WHO) and other local and international NGOs. Technical guidance was provided by the technical advisory group (TAG) members and technical experts in the field of mortality and health. Ethical approval for the survey was obtained from the institutional review boards at the MoPH, ICF Macro, IIHMR, and the WHO.

## Who was interviewed?

The sample for the AMS 2010 which covered all the provinces in the country is a stratified sample selected in two stages from the updated 2011 Population and Housing Census (PHC) preparatory frame obtained from the CSO. The survey was designed to produce representative estimates of indicators for the country as a whole, for the urban and the rural areas separately, and for each of the three survey domains—the North, Central, and South zones.



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# AFGHANISTAN



The North, Central, and South zones are regroupings of the eight geographical regions as described below:

- The North zone combines the Northern region and the North Eastern region and consists of nine provinces: Badakhshan, Baghlan, Balkh, Faryab, Jawzjan, Kunduz, Samangan, Sari Pul, and Takhar.
- The Central zone combines the Western region, the Central Highland region, and the Capital region and consists of 12 provinces: Badghis, Bamyan, Daykundi, Farah, Ghor, Hirat, Kabul, Kapisa, Logar, Panjsher, Parwan, and Maydan Wardak.
- The South zone combines the Southern region, the South Eastern region, and the Eastern region, and consists of 13 provinces: Ghazni, Hilmand, Kandahar, Khost, Kunar, Laghman, Nangarhar, Nimroz, Nuristan, Paktika, Paktya, Uruzgan, and Zabul.

For security reasons, the rural areas of Kandahar, Hilmand, and Zabul, which constitute 9 percent of the population, were excluded during sample design from the sample selection; however, the urban areas of these provinces were included. Of the 751 enumeration areas (EAs) that were included in the sample design, 34 EAs (5 urban and 29 rural) were not surveyed. Six of the selected EAs in Ghazni, 16 in Paktika, 1 in Uruzgan, 3 in Kandahar, 3 in Daykundi, and 2 in Faryab were not surveyed because of the security situation. In addition, two EAs from Badakshan and one from Takhar were not surveyed because base maps from the CSO were unavailable. The non-surveyed EAs—which were primarily in rural areas—represent an additional 4 percent of the total population of the country (Table 1). Thus, all together, 13 percent of the country was not surveyed; most of these areas were in the South zone. The survey covered only 66 percent of the population in the South zone. Sample weights were adjusted to take into account those clusters that were selected but not completed for security or other reasons.

**The AMS covered 87% of the population of the country, 98% of the urban population, and 84% of the rural population.**

The AMS 2010 covered the large majority of the country—87 percent of the total population, 98 percent of the urban population and 84 percent of the rural population. Nevertheless, the lack of total coverage and the disproportionate exclusion of areas in the South, and particularly the rural South, should be taken into consideration when interpreting national level estimates of key demographic indicators and estimates for the South zone and regions within that zone. For this reason key indicators are presented for all Afghanistan and Afghanistan excluding the South zone. Despite these exclusions, the AMS 2010 is the most comprehensive mortality survey conducted in Afghanistan in the last few decades in terms of geographic coverage of the country.

Table 1 Sample coverage

Percentage of the population represented by the sample surveyed in the Afghanistan Mortality Survey, Afghanistan 2010

	Urban	Rural	Total
North	97	98	98
Central	100	98	99
South	94	63	66
Total	98	84	87

## How was the survey Implemented?

Four questionnaires were administered for the AMS 2010: the Household Questionnaire, the Woman’s Questionnaire, the Verbal Autopsy (VA) Questionnaire and a Cluster Level Questionnaire. These questionnaires were based on the DHS model questionnaires and WHO VAs adapted to reflect the population and health issues relevant to Afghanistan. The survey questionnaires were translated from English into the two main local languages—Pashto and Dari—and pretested prior to the start of fieldwork.

After the selection of the 751 clusters throughout the eight geographic regions and three zones, a listing operation was carried out by 88 listers and cartographers from CSO, in the selected clusters starting in March 27, 2010. Out of the 751 clusters, 719 were listed (with 2 of the listed clusters not surveyed).



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A training of trainers was conducted by ICF Macro staff at MoPH for 35 participants over a two-week period from February 1-14, 2010. These trainees were recruited to conduct the pilot survey and to serve as trainers for the main training. The pilot survey was conducted in Dari and Pashto from February 16-20, 2010, in three selected sites.

The training of interviewers, editors, supervisors, quality control staff, and reserves for the main survey was conducted from March 23, 2010, to April 17, 2010 in Dari and Pashto. On the basis of the exam scores and overall performance in the classroom and during field practice, 140 trainees from the 174 recruited were selected to participate in the main fieldwork. Four additional training sessions were conducted in Kabul in the Pashto and Dari languages for fieldwork in the difficult and insecure provinces for which no trainee initially selected and trained had volunteered to go. In order to minimize non-response, interviewers were clearly instructed to respect the cultural sensitivities of the country. Male interviewers

conducted interviews with male respondents and female interviewers completed interviews with female respondents. The majority of respondents to the Household Questionnaire were male. The Woman's Questionnaire was administered to females only. One or more key informants who were present during the death of a person were respondents to the Verbal Autopsy Questionnaires and were either male or female or both. In cases where respondents to the verbal autopsy were male and female, both the male and female interviewers worked jointly in administering the Verbal Autopsy Questionnaires and recording the responses. In line with the local culture, a female field staff was always accompanied by a *maharam*, a close male relative, who was either a member of the team or just a companion to a female member of the team.

In total, 32 teams involving 102 males and 82 females worked over a period of 8 months from April 20-December 31, 2010 to complete fieldwork in all 34 provinces.

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# Key Findings

## 1. Characteristics of Households

The AMS 2010 enumerated a total of 175,079 persons in the selected households, with males outnumbering females at 51 percent. Nearly half of Afghanistan’s population is under age 15, and 16 percent is under age 5. Persons age 65 and older account for less than 3 percent of the total population. The overall sex ratio is 103, and is lower than previous national estimates.

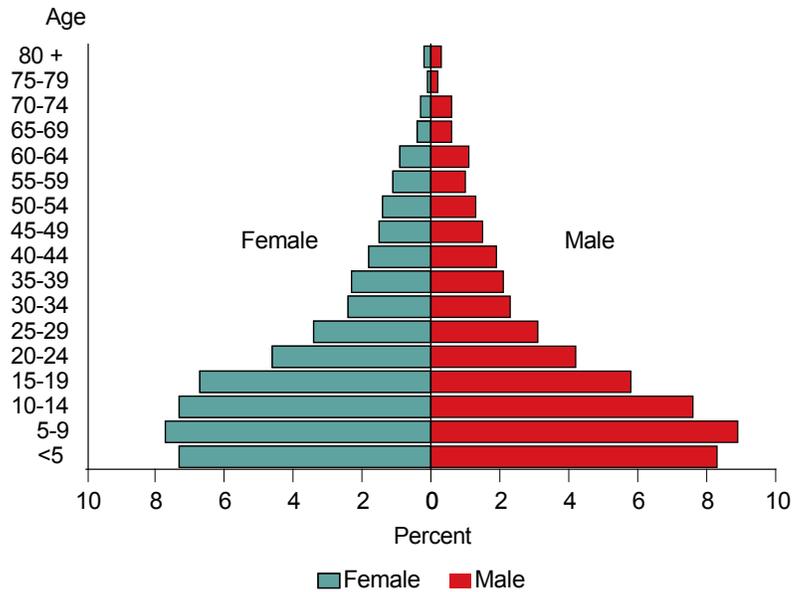
The Myer’s Index indicates that 17 percent of the household population had their ages misreported due to heaping on primarily ages ending in ‘0’ and ‘5’.

The vast majority of households (97 percent) are headed by men. The proportion of female-headed households are slightly higher in urban areas than in rural areas. The mean household size for the country is 7.8 persons per household, with a small urban-rural difference. Eight percent of households have single orphans—one parent dead— compared with 1 percent of households with double orphans—both parents dead. Orphanhood in Afghanistan increases with children’s age from 1 percent of children under age 2 to 11 percent of children age 15-17.

In terms of socioeconomic status, more than two-thirds (68 percent) of urban households fall in the richest wealth quintile. Households in the Central zone are more likely to fall in the highest wealth quintile than households in the South and North zones with the population residing in the Central Highland region being the poorest.

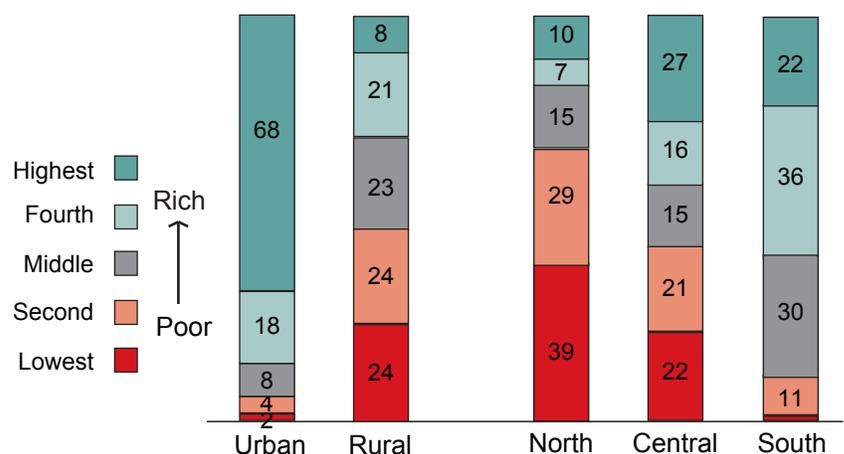
Access to safe drinking water has increased in recent years. Just over one in two (54 percent)

Figure 1 Population Pyramid



Access to safe drinking water has increased in recent years, but Afghanistan has a long way to go in improving sanitation and access to electricity.

Figure 2. Distribution of Population by Wealth Quintiles



households obtain drinking water from an improved source, with three-quarters (77 percent) of urban households and half (49 percent) of rural households having access to safe drinking water. The country has an even longer way to go in improving sanitation. Only one-fifth (20 percent) of households have an improved toilet facility, while four-fifths (81 percent) have a non-improved toilet facility and one-fifth (20 percent) have no toilet facility at all. Less than half (43 percent) of households in Afghanistan are electrified.

## 2. Characteristics of Female Respondents

A total of 47,848 women age 12-49 were interviewed during the survey. The majority (70 percent) of women were under age 30 years and more than half (54 percent) were married at the time of the survey. The majority (80 percent) of respondents reside in rural areas, with just one-fifth (20 percent) residing in urban areas. More than three-quarters (76 percent) of women have no education. Younger women are more likely than older women to be educated, indicating some success in the recent initiatives of the Afghan government to provide girls with access to education. Women who live in the South zone are least likely to be educated compared with women who live in the Central and North zones.

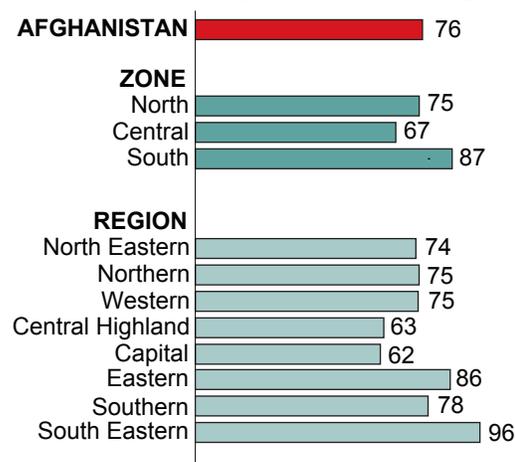
## 3. Fertility

A complete birth history in the AMS 2010 produced direct estimates of fertility for the first time in Afghanistan. The total fertility rate for Afghanistan for the three years preceding the AMS 2010 is 5.1 children per woman. Fertility is higher in rural areas (5.2 children per woman) than in urban areas (4.7 children per woman). The pattern of higher rural fertility is particularly evident in the 15-24 and 40-49 age groups .

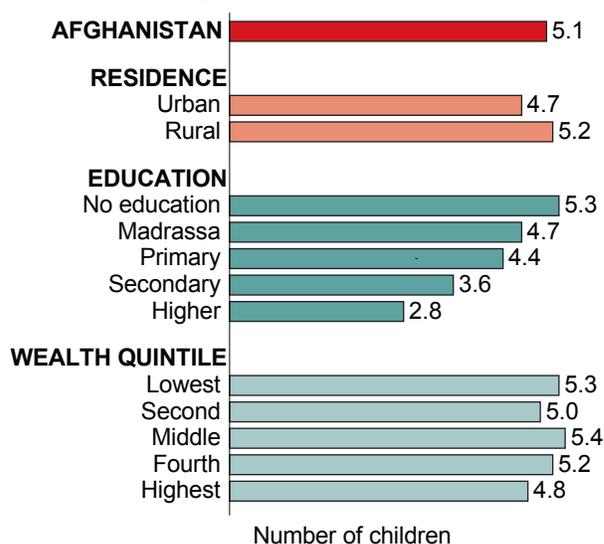
The TFR is higher among women residing in the South zone than among women in the North and Central zones. Women in the South Eastern and Eastern regions have an average of one child more than women in the Central Highland region.

**A complete birth history in the AMS 2010 produced direct estimates of fertility for the first time in Afghanistan.**

**Figure 3. Percentage of Women with No Education by Zone and Region**



**Figure 4. Total Fertility Rates by Background Characteristics**



Fertility decreases rapidly from 5.3 children per woman among women with no education to 2.8 children per woman among women with higher education. The TFR is not uniformly associated with increasing wealth; however, women in the lowest wealth quintile have an average of 5.3 children compared with women in the highest quintile who have 4.8 children.

Fertility has dropped substantially among all age groups in the last 15 years. This is supported by trend data within the AMS 2010 and corroborated by data from the National Risk and Vulnerability Assessment (NRVA) 2007/8.

#### 4. Marriage

Data from the AMS 2010 show that marriage occurs relatively early in Afghanistan, with the vast majority (92 percent) of women married by the time they reach age 25. However, there is strong evidence of a rising age at first marriage among women below age 35. Women age 30-34 were six times more likely to be married by age 15 than women age 15-19.

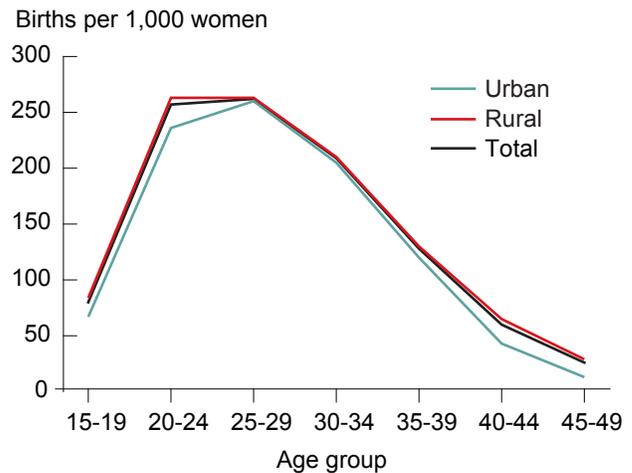
**There is strong evidence of rising age at first marriage among women below age 35.**

#### 5. Family Planning

More than nine in ten (92 percent) currently married women in Afghanistan know of a method of contraception, and women are twice as likely to mention knowing a modern method as a traditional method. The most widely known modern contraceptive methods among currently married women are the pill and injectables. Knowledge of family planning has increased markedly in the last 7 years, however, the larger than expected difference in knowledge between the AMS 2010 and previous surveys can be attributed mostly to the difference in the way the questions on contraceptive knowledge were administered.

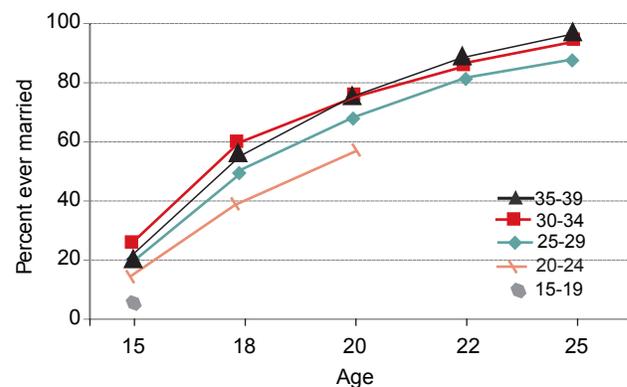
More than one-fifth (22 percent) of currently married women use some method of family

**Figure 5. Age-specific Fertility Rates by Urban-Rural Residence**



**Fertility has dropped substantially among all age groups in the last 15 years.**

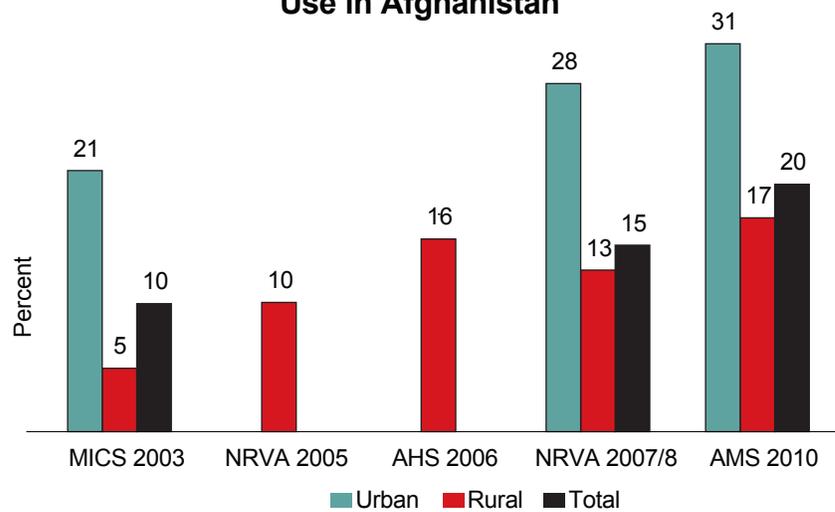
**Figure 6. Trends in Percent First Married at Exact Ages, Afghanistan 2010**



planning, with the vast majority (20 percent) using a modern method. The most common method currently used is injectables, followed by the pill and LAM. Urban women are twice as likely to use a method of family planning as are rural women. Contraceptive use increases rapidly with women's education and wealth. There has been a marked increase in the use of a contraceptive method among currently married women in the last 7 years with the increase more rapid between 2003 and 2006 than in the more recent years.

Data from the AMS 2010 is internally consistent as well as plausible given the relationship between the total fertility rate and the proximate determinants of fertility as measured by the proportion of women married, the use of contraception and the level of infecundity. When the Bongaarts model of proximate determinants of fertility is applied to the AMS 2010 data, there is little variation between the actual fertility and implied fertility.

**Figure 7. Trends in Modern Contraceptive Use in Afghanistan**



Note: MICS 2003 urban and total refers to all methods.

**Use of family planning has increased markedly in the last 7 years in Afghanistan.**



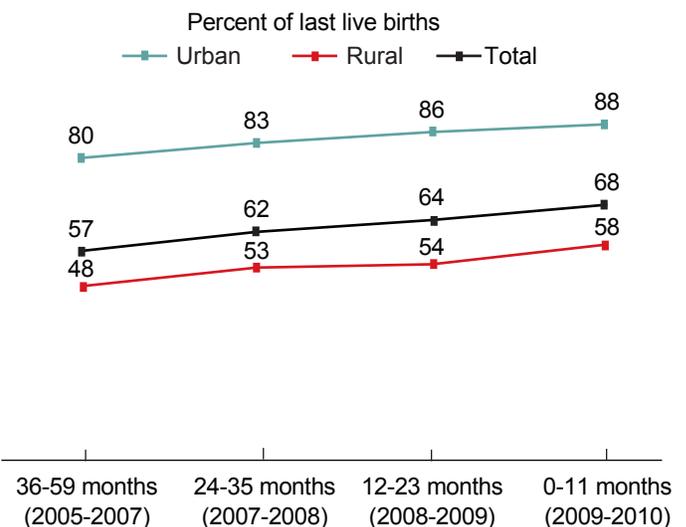
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## 6. Maternal Health

Maternal and child health are strongly associated with the care received by women during pregnancy and delivery. The proportion of women receiving antenatal care from a skilled provider increased from 57 percent in the period 36-59 months before the survey to 68 percent in the year immediately prior to the survey. The gains in coverage were observed in both urban and rural areas.

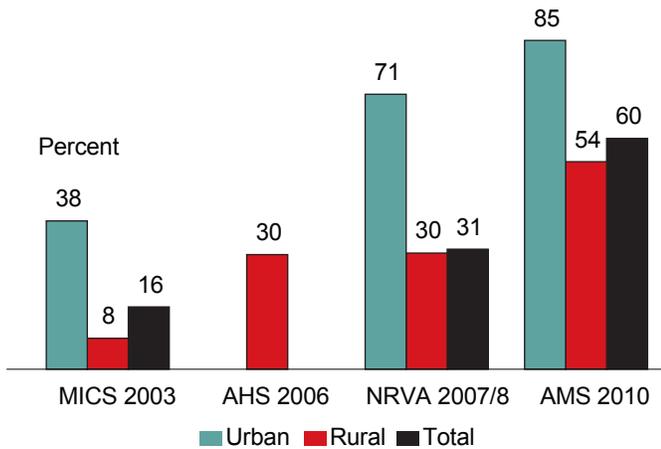
The AMS 2010 results can be compared with other surveys conducted in Afghanistan since the beginning of the decade. Overall, ANC utilization appears to have more than tripled during the period between the MICS 2003 and the AMS 2010. The increased access to services was especially marked in rural Afghanistan, where the MICS 2003 found that only 8 percent of women who gave birth in the two-year period prior to the survey had received ANC from a skilled provider.

**Figure 8. Trends in Antenatal Care from a Medically Skilled Provider by Urban-Rural Residence, Afghanistan 2010**



There has been a similar steady increase in the proportion of women using delivery care services. Medically-assisted deliveries rose rapidly during the five-year period, from 26 percent during the period 36-59 months prior to the AMS 2010 to 42 percent in the 12 months immediately prior to the survey.

**Figure 9. Trends in Antenatal Care from a Medically Skilled Provider, Various Surveys, 2003-2010**



Note: AMS 2010 based on last live birth in five-year period prior to the survey; NRVA 2007/8 and MICS 2003 based on last live birth in the two years prior to the survey; AHS based on last live birth to currently married women in the two years prior to the survey.

A comparison of the AMS 2010 results with the findings from several earlier surveys also documents the substantial progress Afghanistan has made in improving access to delivery care from skilled birth attendants (SBAs). At the time of the MICS 2003, 14 percent of births were attended by skilled providers (UNICEF, 2005). The NRVA 2007/8 found roughly one in four women (including Kuchi women) delivered with an SBA (ICON-INSTITUTE, 2009). In the AMS 2010, more than one in three births was assisted by SBAs.

Despite these gains, it is evident that substantial gaps in maternal care remain. For example, 16 percent of women reported having at least 4 antenatal visits, the minimum necessary to provide adequate screening for pregnancy complications. Moreover, except for blood pressure measurement, only a minority of women who had

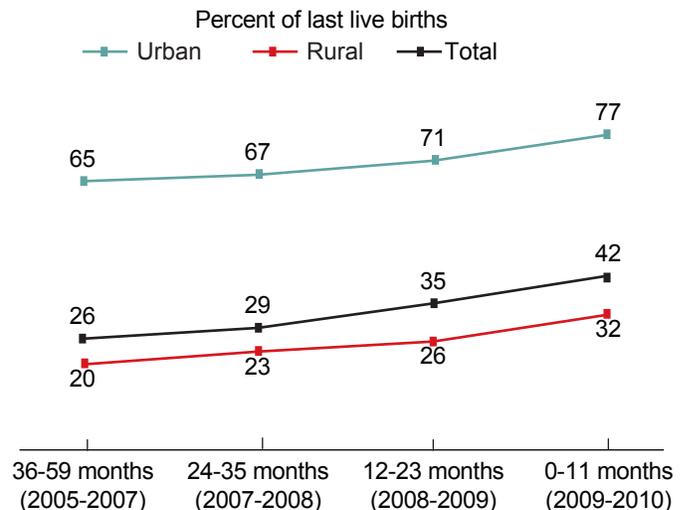
**Antenatal care from a skilled provider increased from 57% in the 3-5 years before the survey to 68% in the year immediately prior to the survey. There has been a similar steady increase in the proportion of women using delivery care services.**

**Despite these gains, major barriers to maternal care continue to exist.**

ANC—40 percent or less—report they received other components of good ANC screening. Only 38 percent took iron tablets or syrup during their pregnancy. Tetanus toxoid coverage is more widespread, but half of women did not receive two injections as recommended during pregnancy for the last birth. With regard to delivery care, access to care still represents a very considerable challenge for the majority of women, particularly rural women, with two-thirds of births taking place at home.

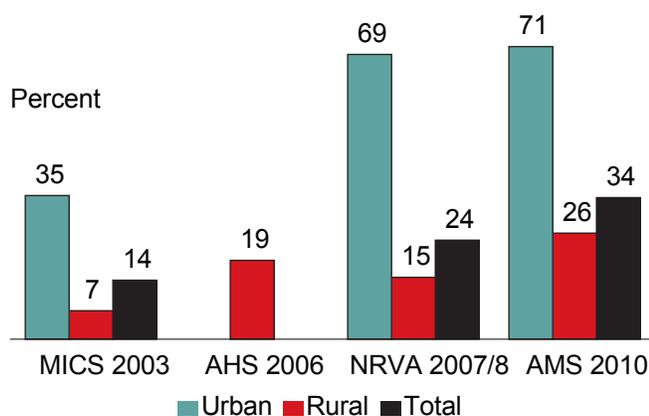
Major barriers to getting maternal care persist. More than 70 percent of women giving birth in the five-year period before the survey said that lack of

**Figure 10. Trends in Delivery Care from a Medically Skilled Provider by Urban-Rural Residence, Afghanistan 2010**



money and distance to health facilities pose serious problems in accessing any health care. These were also the reasons for not seeking care cited most often by women who did not get ANC, delivery care or postnatal care during pregnancy. There also is the continuing need to educate women about the importance of seeking care; four in ten (41 percent) women who did not receive ANC felt it was not necessary to seek such care. Similarly, 35 percent of women who did not deliver the most recent birth in a health facility said that a facility delivery was not necessary.

**Figure 11. Trends in Delivery Care from a Medically Skilled Provider, Various Surveys, 2003-2010**



Note: AMS 2010 based on last live birth in five-year period prior to the survey; NRVA 2007/8 and MICS 2003 based on last live birth in the two years prior to the survey; AHS 2006 based on last live births to currently married women in the two years prior to the survey.



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## 7. Child Mortality

The AMS 2010 is the first survey in Afghanistan to include a full pregnancy history and, thus, the first survey to employ direct techniques in the estimation of childhood mortality rates. However, several issues with the quality of the mortality data are identified that adversely affect the childhood mortality estimates derived from the pregnancy history data. First is the impact of not being able to interview around one-third of the AMS rural

**Child mortality continues to be high in Afghanistan although there has been a marked decline in the last decade.**

sample in the South due to security concerns. The missed households were concentrated predominantly in the South zone and, as a result, households living in urban areas and more secure rural areas are overrepresented in the AMS 2010 sample. In addition to the coverage problems, an examination of the data from the AMS 2010 birth histories found severe omission of deaths, in the South zone. Omission, especially of deaths in the neonatal period, also appears to have been a problem for areas outside the South zone although not nearly as severe.

Data from the AMS 2010 show that child mortality continues to be high in Afghanistan although there

has been a marked decline in the last decade. The under-5 mortality rate for Afghanistan excluding the South Zone for the 2-6 years prior to the survey, adjusted to take into account omission is 97 deaths per 1,000 births and the infant mortality rate is 77 deaths per 1,000 births. Assuming that child mortality rates in the South are 15-25 percent higher than in the rest of the country, under-5 mortality for the whole country might be in the 102-105 range.

Despite the data quality issues, the AMS 2010 is the most comprehensive survey to date of mortality in Afghanistan, and the results identify a number of factors that increase mortality risks for young children. As expected, boys have a slightly higher risk of dying than girls. The survival of infants and children also is strongly influenced by the mother’s age at birth; mortality is higher among children born to mothers under age 20 and over age 40 compared with children born to mothers in the middle age ranges. Short birth intervals reduce a child’s chance of survival; children born within

**The under-5 mortality rate for Afghanistan excluding the South zone for the 2-6 years prior to the survey is 97 deaths per 1,000 births, and the infant mortality rate is 77 deaths per 1,000 births.**

two years of a previous birth are one and a half times as likely to die during the first year of life when compared to children born two years after an older sibling.

Several socioeconomic factors also influence a child’s risk of dying. Urban children have a lower mortality risk than rural children. As expected, mothers’ education is inversely related to mortality levels among young children. Wealth is very strongly related to child mortality: children born to mothers in the highest wealth quintiles have less than half the risk of dying as those born to mothers in the poorest quintile. Mortality levels are also generally lower in less remote areas.

**Table 2 Early childhood mortality rates for Afghanistan excluding the South zone for the period 2-6 years prior to survey**

Unadjusted and adjusted neonatal, postneonatal, infant, child, and under-five mortality rates for the preceding the survey, Afghanistan excluding the South zone, Afghanistan 2010

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN) <sup>1</sup>	Infant mortality (1Q0)	Child mortality (4Q1)	Under-five mortality (5Q0)
2-6 years (unadjusted)	30	37	67	22	87
2-6 years (adjusted <sup>2</sup> )	40	37	77	22	97

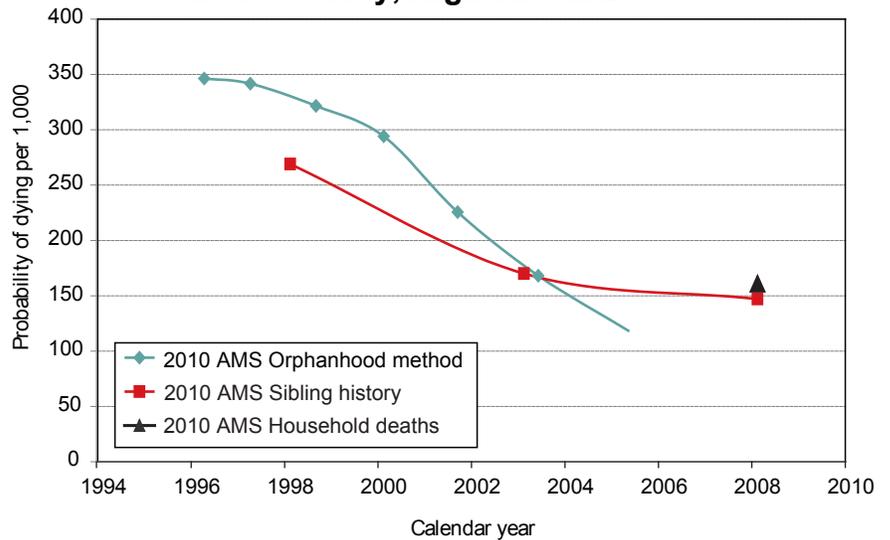
Note: The reference period corresponds to the years 2004-2008 in the Gregorian calendar, which is roughly equivalent to the years 1383-1387 in the Afghan calendar.  
<sup>1</sup> Computed as the difference between the infant and neonatal mortality rates  
<sup>2</sup> For underreporting of neonatal deaths

## 8. Adult Mortality

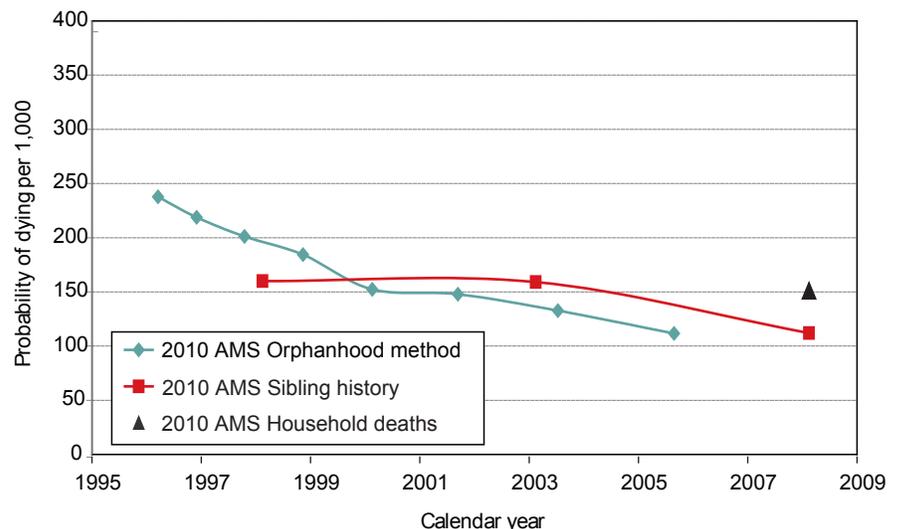
The levels of adult mortality are obtained using three different sources of information within the AMS 2010: a household roster of deaths during the preceding five years, deaths to siblings of respondents to the Woman's Questionnaire, and the survival at the time of the survey of parents of members of the household. All the estimates are in broad agreement with each other given the variation due to sampling error. The death roster gives values slightly higher than the sibling history for the recent past, with a probability of dying of 86 per 1,000 between ages 15-49 for women and 90 for men and between ages 15-59 years of 151 for women and 161 for men. Life table calculations of mortality give life expectancies of approximately 64 years for each sex.

However, there are indications that the mortality levels may be somewhat understated. The basic data show substantial digit preference for both numerators (deaths) and denominators (exposure). Sex ratios are too high for both sibling and death roster exposure and death rates. These problems are much more extensive in the South zone, probably due to security situations that inhibited full interviewing in certain locations and a desire by respondents to protect their families. The Brass Balanced Growth Estimation method adds evidence to these conclusions as do comparisons with external sources. However, the omission of deaths and exposure tend to offset one another so that the effect on mortality rates is thereby reduced. It is certainly evident from the data that

**Figure 12. Estimates of Male Adult Mortality Between Ages 15 and 59 from the Various Sources in the Survey, Afghanistan 2010**



**Figure 13. Estimates of Female Adult Mortality Between Ages 15 and 59 from the Various Sources in the Survey, Afghanistan 2010**



Note: The years 1995-2009 correspond roughly to the years 1374-1388 in the Afghan calendar.

adult mortality levels have fallen substantially in the last decade and are below those of even the recent past. Estimates of life expectancies based on reported deaths, adjusted under-5 mortality rates and potential undercounting of deaths results in life expectancies for all Afghanistan that are 2.3

to 2.7 years less than that reported for females and 1.1 to 1.9 years less for males. Taking this into account, the AMS 2010 results suggest that for all Afghanistan, life expectancies might range between 61.5-64.2 years for females and between 61.7-63.6 years for males.

**Estimates from the AMS 2010 indicate that male and female life expectancies at birth are 62-64 years.**

**Table 3 Various estimates of life expectancy at birth**

Life expectancy at birth with and without taking changes in household composition into account for exposure, adjusting "Best" estimate of infant and child mortality, and for 25 percent excess South zone mortality, by sex, for Afghanistan, Afghanistan excluding the South zone, and the South zone, Afghanistan 2010

	All Afghanistan		Afghanistan excluding South zone		South zone	
	Female	Male	Female	Male	Female	Male
<b>As reported</b>						
Without change in household composition	64.2	63.6	63.2	62.9	66.7	64.5
With change in household composition	63.8	63.4	62.8	62.7	66.5	64.4
<b>Adjusted for neonatal/postneonatal ratio<sup>1</sup></b>						
Without change in household composition	na	na	62.6	63.5	na	na
With change in household composition	na	na	62.2	63.4	na	na
<b>Adjusted for +25 percent South zone</b>						
Without change in household composition	62.2	61.7	na	na	na	na
With change in household composition	61.8	61.5	na	na	na	na
<b>Adjusted for +25 percent South zone and neonatal/postneonatal ratio<sup>1</sup></b>						
Without change in household composition	61.5	61.7	na	na	na	na
With change in household composition	61.5	62.3	na	na	na	na

<sup>1</sup> Calculated using adjusted infant and 1-4 mortality rates from "Best" estimates from Technical Note on Infant and Child Mortality, Appendix D  
na = Not applicable

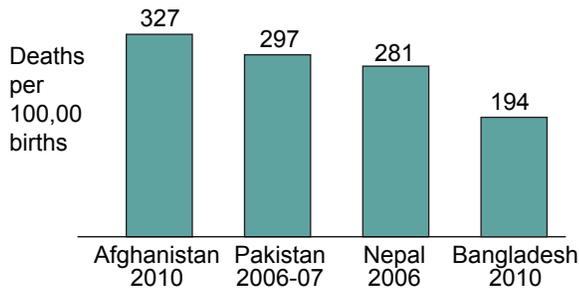
## 9. Maternal Mortality

The pregnancy-related mortality ratio in Afghanistan based on sibling histories is estimated to be 327 per 100,000 births for the seven years preceding the AMS 2010 survey. With the Gakidou-King recommended adjustment, the pregnancy-related mortality ratio increases to 372 per 100,000 births. This means that for every 1,000 live births, about 3-5 women die during pregnancy, in childbirth, or in the two months after delivery. The AMS 2010 survey estimates are much lower than previous estimates that were based on a very geographically limited and nonrepresentative sample. However, the AMS 2010 estimates of

pregnancy-related mortality are higher than the estimates for Bangladesh, Nepal and Pakistan. The AMS 2010 estimates appear to be consistent with the level of ANC from a skilled provider, skilled birth attendance, and delivery in a health facility, which have increased rapidly in Afghanistan in recent years. However, the pregnancy-related mortality ratios are much lower than would be

**For every 1,000 live births, about 3-5 women die during pregnancy, in childbirth, or in the two months after delivery.**

**Figure 14. Pregnancy-Related Mortality Ratio in Selected Countries**

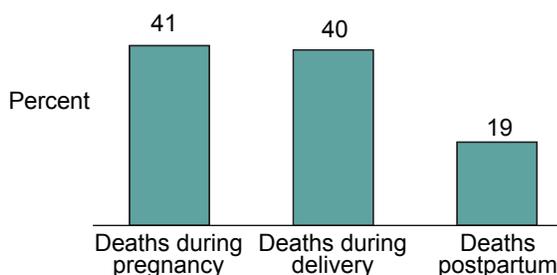


Source: AMS 2010; Streatfield, et al. (2011) for Bangladesh 2010; and DHS survey reports for Nepal and Pakistan

expected on the basis of the average educational attainment of women.

The AMS 2010 results highlight the importance of pregnancy-related deaths as a leading cause of death for women in their childbearing years. Overall, in the seven years before the survey, 41 percent of deaths to women in their childbearing years in Afghanistan were due to pregnancy-related causes. It is estimated that under current conditions approximately 1 in every 50 women in Afghanistan will die of pregnancy-related causes during her lifetime. In other words, one Afghan woman dies about every 2 hours from pregnancy-related causes. The lifetime risk of pregnancy-related death is five times as high in rural areas as in urban areas. Two out of every five pregnancy-related deaths occur during pregnancy and two out of five occur during delivery. Only one out of five pregnancy-related deaths occurs within two months after delivery. The risk of pregnancy-

**Figure 15. Timing of Pregnancy-Related Deaths in the Five Years Preceding the Survey**



related mortality is particularly high for younger women (age 15-19) and for women age 35-49.

There are several ways to assess the quality of the AMS 2010 data used for the estimates in this chapter. Response rates are high at both the household and woman's level. Siblings that are reported have almost complete information on survival status, the age of living siblings and the years since death of deceased siblings. The distribution of the year of birth of siblings is similar to the distribution of the respondents' own years of birth, which would be expected if the data are of reasonable quality. However, there appears to be some omission in the reporting of siblings, particularly of older women. In addition, the particularly high sex ratio at birth for siblings of older women suggest that sisters are more likely to be underreported than brothers and is likely to affect the pregnancy-related mortality estimates to some extent.

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**One Afghan woman dies about every 2 hours from pregnancy-related causes.**

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As in any sample survey, the mortality rates may vary somewhat due to heterogeneity in the population and clustering in the sample design. In the AMS 2010, the confidence interval around the pregnancy-related mortality ratio of 327 is 260-394. The confidence intervals of the estimates show the likely range within which the true value of the pregnancy-related mortality ratio is likely to fall. Based on the sampling errors, the pregnancy-related mortality ratio for the seven years preceding the AMS 2010 could be as high as 394. If an additional 14 percent is added on because of the higher estimate using the Gakidou-King method, the pregnancy-related mortality ratio could be as high as 449. If the pregnancy-related mortality ratio is taken from the verbal autopsy for the three years before the survey (374), the highest ratio would still be well below the 500 level even after the confidence interval around the estimate is considered.

## 10. Cause of Death

In addition to providing information on key demographic indicators, the AMS 2010 also provided cause of death information for all deaths that occurred in the household in the three years prior to the survey. An analysis of cause of death was carried out on 3,157 deaths. This information was collected using three separate Verbal Autopsy Questionnaires, depending on the age at death:

- Form 1 for deaths to children aged 0-28 days (neonatal)
- Form 2 for deaths to children aged 29 days-11 years (post neonatal and child)
- Form 3 for deaths to adults aged 12 years and above (adult).

About 35 percent of deaths in Afghanistan are due to non-communicable diseases like cardiovascular diseases and cancers, while about three in ten are due to communicable diseases and infections.

The leading cause of death among females of all ages is infections (33 percent). Noncommunicable diseases result in 37 percent of all female deaths, of which 18 percent are due to cardiovascular diseases. Deaths due to perinatal conditions result

in 12 percent of female deaths and 27 percent of deaths to children under

**Hemorrhage is the leading cause of maternal death in Afghanistan.**

five years. Maternal conditions are responsible for 5 percent of all deaths but account for one in five deaths to women age 15-59. Hemorrhage is the leading cause of maternal deaths in Afghanistan.

The cause of death pattern among males is substantially different. Injury-related deaths account for a much greater proportion of deaths (21 percent for all ages) among males. Among men 15-59, half of the male deaths are due to injuries, roughly evenly divided between unintentional and intentional injuries. Among men age 15 and over, war and violence account for just under half of all injury-related deaths (48 percent). War and violence are also a significant cause of death due to injury for boys under age 15 years (10 percent). This is not the case for women and girls.

**One in five men dies from injury-related causes. Half of injury-related deaths to men age 15+ are due to war and violence.**

**Figure 16. Causes of Death of Women and Men, All Ages**

