Key Findings

Afghanistan Mortality Survey 2010

The Afghanistan Mortality Survey (AMS) 2010 was carried out by the Afghan Public Health Institute (APHI) of the Ministry of Public Health (MoPH) and the Central Statistics Organization (CSO) of 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 AMS 2010 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).

What is the AMS?

The AMS 2010 is the **first comprehensive mortality survey in Afghanistan.**

It is a **nationally representative** survey of 22,351 households, 47,848 women age 12-49, and includes verbal autopsies of 3,157 deaths.

How is the AMS 2010 different from previous surveys in Afghanistan?

❖ The AMS 2010 is the first survey to collect **data on adult mortality in Afghanistan.**

❖ The AMS is the first survey to provide **nationally representative data on maternal mortality**

❖ The AMS is the first survey to produce **direct estimates of childhood mortality** in country

❖ The AMS is the first survey to produce **cause of death data for all ages**

AMS 2010 Survey Domains

Sample Coverage

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

- AMS excluded the rural areas of Kandahar, Helmand and Zabul from the sample (9 % of population of Afghanistan)
- Only 717 of the 751 clusters selected were completed and most of the uncompleted clusters were in the South zone (4 % of population)
- The AMS covered 87% of the population of the country, 98% of the urban population, and 84% of the rural population.
- About one-third of the AMS sample in the South zone and predominantly in the rural areas was not covered due to security concerns.
- This may have introduced an urban and more-secure-area bias into the data and resulting estimates

Data Quality

- Reporting bias due to low levels of literacy, cultural sensitivities, security concerns

- Girl children reported as boys (high sex ratio)

- Omission of deaths: particularly of children who died soon after birth, particularly girl children

- Omission of siblings: among older women; who died when respondent was very young; sisters more likely to be underreported than brothers

- Particularly exacerbated in the South zone

- Resulting in under estimates of childhood mortality, adult mortality and maternal mortality in the South zone

Conclusion from Data Quality Assessment

- Quality of the **mortality** data for the **South** zone is unusable

Table D.8 Measured and adjusted infant and under-5 mortality rates, Afghanistan excluding the South zone		
Data source and adjustment	Infant mortality rate	Under-5 mortality rate
Pregnancy history		
Measured (0-4 years prior to survey)	64	83
Adjusted for omission of neonatal deaths (by NN/PNN ratio of 1.09)	71	90
Adjusted for omission at 0-1 years (rates for 2-6 years prior to survey)	67	87
Adjusted for both omission at 0-1 years and neonatal deaths (ratio of 1.09)	77	97
Household deaths and exposure		
Measured	76	97
Adjusted for sex ratio of deaths and exposure using Coale-Demeny West Model Life Table at level 18	67	92
Indirect children ever born-children surviving		
Measured	71	98
"Best" estimate	77	97

Table D.9 Estimates for all of Afghanistan based on assumed mortality of South zone in excess of "Best" estimate for Afghanistan excluding the South zone

Percent excess mortality of South over rest of Afghanistan	South zone estimates		All of Afghanistan	
	Infant mortality rate	Under-5 mortality rate	Infant mortality rate	Under-5 mortality rate
+0%	77	97	77	97
+10%	85	107	80	100
+15%	89	112	81	102
+20%	92	116	82	104
+25%	96	121	84	105

Maternal Mortality Estimates

- The pregnancy-related mortality ratio (PRMR) in Afghanistan from sibling history is estimated to be 327 per 100,000 live births (ranging between 260-394) for the 7 years before the survey

- Adjusted (Gakidou-King) PRMR is 372 per 100,000 live births (14 % higher than all Afghanistan) for same period

- **Adjusted PRMR = 296-449 per 100,000 births (3-4 deaths per 1,000 live births)**

- The maternal mortality ratio (MMR) from verbal autopsy in Afghanistan is estimated to be 374 per 100,000 births for the 3 years before the survey (about 4 deaths per 1,000 live births)

- No matter what source maternal mortality in Afghanistan is **under 500 deaths per 100,000 births (less than 5 deaths per 1,000 live births)**

WHO, UNICEF, UNFPA & World Bank 2012 Estimate

- The Maternal Mortality Estimation Inter-Agency Group (MMEIG) in 2012 released its worldwide Trends in Maternal Mortality Report for 1990-2010

- MMEIG's revised estimate of the MMR for Afghanistan is **460**

- **AMS adjusted estimate upper range is 449**

Adult Mortality: Data Sources

- Sibling history: direct estimate over several decades

- Household Roster: direct estimate of mortality from all deaths in household in past 5 years

- Orphanhood Questions: on survival of birth mother and father of each household member (indirect estimate; historical estimate that dates back several decades)

Life Expectancy: Various Estimates

Table 6.11 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
As reported						
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
Adjusted for neonatal/postneonatal ratio[1]						
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
Adjusted for +25 percent South zone						
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
Adjusted for +25 percent South zone and neonatal/postneonatal ratio[1]						
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

[1] 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

Key Findings

There are other important findings from the AMS that support the argument that there has been a **substantial drop in mortality**, and that not only is the adjusted data plausible but that it is a more accurate representation of the health status of the Afghan population today

Key Findings

- Improvements in Female Education

- Substantial Decline in Fertility

- Rising Age at Marriage

- Marked Increase in Use of Family Planning

- Substantial rise in ANC

- Substantial rise in SBA

- Improvements in health care

KF1:Improvements in Female Education
Female Respondents with No Education by Age
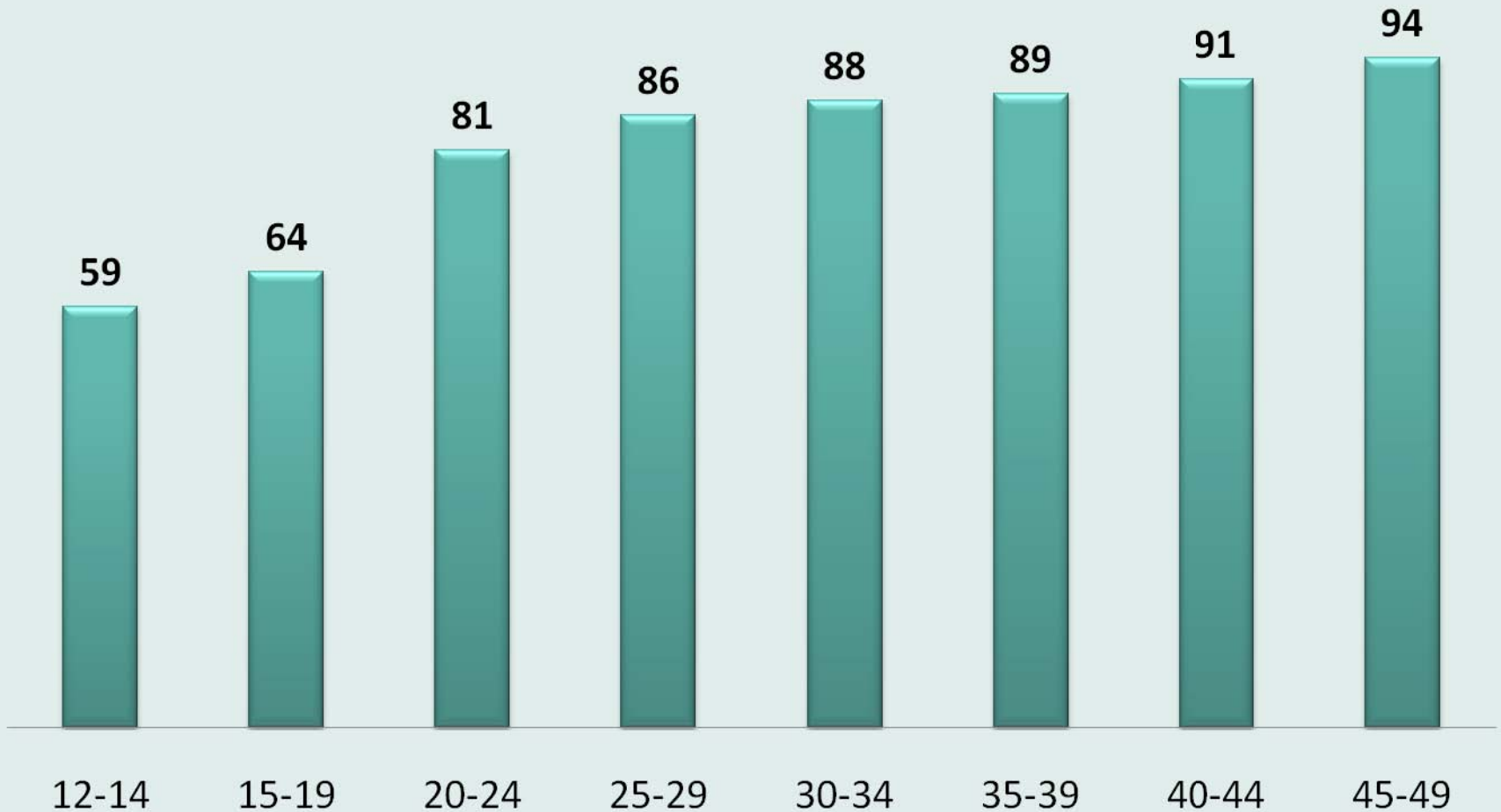
Percentage of women age 12-49 with no education

Improvements in Education

In 2002, < 1M students enrolled; < 20,000 teachers; 3,400 schools majority in unusable buildings, and no female participation

In 2010, of 7M enrolled in schools, 37% or 2.5M are girls; 4,500 schools built with active community participation; 8-fold increase in teachers to 170,000
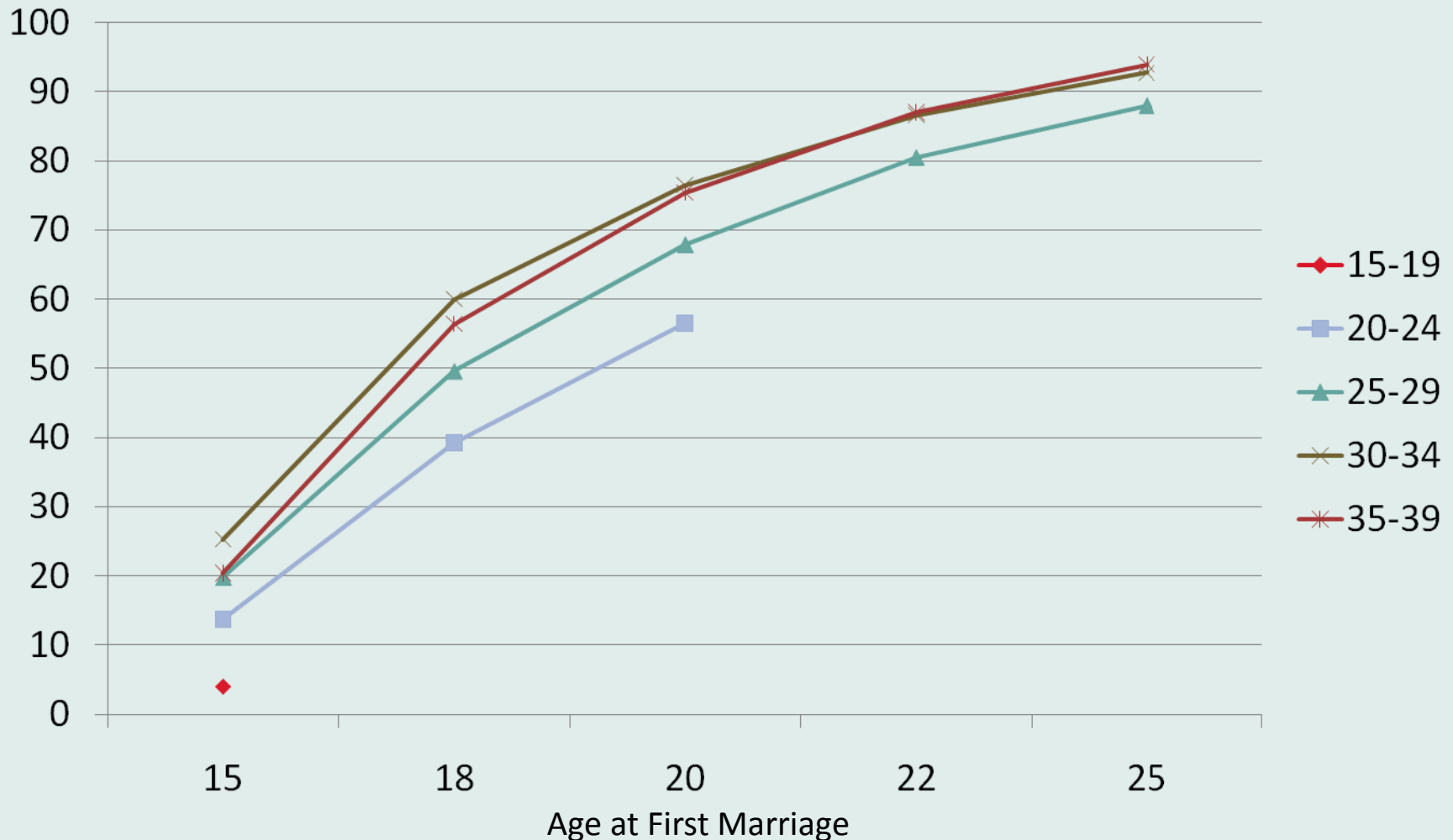
KF2: Substantial Decline in Fertility

At current fertility levels, a woman in Afghanistan will have an average of **5.1 children** in her lifetime

Fertility has dropped substantially among all age groups in the last fifteen years

KF 3: Rising Age at Marriage
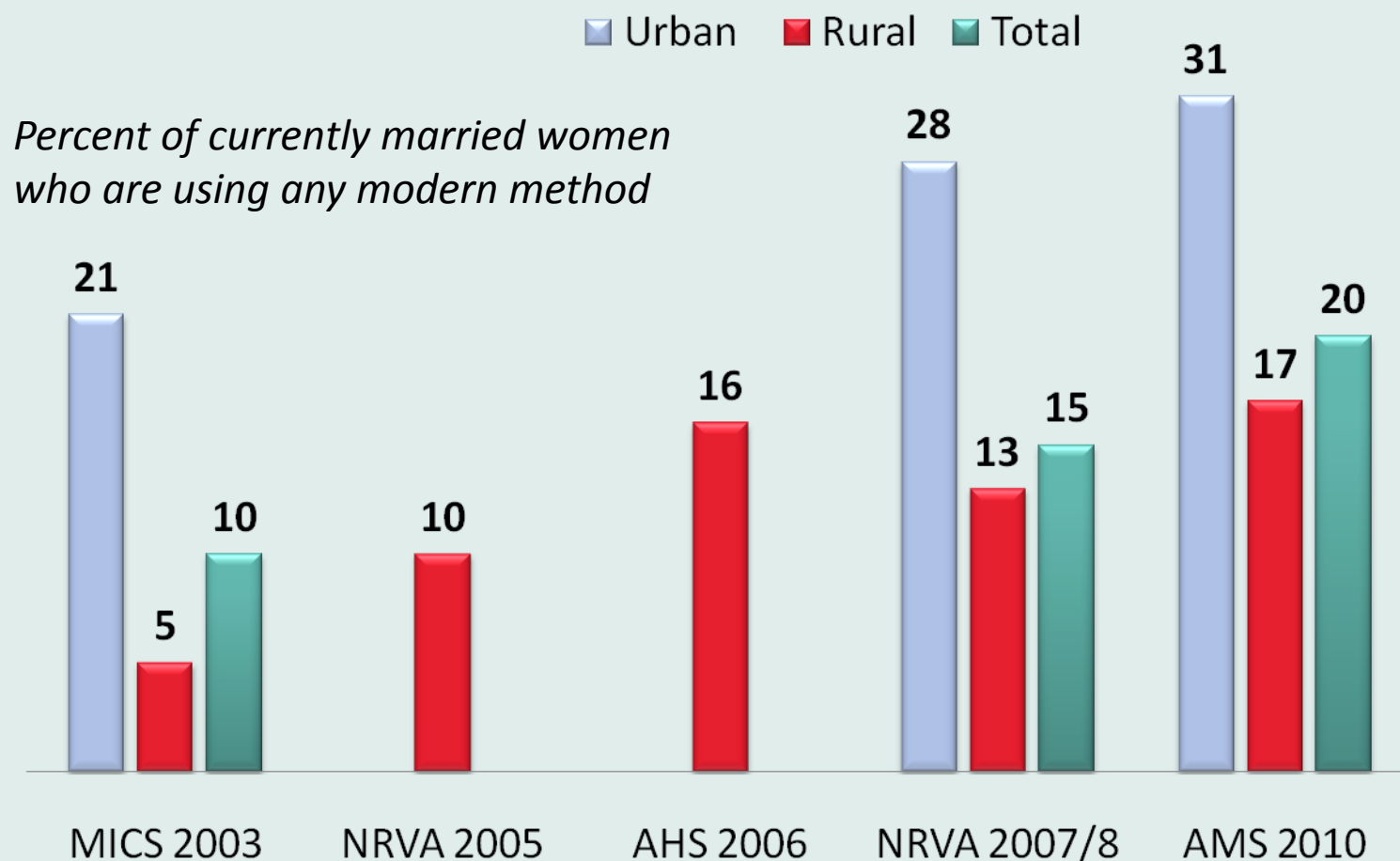## Trends in Age at First Marriage

Percentage of women age 15-39 who were first married by specific exact ages
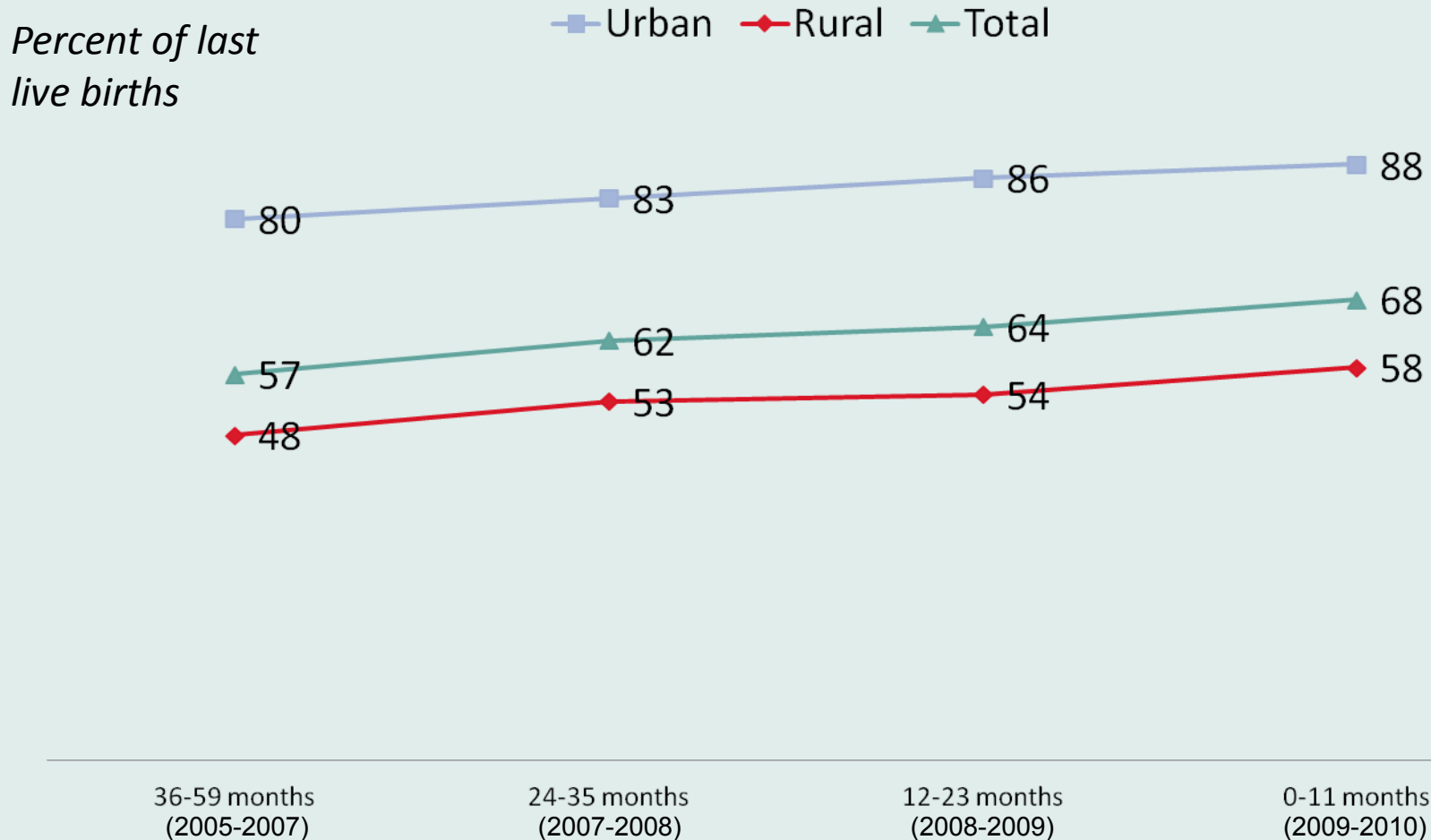
KF 4: Marked Increase in CPR
Trends in Family Planning

□ Urban ■ Rural ■ Total

Percent of currently married women who are using any modern method

	MICS 2003	NRVA 2005	AHS 2006	NRVA 2007/8	AMS 2010
Urban	21			28	31
Rural	5	10	16	13	17
Total	10			15	20

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

KF 5: Substantial Rise in ANC
Trends in Antenatal Care from a Skilled Provider

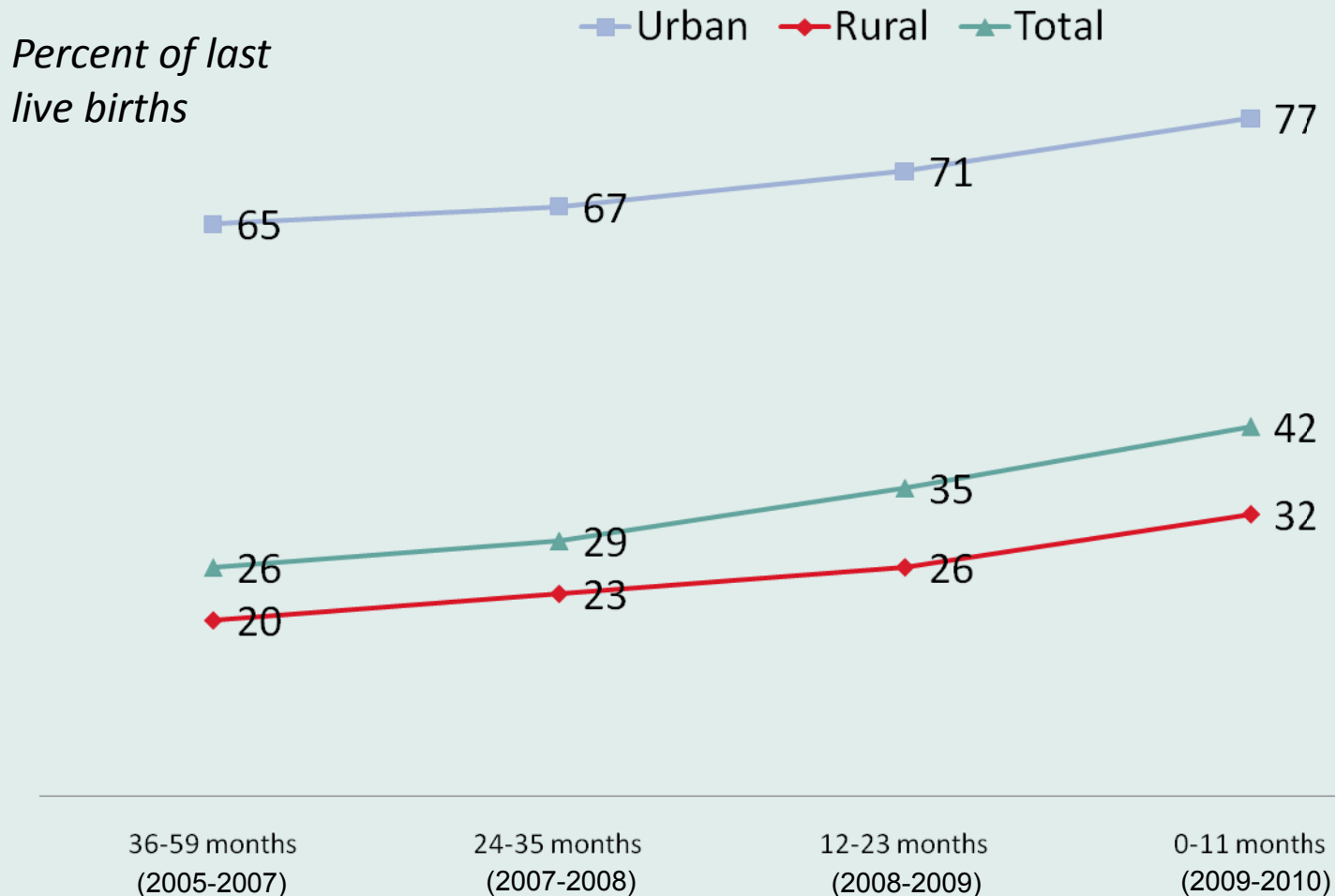*Percent of last live births*

Legend: Urban, Rural, Total

Urban: 80, 83, 86, 88
Total: 57, 62, 64, 68
Rural: 48, 53, 54, 58

36-59 months (2005-2007) | 24-35 months (2007-2008) | 12-23 months (2008-2009) | 0-11 months (2009-2010)

Trends in Antenatal Care from a Medically Skilled Provider

Percent of last live births

Urban Rural Total

85
71
60
54
38
31
30 30
16
8

MICS 2003   AHS 2006   NRVA 2007/8   AMS 2010
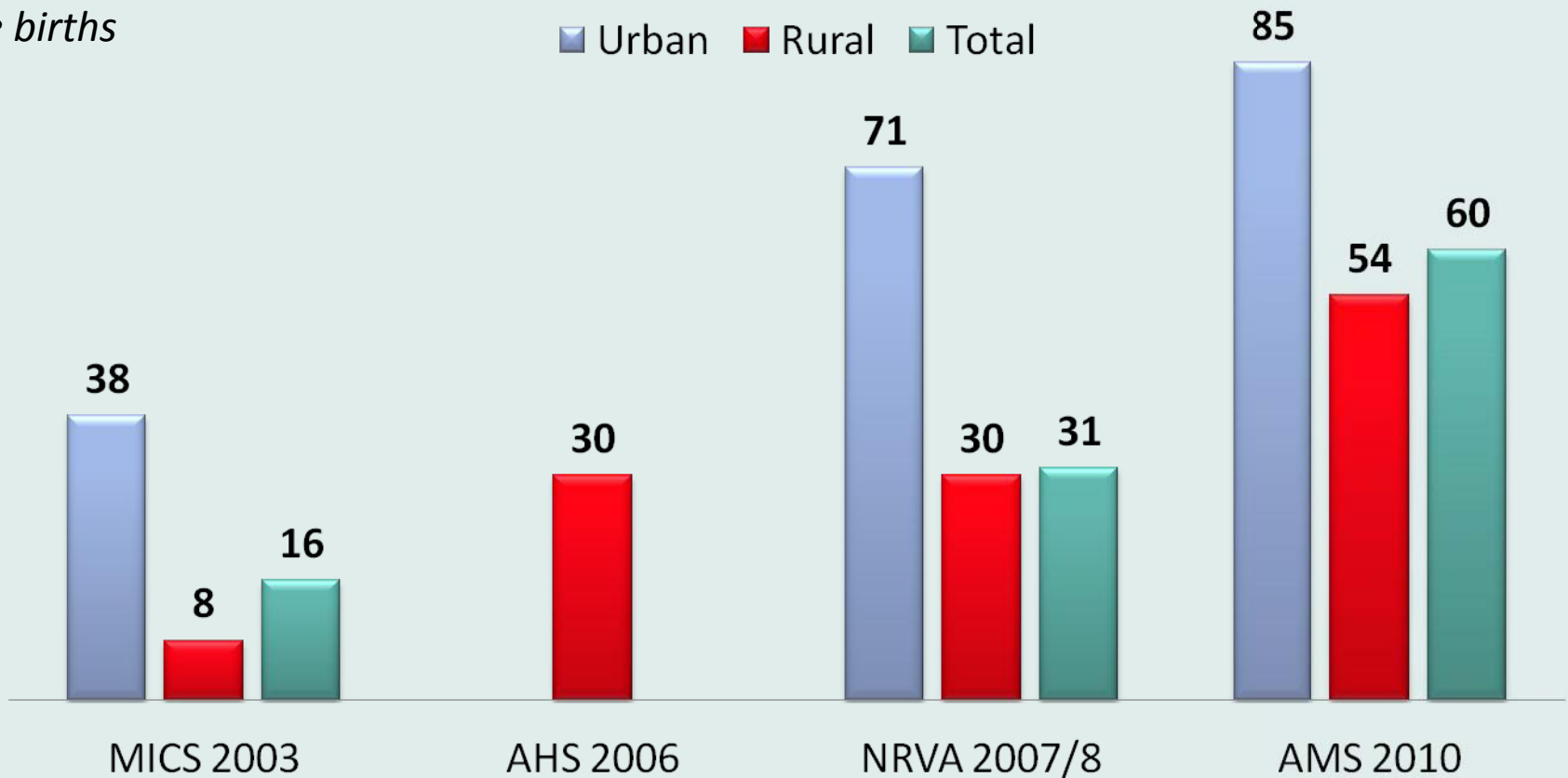
KF 6: Substantial Rise in SBA
Trends in Delivery Care from a Skilled Provider

Percent of last live births

Legend: Urban, Rural, Total

Urban: 65, 67, 71, 77
Total: 26, 29, 35, 42
Rural: 20, 23, 26, 32

| 36-59 months (2005-2007) | 24-35 months (2007-2008) | 12-23 months (2008-2009) | 0-11 months (2009-2010) |

Trends in Delivery Care from a Medically Skilled Provider

Percent of last live births

Legend: Urban | Rural | Total

	MICS 2003	AHS 2006	NRVA 2007/8	AMS 2010
Urban	35		69	71
Rural	7	19	15	26
Total	14		24	34
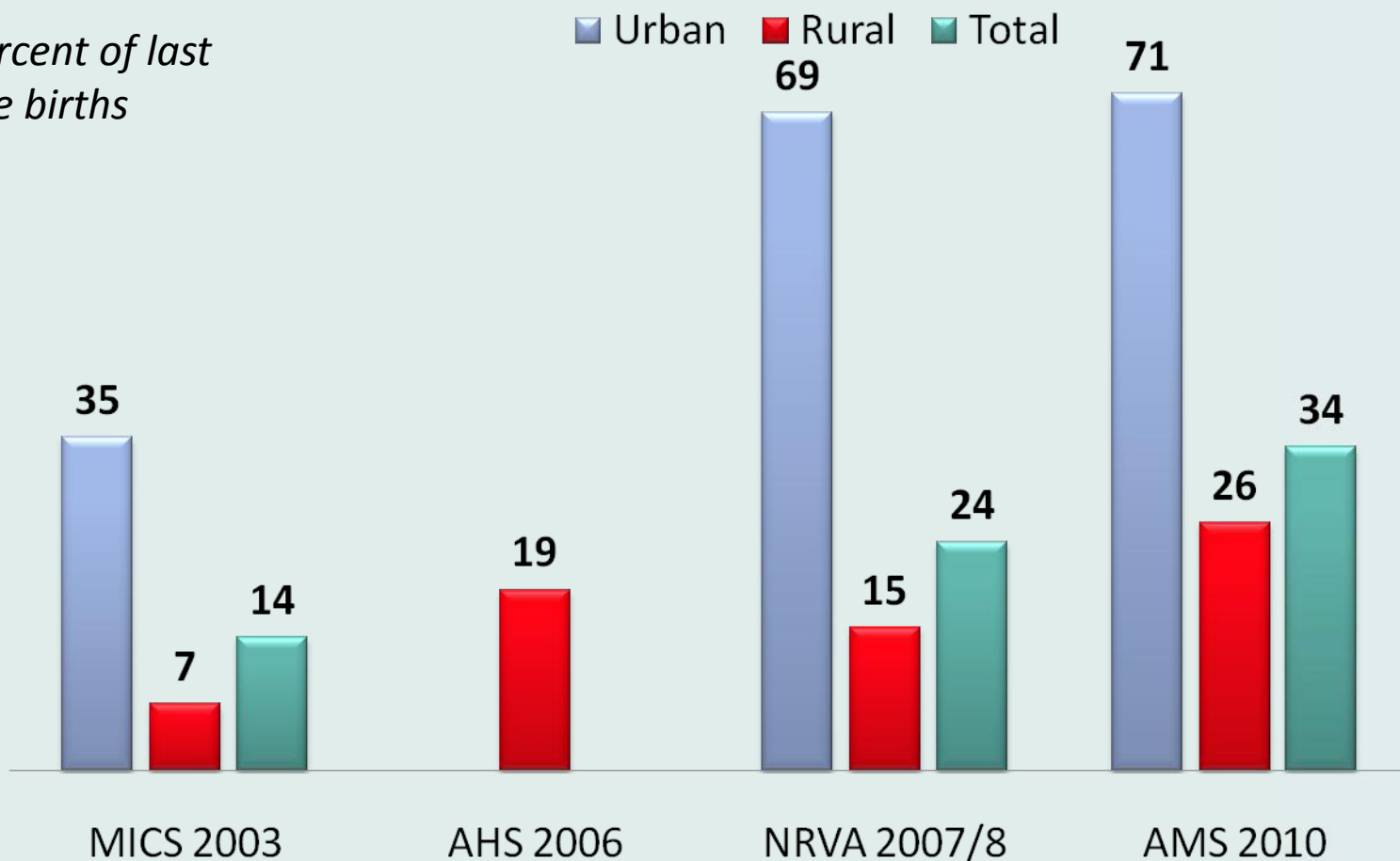
KF 7: **Improvements in Health Care**

❖Basic Package of Health Services (BPHS) – comprehensive strategy initiated in 2002

❖Essential Package of Hospital Services—to complement the BPHS in 2005

Changes in the Health Care System in Afghanistan

❖ BPHS and EPHS brought coherence to the health care system

❖ In 2002, 60 % of country had no access to basic health services;

❖ As of 2011 there are: 10,277 health posts; 468 health sub-centers; 807 basic health centers; 388 comprehensive health centers; 67 district hospitals; 29 provincial hospitals; 5 regional hospitals; 24 national hospitals

Improvements in availability of skilled staff

❖ In 2003 MoPH reported severe shortage of SBA

❖ To address this development partners set up 2 programs to train and graduate midwives (CME outreach and HIS)

❖ Between 2002 and 2011, 34 schools established in 31 provinces to serve all 34 provinces

❖ Seven-fold increase in number of midwives from 467 to 3,275 in the last 10 years

Evidence from other sources

❖ NRVA 2007/8: In 2008, 85% of Afghan population was within 1 hour's walking distance of a public health facility;

❖ Balanced Score Card (BSC) 2008:

➢ Women more likely to access services than men;

➢ Between 2004-2008, BPHS facilities providing ANC services increased to all time high of 95%;

➢ National median proportion of facilities providing delivery care in health facilities increased by 18% from 60% in 2007 to 71% in 2008

How can we explain such a large drop in mortality, etc?

➢ First time a survey is able to produce direct estimates, which are more precise than indirect estimates

➢ Previous estimates based on indirect estimation and modeled estimates

➢ Coverage differences

➢ Estimates have wider confidence intervals

➢ Estimates may have been higher than expected

➢ **But no denying the fact that there was a substantial drop in mortality**

Conclusion

➢ Coverage of AMS may have an urban, and more-secure-area rural bias

➢ Producing a lower than expected estimate

➢ And creating a larger than expected gap

➢ True estimate probably lies somewhere in-between

➢ Adjusted estimates from AMS address this and provide an estimate that is more reflective of the actual situation

➢ Recent surveys corroborate the findings in the AMS

➢ Improvements in health indicators reflective of changes in health care delivery system

Thank You