Revising Unmet Need: In Brief
Analysis Summary from MEASURE DHS

Why does the definition of unmet need for family planning need to change?

Unmet need for family planning, or the percentage of women who do not want to become pregnant but are not using contraception, is a concept that has been in flux since its introduction in the 1960s. Continued refinements have made the full definition of unmet need extraordinarily complex, incorporating pieces of data from 15 separate questions plus the contraceptive calendar. Not all of these questions have been consistently included in every survey. As a result:

- Unmet need has not been calculated consistently over time.
- Unmet need is not calculated the same way in DHS and other international survey programs (RHS, MICS).
- Levels of unmet need are not comparable between countries or across time.

Unmet need has received an unprecedented level of scrutiny since it became a Millennium Development Goal indicator. Now more than ever, ensuring that the indicator can be calculated in a consistent way over time and across countries has become crucial.

Credit: © 2006 Helen Hawkings, Courtesy of Photoshare—A young family visits a mobile health clinic which offers family planning, pap smears, and other basic health care in the Dominican Republic.

What was the process for revising the definition?

Sarah Bradley, Trevor Croft, and Joy Fishel of MEASURE DHS proposed a series of modifications to the definition to address the inconsistencies and complexity of the indicator. MEASURE DHS convened a Technical Expert Working Group (TEWG) to review these proposed changes with experts who have a wealth of experience in unmet need: Charles Westoff, John Bongaarts, Amy Tsui, John Casterline, Jacob Adetunji, Stan Bernstein, Edilberto Loaiza, and Ann Way. Input was also given by additional colleagues from USAID, MEASURE DHS, UNFPA and UNICEF. The TEWG felt that while the basic elements of unmet need should remain unchanged, some changes were needed in order to promote standardization of the indicator across surveys and over time.

The change that has the largest impact on estimates of unmet need is the exclusion of inconsistently collected data from the definition. Some DHS surveys, mostly in countries with higher contraceptive prevalence, included a calendar with a month-by-month retrospective history of all births, pregnancies, terminations, and episodes of contraceptive use in the five years prior to the interview. Other surveys did not include such information. The Original calculation of unmet need incorporated data from the calendar in countries where a calendar was used, but where calendar data were not collected the calculation of unmet need followed a different algorithm. This resulted in an inconsistent calculation of unmet need across countries, and sometimes for different surveys in the same country. According to the Revised definition proposed by the authors and agreed upon by the TEWG, calendar data are excluded from the calculation of unmet need. All other data that were not collected in every survey—questions about whether a woman would be "happy" or if it would be a "problem" if she became pregnant—are also excluded.

The TEWG agreed to several other modifications to the definition of unmet need (e.g., to the calculation of postpartum amenorrhea and infecundity that feed into the unmet need algorithm), but these changes had very little impact on estimates of total unmet need.

Credit: © 1994 Cheryl Groff, Courtesy of Photoshare—A Family Welfare Assistant shares family planning information with villagers in the Trishad District of Bangladesh.

What is the impact of the changes?

The figures and table below compare the Original definition, including inconsistently collected data and changes over time, with the consistent, Revised definition. In terms of the impact of the revised definition on estimated levels of unmet need, countries fall into three categories:

1) Countries in which calendar data were collected in none of the surveys, examples shown in Figures 1 and 2. In these countries, the Original and Revised definitions produce estimates that are almost identical.

2) Countries in which calendar data were collected in every survey, examples shown in Figures 3 and 4. In these countries, the Revised estimates are consistently higher than the Original estimates, but the trend generally remains the same. Revised estimates are comparable with surveys that did not collect calendar data; Original estimates are not.

3) Countries in which calendar data were collected in some, but not all surveys. Examples shown in Figures 5 and 6. One surprising "trend," the recent increase in unmet need in the Philippines, is simply an artifact of the inclusion of calendar data in the 1993-2003 surveys and exclusion in 2008. Similar problems with trend interpretation are seen in most countries with inconsistent collection of calendar data. The Revised indicator more accurately reflects the true patterns in unmet need over time.

Conclusions

- *The Original definition of unmet need has changed over time, resulting in estimates that are not comparable over time or across surveys.*

- *The Revised definition of unmet need (described fully in the forthcoming MEASURE DHS report Revising Unmet Need) produces similar, though slightly higher, estimates of unmet need compared to the Original definition.*

- *The Revised definition can be applied consistently to all surveys to reliably track trends over time and compare estimates across countries.*

Next Steps

Once the Revised definition is approved by USAID, MEASURE DHS will include the Revised definition of unmet need in DHS Final Reports, datasets, and STATcompiler. All trends in unmet need will be shown using the Revised definition, which can be re-calculated for surveys as early as 1990. UN agencies that monitor or calculate unmet need will also use the Revised definition.

Countries that did not collect calendar data in any survey

Figure 1: Nepal

- Total unmet need, Original
- Total unmet need, Revised

	1996	2001	2006
Revised	32.4	27.8	24.7
Original	31.4	27.8	24.6

Figure 2: Madagascar

- Total unmet need, Original
- Total unmet need, Revised

	1992	1997	2003-04	2008-09
Revised	32.3	27.7	24.5	19.0
Original	32.4	25.6	23.6	18.9
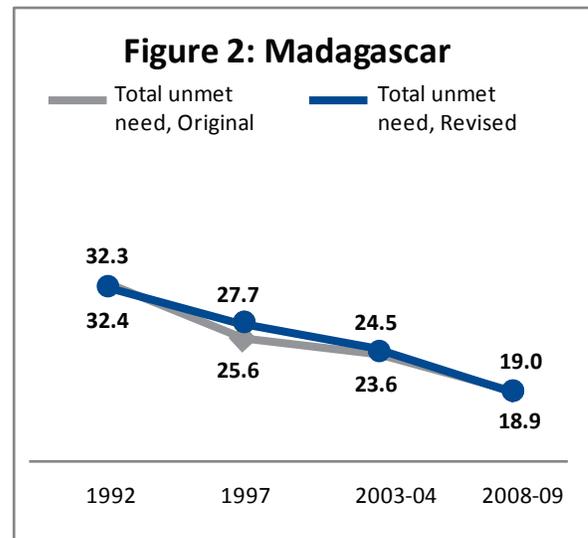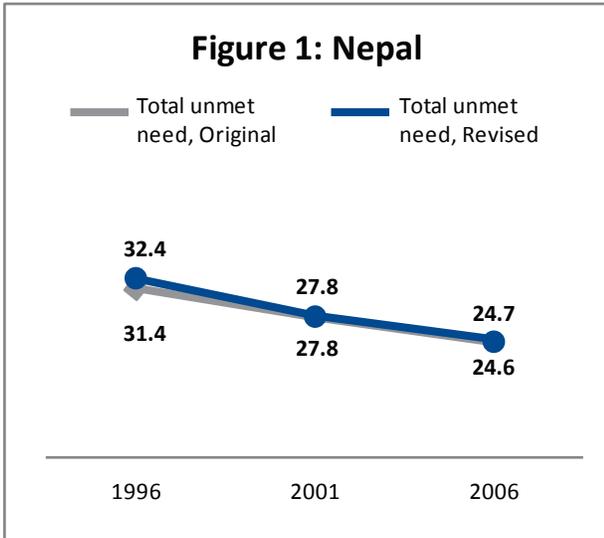
Countries that collected calendar data in every survey

Figure 3: Indonesia

- Total unmet need, Original
- Total unmet need, Revised

	1991	1994	1997	2002-03	2007
Revised	17.0	15.3	13.6	13.2	13.1
Original	14.1	10.6	9.2	8.6	8.8

Figure 4: Egypt

- Total unmet need, Original
- Total unmet need, Revised

	1992	1995	2000	2003	2005	2008
Revised	22.9	20.2	13.7	11.8	12.3	11.6
Original	19.8	16.0	10.6	9.5	10.3	9.2
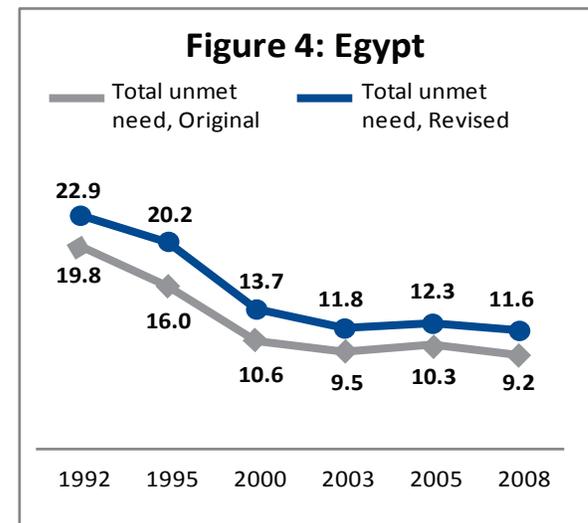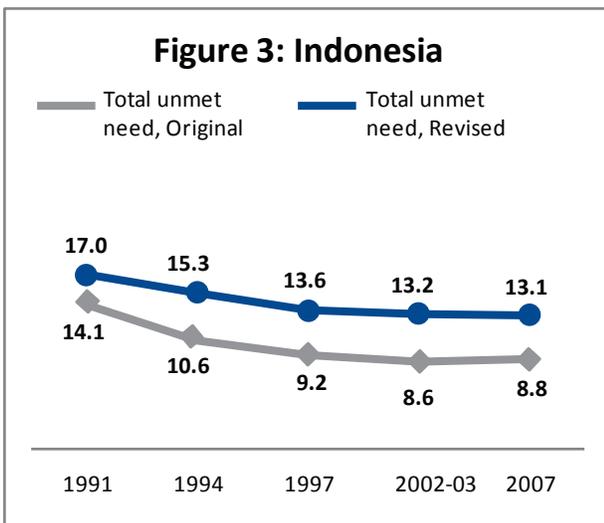
Countries that collected calendar data in some surveys but not others

Figure 5: Kenya

- Total unmet need, Original
- Total unmet need, Revised

	1993	1998	2003	2008-09
Revised	35.3	28.0	27.4	25.6
Original	35.5	23.9	24.5	25.6

Figure 6: Philippines

- Total unmet need, Original
- Total unmet need, Revised

	1993	1998	2003	2008
Revised	30.2	24.6	22.5	22.0
Original	25.9	18.8	17.3	22.3

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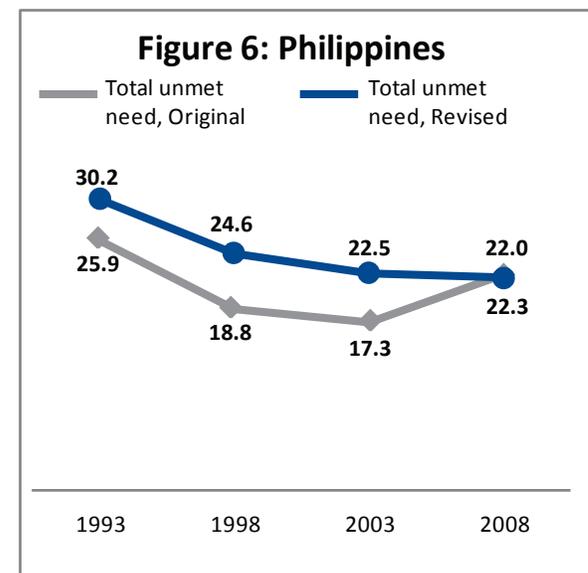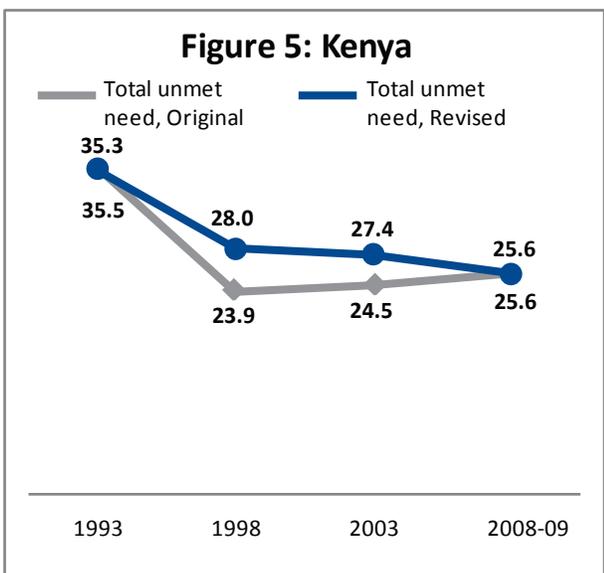
Total unmet need for family planning among currently married women 15-49 using the Original and Revised definitions, DHS surveys 1990-2010			
	Total unmet need, Original definition	Total unmet need, Revised definition	Percentage point difference	Number of married women 15-49
No calendar data			
Albania, 2008-09	12.8	12.9	0.1	5,001
Benin, 1996	25.7	27.7	1.9	4,198
Benin, 2001	27.2	27.9	0.7	4,563
Benin, 2006	26.4	27.3	0.9	13,403
Burkina Faso, 1993	24.5	24.6	0.1	5,326
Burkina Faso, 1998-99	25.8	30.3	4.5	5,181
Burkina Faso, 2003	28.8	29.8	1.0	9,655
Cameroon, 1991	21.7	22.4	0.6	2,868
Cameroon, 1998	19.7	20.7	1.0	3,676
Cameroon, 2004	20.2	20.5	0.3	7,166
Central African Republic, 1994-95	16.2	19.1	2.9	4,083
Chad, 1996-97	15.1	17.4	2.3	5,832
Chad, 2004	19.1	20.6	1.5	4,663
Comoros, 1996	34.6	35.6	0.9	1,634
Congo (Brazzaville), 2005	19.3	19.5	0.2	3,979
Congo Democratic Republic, 2007	26.2	26.9	0.7	6,622
Cote D'Ivoire, 1994	27.1	30.4	3.3	5,271
Cote D'Ivoire, 1998-99	27.7	28.9	1.3	1,863
Eritrea, 1995	27.5	29.7	2.2	3,371
Eritrea, 2002	27.0	28.5	1.4	5,733
Gabon, 2000	28.0	27.9	-0.1	3,348
Ghana, 1993	36.5	36.9	0.3	3,204
Ghana, 1998	33.5	34.7	1.2	3,131
Ghana, 2003	34.0	34.5	0.5	3,549
Ghana, 2008	35.3	35.7	0.3	2,876
Guinea, 1999	24.2	24.8	0.7	5,561
Guinea, 2005	21.2	21.9	0.7	6,292
Guyana, 2009	28.5	28.5	0.0	2,920
Haiti, 1994-95	44.5	44.7	0.2	3,113
Haiti, 2000	39.6	39.6	0.0	5,958
Haiti, 2005-06	37.5	37.3	-0.1	6,323
Honduras, 2005-06	16.9	16.8	-0.1	11,613
Kyrgyz Republic, 1997	11.6	11.8	0.2	2,675
Lesotho, 2004	31.0	31.0	0.0	3,709
Lesotho, 2009	23.0	23.3	0.3	4,049
Liberia, 2007	35.6	35.7	0.1	4,540
Madagascar, 1992	32.4	32.3	-0.1	3,736
Madagascar, 1997	25.6	27.7	2.1	4,435
Madagascar, 2003-04	23.6	24.5	0.8	5,140
Madagascar, 2008-09	18.9	19.0	0.1	12,039
Maldives, 2009	28.1	28.6	0.5	6,500
Mali, 1995-96	25.7	27.5	1.8	8,222
Mali, 2001	28.5	29.6	1.1	10,723
Mali, 2006	26.7	27.6	0.9	12,365
Mauritania, 2000-01	31.6	32.1	0.5	4,541

Credit: © 2005 Babafunke Fagbemi, Courtesy of Photoshare—Nursing mothers from a periurban setting in Ekiti State, Nigeria, attend a postnatal care program at a Basic Health facility.

Credit: © 2003 CCP, Courtesy of Photoshare—A family planning provider explains the use of an intrauterine device (IUD) to a client at a Clinical Service Improvement (CSI) project clinic in Egypt.

	Total unmet need, Original definition	Total unmet need, Revised definition	Percentage point difference	Number of married women 15-49
Mozambique, 1997	22.5	24.9	2.4	6,530
Mozambique, 2003	18.4	18.9	0.5	8,736
Namibia, 1992	21.9	21.8	-0.1	2,259
Namibia, 2000	22.1	23.9	1.7	2,610
Namibia, 2006-07	20.6	20.7	0.2	3,451
Nepal, 1996	31.4	32.4	1.0	7,982
Nepal, 2001	27.8	27.8	0.0	8,342
Nepal, 2006	24.6	24.7	0.1	8,257
Niger, 1992	18.1	18.7	0.5	5,561
Niger, 1998	16.6	17.7	1.1	6,382
Niger, 2006	15.7	16.1	0.4	7,941
Nigeria, 1990	20.5	21.5	1.0	6,880
Nigeria, 1999	17.5	20.0	2.5	5,757
Nigeria, 2003	16.9	17.5	0.6	5,336
Nigeria, 2008	20.2	20.2	0.0	23,578
Pakistan, 1990-91	31.8	30.5	-1.3	6,364
Pakistan, 2006-07	24.9	25.2	0.3	9,556
Rwanda, 1992	38.8	38.2	-0.5	3,785
Rwanda, 2000	35.6	36.4	0.8	5,052
Rwanda, 2005	37.9	38.5	0.6	5,510
Samoa, 2009	45.6	47.7	2.2	1,554
Sao Tome and Principe, 2008-09	37.1	37.6	0.5	1,718
Senegal, 1992-93	29.3	28.8	-0.4	4,450
Senegal, 2005	31.6	32.0	0.4	9,866
Sierra Leone, 2008	27.6	28.4	0.8	5,525
South Africa, 1998	15.0	16.5	1.6	5,077
Swaziland, 2006-07	23.8	24.7	0.9	2,062
Timor-Leste, 2009	30.8	31.5	0.7	7,906
Togo, 1998	32.3	35.0	2.7	5,819
Uganda, 1995	29.0	30.0	1.0	5,136
Uganda, 2000-01	34.6	35.0	0.4	4,881
Uganda, 2006	37.8	38.0	0.2	5,337
Uzbekistan, 1996	13.7	13.7	0.0	3,102
Zambia, 1992	30.7	30.0	-0.7	4,457
Zambia, 1996	26.5	25.2	-1.3	4,902
Zambia, 2001-02	27.4	27.5	0.1	4,694
Zambia, 2007	26.5	26.6	0.1	4,402

	Total unmet need, Original definition	Total unmet need, Revised definition	Percentage point difference	Number of married women 15-49
Consistently collected calendar data				
Armenia, 2000	11.8	18.1	6.3	4,125
Armenia, 2005	13.3	19.3	6.1	4,044
Azerbaijan, 2006	15.1	15.4	0.3	5,269
Brazil, 1996	7.3	10.8	3.5	7,584
Egypt, 1992	19.8	22.9	3.0	9,153
Egypt, 1995	16.0	20.2	4.3	13,710
Egypt, 2000	10.6	13.7	3.1	14,382
Egypt, 2003	9.5	11.8	2.3	8,445
Egypt, 2005	10.3	12.3	2.0	18,187
Egypt, 2008	9.2	11.6	2.4	15,396
Guatemala, 1995	24.3	28.1	3.7	7,984
Guatemala, 1998-99	23.1	26.8	3.7	3,964
Indonesia, 1991	14.1	17.0	2.9	21,109
Indonesia, 1994	10.6	15.3	4.7	26,186
Indonesia, 1997	9.2	13.6	4.4	26,886
Indonesia, 2002-03	8.6	13.2	4.6	27,857
Indonesia, 2007	8.8	13.1	4.3	30,931
Moldova, 2005	6.7	11.4	4.7	4,937
Paraguay, 1990	15.0	17.4	2.4	3,574
Peru, 1991-92	15.5	21.6	6.1	8,741
Peru, 1996	12.1	17.7	5.6	16,885
Peru, 2000	10.2	14.4	4.2	15,628
Peru, 2004-08	8.2	12.4	4.2	22,564
Turkey, 1993	11.2	14.6	3.3	6,271
Turkey, 1998	10.1	14.0	3.8	5,921
Turkey, 2003	6.3	9.5	3.2	3,902
Ukraine, 2007	10.3	10.1	-0.1	4,116
Vietnam, 1997	6.9	8.4	1.4	5,340
Vietnam, 2002	4.8	6.6	1.8	5,338
Zimbabwe, 1994	14.9	19.1	4.2	3,788
Zimbabwe, 1999	12.9	16.7	3.8	3,609
Zimbabwe, 2005-06	12.0	15.5	3.5	5,143
Inconsistently collected calendar data				
Bangladesh, 1993-94	17.9	21.6	3.7	8,840
Bangladesh, 1996-97	15.7	19.7	4.0	8,307
Bangladesh, 1999-2000	15.0	18.2	3.2	9,540
Bangladesh, 2004	11.8	15.0	3.2	10,436
Bangladesh, 2007	16.8	16.8	0.0	10,192
Bolivia, 1994	23.2	28.9	5.7	5,334
Bolivia, 1998	26.0	26.6	0.5	6,649
Bolivia, 2003	22.7	22.8	0.2	10,569
Bolivia, 2008	20.2	20.1	-0.1	10,162
Cambodia, 2000	29.7	33.0	3.4	9,071
Cambodia, 2005	25.1	25.3	0.2	10,087
Cambodia, 2010	16.4	16.9	0.6	11,626
Colombia, 1990	11.1	13.7	2.6	4,450
Colombia, 1995	7.7	11.4	3.6	6,097
Colombia, 2000	6.1	10.0	3.9	5,935

	Total unmet need, Original definition	Total unmet need, Revised definition	Percentage point difference	Number of married women 15-49
Colombia, 2005	5.7	8.6	2.9	19,762
Colombia, 2010	6.9	8.0	1.1	26,247
Dominican Republic, 1991	17.2	19.4	2.2	4,083
Dominican Republic, 1996	12.3	14.3	2.0	4,983
Dominican Republic, 1999	11.9	13.8	2.0	728
Dominican Republic, 2002	10.9	12.4	1.5	13,996
Dominican Republic, 2007	11.4	11.1	-0.2	15,417
Ethiopia, 2000	35.2	36.6	1.4	9,789
Ethiopia, 2005	33.8	36.1	2.3	9,066
India, 1992-93	20.1	20.3	0.2	84,328
India, 1998-99	15.8	16.1	0.3	84,682
India, 2005-06	12.6	13.9	1.3	93,089
Jordan, 1990	22.2	26.5	4.3	6,168
Jordan, 1997	14.2	20.1	5.9	5,337
Jordan, 2002	11.0	14.9	3.9	5,706
Jordan, 2007	11.9	13.8	1.9	10,354
Jordan, 2009	11.2	13.4	2.2	9,651
Kazakhstan, 1995	15.7	16.3	0.6	2,507
Kazakhstan, 1999	8.7	11.9	3.2	3,018
Kenya, 1993	35.5	35.3	-0.2	4,629
Kenya, 1998	23.9	28.0	4.1	4,834
Kenya, 2003	24.5	27.4	2.9	4,919
Kenya, 2008-09	25.6	25.6	0.0	4,928
Malawi, 1992	35.7	36.5	0.8	3,492
Malawi, 2000	29.7	29.9	0.3	9,452
Malawi, 2004	27.6	30.3	2.7	8,312
Malawi, 2010	26.1	26.2	0.0	15,528
Morocco, 1992	19.7	23.5	3.8	5,118
Morocco, 2003-04	10.0	11.9	1.9	8,782
Nicaragua, 1998	14.7	17.9	3.1	8,045
Nicaragua, 2001	14.6	14.6	0.1	7,424
Philippines, 1993	25.9	30.2	4.2	8,961
Philippines, 1998	18.8	24.6	5.8	8,336
Philippines, 2003	17.3	22.5	5.2	8,671
Philippines, 2008	22.3	22.0	-0.3	8,418
Tanzania, 1991-92	27.9	27.8	-0.1	6,038
Tanzania, 1996	23.9	26.0	2.1	5,411
Tanzania, 1999	21.8	22.3	0.5	2,653
Tanzania, 2004-05	21.8	24.3	2.4	6,950
Tanzania, 2010	25.3	25.3	0.0	6,412
Average, 169 surveys	**21.3**	**23.0**	**1.7**	