



# Tracking indicators and methods



This chapter begins with an overview of how the priority *Countdown* countries were selected. In the second section we introduce the interventions and approaches within the continuum of care for maternal, newborn and child health that are tracked through the *Countdown* and the coverage indicators associated with each. The third section discusses determinants of coverage at the country level, such as policies, health system strength and financial flows, followed by a description of how equity is tracked through the *Countdown*. In the final section of the chapter we describe the data sources and methods used for the *Countdown* tracking effort.

## Selecting the *Countdown* priority countries

The *Countdown* tracks coverage for the 68 countries with the highest burden of maternal and child mortality, shown in figure 2.1. Country selection took place in two phases – the first in 2004, when the *Countdown* Core Group defined countries with the highest numbers or rates of under-five mortality, and the second in 2007, when the list was expanded to include those with the highest numbers of maternal deaths or maternal mortality ratios. Each phase is described below.

The 68 *Countdown* Priority Countries



Source: Authors' compilation based on information supplied in text

Figure 2.1. The 60 priority countries in 2005 (red). The 8 priority countries added in 2008 (yellow): Bolivia, Eritrea, Guatemala, Democratic People's Republic of Korea, Lao People's Democratic Republic, Lesotho, Morocco, Peru.

## Phase 1: Selecting priority countries based on deaths among children under age five

In 2005 the *Countdown* did not yet address maternal survival. It therefore drew its priority countries from two lists of all developing countries. The first list rank-ordered countries by the total number of child deaths in 2004, the most recent year for which data were available.<sup>1</sup> All countries with at least 50,000 child deaths were selected from this list for inclusion in the *Countdown*. The second list rank-ordered countries by under-five mortality rate. Any country that had a rate of at least 90 under-five deaths per 1,000 live births – and that had not already been selected from the first list – was selected from the second list for inclusion in the *Countdown*. The addition of the second list ensured that countries with small populations but high mortality rates, most of them in sub-Saharan Africa, were included.

Together, the 60 *Countdown* priority countries selected in 2005 represented almost 500 million children under age five – over 75 per cent of all such children then living. They also represented 94 per cent of all deaths among children under age five in 2004.<sup>2</sup>

## Phase 2: Expanding the priority countries based on maternal deaths

For this report the *Countdown* expanded to include maternal deaths. We relied on procedures like those used for the first *Countdown* report to determine whether additional priority countries should be included. We again developed two lists of all developing countries. The first list rank-ordered countries by the maternal mortality ratio estimates from the year 2005, the most recent year for which this information was available.<sup>3</sup> All countries with a maternal mortality ratio greater than 550 were retained at this stage. The second list rank-ordered countries by the total number of maternal deaths in 2005. Using both lists, we selected for inclusion in the *Countdown* – if they had not already been included for having a high burden of under-five mortality – all countries with a maternal mortality ratio greater than 550 and all countries with both a maternal mortality ratio greater

than 200 and at least 750 maternal deaths in 2005. Countries with high under-five mortality overlapped significantly with those that had high maternal mortality. This exercise led to the inclusion of just eight additional *Countdown* priority countries: Bolivia, the Democratic Republic of Korea, Eritrea, Guatemala, Lao People's Democratic Republic, Lesotho, Morocco and Peru.

Table 2.1 shows the proportion of *Countdown* priority countries in each region and their share of each region's population. Priority countries account for a vast majority of people in sub-Saharan Africa and South Asia, and smaller but still substantial proportions of those in the East Asia and the Pacific, Latin America and the Caribbean, and Middle East and North Africa regions.

The 68 priority countries represent 97 per cent of maternal and child deaths worldwide and in developing countries. Therefore, the *Countdown's* findings are indicative of global progress towards the Millennium Development Goals – although countries with small populations may be underrepresented, and care must be taken when generalizing the results to those settings.

Numerous factors not directly related to health service coverage can have an important impact on health outcomes. Though beyond the scope of the *Countdown*, such factors should be kept in mind when using the findings. For example, important

intermediate determinants of health outcomes include women's education and nutritional status, household wealth and cultural factors that affect health seeking behaviours.<sup>4</sup> In addition, the root causes of poor health include disruptions in a country's social fabric and economic infrastructure. This is evident in conflict and post-conflict situations<sup>5</sup> and in countries characterised by severe governance problems. Finally, natural and environmental disasters also contribute to the death toll and strain the capacity of already weak public health systems.<sup>6</sup> Many *Countdown* priority countries are affected by these and other important contextual factors. For example:

- In 32 per cent (17 of 53) of priority countries with data on adult female literacy, the rate is 50 per cent or less.<sup>7</sup>
- In 93 per cent (62 of 67) of priority countries with data on stunting prevalence among children under five years of age, the rate is at least 20 per cent.<sup>8</sup>
- In 23 per cent (15 of 64) of priority countries with data on HIV prevalence among adults age 15–49, the rate is estimated at 5 per cent or greater.<sup>9</sup>
- In 98 per cent (49 of 50) of priority countries with data on the World Bank's international poverty indicators, there are populations living on less than \$1 USD per day (range 3 to 85 per cent).<sup>10</sup>
- In 2006, 66 per cent of all *Countdown* priority countries (45 of 68) were low-income countries – defined as countries with less than \$905 of gross national income per capita per year.<sup>11</sup>
- Between 2002 and 2006, 35 per cent of all *Countdown* priority countries (24 of 68) were affected by violent, high-intensity conflict.<sup>12</sup>
- Between 2000 and 2007, 88 per cent of all *Countdown* priority countries (60 of 68) were struck by a natural disaster killing at least 100 people or affecting more than 10,000 people.<sup>13</sup>

Achieving the health-related Millennium Development Goals in the 68 *Countdown* priority countries will require extraordinary investments and efforts on many fronts. Given the magnitude of the challenge, a special effort is needed to enlist parliamentary champions and harness national commitments at the highest levels of government. Achieving the goals for mothers, newborns and children is a shared responsibility of national governments and their United Nations and non-governmental partners at both international and national levels, together with academic and research institutions, religious and community groups and dedicated individuals.

## Priority interventions and coverage indicators

Chapter 1 described the principles that guide the *Countdown*, including its focus on tracking population coverage for effective interventions and approaches that are feasible for universal implementation in poor countries. In this section we describe how the *Countdown* interventions and approaches were chosen, how indicators of coverage were selected for each and how we arrived at the coverage estimates in this report.

### Inclusion criteria for interventions and approaches

The *Countdown's* most important criterion for including an intervention is the availability of internationally accepted (peer-reviewed) evidence demonstrating that it can reduce mortality among mothers, newborns or children under age five. The first *Countdown*, in 2005, was able to draw on the 2003 and 2005 Lancet series on child and neonatal survival, respectively, which used systematic literature reviews to identify such interventions.<sup>14</sup>

As the *Countdown* expanded to include maternal survival, and in light of new thinking about the continuum of care,<sup>15</sup> the Core Group recognized that the focus on single interventions was too narrow. Coverage with broader approaches such as antenatal and postnatal care, delivery care and reproductive health services – as basic platforms for delivering multiple interventions proven to reduce maternal and newborn mortality – also needed to be tracked. Beginning with this report, the *Countdown* will track both interventions and approaches, provided that at least one effective intervention is supported by each approach.

For this report a *Countdown* Working Group on Indicators and Coverage Data was convened and charged with reviewing new evidence on interventions included in the 2005 *Countdown*, as well as determining whether additional interventions or delivery platforms should be included in 2008. A full report of the Working Group's deliberations and decisions is at the *Countdown* website ([www.countdown2015mnch.org](http://www.countdown2015mnch.org)).

Among proven interventions, the *Countdown* includes only those judged feasible for delivery with universal coverage in low-income countries. Because intervention costs and delivery strategies can change, this criterion must be reassessed in each *Countdown* cycle.

The *Countdown* does not aim to be comprehensive and does not necessarily include all interventions and approaches meeting the criteria described above. For example, as explained below, interventions have been excluded if no appropriate coverage indicator is available. In addition, the *Countdown* strives to limit the total number of interventions and indicators to keep the effort manageable and focused.

The criteria used to assess potential coverage indicators were based on the normative principle that a 'good' coverage indicator should provide a valid measure of whether the target population for a given intervention receives it when it is needed and when it is clinically effective. In addition, though, indicators used for the *Countdown* must produce results that are:

- Nationally representative.
- Reliable and comparable across countries and time
- Clear and easily interpreted by policy makers and program managers.
- Available regularly in most of the *Countdown* priority countries.

None of the 68 priority countries has a health information system that can now produce coverage estimates meeting the standards described above for all indicators.<sup>11</sup> Fortunately, most of the *Countdown* coverage indicators tracked in 2005 have since been included in the protocols for the major population-based surveys used in the 68 priority countries – usually either the UNICEF-supported Multiple Indicator Cluster Surveys<sup>16</sup> or the Demographic and Health Surveys supported by the United States Agency for International Development.<sup>17</sup> Exceptions include interventions for which data collection and the analysis of coverage indicators are not yet routine or harmonised, such as unmet need for family planning or a postnatal visit for the newborn within two days of birth. In addition, coverage estimates for vaccinations, vitamin A supplementation and the prevention of mother-to-child transmission of HIV/AIDS reflect the synthesis of routine program data and data from household surveys. Annex B lists the data sources for all indicators included in the 2008 *Countdown* cycle.

### The 2008 *Countdown* coverage indicators

The *Countdown* builds on the work of others. Coverage estimates and trends for HIV-related interventions, immunisation, vitamin A supplementation and water and sanitation reflect the work of various interagency working groups described more fully below. For other indicators the *Countdown* reports available estimates but recognizes the need for improvement in data availability and estimation methods. (Annex C defines the *Countdown* 2008 coverage indicators.)

### Countdown Countries Compared by Region

Region	Countdown priority countries (n=68)		
	Compared with number of countries in region		Percentage of region's population (2006)
	Number of Countdown countries	Number of countries in region	
South Asia	5	8	99
Eastern and Southern Africa	18	22	99
West and Central Africa	22	24	100
Middle East and North Africa	6	20	51
East Asia and Pacific	8	29	88
Latin America and Caribbean	6	33	63
Central and Eastern Europe and the Commonwealth of Independent States	3	21	5
Industrialized countries	0	39	0

Table 2.1. *Countdown* priority countries compared with the number of countries in each region and as a percentage of each region's population, 2006, by region

Through its efforts the *Countdown* has acquired a clear view of the limitations of available coverage indicators, the data that support them and the process through which country-specific estimates are updated. A part of the *Countdown* work plan is addressing these issues.

Coverage indicators are summarized only for countries to which they are relevant. For example, only 45 of the 68 countries have endemic malaria, defined here as documented risk of *Plasmodium falciparum* transmission nationwide and throughout the year.<sup>18</sup> The country profiles estimate coverage for countries with limited geographic areas of malaria risk, but such countries are not included in the results summarized in this chapter. All *Countdown* priority countries are considered to need antiretroviral treatment for pregnant women with HIV/AIDS to prevent mother-to-child transmission.<sup>19</sup>

### Indicators for factors that contribute to coverage

The *Countdown* Core Group identified two prerequisites for success in attaining high, sustained and equitable levels of coverage for interventions and approaches proven to improve maternal and child survival: a supportive policy environment with adequate health systems support (including human resources) and predictable, longer term financial support. For the 2008 *Countdown*, technical groups were convened in each area and charged with reviewing the 2005 *Countdown* experience and improving on the tracking procedures.

The Working Group on health policies and health systems searched for relevant indicators, prioritising those with international benchmarks for health systems strengthening and with data either available in the public domain or objectively assessable within the timeframe of the 2008 *Countdown* cycle. Box 2.1 shows the list of indicators finally selected through a consultative process involving the *Countdown* Core Group, health systems experts and experts in maternal, newborn and child health.

Each technical or intersectoral policy identified as critical to maternal, newborn and child health was coded as being either fully adopted at country level ('Yes'), partially adopted ('Partial') or not adopted ('No'; see annex table D1). The inclusion of a policy or plan does not necessarily reflect the extent or quality of implementation, but can often be a prerequisite for effective programme action. (Annexes B and D present further information on data sources, definitions and coding criteria for each indicator.)

### Health Policies and Health Systems Indicators

Countries with adopted national policies indicating:

- International Code of Marketing of Breastmilk Substitutes adopted.
- International Labour Organization Convention 183 on Maternity Protection ratified.
- Notification of maternal deaths.
- Midwives authorized to administer a core set of life-saving interventions.
- Integrated management of childhood illness guidelines adapted to cover newborns 0–1 week of age.
- Low osmolarity oral rehydration salts and zinc supplements for the management of diarrhoea.
- Community management of pneumonia with antibiotics.
- Costed implementation plan or plans for maternal, newborn and child health available.

National indicators of health system preparedness to improve maternal, newborn and child health

- Per capita total expenditure on health (at international US dollar rate).
- Government expenditure on health as a percentage of total government expenditure.
- Out-of-pocket expenditure as a percentage of total expenditure on health.
- Density of physicians, nurses and midwives per 1,000 people.
- Availability of emergency obstetric care services as a percentage of recommended minimum.

*Box 2.1. Health policies and health systems indicators tracked in the 2008 Countdown*

The *Countdown* has worked to develop methods for tracking domestic and external financial investments in child health. Efforts through the 2005 *Countdown* to track official development assistance indicated that overall funding for child survival in the priority countries was insufficient and not well targeted to countries with the greatest needs.<sup>20</sup> The present *Countdown* cycle's official development assistance tracking effort has expanded to include support for maternal and newborn activities in the priority countries. The country profiles include estimates of official development assistance to child health per child and official development assistance to maternal and neonatal health per live birth.

Work on tracking domestic investments in maternal, newborn and child health has also progressed. The most promising method identified by the Working Group was to build on the National Health Accounts approach<sup>21</sup> and develop specific procedures for a sub analysis of resources directed to maternal, newborn

and child health, including reproductive health. Results on a greater number of countries are expected in the next *Countdown* cycle.

### Tracking improvements in equity

Efforts to monitor coverage for interventions proven to reduce maternal and child mortality are incomplete without measures of equity, defined here as the extent to which mothers and children in different socioeconomic or ethnic groups or children of different sexes are equally likely to receive services. Each 2005 *Countdown* country profile included a graph showing the proportion of children under age five in two population quintiles – the poorest and the least poor – who were receiving six or more preventive child survival interventions.<sup>22</sup>

In the 2008 *Countdown* cycle we focus on socioeconomic inequities across a broader set of interventions. Because curative services are needed only by particular subpopulations in response to particular health events, we developed a new measure reflecting the gap between universal coverage for an intervention (100 per cent of the population in need) and current coverage for each country. This 'coverage gap' measure includes eight interventions grouped into four areas:

1. Family planning (need met or modern contraceptive use).
2. Maternal and newborn care (antenatal care and skilled birth attendance).
3. Immunisation (measles vaccine, Bacille Calmette-Guerin vaccine against tuberculosis and third dose of diphtheria and tetanus with pertussis vaccine).
4. Treatment of child illness (medical care sought for acute respiratory infection and oral rehydration therapy with continued feeding for diarrhoea).

Larger coverage gaps indicate poorer coverage for these interventions; smaller coverage gaps indicate better coverage. Thus, while the coverage gap across wealth quintiles represents coverage inequities within a country, it can also be compared with other countries' coverage gaps to suggest intercountry coverage inequities. (Annex E offers further details about the construction of the coverage gap measure and guidance on its interpretation.)

### Data sources and methods

The *Countdown* aims to bring together data on coverage for interventions and approaches with proven effectiveness in reducing maternal, newborn and child survival, making this information readily accessible and spurring donors and policy makers to action. The *Countdown* does not normally collect new coverage data. This section describes the sources of *Countdown* data (listed for each indicator in annex B) and the quality control mechanisms that are already in place to assess and ensure their validity. Any secondary analysis carried out solely for the *Countdown*'s use is described in detail. The section follows the order in which indicators are presented on the country profiles available in chapter 4.

### Child and maternal mortality

Country-specific estimates of mortality in children under age five were abstracted from tables in *The State of the World's Children 2008*.<sup>23</sup> The methods and limitations associated with these estimates are available elsewhere.<sup>24</sup> Country-specific cause-of-death profiles were abstracted from World Health Organization statistical databases,<sup>25</sup> based on work by the Child Health Epidemiology Reference Group.<sup>26</sup>

Progress towards Millennium Development Goal 4 was assessed by determining whether the average annual rate of reduction in mortality in children under age five from 1990–2006 matched or exceeded the rate needed from 2007–2015 if the goal is to be met. If a country's mortality rate in children under age five is less than 40 per 1,000 live births, or greater than or equal to 40 with an average annual reduction rate of at least 4 per cent for 1990–2006, it is considered 'on track'. If the country's mortality rate in children under age five is greater than or equal to 40 and the average annual reduction rate for 1990–2006 was between 1.0 per cent and 3.9 per cent, the country is considered to be making 'insufficient progress'. If the mortality rate in children under age five is greater than or equal to 40 and the average annual reduction rate for 1990–2006 was less than 1.0 per cent, the country is considered to be making 'no progress'.

Country-specific maternal mortality ratios per 100,000 live births reflect 2005 data,<sup>27</sup> drawing on estimates developed by the Maternal Mortality Working Group. Because large uncertainty margins surround these estimates, progress towards Millennium Development Goal 5 – improve maternal health – was assessed using four broad categories for maternal mortality: low (maternal mortality ratio of less than 100), moderate (maternal mortality ratio of 100–299), high (maternal mortality ratio of 300–549) and very high (maternal mortality ratio of 550 or greater).<sup>28</sup>

## Nutritional status

The *Countdown* country profiles include nutritional status indicators (such as underweight prevalence, stunting prevalence, wasting prevalence and incidence of low birthweight) as an important reference point for interpreting coverage. Country-specific estimates for nutritional status indicators<sup>29</sup> were adjusted to reflect new World Health Organization growth standards.<sup>30</sup> An exception is estimates of low birthweight, which are not dependent on the growth standards and have been adjusted here for high underreporting (especially in sub-Saharan Africa).<sup>31</sup>

## Coverage

**Data sources and quality.** Household surveys are the primary data source for tracking progress in coverage for maternal, newborn and child survival. The main sources of coverage data for the *Countdown* are UNICEF's global databases and the coverage estimates in its annual *The State of the World's Children* reports. The two most important sources of household survey data are the Multiple Indicator Cluster Surveys (MICS) and the Demographic and Health Surveys (DHS). The latest protocols for these two surveys permit collecting harmonised information on most of the *Countdown* coverage indicators.

The remaining coverage estimates come from several sources. The latest available coverage data and methods of estimating coverage for antiretroviral treatment to prevent mother-to-child HIV transmission reflect harmonised estimates developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS), UNICEF and the World Health Organization. Based on denominators derived from unpublished HIV estimates for 2007 by the Joint United Nations Programme on HIV/AIDS and the World Health Organization, these harmonised estimates are more recent than those published in UNICEF's *The State of the World's Children 2008*. Data on Caesarean section prevalence are drawn from the Demographic and Health Surveys.

Many groups share responsibility for the quality control of the coverage estimates for interventions and approaches effective in reducing maternal, newborn and child mortality. Table 2.2 summarizes quality review and improvement mechanisms for the maternal, newborn and child health coverage indicators, together with selected mortality measures.

A number of methodological challenges in coverage measurement have been known for some time. The *Countdown* throws these challenges into relief. They will be prioritized as part of the *Countdown* technical work plan in the next reporting cycle. One area that

needs urgent attention is the development of standard procedures for estimating uncertainty. The 2008 report presents point estimates and makes no attempt to estimate precision or provide uncertainty ranges.

**Data summary and analysis.** The *Countdown* focuses on accelerating coverage improvements at the country level. Therefore, in summarizing the results this report uses the country as its unit of analysis, consistent with the need for in-depth country-by-country analysis and action. The most appropriate summary measures for this purpose are the median, which gives each of the 68 countries an equal weight, and the range, which illustrates the extent of the variation among countries.

All *Countdown* Core Group members were invited to participate in a consultative process to agree on the most important aspects of the country-specific findings and their implications for achieving Millennium Development Goals 4 and 5. Meetings were held in Addis Ababa (2 December 2007), Geneva (10 December 2007) and New York (12 January 2008). At each meeting participants examined preliminary results and agreed on the most important findings and their implications for continued implementation efforts. These findings were then shared with the broader *Countdown* Core Group through a draft report, resulting in extensive further discussion and agreement on the conclusions presented here.

In 2005, summaries of performance across the priority countries for each indicator were categorized in three ways – 'on track', 'watch and act' or 'high alert' – based on international targets. For indicators without targets, categorizations across the priority countries were based on arbitrary thresholds for high, middle and low performance.

In 2008 the challenge was to compare progress over time as well as across countries. Countries were first grouped into the 2005 categories for each indicator. But since the number of countries had increased from 60 in 2005 to 68 in 2008 – resulting in a lack of data for one of the two years in some countries – summaries like those presented in 2005 proved difficult to produce, and an alternative approach to summary analysis was devised.

For the 2008 *Countdown*, then, progress is measured by the average annual percentage point change in coverage for each indicator, standardized to a three-year reference period to conform to the *Countdown* reporting cycle. Using the databases containing the trend information presented in the 2008 country profiles, we identified the subset of countries that had two data points for each indicator since 1998 with

## Quality Review and Improvement Mechanisms

Review Group	Coverage or mortality indicators	Membership
Interagency Child Mortality Estimation Group	None at present (Develop joint estimates for under-five, infant and neonatal mortality)	<b>International organizations</b> (UNICEF, WHO, The World Bank, UN Population Division) <b>Academia and institutions</b> (Harvard and others)
Malaria Monitoring and Evaluation Reference Group (MERG)	Use of insecticide-treated nets by children under five Treatment of fever among children under five Intermittent preventative treatment for pregnant women (malaria; IPTp)	<b>International organizations</b> (UNICEF, MACEPA, WHO, USAID, The World Bank, The Global Fund) <b>Academia and institutions</b> (Macro International, CDC, LSHTM, others)
Joint Monitoring Program (JMP) for Water Supply and Sanitation and Technical Advisory Group	Use of improved drinking water sources Use of improved sanitation facilities	<b>International organizations</b> (UNICEF, WHO, The World Bank, USAID) <b>Academia and institutions</b> (LSHTM, Macro International and others)
HIV/AIDS Monitoring and Evaluation Reference Group (MERG)	HIV+ pregnant women receiving ARVs for PMTCT	<b>International organizations</b> (UNAIDS, UNICEF, WHO, UNFPA and others) <b>Academia and institutions</b> (various)
WHO UNICEF Joint Working Group on Immunizations	Measles vaccination DPT vaccination Hib vaccination	<b>International organizations</b> (UNICEF, WHO)
Child Health Epidemiology Reference Group (CHERG)	None at present (Conduct systematic reviews on cause-specific mortality, morbidity and risk factors, including nutrition)	<b>International organizations</b> (UNICEF, WHO, UNFPA, CDC, Save the Children US and others) <b>Academia and institutions</b> (Johns Hopkins, LSHTM, others)
Interagency group for maternal mortality estimation and trend analysis	None at present (Develop joint maternal mortality estimates and new methodology for trend analysis; Prepare regional workshops to explain methodology and promote data analysis and use)	<b>International organizations</b> (UNICEF, WHO, UNFPA, World Bank, UN Population Division) <b>Academia and institutions</b> (Harvard and others)

Source: Author's compilation based on data as described in the report

Table 2.2. Quality review and improvement mechanisms for country-specific estimates of coverage and mortality

these data points being at least three years apart. We calculated the difference in the coverage estimates and divided it by the number of years between the two point estimates. This product was then multiplied by three to produce a three-year estimate, resulting in a continuous variable across the 68 countries.

Coverage patterns for the interventions and approaches presented in the country profiles were also analyzed for the continuum of care. This was done by counting the number of countries that had coverage levels for four of the component indicators of at least 10 per cent, at least 20 per cent, at least 30 per cent and so on.

The *Countdown* countries that were included in the summary estimates for each coverage indicator met the following criteria, consistent with those used in global reporting:

- Only data from countries with available coverage estimates for 2000–2006 were used.
- Countries with summary measures from years or

time periods other than 2000–2006, or with data that differ from the standard definition or refer only to part of a country, were excluded from the analysis. Exceptions to this rule are coverage estimates for vitamin A supplementation, which refer only to 2005 data, and coverage estimates for measles immunisation, neonatal tetanus protection, the third dose of diphtheria and tetanus with pertussis vaccine (DPT3) and the third dose of haemophilus influenzae type B vaccine (Hib3), which refer only to 2006 data.

## Policies, health systems and financial flows

Information on country-specific policies related to maternal, newborn and child health was obtained from staff of the UNICEF and World Health Organization offices in the 68 priority countries in November 2007. These reports were then reviewed and confirmed with technical staff in the relevant programme area at UNICEF's New York headquarters and the World Health Organization headquarters in Geneva. The information on emergency obstetric care was derived

from a joint Averting Maternal Death and Disability–UNICEF database. Averting Maternal Death and Disability and UNICEF headquarters staff reviewed initial country assessments and consulted country staff, United Nations Population Fund colleagues and other experts to determine the reliability of the data.

The *Countdown* Working Group on Financial Flows analysed and coded the complete aid activities database for 2005, using the methodology for the 2005 *Countdown* cycle.<sup>32</sup> The analysis included all 22 donor countries and the European Union, represented in the Development Assistance Committee of the Organisation for Economic Co-operation and Development. The World Bank, UNICEF, the Joint United Nations Programme on HIV/AIDS, the Global Alliance for Vaccines Initiative and the Global Fund to Fight AIDS, Tuberculosis and Malaria were included as multilateral development organisations and global health initiatives. Consistent with earlier analysis, the United Nations Population Fund was treated as a delivery channel and does not appear in the donor list. Because it is a significant supporter of maternal and reproductive health efforts, this approach will be reviewed in future work.

For all but one of the donors the analysis used data from the Creditor Reporting System database, which is maintained and administered by the Organisation for Economic Co-Operation and Development.<sup>33</sup> The analysis also includes disbursement data provided by the Global Alliance for Vaccines Initiative. Disbursements by the Global Fund to fight AIDS, Tuberculosis and Malaria were already included in the Creditor Reporting System database; the Working Group triangulated the information with the data that the Global Fund to Fight AIDS, Tuberculosis and Malaria provided on its website. The Creditor Reporting System database shows no reported disbursements for Norway, only commitments.

Results are reported for two groups: first, children under five years of age; second, mothers and newborns. Both categories include financial flows for nutrition, so far as these could be identified – although nutrition is not defined as a separate category.

## Equity

The 2008 *Countdown* country profiles present the coverage gap by wealth quintiles, drawing on Multiple Indicator Cluster Surveys and Demographic and Health Surveys conducted since 1990. In particular, the profiles show:

- The absolute size of the coverage gap (the difference between universal coverage for these eight interventions and actual coverage as measured in each survey).
- The ratio between the gap in the poorest and the least poor ('best-off') quintile of the population.
- The absolute difference between the two quintiles.

Larger gaps reflect poorer coverage; smaller gaps reflect better coverage.

The coverage data used to construct the coverage gap index for each country, as well as its wealth quintiles, are based on national Demographic and Health Surveys<sup>34</sup> and Multiple Indicator Cluster Surveys. Where multiple surveys were available for a *Countdown* country, all data were used to assess current levels and trends in the coverage gap measure by wealth quintile. Data on coverage for key interventions by wealth quintile were available from surveys conducted since 1990 for 54 of the 68 *Countdown* priority countries. Forty countries had more than one survey, 22 more than two surveys.

The coverage gap was analyzed by wealth quintiles using a standard methodology.<sup>35</sup> (Further details about the analysis methods are in annex E.)



## Notes

<sup>1</sup> UNICEF 2005.

<sup>2</sup> UNICEF 2004.

<sup>3</sup> WHO, UNICEF, UNFPA and World Bank 2007; UNICEF 2007c; Hill, Thomas, AbouZahr and others 2007.

<sup>4</sup> Glewwe, 1999; Schell, Reilly, Rosling and others 2007.

<sup>5</sup> Pedersen 2002; Al Gasseer, Dresden, Keeney and others 2004.

<sup>6</sup> Noji 2000.

<sup>7</sup> UNICEF 2006b.

<sup>8</sup> UNICEF 2007c.

<sup>9</sup> UNICEF 2007a; UNAIDS and WHO 2007; UNAIDS 2007.

<sup>10</sup> UNICEF 2007c.

<sup>11</sup> World Bank n.d.

<sup>12</sup> Personal communication from Edilberto Loaiza, DPP/SIS UNICEF, 25 January 2008, based on a recent analysis by UNICEF of the Uppsala conflict database, the Conflict Barometer of the Heidelberg Institute for International Conflict Research, and Project Ploughshares 2007.the Project Ploughshares' Armed Conflicts Report 2007.

<sup>13</sup> Emergency Events Database n.d.

<sup>14</sup> Jones, Steketee, Black and others 2003; Darmstadt, Bhutto, Cousens and others 2005.

<sup>15</sup> Tinker, ten Hoop-Bender, Azfar and others 2005; Kerber, de Graft-Johnson, Bhutta and others 2007.

<sup>16</sup> UNICEF n.d.

<sup>17</sup> Measure DHS, MACRO International, Inc. n.d.

<sup>18</sup> WHO 2007a.

<sup>19</sup> UNICEF 2007c; UNICEF 2007a; UNAIDS and WHO 2007; UNAIDS 2007.

<sup>20</sup> Powell-Jackson, Borghi, Mueller and others 2006.

<sup>21</sup> World Bank, WHO and USAID 2003.

<sup>22</sup> Bryce, Terreri, Victora and others 2006.

<sup>23</sup> UNICEF 2007c.

<sup>24</sup> UNICEF, WHO, World Bank and UNPD 2007.

<sup>25</sup> WHO 2007b.

<sup>26</sup> Bryce, Boschi-Pinto, Shibuya and others 2005.

<sup>27</sup> UNICEF 2007b, p. 27.

<sup>28</sup> Hill, Thomas, AbouZahr and others 2007.

<sup>29</sup> UNICEF 2007c, pp. 118–21.

<sup>30</sup> WHO 2006a.

<sup>31</sup> Blanc and Wardlaw 2005.

<sup>32</sup> Powell-Jackson, Borshi, Mueller and others 2006.

<sup>33</sup> IDS n.d.

<sup>34</sup> Gwatkin, Rutstein, Johnson and others 2007.

<sup>35</sup> Filmer and Pritchett 2001.