



Countdown to 2015

Maternal, Newborn & Child Survival

COUNTDOWN TO 2015 DECADE REPORT (2000–2010)

Taking stock of maternal, newborn and child survival



Contributors

Production editor: Jennifer Requejo (PMNCH/Johns Hopkins University)

Lead writers: Jennifer Requejo (PMNCH/Johns Hopkins University), Jennifer Bryce (Johns Hopkins University)

Subeditors/writers: Joy Lawn (Save the Children/Saving Newborn Lives), Peter Berman (World Bank), Bernadette Daelmans (WHO), Laura Laski (UNFPA), Cesar Victora (Universidade de Pelotas), Elizabeth Mason (WHO)

Profile support team: Tessa Wardlaw (UNICEF), Holly Newby (UNICEF), Archana Dwivedi (UNICEF)

Additional writing team: Henrik Axelson (PMNCH), Zulfiqar Bhutta (Aga Khan University), Ties Boerma (WHO), Flavia Bustreo (PMNCH), Eleanora Cavagnero (WHO), Mickey Chopra (UNICEF), Giorgio Cometto (Global Health Workforce Alliance), Andres de Francisco (PMNCH), Helga Fogstad (Norad), Giulia Greco (LSHTM), Kate Kerber (Save the Children/Saving Newborn Lives), Blerta Maliqi (WHO), Tim Powell-Jackson (LSHTM), Lale Say (WHO), Ann Starrs (Family Care International), Nancy Terreri (FCI/PMNCH)

Countdown Coordinating Committee

Mickey Chopra (co-chair), Zulfiqar Bhutta (co-chair), Jennifer Bryce, Joy Lawn, Tessa Wardlaw, Elizabeth Mason, Bernadette Daelmans, Helga Fogstad, Flavia Bustreo, Ann Starrs, Laura Laski, Ties Boerma, Cesar Victora, Peter Berman, Andres de Francisco

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Technical working groups

Coverage: Jennifer Bryce (co-chair), Tessa Wardlaw (co-chair), Holly Newby, Archana Dwivedi, Jennifer Requejo, Alison Moran, Shams El Arifeen, Edilberto Loiaza, Angella Mtimumi, Blerta Maliqi, Lale Say, James Tibenderana, Anuli Ajene

Equity: Cesar Victora (co-chair), Ties Boerma (co-chair), Aluisio Barros, Carine Ronsmans, Wendy Graham, Edilberto Loiaza, Betty Kirkwood, Zulfiqar Bhutta, Kate Kerber, Henrik Axelson

Financing: Peter Berman (chair), Henrik Axelson, Giulia Greco, Ruth Levine, David Collins, Giorgio Cometto, Jacqueline Mahon, Ravi Rannan-Eliya, Josh Lozman, Nouria Brikci, Karin Stenberg, Dan Kraushaar

Health systems and policies: Bernadette Daelmans (co-chair), Helga Fogstad (co-chair), Yves Bergevin, Geoff Black, Nouria Brikci, Craig Burgess, Naomi Cassirer, Eleonora Cavagnero, Mickey Chopra, Giorgio Cometto, Vincent Fauveau, Lynn Freedman, Neeru Gupta, Julia Hussein, Monir Islam, Dan Kraushaar, Blerta Maliqi, Elizabeth Mason, Zoe Matthews, Barbara McPake, Robert Scherpber, Anuraj Shankar, Nancy Terreri, Mark Young, David Sanders, Yaron Wolman

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Countdown to 2015: key messages for 2010

- The *Countdown* report for 2010 contains good news—many countries are making progress, reducing mortality and increasing coverage of effective health interventions at an accelerating pace.
- But the news is not all good. Many *Countdown* countries are still off track for achieving Millennium Development Goals 4 (reduce child mortality) and 5 (improve maternal health), and are not increasing coverage of key health interventions quickly enough.
- *Countdown* countries in Sub-Saharan Africa are especially far behind, although a few have shown improvements.
- The vast majority of maternal and child deaths are preventable, but unacceptably large numbers of women, newborns and children are still dying each year in *Countdown* countries, where at least 95% of all maternal and child deaths occur. A growing proportion of child deaths occur in the first four weeks of life.
- Poorly functioning health infrastructure, inadequate numbers of health workers, slow adoption of evidence-based health policies and insufficient focus on quality of care are holding back progress in many countries.
- Skilled care at birth, including emergency care for mothers and newborns, is critical to achieving Millennium Development Goals 4 and 5: about 2 million lives a year are lost to complications occurring during labour and childbirth.
- Pneumonia and diarrhoea remain the largest killers of children after the newborn period. Undernutrition contributes to more than one-third of child deaths.
- Some *Countdown* countries are doing better at reaching the most disadvantaged women and children, but profound inequities in coverage and health outcomes—both between and within countries—must be confronted and overcome.
- Countries should aggressively pursue policies to make health services available and affordable for all, by making services free at the point of delivery and exploring innovative financing strategies.
- Funding is increasing for maternal and child health, but at too slow a pace, and funding for family planning has declined.
- Millennium Development Goals 4 and 5 are still achievable by 2015—but only a dramatic acceleration of political commitment and financial investment can make it happen.





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Abbreviations

BCG	Bacille Calmette-Guérin
DPT	diphtheria and tetanus with pertussis
GDP	gross domestic product
HIV/AIDS	human immunodeficiency virus/acquired immune deficiency syndrome
MDG	Millennium Development Goal
ODA	official development assistance
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Countdown headlines for 2010: saving the lives of the world's women, newborns and children



Survival status

Millennium Development Goal 4—reduce child mortality

- Good news: 19 of the 68 *Countdown* countries are on track to achieve Millennium Development Goal (MDG) 4.
 - 17 countries have reduced child mortality by at least half.
 - 47 countries have accelerated their progress on child mortality since 2000.
- Much work remains: 49 *Countdown* countries are not on track to achieve MDG4.
 - 12 countries (including some currently on track) have seen their progress slow since 2000.
- Death and illness:
 - Globally 8.8 million children a year die before their fifth birthday, more than 40% of them during their first four weeks of life. At least two-thirds of all child deaths are preventable.
 - Pneumonia and diarrhoea remain the largest killers of children after the newborn period.
 - Undernutrition contributes to more than 1 in 3 child deaths.
- Death and illness:
 - An unacceptable number of women die in pregnancy and childbirth each year. For every woman who dies, at least 20 others suffer injuries, infection and disability. Almost all maternal deaths are preventable.
 - Most maternal deaths occur during childbirth and in the immediate postnatal period, which is also when most stillbirths and newborn deaths occur.
 - The leading cause of maternal deaths remains postpartum haemorrhage, largely preventable through skilled care during childbirth.

Coverage gains and gaps

Millennium Development Goal 5—improve maternal health

- Good news: new studies suggest that some progress is being made on reducing maternal mortality.
- Much work remains: both globally and in most *Countdown* countries, progress is insufficient to achieve MDG 5, particularly in Sub-Saharan Africa. Urgent action is needed to scale up proven interventions to improve reproductive and maternal health.
- Progress is inconsistent: progress on coverage of lifesaving interventions across the continuum of care is uneven.
 - Some interventions delivered routinely through outreach or scheduled in advance (such as vaccinations and vitamin A supplementation) have achieved and sustained high coverage.
 - Interventions that must be provided in response to acute need (such as treatment of childhood illnesses and caesarean sections) show little progress.
 - Relatively new interventions that have received attention and resources, such as insecticide-treated nets and prevention of mother-to-child transmission of HIV, show rapid gains.
- Skilled care during childbirth: all women and newborns need access to a skilled attendant at birth, but overall coverage across the *Countdown* countries remains insufficient and uneven.
 - 10 countries showed coverage gains of more than 10 percentage points since 1990, and 3 countries—Burkina Faso,

Pakistan and Rwanda—had gains of more than 20 percentage points from around 2000 to around 2008.

- 11 countries have shown no progress in coverage since 1990.
- Family planning: wide disparities in coverage of family planning services across and within countries represent a missed opportunity to improve the health of women and young children.
- More information is needed: higher coverage is critical, but saving lives also depends on the quality of care. More information is needed on what care is actually provided during antenatal, childbirth and postnatal contacts.

Health systems and policies

- Health workers: 53 of the 68 *Countdown* countries are experiencing acute shortages of doctors, nurses and midwives. Overcoming these shortages and addressing the unequal distribution of health workers within countries require focused investment in training, deployment and retention.
- Financial barriers to access: the high proportion of health service costs paid out of pocket in nearly all *Countdown* countries puts families at risk of financial catastrophe. Making services free at the point of delivery helps increase utilization: financing mechanisms such as pre-payment and risk pooling can help make health services available and affordable for all.
- Improving access and quality of care: investment in health information and referral systems, equipment, medical supplies and infrastructure is critical to improving access to and quality of maternal, newborn and child health services.
- Adoption of policies: evidence-based policies can save and improve women's and children's lives. Bangladesh and Nepal, for example, have shown that implementing policies to increase access to diarrhoea and pneumonia treatment in the community reduces child deaths. More progress is needed: the number of *Countdown* countries that have adopted

recommended policies for increasing access to quality care is still too low.

Closing the equity gap

- Inequities in access: coverage rates are substantially higher among women and children in better-off families than in poor families.
- The poor and excluded: high national coverage levels do not always indicate progress in reaching the poorest and most vulnerable women and children. Guatemala and Zambia, for example, have similar levels of overall coverage for a subset of proven maternal, newborn and child health interventions, but more women and children from the poorest families receive these services in Zambia than in Guatemala.
- Further research needed: countries with smaller gaps between rich and poor—including Bangladesh, Brazil, Egypt, Swaziland and Zambia—may provide models for reducing inequities through greater political commitment, specific targeting of low-income groups, redirecting of human resources and other strategies.
- Service provision: disparities are larger for services provided in health facilities (such as delivery care) than for those delivered at the community level (such as vaccines).

Closing the funding gap

- Financing the gap: preliminary estimates show that considerable additional funding and greater political commitment to maternal, newborn and child health are needed to achieve universal coverage of the full package of interventions in the 68 *Countdown* countries.
- Official development assistance (ODA):
 - ODA for maternal, newborn and child health increased between 2003 and 2007 but remains far below needed levels. Only 31% of all ODA for health was allocated to maternal, newborn and child health in 2007. Family planning received less funding in 2007 than in 2003.
 - ODA is not always targeted to countries with the greatest need. Achieving

MDGs 4 and 5 will require donors to improve their funding and allocation practices.

- National resources: although ODA is important, national resources are a much larger share of maternal, newborn and child health funding. Tracking government and nongovernment spending at the country level is essential so that policy-makers can allocate adequate resources for women's and children's health.

Action now

- All countries should:
 - Identify gaps in coverage and quality of care along the continuum of care for maternal, newborn and child health.
 - Improve the delivery of essential interventions and packages.
 - Identify inequities in coverage—by geographic area, ethnic group, income and the like—and initiate actions to provide universal coverage of essential interventions and packages.
 - Increase resource allocations for reproductive, maternal, newborn and

child health services, ensuring that interventions and programmes are sufficiently funded.

- Other *Countdown* partners should work together with countries to:
 - Advocate for increased funding for reproductive, maternal, newborn and child health through innovative mechanisms and ensure that funding is predictable, consistent and responsive to national needs and plans.
 - Support country efforts to improve data collection and analysis by strengthening health information and vital registration systems as well as by undertaking additional surveys to measure mortality, coverage and funding.
 - Invest in implementation research to identify effective strategies for delivering proven interventions and quantify their impact.
 - Maximize financial and technical support for large-scale implementation of priority strategies and interventions.
 - Encourage the development and use of mechanisms for holding key actors accountable for fulfilling their commitments.





About *Countdown to 2015*



Countdown to 2015: Tracking Progress in Maternal, Newborn and Child Survival

- is a global movement of academics, governments, international agencies, health care professional associations, donors and nongovernmental organizations, with *The Lancet* as a key partner.
- uses country-specific data to stimulate and support country progress towards achieving the health-related MDGs.
- focuses on coverage of effective interventions for maternal, newborn and child health and coverage determinants, including health systems and policies, financial flows and equity.

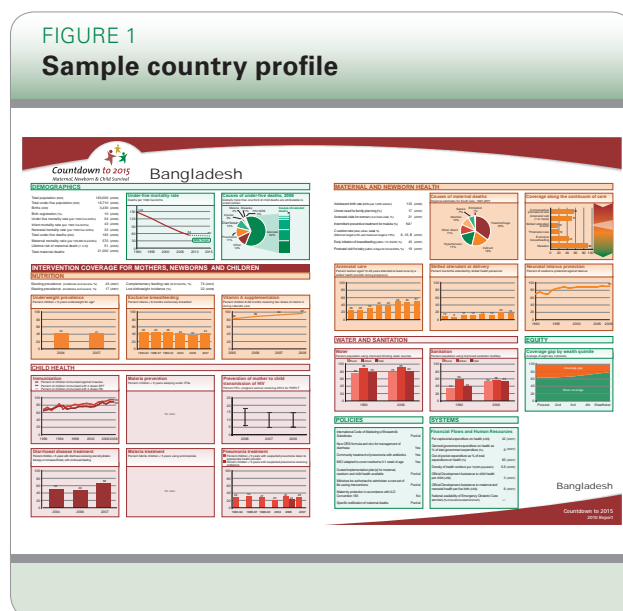
Countdown addresses multiple MDGs:

- MDG 4 to reduce child mortality.
- MDG 5 to improve maternal health.
- MDG 1 to eradicate extreme poverty and hunger, specifically by addressing nutrition with a focus on infant and young child feeding.
- MDG 6 to combat HIV/AIDS, malaria and other diseases.
- MDG 7 to ensure environmental sustainability, through tracking improved access to safe water and improved sanitation.

Countdown tracks progress in the 68 countries where more than 95% of all maternal and child deaths occur (map 1).

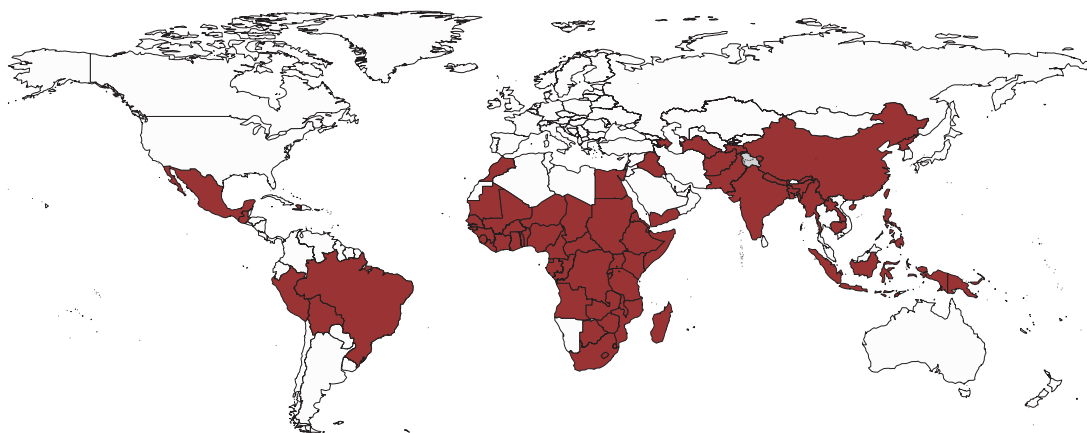
Countdown focuses on countries (figure 1).

FIGURE 1
Sample country profile



MAP 1

The 68 Countdown Priority countries



Source: Authors' compilation based on information supplied in text.

A key element of *Countdown* work is country profiles that bring together information on coverage levels for interventions proven to improve maternal, newborn and child health as

well as relevant demographic, epidemiological, policy, health systems and financing indicators (box 1). The profiles are updated every two to three years with new data and estimates.

BOX 1

Countdown: the best evidence to inform the right decisions

Scope of Countdown work

Countdown focuses on four areas, each addressed by an interdisciplinary technical working group:

- *Coverage* for interventions proven effective in reducing maternal, newborn and child deaths. Coverage is defined as the proportion of the population who can benefit from an intervention who receives it.
- *Health systems and policies*, which provide an important context for coverage gains.
- *Financial flows to maternal, newborn and child health*, initially focused on ODA and now including national financing.
- *Equity* in intervention coverage, focused on the equitable distribution of coverage across socioeconomic quintiles in national populations.

Countdown recognizes the broader set of political, economic, social, technological and environmental determinants of coverage and mortality and incorporates them into analyses where relevant and feasible given available data.

Data sources and methods

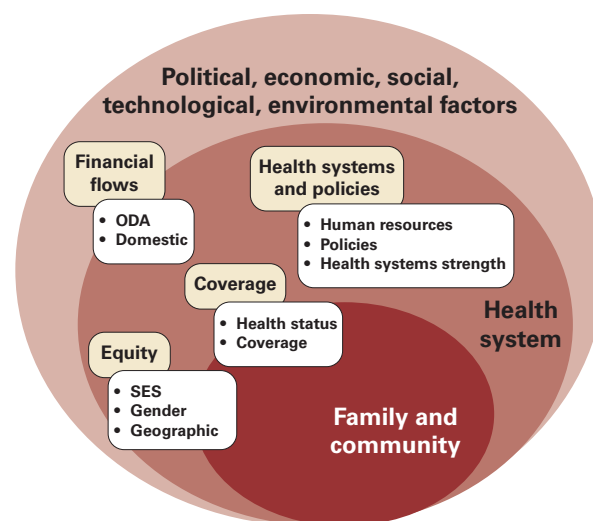
The 2008 *Countdown* report describes how the priority *Countdown* countries were identified, the selection of interventions and approaches tracked through *Countdown*, and the coverage indicators associated with each. A full list of *Countdown* indicators and data sources as well as documentation on the methods used to calculate the equity measures, financing gap analysis and ODA estimates is available at <http://www.countdown2015mnch.org>.

Data quality control

Quality control of the coverage estimates for interventions and approaches effective in reducing maternal, newborn and child mortality is the responsibility of many different groups. *Countdown* supplements these efforts by working closely with the United Nations Children's Fund (UNICEF) and others

responsible for maintaining global databases and conducts additional quality checks to ensure consistency and reliability. Country profiles are shared with ministries of health and UN colleagues prior to publication. Work is under way to address continuing challenges in estimating coverage and associated uncertainty.

Countdown databases within the broader context of maternal, newborn and child survival



New Countdown results expected in 2011

This update reports on data for *Countdown* indicators available as of December 2009. A full *Countdown* report will be released in 2011 and will include:

- Updated estimates for maternal mortality.
- New coverage estimates for many countries drawing on recent national surveys.
- First results from in-depth analyses conducted by all technical working groups.
- Findings from cross-cutting analyses addressing priority questions.
- New ODA estimates for maternal, newborn and child health for 2008, financing for family planning, and domestic spending on maternal, newborn and child health for African and Asian *Countdown* countries.

Progress towards Millennium Development Goals 4 and 5

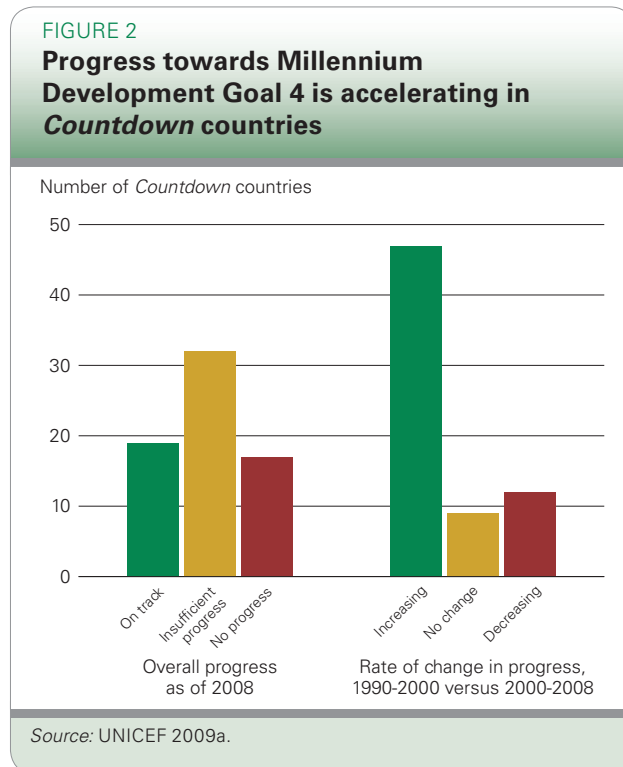


Progress towards MDGs 4 and 5 is inextricably linked: improving maternal health will lead directly to reductions in deaths among newborns and young children. There are also shared challenges in improving health services across the continuum from pre-pregnancy through pregnancy, childbirth, the postnatal period, and childhood. This section focuses on trends in mortality; later sections look more in depth at intervention coverage and the related areas of health systems, financial flows and equity.

Good news! There has been huge progress in reducing deaths among children under age 5 worldwide.¹ And yet the opportunity to save children's lives has never been greater. Of the unacceptable burden of nearly 9 million deaths of children under age 5 that occur a year, at least two-thirds of them could be prevented using proven, affordable interventions.² Table 1 shows country-specific progress towards MDG 4, including the estimated under-five mortality rates for 1990, 2000 and 2008, the average annual rate of reduction for 1990–2008 and its trend for 1990–2000 and 2000–2008, and a summary assessment of progress.

Of the 68 *Countdown* countries, 19 are on track to achieve MDG 4 (figure 2), and 17 of those have reduced mortality by at least half. In 47 *Countdown* countries the rate of change in progress over 2000–2008 increased compared with the 1990s. The annual average rate of reduction rose more than 4 percentage points in Azerbaijan, Botswana, China, Ghana, Lesotho, Rwanda and Swaziland. However, further absolute gains are needed to achieve the goal, except in Azerbaijan and Botswana, two countries that are on track.

Much remains to be done. In 12 countries progress has slowed since 2000; some are on track now but may not be if these trends continue (including Guatemala, Indonesia and



the Philippines). National governments and their development partners must stay committed to child survival to prevent reversals in progress and because further gains are harder to achieve as mortality rates fall.

Mortality is not being reduced uniformly. Just over 40% of child deaths now occur in the first month of life. The growing concentration of child deaths in the newborn period is linked to maternal health and survival (box 2). Hundreds of thousands of women die each year because of complications related to pregnancy and childbirth. For every woman who dies, approximately 20 others suffer injuries, infection and disabilities, resulting in millions of women experiencing adverse pregnancy outcomes.

TABLE 1

Country progress towards Millennium Development Goal 4

Country or territory	Under-five mortality rate (per 1,000)			Average annual rate of reduction (%)	Summary assessment of progress ^a	Average annual rate of reduction (%)		Direction of change
	1990	2000	2008	1990–2008		1990–2000	2000–2008	
Afghanistan	260	257	257	0.1	No progress	0.1	0.0	↓
Angola	260	239	220	0.9	No progress	0.8	1.0	↑
Azerbaijan	98	69	36	5.6	On track	3.5	8.1	↑
Bangladesh	149	91	54	5.6	On track	4.9	6.5	↑
Benin	184	144	121	2.3	Insufficient progress	2.5	2.2	↓
Bolivia	122	86	54	4.5	On track	3.5	5.8	↑
Botswana	50	81	31	2.7	On track	−4.8	12.0	↑
Brazil	56	34	22	5.2	On track	5.0	5.4	↑
Burkina Faso	201	188	169	1.0	Insufficient progress	0.7	1.3	↑
Burundi	189	178	168	0.7	No progress	0.6	0.7	↑
Cambodia	117	106	90	1.5	Insufficient progress	1.0	2.0	↑
Cameroon	149	147	131	0.7	No progress	0.1	1.4	↑
Central African Republic	178	181	173	0.2	No progress	−0.2	0.6	↑
Chad	201	205	209	−0.2	No progress	−0.2	−0.2	—
China	46	36	21	4.4	On track	2.5	6.7	↑
Congo	104	116	127	−1.1	No progress	−1.1	−1.1	—
Congo, Dem. Rep. of the	199	199	199	0.0	No progress	0.0	0.0	—
Côte d'Ivoire	150	138	114	1.5	Insufficient progress	0.8	2.4	↑
Djibouti	123	106	95	1.4	Insufficient progress	1.5	1.4	↓
Egypt	90	47	23	7.6	On track	6.5	8.9	↑
Equatorial Guinea	198	168	148	1.6	Insufficient progress	1.6	1.6	—
Eritrea	150	89	58	5.3	On track	5.2	5.4	↑
Ethiopia	210	148	109	3.6	Insufficient progress	3.5	3.8	↑
Gabon	92	87	77	1.0	Insufficient progress	0.6	1.5	↑
Gambia	153	131	106	2.0	Insufficient progress	1.6	2.6	↑
Ghana	118	111	76	2.4	Insufficient progress	0.6	4.7	↑
Guatemala	77	47	35	4.4	On track	4.9	3.7	↓
Guinea	231	185	146	2.5	Insufficient progress	2.2	3.0	↑
Guinea-Bissau	240	218	195	1.2	Insufficient progress	1.0	1.4	↑
Haiti	151	109	72	4.1	On track	3.3	5.2	↑
India	116	94	69	2.9	Insufficient progress	2.1	3.9	↑
Indonesia	86	56	41	4.1	On track	4.3	3.9	↓
Iraq	53	48	44	1.0	Insufficient progress	1.0	1.1	↑
Kenya	105	128	128	−1.1	No progress	−2.0	0.0	↑
Korea, Dem. Rep.	55	55	55	0.0	No progress	0.0	0.0	—
Lao People's Democratic Republic	157	86	61	5.3	On track	6.0	4.3	↓
Lesotho	101	109	79	1.4	Insufficient progress	−0.8	4.0	↑
Liberia	219	174	145	2.3	Insufficient progress	2.3	2.3	—
Madagascar	167	132	106	2.5	Insufficient progress	2.4	2.7	↑
Malawi	225	162	100	4.5	On track	3.3	6.0	↑
Mali	250	217	194	1.4	Insufficient progress	1.4	1.4	—
Mauritania	129	122	118	0.5	No progress	0.6	0.4	↓
Mexico	45	26	17	5.4	On track	5.5	5.3	↓
Morocco	88	54	36	5.0	On track	4.9	5.1	↑
Mozambique	249	183	130	3.6	Insufficient progress	3.1	4.3	↑
Myanmar	120	107	98	1.1	Insufficient progress	1.1	1.1	—
Nepal	142	85	51	5.7	On track	5.1	6.4	↑
Niger	305	227	167	3.3	Insufficient progress	3.0	3.8	↑
Nigeria	230	207	186	1.2	Insufficient progress	1.1	1.3	↑

(continued)

TABLE 1 (continued)

Country progress towards Millennium Development Goal 4

Country or territory	Under-five mortality rate (per 1,000)			Average annual rate of reduction (%)	Summary assessment of progress ^a	Average annual rate of reduction (%)		
	1990	2000	2008	1990–2008		1990–2000	2000–2008	Direction of change
Pakistan	130	108	89	2.1	Insufficient progress	1.9	2.4	↑
Papua New Guinea	91	77	69	1.5	Insufficient progress	1.7	1.4	↓
Peru	81	41	24	6.8	On track	6.8	6.7	↓
Philippines	61	36	32	3.6	On track	5.3	1.5	↓
Rwanda	174	186	112	2.4	Insufficient progress	−0.7	6.3	↑
Senegal	149	131	108	1.8	Insufficient progress	1.3	2.4	↑
Sierra Leone	278	252	194	2.0	Insufficient progress	1.0	3.3	↑
Somalia	200	200	200	0.0	No progress	0.0	0.0	—
South Africa	56	73	67	−1.0	No progress	−2.7	1.1	↑
Sudan	124	115	109	0.7	No progress	0.8	0.7	↓
Swaziland	84	124	83	0.1	No progress	−3.9	5.0	↑
Tajikistan	117	94	64	3.4	Insufficient progress	2.2	4.8	↑
Tanzania, U. Rep.	157	139	104	2.3	Insufficient progress	1.2	3.6	↑
Togo	150	122	98	2.4	Insufficient progress	2.1	2.7	↑
Turkmenistan	99	71	48	4.0	On track	3.3	4.9	↑
Uganda	186	158	135	1.8	Insufficient progress	1.6	2.0	↑
Yemen	127	98	69	3.4	Insufficient progress	2.6	4.4	↑
Zambia	172	169	148	0.8	No progress	0.2	1.7	↑
Zimbabwe	79	102	96	−1.1	No progress	−2.6	0.8	↑

a. "On track" indicates that the under-five mortality rate for 2008 is less than 40 per 1,000 or that it is 40 or more with an average annual rate of reduction of 4% or higher for 1990–2008; "insufficient progress" indicates that the under-five mortality rate for 2008 is 40 or more with an average annual rate of reduction of 1%–3.9% for 1990–2008; "no progress" indicates that the under-five mortality rate for 2008 is 40 or more with an average annual rate of reduction of less than 1% for 1990–2008.

Source: Mortality rates, Inter-agency Group for Child Mortality Estimation, 2009, www.childmortality.org; average annual rate of reduction and summary of progress, UNICEF 2009a.



The maternal mortality ratio, the number of maternal deaths per 100,000 live births, is the most common measure of the magnitude of maternal mortality and is a progress indicator for MDG target 5.A, which aims at reducing the ratio by three quarters over 1990–2015, implying an average annual rate of reduction of 5.5%.

New global and regional maternal mortality estimates were set to be released after this *Countdown* update went to press. Updated country estimates will be available in fall 2010 after extensive in-country consultation.

The work on regular updating of the estimates reflects the international community's commitment to continuously improve assessment of the maternal mortality burden but also highlights the urgent need to invest in building country health information systems to monitor maternal mortality. The World Health Organization (WHO), UNICEF, the United Nations Population Fund (UNFPA) and the World Bank work closely with the United Nations Population Division, academic experts and countries to regularly update global, regional and country estimates of maternal mortality. There are preliminary indications of global progress, with some countries having achieved significant declines.¹ A recent academic analysis using alternative statistical assumptions found an annual rate of reduction of 1.3% over 1990–2008,² well short of the 5.5% needed to attain the MDG target.

Measuring maternal mortality remains a challenge. Identifying a maternal death requires accurate data on the deaths of women of reproductive age, including cause of death, pregnancy status and the time of death in relation to pregnancy or childbirth. These data are often missing, misclassified or underreported, particularly in low- and middle-income countries that lack fully functioning vital registration systems and where many women deliver at home. Early pregnancy deaths are especially difficult to identify. The weakness of many developing country health information systems

results in the use of statistical modelling to develop maternal mortality estimates, which better indicate the order of magnitude of the problem. These estimates are subject to considerable uncertainty and vary with the assumptions and methods used. Important limitations of the maternal mortality ratio include:

- The maternal mortality ratio reflects only the risk of death once pregnant and misses the cumulative mortality risk associated with the number of pregnancies a woman has during her reproductive years.
- The maternal mortality ratio is difficult to measure, has large uncertainty bounds and must be interpreted cautiously—hence the need for real-time monitoring and surveillance of maternal deaths.
- The maternal mortality ratio focuses narrowly on mortality and may result in a lack of attention to the millions of women who suffer from “near-miss” events and short- and long-term pregnancy-related illnesses.³

Preventing maternal mortality and the millions of pregnancy-related disabilities each year will require concentrated efforts to improve coverage of comprehensive family planning programmes and antenatal, childbirth, emergency obstetric and postnatal care—all indicators tracked in *Countdown*. Improving access to safe abortion care in countries where abortion is legal is also essential for reducing maternal deaths. Coverage of a skilled attendant at birth is a progress indicator for MDG target 5.A and is a sensitive measure of health system strength. Over the past two decades coverage of a skilled attendant at birth has improved in all regions, with considerable gains in North Africa and South-East Asia (see figure 10).⁴

Notes

1. WHO, UNICEF, UNFPA, and World Bank 2007.
2. Hogan and others 2010.
3. Filippi 2006.
4. UNICEF global databases, November 2009.