

Countdown to 2015 and beyond: fulfilling the health agenda for women and children



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The end of 2015 will signal the end of the Millennium Development Goal era, when the world can take stock of what has been achieved. The Countdown to 2015 for Maternal, Newborn, and Child Survival (Countdown) has focused its 2014 report on how much has been achieved in intervention coverage in these groups, and on how best to sustain, focus, and intensify efforts to progress for this and future generations. Our 2014 results show unfinished business in achievement of high, sustained, and equitable coverage of essential interventions. Progress has accelerated in the past decade in most Countdown countries, suggesting that further gains are possible with intensified actions. Some of the greatest coverage gaps are in family planning, interventions addressing newborn mortality, and case management of childhood diseases. Although inequities are pervasive, country successes in reaching of the poorest populations provide lessons for other countries to follow. As we transition to the next set of global goals, we must remember the centrality of data to accountability, and the importance of support of country capacity to collect and use high-quality data on intervention coverage and inequities for decision making. To fulfill the health agenda for women and children both now and beyond 2015 requires continued monitoring of country and global progress; Countdown is committed to playing its part in this effort.

Introduction

At the end of 2015 the period of the Millennium Development Goals (MDGs) will end, and the 189 signatory countries will take stock of what has been achieved. The focus is already shifting to proposals for a new global framework for after 2015, centered on sustainable development. Now is therefore the time to take a hard look at how far women's and children's health has come, and at what more can and must be done. Efforts must not slow in the transition from the Millennium Development Goals to what will follow. The 2014 report¹ from Countdown to 2015 for Maternal, Newborn and Child Survival (Countdown), released on June 30, 2014, has focused on the unfinished business of the MDGs and how best to sustain, focus, and intensify efforts for women and children as we move forward.

The MDGs, fixed in 2000, committed the global community to reduce extreme poverty and achieve a set of targets by 2015, relative to a starting point in 1990. At the heart of the MDGs are MDG4, which calls for a reduction of child mortality by two-thirds, and MDG5, which focuses on improvement of maternal health through a reduction of maternal mortality by three-quarters and universal access to reproductive health. Countdown tracks and stimulates progress toward these targets in the 75 countries that represent more than 95% of maternal and child deaths, and has published country-specific profiles at least every 2 years since 2005. Each profile features data on intervention coverage, equity in coverage, and policy, health systems, and financial factors that can affect whether every woman and child receives interventions that can save their lives (appendix pp 1–2).

We summarise Countdown results for 2014, examine the data supporting evidence-based decisions in women's

and children's health, describe elements of the Countdown process that might inform ongoing efforts to hold the world to account for progress, and list concrete steps that can be taken now to ensure continued progress for women and children.

Key messages

- Achievement of high, sustained, and equitable coverage of life-saving interventions for women and children is insufficient.
- Although most countries will not achieve Millennium Development Goals (MDGs) 4 and 5, progress has accelerated in recent years, suggesting that further gains are possible with continued, intensified actions.
- Some of the most important coverage gaps are in family planning, interventions addressing newborn mortality, and case management of childhood diseases.
- Massive inequalities in intervention coverage and health outcomes, including stunting, must be tackled for progress to continue.
- Progress has occurred in country adoption of evidence-based policies and strategies to improve women's and children's health.
- Accountability cannot exist without data. Countries must continue to be supported to build capacity to collect high-quality data on intervention coverage and inequities, and to use it as a basis for decisions about how best to reach women and children with interventions. Baseline data must be collected now for the post-2015 era.
- Countdown will continue to monitor country-specific coverage and inequalities over the final days of the MDG era and into the future, to ensure that attention and focus are maintained during this transition period.

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See Online for appendix

The 2014 countdown results

Data

The compilation of recent, relevant, quality-controlled data to drive action is a hallmark of Countdown work (panel 1). We summarise selected findings for 2014, with an emphasis on our core focus of intervention coverage and equity. The full results are available at www.countdown2015mnch.org.

Reduction of mortality and undernutrition

Progress in reduction of mortality and undernutrition is accelerating, but not quickly enough. Only a few Countdown countries will reach MDG4 in 2015,⁶ and even fewer will reach MDG5.⁷ However, child mortality in Countdown countries has decreased substantially since 1990 (appendix pp 11–13), paralleling a global drop from 12·6 million under-5 deaths in 1990 to 6·6 million in 2012.⁸ Annual rates of reduction (ARR) in under-5 mortality have increased in Countdown countries

from a median of 1·9% in 1990–99 to a median of 3·8% for 2000–12, and 29 Countdown countries achieved an annual rate of reduction of at least 4·4%—the original MDG target—in the more recent period. However, this progress leaves unfinished business. About 18 000 children are dying every day, mostly in disadvantaged population groups in Countdown countries.⁹ The main causes of post-neonatal child deaths are preventable infectious diseases—pneumonia, diarrhoea, and malaria.¹⁰ Programmes aimed at these diseases need greater prioritisation and sustained commitment. HIV accounted for only 2·9% of under-5 deaths in sub-Saharan Africa in 2012, and less than 1% in the other world regions.⁹

Slower progress has been made in reduction of neonatal mortality, translating into an increasing percentage of child deaths occurring in the first 4 weeks of life. Newborn deaths account for a median of 39% of all under-5 deaths in Countdown countries, with a high of 64% in Brazil and

Panel 1: Countdown data sources and methods

Data sources

Most Countdown coverage, equity, and nutrition data come from nationally representative household surveys, primarily the Demographic and Health Surveys (DHS) and the Multiple Indicator Cluster Surveys (MICS). Countdown uses databases provided by UNICEF, the UN Population Division, Save the Children, and other stakeholder organisations.

Cause of death profiles are taken from WHO databases based on work by the Child Health Epidemiology Reference Group. The child mortality estimates are based on the work of the Inter-agency Group for Child Mortality Estimation and are the official UN estimates for measurement of progress towards Millennium Development Goal 4. The maternal mortality estimates are based on the work of an inter-agency group comprising WHO, UNICEF, the UN Population fund, and the World Bank.

Data for the health systems and policies indicators are taken from surveys administered by WHO and global databases maintained by WHO, other UN organisations, and other groups such as the International Labour Organisation. Countdown financing data are abstracted from datasets maintained by the Organisation for Economic Co-operation and Development Assistance Committee.

Analysis method

The summary measure used for the coverage indicators is the median, which gives each of the 75 countries equal weight, and the range, which shows the extent of variation across the countries. Countdown coverage data are analysed by the Institute for International Programs at Johns Hopkins University in collaboration with the Countdown Coverage Working Group and UNICEF.

Summary estimates of coverage include Countdown countries with available estimates for 2008–12. For tracking coverage

trends, subsets of countries were identified that had at least two datapoints for each indicator, one from 2000 to 2007, and the second from 2008 to 2012. We calculated the difference between the two summary point estimates for each indicator, and the proportion of the gap closed between the earlier estimate and 100% coverage.

Countdown tracks coverage (the proportion of women and children in need of interventions who actually receive them) rather than measures of effective coverage that include estimates of intervention effectiveness, access, use, and service quality. Effective coverage metrics typically require data that are rarely available in Countdown countries, and sometimes rely on modelling procedures that must be unpacked to guide decision making.

Two summary metrics are used. The composite coverage index (CCI) is a weighted average of eight interventions.² The cocoverage index indicates the extent to which individual women and their children are receiving eight preventive interventions. These interventions have been available in most countries for at least a decade.³

The equity results are presented for selected coverage indicators as well as the two summary indices stratified by wealth quintiles.^{2,4} Equity analyses are conducted by the International Center for Equity in Health at the University of Pelotas, Brazil, in collaboration with the Countdown Equity Working Group.

Information on country-specific policies and systems indicators is analysed by WHO with inputs from the Countdown Health Systems & Policies Working Group.

Countdown databases are publicly available free of charge through the Countdown website (<http://countdown2015mnch.org/about-countdown/countdown-data>).⁵

a low of 26% in Niger. Countdown countries in which child mortality has rapidly reduced, such as Brazil, tend to show an increasing proportion of deaths in the newborn period. The three main causes of these deaths are intrapartum events, preterm complications, and sepsis,^{9,10} all of which can be significantly reduced by increased investment in quality of care around the time of birth. Such investments can also reduce the staggering number of stillbirths each year (about 2·6 million), more than 90% of which occur in the Countdown countries.^{11,12}

Progress towards MDG5a has been slower than has progress towards MDG4, and is harder to measure. For both MDG4 and MDG5a, sub-Saharan Africa is the region with the highest mortality and, with a few exceptions, the slowest rates of reduction. The median ARR for the period 2000–13 in the 75 Countdown countries is 3·1%, with a high of 8·6% (Rwanda) and a low of –0·5% (Cote d'Ivoire; appendix). The good news is that 56 countries had declines during 2000–13 that were faster than those achieved in the previous decade, and 11 countries have an ARR of 5·5% or higher—the original MDG 5 target—from 2000 to 2013. However, ARR in four Countdown countries declined by less than 1% in the past decade, and 16 countries—all in sub-Saharan Africa—have very high maternal mortality with an MMR of 500 or more deaths per 100 000 livebirths.¹³ Most maternal deaths occur during the intrapartum and immediate postpartum period, from preventable causes such as haemorrhage, hypertension, and infections.¹⁴ Unsafe abortion also exacts a high toll of avoidable maternal deaths in the Countdown countries (appendix). These deaths can be averted through implementation of programmes and policies that support women's access to affordable and high quality family planning, and antenatal, delivery, and postnatal care, including programmes that improve training, retention, and deployment of the health workforce, and other health system strengthening measures.

Progress in addressing of undernutrition

The importance of ensuring of good nutrition across the continuum of care from adolescence through pregnancy and early childhood is increasingly recognised as a priority for sustainable development.¹⁵ Poor nutritional status is detrimental to a woman's health and a risk factor for intrauterine growth restriction and other poor obstetrical outcomes.^{16,17} Nearly half of all deaths of children younger than 5 years are attributable to undernutrition—about 3 million deaths each year.¹⁵

Stunting is the most sensitive indicator of the quality of a child's life, because it indicates long-term nutritional deprivation, often chronic exposure to infections, and disproportionately affects disadvantaged population groups.^{15,18} On the basis of data from *State of the World's Children 2014 in numbers: every child counts*,¹⁹ Countdown analyses estimated that in 42 of the 62 countries with available data 30% or more children are stunted.

To address high prevalence of stunting necessitates a comprehensive approach, including nutrition-specific interventions for women and children, and multisectoral efforts that combat food insecurity and women's low social status and improve access to safe water and sanitation facilities.^{20,21} Recognition of the crucial role nutrition has in child health and development, long-term health outcomes, and economic productivity has expanded since about 2008 (appendix pp 4–5).

Intervention coverage: the core of Countdown monitoring

Intervention coverage is closely related to maternal, newborn, and child survival. Figure 1 shows that countries with higher levels of intervention coverage (as captured in the composite coverage index [CCI]), a measure of performance in achievement of coverage along the continuum of care, defined in panel 1) tend to have lower levels of child mortality, and vice versa. A strong correlation exists between coverage levels and child mortality (Pearson $r=-0\cdot74$; $P<0\cdot001$), and this association is strong even after adjustment for the strength of the national economy ($r=-0\cdot63$ adjusted for log GDP per person; $P<0\cdot001$). These high correlations support Countdown's focus on tracking of intervention coverage as central to accountability, and contradict suggestions that money can directly save lives.⁶ Both financial wellbeing and mothers' education must function through more proximate interventions that address the causes of death. A similar analysis with a composite indicator of intervention coverage for maternal mortality is challenging because most Countdown countries rely on modelled estimates based on some of the same interventions that are part of the CCI. Thus, any correlations noted would be spurious.

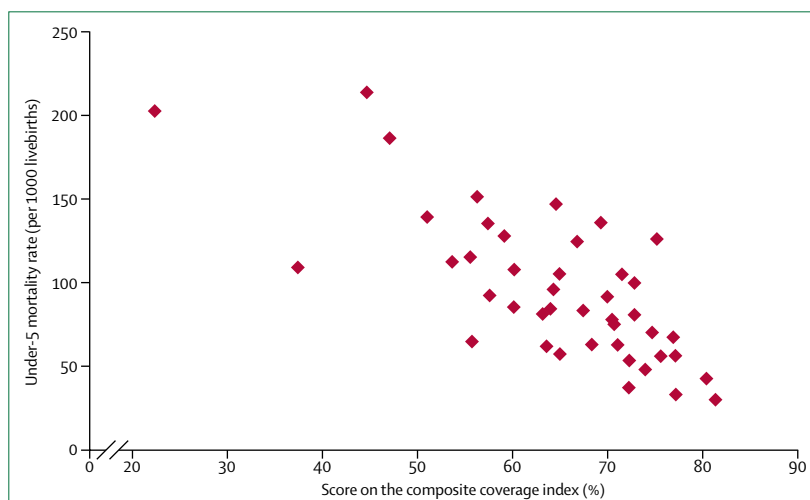


Figure 1: Correlation between CCI and U5MR

Includes 43 countries that have information on all eight indicators required for building the CCI and information on U5MR from the same survey. We used the most recent survey from each country, irrespective of when it was done.

Figure 2 shows median national coverage for 21 interventions using the most recent data since 2008, providing a snapshot of how well the Countdown countries are reaching women and children with a core set of effective interventions that should be available to all. Only Countdown countries with a substantial proportion of the population at risk of *Plasmodium falciparum* transmission are included in the analysis of coverage for the malaria indicators. These interventions are presented along the continuum of care from pre-pregnancy to early childhood, and include water and sanitation as cross-cutting interventions relevant to women's and children's health. Crucial gaps exist in care around the time of birth when the risk of mortality is highest for mother and newborn baby, and with case management of childhood illnesses. Median coverage is at least 75% for antenatal care (at least one visit), vitamin A supplementation (two doses), immunisation indicators, and improved drinking water sources. However, even with these high-functioning interventions, some countries report coverage much less than 50%. Variations in coverage by country also show that at least one country exceeded 75% coverage for every intervention, with the exception of intermittent preventive

treatment of malaria for pregnant women, which might indicate the relative newness of this intervention, and the need for more time to bring the intervention to scale.

These cross-sectional results should be interpreted in light of changes in coverage over time. Table 1 shows the absolute percentage point change in coverage from the first to the second period for each intervention, and what proportion of the gap between the earlier measurement of coverage and 100% coverage was closed by the time of the second measurement. The so-called proportion of gap closed metric is useful because it takes into account that coverage might have already been high during the first period for some indicators (eg, immunisation or at least one antenatal care visit), and any relative progress achieved by the second period would be masked by looking only at absolute percentage point changes.

Table 1 shows three primary coverage patterns. First, some interventions—such as antenatal care (at least one visit), and the three indicators of vaccination coverage—have high and sustained coverage at or greater than 80%, showing continued progress in closing of the remaining gap to universal coverage. A second group of interventions is those for which measurable progress has been made in absolute terms, but for which coverage is

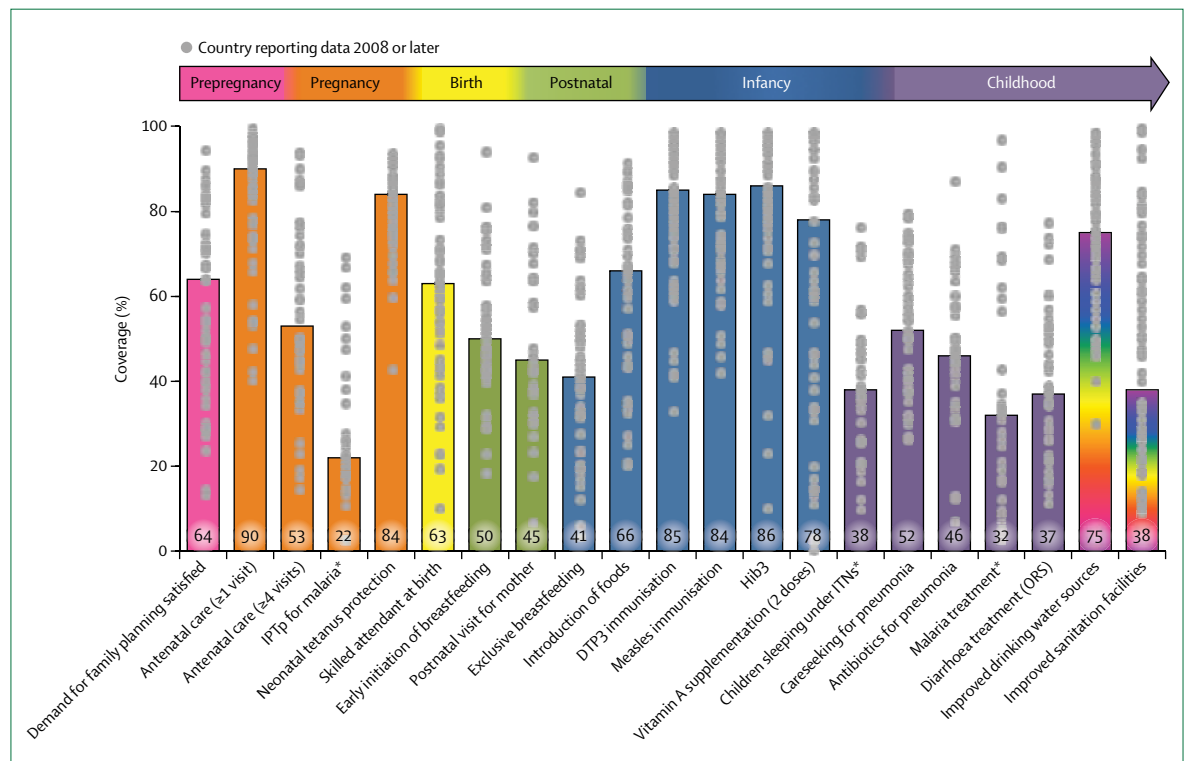


Figure 2: Median national coverage of selected Countdown interventions, most recent survey, 2008 or later (%)

The grey dot indicates the point estimate for each country from the most recent available data source. IPTp=intermittent preventive treatment in pregnancy. ITNs=insecticide-treated nets. ORS=oral rehydration salts. *Analysis is based on countries with 75% or more of the population at risk of *P falciparum* transmission and 50% or more cases of malaria caused by *P falciparum*. Data are for 2012. Source: Immunisation rates, WHO, and UNICEF; post-natal visit for mother, Saving Newborn Lives analysis of Demographic and Health Surveys; improved water and sanitation, WHO and UNICEF Joint Monitoring Programme; all other indicators, UNICEF global databases, April 2014, based on Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and other national surveys. Reproduced from Requejo and colleagues.¹

	Number of countries with data	Median coverage (%)		Change (%)	Proportion of gap closed
		2000–07	2008–12		
Hib3	24	86	91	5	36
Malaria treatment (1st-line)*	19	5	37†	32	34
Antenatal care (at least one visit)	58	85	90	5	33
Children sleeping under ITNs*	33	10	38	28	31
Antibiotic treatment for pneumonia	21	26	47	21	28
Improved drinking water sources	71	66	75	9	26
Measles immunisation	74	79	84	5	24
Skilled attendant at birth	60	54	63	9	20
IPTp*	23	7	25‡	18	19
Demand for family planning satisfied	39	56	64§	8	18
DTP3 immunisation	74	82	85	3	17
Exclusive breastfeeding	47	34	41	7	11
Careseeking for pneumonia	50	48	52	4	8
Oral rehydration salts treatment (ORT)	52	29	35	6	8
ORT with continued feeding	40	42	46	4	7
Improved sanitation facilities	71	36	40	4	6

If more than one survey was conducted in a period, the most recent was used. This table includes only indicators for which trend data are available in the data sets shared by UNICEF to date. ITN=insecticide-treated bednet. IPTp=intermittent preventive treatment of malaria during pregnancy. *Reported only for Countdown countries with endemic malaria. †Includes DHS 2013 data for Gambia and Liberia. ‡Includes DHS 2013 data for Gambia, Mali, and Senegal. Analysis is based on countries with 75% or more of the population at risk of *P falciparum*. §Includes DHS 2013 data for Pakistan and 2013 PMA Family Planning Survey data for Ghana. Source: UNICEF global databases, April, 2014, based on Demographic and Health Surveys, and other national surveys.

Table: Changes in national coverage of Countdown interventions from 2000–07 to 2008–12 (%), using most recent data in each period, ordered by % of the coverage gap (to 100%) closed between the two periods

low and a large gap exists between present coverage and achievement of 100% coverage. Interventions in this category include intermittent preventive treatment of malaria for pregnant women, children sleeping under insecticide-treated nets, and correct treatment of malaria, each of which showed absolute increases of about 20% during the two periods. These examples, and analyses by Countdown based on data from *State of the World's Children 2014 in numbers: every child counts*¹⁹ that show the rapid progress achieved in prevention of mother-to-child transmission of HIV, show what can be accomplished with focused advocacy, sufficient resources, and sustained effort.²² The third group of interventions includes those for which coverage is inadequate and has not increased significantly since 2000, such as satisfied demand for family planning, presence of a skilled attendant at birth, exclusive breastfeeding to 6 months, and appropriate care-seeking and treatment for diarrhoea and pneumonia, the two greatest infectious causes of death among children younger than 5 years. Panel 2 and figure 3 compare progress for one intervention from the rapid acceleration group (insecticide-treated nets) with one from the stagnant group (oral rehydration salts) to show the difference.

Understanding of intervention coverage is incomplete without attention to other features of health systems, including the health workforce, the quality with which services are delivered, their acceptability to the population, and efforts to increase access and generate demand leading to greater service use. Countdown works

Panel 2: With adequate focus and financing, coverage can and should accelerate quickly for many proven interventions

A comparison of the annual percentage point change in coverage of insecticide treated nets (ITNs) for the prevention of malaria with coverage of oral rehydration salt solution (ORS) for the prevention of diarrhoea-related dehydration for Countdown countries with two data points since 2000 is shown in figure 3. These two interventions, both targeted at the most common killers of children, show divergent coverage trajectories with substantial gains for ITNs versus small gains and even some reversals with ORS.

Recent gains in ITN coverage in many malaria endemic countries were achieved through a combination of political commitment, public-private partnerships, strong advocacy, and substantial financial investment to support the integration of ITN delivery with maternal and child health programmes such as immunisation.²²

Lessons from ITN success should be applied to efforts to scale up ORS and other preventive and treatment measures to combat childhood diarrhoea, and other common killers of women and children. One step in this direction was the launch of the Global Action Plan for Pneumonia and Diarrhoea in 2013, with targets set to end preventable child deaths from these two diseases by 2025.²³ The plan calls for coordination and integration of efforts to address the underlying environmental determinants of pneumonia and diarrhoea and to increase access to treatment.²⁴

closely with those doing research in these areas, and monitors their effects on programme effectiveness.

Assessment of country efforts to increase service access for women and children requires an understanding of context—ie, the importance of population dynamics and conflict (discussed in the appendix pp 6–8). Other key

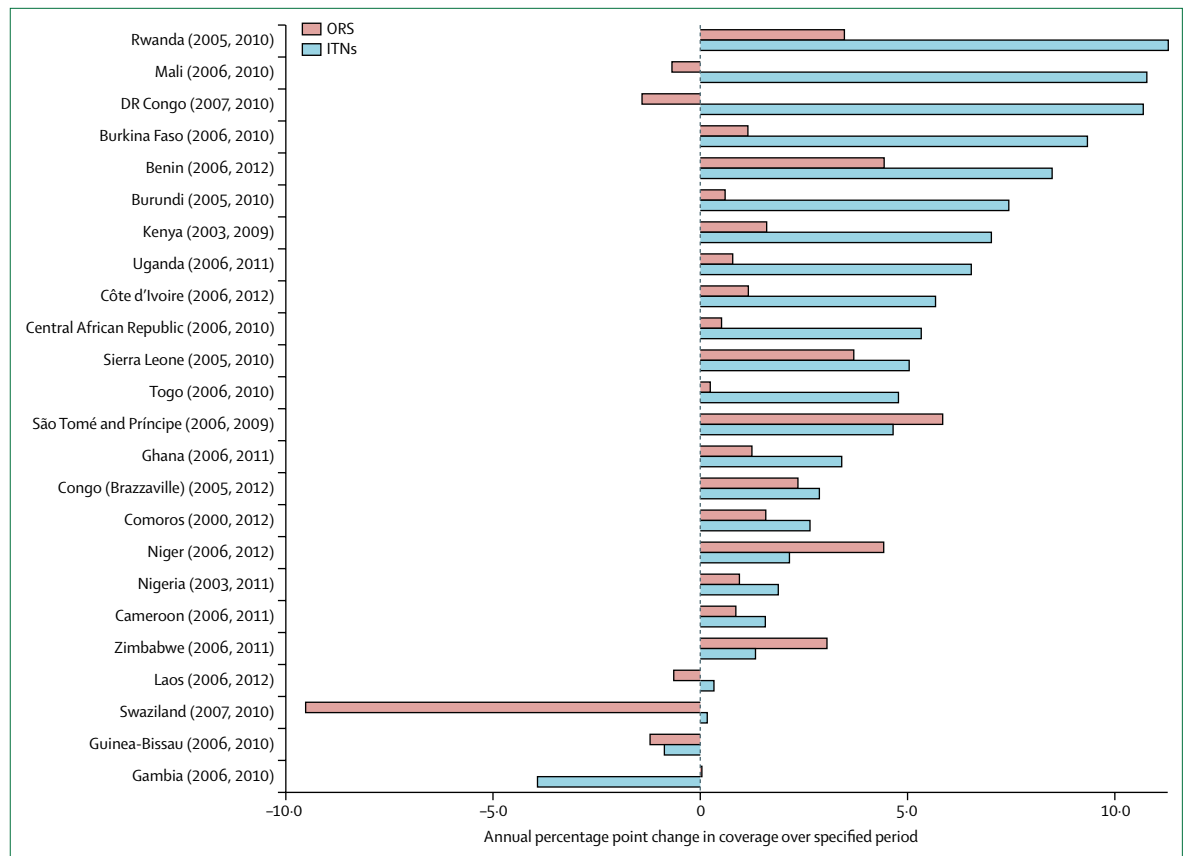


Figure 3: Rapid gains for insecticide-treated nets

Change in coverage for children sleeping under an impregnated bed net and oral rehydration salts (ORS) for diarrhoea during about 5 years, for all Countdown countries with sufficient data. Source: UNICEF Global Databases, April 2014, based on Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and other national surveys.

contextual variables affecting coverage patterns and health outcomes include women's social status, education levels, and access to health services, natural disasters, economic development, and other environmental factors such as pathogen burden (eg, HIV and TB prevalence, malaria endemicity, and other parasite loads).

Equity: no women and children left behind

Focusing on coverage at the national level alone can mask large differences in access to services between different population groups within a country. A large part of the unfinished business in Reproductive, Maternal, Newborn, and Child Health (RMNCH) is addressing of pervasive inequities, to ensure that all women and children receive the services they need, regardless of wealth, gender, ethnic group, or geography.

Figure 4 shows achievement of coverage of eight preventive and curative interventions along the continuum of care, using the CCI, of Countdown countries, with available data.

The message is clear. In almost every country, the CCI score among the richest is greater than 60% and often more than 80%, and in most countries this far exceeds

coverage among the poor. If such high levels of coverage can be attained among the wealthy, achievement of high levels should be possible across the whole population. Trends in the CCI by wealth quintile in four countries are described in the appendix p 9.

In a second set of equity analyses, we used the CCI to assess the extent of inequity in the proportions of individual mothers and their children who receive eight well established, evidence-based interventions that have been available in most if not all countries, even the poorest, for at least a decade (panel 1). Countdown has summarised the results by focusing on those mothers and children in the poorest 20% of the population who received none, one, or two of the eight interventions (appendix p 17). It is striking that in countries such as Somalia, Chad, Yemen, Nigeria, Afghanistan, and Ethiopia, more than half of all mothers and children in the poorest quintile have received two or fewer of these evidence-based interventions.

Policy and health systems supports

Health systems characteristics and policies can set the stage for reaching all women and children with the interventions they need. Country progress in family

planning shows how these factors can be determinants of coverage and ultimately fertility and mortality outcomes (appendix p 10).

Countdown provides a snapshot of the number of priority countries with available data that have adopted ten key tracer policies that support delivery of proven interventions across the RMNCH continuum of care (appendix p 18). These tracer policies include those that ensure access to family planning, provide protection for pregnant women from harmful environmental and labour conditions, authorise midwives to do life-saving tasks, foster women's ability to breastfeed immediately after birth and up to 2 years, boost the delivery of key newborn interventions, and stimulate increased uptake of treatment interventions for the main causes of death among children. Countdown also tracks a policy indicator on the legal status of abortion—the results are available in the appendix p 16.

Adoption rates are high for some policies such as low osmolarity oral rehydration salts and zinc for management of diarrhoea, postnatal home visits in the first week of life, and specific notification of maternal deaths. Crucial gaps remain, however, and fewer than half of Countdown countries reporting have adopted policies in the areas of access to contraception for adolescents, maternity protection in accordance with Convention 183,²⁵ and regulation of the marketing of breastmilk substitutes. These tracer policies are of relevance to almost all Countdown countries, but no countries have endorsed all 10 tracer indicators, and 22 have adopted five or fewer (appendix p 19).

To understand country progress in adoption of key policy measures necessitates assessment of changes in the number of countries that have endorsed policies. Countdown analyses show increases in the number of countries that have adopted key policies between 2012 and 2014 for five of the six policy indicators for which trend data are available (appendix p 20). The number of Countdown countries that have adopted maternal death notification and postnatal home visits in the first week of life, for example, more than doubled between the 2 reporting years. These positive changes indicate important improvements in government prioritisation of women's and children's health in recent years.²⁶ The stagnation in the number of countries that have adopted policies related to maternity protection is a warning to countries to focus more attention on this issue.

Effective and efficient delivery of services to all women and children is enabled by a health-care system with an adequate and well trained health workforce, and functioning referral and supply chain mechanisms. Many Countdown countries face severe health workforce shortages, negatively affecting their ability to provide high-quality care. Only seven of the 56 Countdown countries with available data (Botswana, Egypt, Gabon, India, Philippines, Solomon Islands, and Vietnam) meet or exceed the threshold of 23 skilled health professionals

(doctors, nurses, and midwives) per 10 000 population needed to achieve high coverage of essential interventions.²⁷ Countries are introducing various strategies to ameliorate their health workforce crises, such as maximising the potential of task delegation, and sharing across health-care cadres.

Financial flows to RMNCH are also major drivers of progress in increasing of coverage. New Countdown financing results will be made available by September, 2014. The most salient findings of the 2014 Countdown analyses show four major areas in which the data show progress has been slowest and in which efforts need to be continued through 2015 and beyond. These gap areas are family planning, slow progress in scaling up of interventions to address neonatal mortality, unacceptably low levels of coverage for case management of childhood diseases, and staggering rates of stunting. The gaps in these areas are particularly large in sub-Saharan Africa.

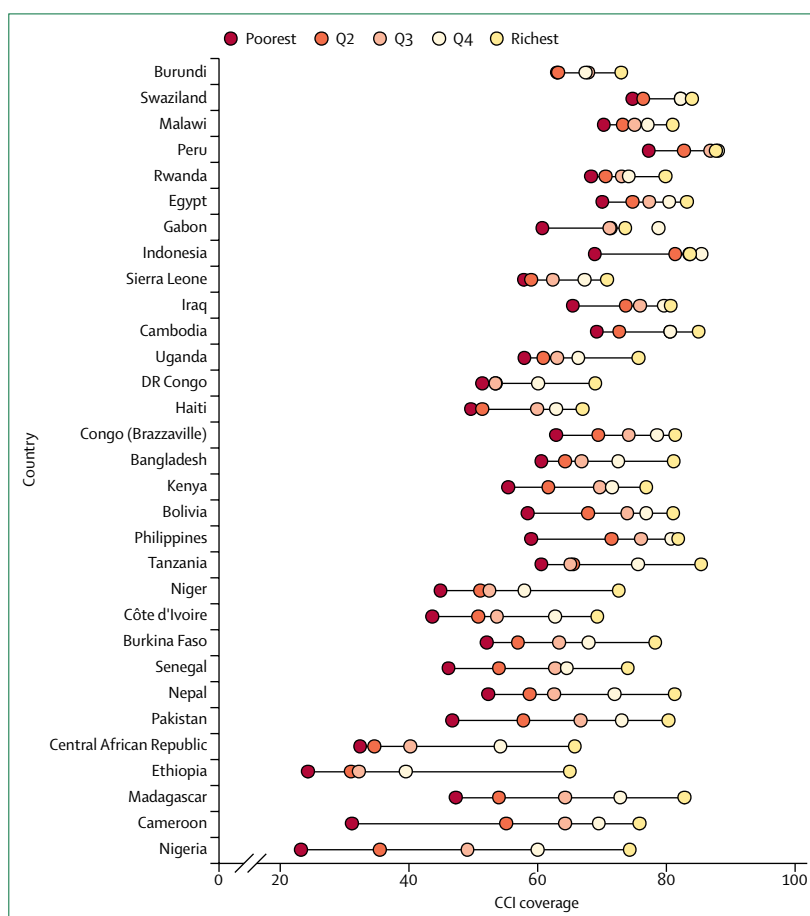


Figure 4: Wealth inequalities in composite coverage index (CCI)

CCI according to wealth quintiles in 31 Countdown countries, ranked by the degree of absolute inequality. The horizontal bars link the poorest and wealthiest 20% of women and children. Longer bars represent greater absolute inequalities. Includes countries that had information on all indicators required for the CCI and at least 25 children in the denominator for each of these eight indicators, in every quintile. Only surveys from 2008 or later are included. Each country's score on the CCI is shown in a series of dots, and countries are ranked from least (top) to greatest (bottom) inequity in absolute terms, indicated by length of the bar between the point estimates for the poorest and richest quintiles. Source: Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

A cross-cutting theme throughout these four areas is the presence of massive inequalities in intervention coverage and health outcomes. Unless these inequities are tackled, progress is likely to be curtailed. The good news is that some countries have managed to increase coverage by adopting evidence-based policies and strategies to close the equity gap. The experience of these countries can be an example to the rest of the world.

The state of the data

Accountability cannot exist without data. Countdown therefore puts a special focus on availability, quality, and use of data. Working closely with the independent Expert Review Group of the Commission,²⁸ Countdown advocates for efforts to ensure all countries have adequate data to make informed decisions about programme priorities for women and children, and to monitor the implementation of those programmes. These data include, but are not limited to, high-quality household surveys. Continued efforts are needed to strengthen civil registration and vital statistics, health management information systems, and institutional capacity at country level to conduct independent assessments of RMNCH programmes. Many births and deaths, including neonatal deaths and stillbirths, are never recorded in the Countdown countries—a situation that must be corrected to improve country capacity to plan for services and to monitor progress.

Information on the source and period for the most recent estimate of intervention coverage in Countdown

countries is available in the appendices of the Countdown 2014 report.¹ 28 (37%) of the 75 countries did a nationally-representative survey in 2011 or 2012, providing high quality, recent data to support assessments of progress toward the MDGs. Another 29 countries (39%) did such a survey between 2008 and 2010 (appendix p 21). These surveys are a major achievement, probably linked to the emphasis on MDG global monitoring. Before 2000, few of the 75 countries had nationally representative survey data on MNCH coverage available.

Accurate and consistent data are crucial for governments and their partners to effectively manage health systems, allocate resources according to need, and to make commitments where the effect will probably be greatest. These data must be fit for purpose, reliable, timely, and able to be disaggregated (panel 3).

The Demographic and Health Surveys and Multiple Indicator Cluster Surveys are the primary source of coverage data for most low-income and middle-income countries, and have worked hard to coordinate their protocols and target their support to the 75 Countdown countries.³³ An important development is that a small but growing number of countries are fielding their own surveys—often using adaptations of the standard protocols—and this increase in national capacity must be supported and expanded, with indicator definitions mirroring international consensus to enable comparisons across countries and over time.

Success should be measured not only through the availability of high-quality, timely data, but also by the extent to which the process is implemented from start to finish, including special analyses to respond to questions from policymakers, by country-based research institutions.

Well designed and well implemented household surveys should be a central pillar of Government systems for monitoring and assessment of programmes, but these alone are not enough. Measures of coverage for interventions needed by subsets of women and children—including women with obstetric complications and newborn babies or children who are ill—are also likely to benefit from efforts to link household surveys to assessments of service providers and estimates of service use, although routine health information systems have the important restriction of showing only those in contact with the health system. Efforts are underway to meet these challenges, and to ensure that standard, fit-for-purpose indicators are defined, subjected to validation assessments, and measured with adequate technical and financial support and institutional capacity-building at country level. Good examples of inter-disciplinary groups that engage independent technical experts to address these issues include the Malaria Monitoring and Evaluation Reference Group hosted by WHO, the Newborn Indicators Technical Working Group hosted by Save the Children, and the various inter-agency working groups working on measurement issues related to women and children hosted by UN agencies.

Panel 3: Criteria of quality data for accountability

Fit for purpose—ie, designed to measure a set of standardised indicators that respond to accountability requirements. As new, effective interventions and consensus indicators are identified, these need to be incorporated into the core questionnaires for the surveys used by countries. The process through which indicators for postnatal care were defined and tested provides a good example.²⁹ Similar efforts are now needed to define standard coverage measures for nutritional interventions and for other newborn-specific interventions—areas that have long been neglected.

Reliable—at least, and ideally also valid, so that they can be used across time and countries to assess progress. An important research agenda exists on improvement of coverage measurement for RMNCH, which has already shown that at least one of the core indicators recommended by the Commission for Information and Accountability for Women's and Children's Health (Commission)—antibiotic treatment for childhood pneumonia—cannot be measured accurately by household surveys.^{30,31} Countdown has therefore added an indicator on careseeking for childhood pneumonia to its reporting on Commission indicators. This work on improvement of coverage measurement is continuing, and is closely coordinated with Countdown. A particular focus is on unpacking of service contact indicators such as antenatal care visits and skilled attendant at delivery, to establish how best to generate valid measures of coverage for individual interventions.³²

Timely—provision of information on coverage that shows recent progress and can be used in the short term to improve the functioning of RMNCH programmes.

Able to be disaggregated—to assess inequities and establish which women and children are not being reached, as a basis for action.²

Those who set global goals must be mindful of the technical demands of coverage measurement when defining indicators that will be used to track progress and assess accountability.³⁴ Preliminary versions of the post-2015 Sustainable Development Goals documentation included more than 20 targets for the health goal alone (<http://unsdn.org/resources/publications/indicators>). Setting of a target implies measurement, and over the years Countdown has repeatedly pointed to the unfair demand that countries report on data for which no measurement strategy is in place or supported. Countdown assessed the availability of survey data from 2011 to 2012 in Countdown countries for nine coverage indicators across the RMNCH continuum of care prioritised by the Commission (appendix pp 21–22). Only eight of the 75 Countdown countries have data for all nine of these indicators, and 37 have data for only one indicator. The paltry number of countries able to report recent data on the full set of recommended coverage indicators is a distressing testament to data gaps in the countries where the burden of preventable maternal, newborn, and child deaths is highest. Responsibility for filling of those gaps, and for definition of indicators on the basis of what it is feasible to measure well, is shared by countries and the global RMNCH community.

Gaps in data on the policy and health systems determinants of coverage also need to be addressed. Countdown reports have drawn attention to some of these gaps, and helped stimulate an effort led by WHO to work at country level to obtain standardised reports on selected indicators in each area. Intensive efforts are also underway to develop guidance on policies and health systems factors that affect access to essential RMNCH interventions.³⁵

Crucial gaps exist in resource tracking. In 2014, for the first time, Countdown country profiles include the Commission-recommended resource indicator on RMNCH expenditures by source of funding, intended to track both domestic and external financial commitments to achievement of the goals of the Global Strategy on Women's and Children's Health. More than 2 years have passed since the 2011 launch of the Commission action agenda, and progress has been slow. According to WHO, only four of the 75 Countdown countries can report completely on the recommended financing indicator for recent years, and two countries can report partially. However, to note that 18 countries report that development of these indicators is in process, and that 25 countries report being in the planning phase, is encouraging (Van de Maele N, Health Resource Tracking, WHO, personal communication).

The Countdown process: what we have learned

As the original time horizon of Countdown approaches, we look both back and forward to draw lessons that might inform the future landscape for women's and children's health. Many of the same challenges exist;

some, including broadening of the goals to encompass a more holistic agenda and the explosion of methods and initiatives for monitoring, will be new.

Countdown was conceived in a 2003 meeting at the Rockefeller Foundation's Bellagio Center, resulting in the publication of a series on child survival in *The Lancet* in 2003.³⁶ Countdown is fundamentally about accountability. The call was specific to child survival, but was later extended to include the full continuum of reproductive, maternal, newborn, and child health.

Countdown has grown in different dimensions since the first report in 2005. Additionally to the shift from child survival to a broader RMNCH agenda, the number of countries expanded from 60 to 75, and the number of interventions being monitored from 35 to 73. 11 institutions had their logos in the 2005 report, increased to 43 by 2013. Countdown now produces reports annually, with the full report (with two-page country profiles) in even years and a shorter version (with one-page country profiles, focused on the 11 Commission indicators) in odd years. Countdown has become a key resource for the global health community.

What are the strengths of Countdown that merit special consideration as the accountability and oversight structures are framed for the post-2015 period? First is Countdown's reliance on recent, replicable, relevant data on coverage, equity, and their determinants at country level as the driving force, providing an unfiltered lens on progress and results. Second is the essential focus on disaggregation of data to show inequities. Third, Countdown has maintained its commitment to bringing scientists, policymakers, programme leaders, and advocates from both country and international institutions together to review and act on these data. Finally, Countdown continues to search for more user-friendly ways to present country-specific data to promote the translation of scientific findings into actions that will prolong and improve the lives of women and children.

Conversely, these strengths have produced some of Countdown's biggest challenges. One challenge has been to maintain the plurality of Countdown and its supra-institutional governance and remain true to the evidence. Achievement of evidence-based consensus across 43 institutions has transaction costs, particularly around issues related to selection of the subset of proven interventions to be tracked and upholding of an appropriate balance across the RMNCH continuum of care. A related challenge is to maintain flexibility so that Countdown is able to change in response to new evidence and country needs, but adhere to its core principles and processes of work. Another major challenge has been to preserve the focus of Countdown. As Countdown increased in visibility and influence, pressure has been continuous to expand the areas of concern. For example, should Countdown also be reporting on child overweight or obesity? How much emphasis should be given to adolescent health, child development, maternal morbidity,

or stillbirths as elements of the continuum of care? How much collaboration is needed with other MDG-specific and topic-specific monitoring interventions so that each retains its added value but all are well coordinated? Should we retain our main focus on intervention coverage, or should we move more into social and environmental determinants of health, or put a greater focus on health effects beyond mortality and nutrition? These debates are ongoing, and are important to ensure Countdown continues to be relevant, is responsive to the evidence, and is integrated into other accountability processes, while it maintains a manageable, well defined scope of work so that our messages are clear and actionable.

Future work includes the protection of the strengths of the Countdown process while these challenges are addressed. We believe no single optimum structural arrangement to protect the scientific integrity, programme relevance, and independence of Countdown exists, and that instead it represents a process of dedication, commitment, compromise, and trust. One absolute necessity is to generate and sustain interest and commitment among young epidemiologists, programme assessors, health economists, communications specialists, and programme leaders, at a global level but particularly those living and working in Countdown countries.

Countdown speaks: priorities for the next 500 days and beyond

What do the 2014 findings mean for women and children, both immediately for the period until the end of the MDG era, and for the process of definition of the post-2015 framework? What actions must be taken?

Looking to after 2015, the Countdown experience and findings point to four absolute necessities related to accountability. First, now is the time to build a foundation of baseline data that can be used to track progress—a crucial omission in the MDGs. Second, we must work to define an accountability mechanism that will serve women and children going forward, and we have tried to contribute to that conversation here. Third, we must back up our accountability rhetoric with real resources that can be used at country level to generate the data countries need to participate meaningfully in the process. Too many Countdown countries still cannot report annually on key indicators, despite more than a decade of monitoring of MDGs and more recent efforts around the Commission on Information and Accountability initiative. To address this means to increase support for and strengthen country institutional capacity to do high-quality household surveys at regular intervals of no more than 3 years, and work to strengthen vital statistics and assessments of service provision. Fourth, these data systems must be designed intentionally to permit disaggregation and examination of equity trends, to identify the women and children who are being missed, and to support effective programming to reach them.

An even more important mandate is to use the next 18 months to sustain and move forward in achievement of high and equitable coverage with proven interventions that can save women's and children's lives, and to strengthen country data collection systems so that they can respond to the future accountability agenda. Opportunities now to save lives must not be missed in the process of final assessments related to the MDGs and in the fight for attention in the next set of goals. Experience from the MDGs shown in our results indicated that it took a long time for international agencies and country leaders to translate their global commitments into concrete action, and for countries to accelerate coverage gains and mortality reduction. Action must not be this slow during the next 2–3 years. The essential foundation and processes for achievement of the next set of goals begins today, with reinvigorated efforts to address the unfinished business of maternal, newborn, and child survival.

We, as Countdown, challenge ourselves and the global community for RMNCH to make the remaining MDG days and the years beyond 2015 count for women and children. Acceleration must be continued, and even increase, in coverage for life-saving interventions. Improvements must be made in the equitable delivery of these interventions, providing essential services for all. Progress is to ensure that the requisite policy, health system, and financial supports for these services are in place. Additionally, in this transition period measureable progress must be made in improvement of nutrition, and in universal availability of family planning. These targets do not need to wait for validation through the language of the sustainable development goals—they are a necessary part of any global agenda, and delays are unacceptable. Countdown will continue to track progress toward these immutable targets at country level, and will hold fast to the principle of accountability by all for the health and development of women and children.

Contributors

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Declaration of interests

We declare no competing interests.

References

- 1 Requejo J, Bryce J, Victora C, and the Countdown to 2015 writing team. Countdown to 2015 and beyond: fulfilling the health agenda for women and children. 2014. UNICEF and WHO. pp 1–229.
- 2 Barros AJD, Victora CG. Measuring coverage in MNCH: determining and interpreting inequalities in coverage of maternal, newborn, and child health interventions. *PLoS Med* 2013; 10: e1001390.

- 3 Victora CG, Fenn B, Bryce J, Kirkwood BR. Co-coverage of preventive interventions and implications for child-survival strategies: evidence from national surveys. *Lancet* 2005; **366**: 1460–66.
- 4 Filmer D, Pritchett LH. Estimating wealth effects without expenditure data-or tears: an application to educational enrollments in states of India. *Demography*. 2001; **38**: 115–32.
- 5 Requejo J, Victora C, Bryce J, on behalf of the scientific review group of Countdown to 2015. Data Resource Profile: Countdown to 2015: Maternal, newborn and child survival. *Int J Epidemiol* 2014; **43**: 586–96.
- 6 Wang H, Liddell CA, Coates MM, et al. Global, regional, and national levels of neonatal, infant, and under-5 mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2014; published online May 2. [http://dx.doi.org/10.1016/S0140-6736\(14\)60497-9](http://dx.doi.org/10.1016/S0140-6736(14)60497-9).
- 7 Kassebaum NJ, Bertozzi-Villa A, Coggeshall MS et al. Global, regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2014; published online May 2. [http://dx.doi.org/10.1016/S0140-6736\(14\)60696-6](http://dx.doi.org/10.1016/S0140-6736(14)60696-6).
- 8 Inter-agency Group for Child Mortality Estimation (UN IGME). Levels and trends in child mortality report 2013. New York: UNICEF, 2013.
- 9 UNICEF Division of Policy and Strategy. Committing to child survival: a promise renewed. Progress report 2013. New York: UNICEF, 2013.
- 10 World Health Organization. World Statistics report 2014. http://www.who.int/gho/publications/world_health_statistics/2014/en (accessed June 18, 2014).
- 11 Lawn JE, Blencowe H, Pattinson R, et al, for the Lancet Stillbirths Series steering committee. Stillbirths: Where? When? Why? How to make the data count? *Lancet* 2011; **377**: 1448–63.
- 12 Requejo JH, Bryce J, Victora C, and the Countdown writing team. Countdown 2012 report: building a future for women and children. UNICEF and WHO, 2012.
- 13 World Health Organization, UNICEF, UNFPA, The World Bank and the United Nations Population Division. Trends in maternal mortality estimates 1990–2013. Geneva: WHO, 2014. <http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2013> (accessed May 15, 2014).
- 14 Say L, Chou D, Gemmill A, et al. Global causes of maternal death: a WHO systematic analysis. *Lancet Glob Health* 2014; **2**: e323e333.
- 15 Black R, Allen LH, Bhutta ZA, et al. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet* 2008; **371**: 243–60.
- 16 Black R, Victora C, Walker S, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013; **382**: 427–51.
- 17 Bhutta Z, Das J, Rizvi A, et al. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet* 2013; **382**: 452–77.
- 18 UNICEF. Improving child nutrition: the achievable imperative for global progress. New York: UNICEF, 2013.
- 19 United Nation's Children's Fund. State of the world's children 2014 in numbers: every child counts. UNICEF, New York: 2014.
- 20 Gillespie S, Haddad L, Mannar V et al. The politics of reducing malnutrition: building commitment and accelerating progress. *Lancet* 2013; **382**: 552–69.
- 21 Ruel M, Alderman H, and the Maternal and Child Nutrition Study Group. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *Lancet* 2013; **382**: 536–51.
- 22 Walker N, Yenokyan G, Friberg IK, Bryce J. Patterns in coverage of maternal, newborn, and child health interventions: projections of neonatal and under-5 mortality to 2035. *Lancet* 2013; **382**: 1029–38.
- 23 WHO/UNICEF. Ending preventable child deaths from pneumonia and diarrhea by 2025: the integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD). 2013. WHO/UNICEF.
- 24 Bhutta ZA, Das JK, Walker N, et al, for The Lancet Diarrhoea and Pneumonia Interventions Study Group. Interventions to address deaths from childhood pneumonia and diarrhea equitably: what works and at what cost? *Lancet* 2013; **381**: 1417–29.
- 25 C183—Maternity Protection Convention, 2000 (No. 183). Convention concerning the revision of the Maternity Protection Convention (Revised), 1952 (Entry into force: 07 Feb 2002). Adoption: Geneva, 88th ILC session (15 Jun 2000).
- 26 Darmstadt G, Kinney MV, Chopra M, et al, for the Lancet Every Newborn Study Group. Who has been caring for the baby? *Lancet* 2014; published online May 20, 2014. [http://dx.doi.org/10.1016/S0140-6736\(14\)60458-X](http://dx.doi.org/10.1016/S0140-6736(14)60458-X).
- 27 Global Health Workforce Alliance and World Health Organization. A universal truth: no health without a workforce. Third Global Forum on Human Resources for Health Report. Geneva: WHO, 2013.
- 28 Independent Expert Review Group, Commission on Information and Accountability for Women's and Children's Health. Every woman, every child: strengthening equity and dignity. The Second Report of the independent Expert Review Group (iERG) on Information and Accountability for Women's and Children's Health. Geneva: World Health Organization, 2013.
- 29 Moran A, Kerber K, Sitrin D, et al. Measuring coverage in MNCH: Indicators for global tracking of newborn care. *PLoS Med* 2013; **10**: e1001415.
- 30 Campbell H, el Arifeen S, Hazir T, et al. Measuring coverage in MNCH: challenges in monitoring the proportion of young children with pneumonia who receive antibiotic treatment. *PLoS Med* 2013; **10**: e1001421.
- 31 Hazir T, Begum K, el Arifeen S, et al. Measuring coverage in MNCH: a prospective validation study in Pakistan and Bangladesh on measuring correct treatment of childhood pneumonia. *PLoS Med* 2013; **10**: e1001422.
- 32 Bryce J, Arnold F, Blanc A, et al, for the CHERG working group on improving coverage measurement. Measuring coverage in MNCH: new findings, new strategies, and recommendations for action. *PLoS Med* 2013; published online May 7. DOI:10.1371/journal.pmed.1001423.
- 33 Hancioglu A, and F Arnold. Measuring coverage in MNCH: tracking progress in health for women and children using DHS and MICS household surveys. *PLoS Med*, 2013; **10**: e1001391.
- 34 Requejo JH, Newby H, Bryce J. Measuring coverage in MNCH: Challenges and opportunities in the selection of coverage indicators for global monitoring. *PLoS Med* 2013; **10**: e1001416.
- 35 Partnership for Maternal, Newborn & Child Health and WHO. A multisectoral policy compendium for RMNCH. Geneva: Partnership for Maternal, Newborn & Child Health, 2014.
- 36 The Bellagio Study Group on Child Survival. Knowledge into action for child survival. *Lancet* 2003; **362**: 323–27.