

Every Newborn 5



From evidence to action to deliver a healthy start for the next generation

Elizabeth Mason, Lori McDougall, Joy E Lawn, Anuradha Gupta, Mariam Claeson, Yogan Pillay, Carole Presern, Martina Baye Lukong, Gillian Mann, Marijke Wijnroks, Kishwar Azad, Katherine Taylor, Allison Beattie, Zulfiqar A Bhutta, Mickey Chopra, for The Lancet Every Newborn Study Group*, on behalf of the Every Newborn Steering Committee*

Remarkable progress has been made towards halving of maternal deaths and deaths of children aged 1–59 months, although the task is incomplete. Newborn deaths and stillbirths were largely invisible in the Millennium Development Goals, and have continued to fall between maternal and child health efforts, with much slower reduction. This Series and the Every Newborn Action Plan outline mortality goals for newborn babies (ten or fewer per 1000 livebirths) and stillbirths (ten or fewer per 1000 total births) by 2035, aligning with A Promise Renewed target for children and the vision of Every Woman Every Child. To focus political attention and improve performance, goals for newborn babies and stillbirths must be recognised in the post-2015 framework, with corresponding accountability mechanisms. The four previous papers in this Every Newborn Series show the potential for a triple return on investment around the time of birth: averting maternal and newborn deaths and preventing stillbirths. Beyond survival, being counted and optimum nutrition and development is a human right for all children, including those with disabilities. Improved human capital brings economic productivity. Efforts to reach every woman and every newborn baby, close gaps in coverage, and improve equity and quality for antenatal, intrapartum, and postnatal care, especially in the poorest countries and for underserved populations, need urgent attention. We have prioritised what needs to be done differently on the basis of learning from the past decade about what has worked, and what has not. Needed now are four most important shifts: (1) intensification of political attention and leadership; (2) promotion of parent voice, supporting women, families, and communities to speak up for their newborn babies and to challenge social norms that accept these deaths as inevitable; (3) investment for effect on mortality outcome as well as harmonisation of funding; (4) implementation at scale, with particular attention to increasing of health worker numbers and skills with attention to high-quality childbirth care for newborn babies as well as mothers and children; and (5) evaluation, tracking coverage of priority interventions and packages of care with clear accountability to accelerate progress and reach the poorest groups. The Every Newborn Action Plan provides an evidence-based roadmap towards care for every woman, and a healthy start for every newborn baby, with a right to be counted, survive, and thrive wherever they are born.

Introduction

The Millennium Development Goals (MDGs) showed that a few outcome-focused targets with accountability can unify many players around a common agenda to deliver results. The average annual rate of reduction in child mortality, for example, has more than doubled in the past 10 years compared with the previous decade, and both child and maternal mortality have halved since the 1990 baseline¹ associated with increased intervention coverage of care and technical advances supported by political commitment and investment.² By contrast, newborn mortality and stillbirth reduction did not feature in the MDGs, and had slower progress compared with overall under-5 mortality and maternal mortality during the same period. The collective action behind successful postneonatal interventions, such as high immunisation coverage and malaria prevention and care, is one explanation for the increasing proportion of newborn mortality in the under-5 age group. This success illustrates that it is both realistic and timely for the same attention to also be channelled to newborn survival and stillbirth prevention. For example, Africa now has more newborn deaths than at the MDG baseline in 1990, in view of slow progress in reducing mortality risk and in

closing the gap in unmet need for contraception.^{1,3} Fertility reduction contributes to improved newborn survival, and vice versa. As the chance of newborn survival becomes more certain, families are more likely to decide on fewer children by using contraception.^{2,4}

As the MDG era ends, about 2·9 million newborn babies (ie, babies in their first 4 weeks after birth) die every year, mostly from preventable causes.^{1,5} These deaths account for 44% of under-5 child deaths globally. In most regions of the world, more than half of all deaths in children younger than 5 years occur in the newborn period. Additionally, more than 2·6 million third trimester stillbirths occur globally each year,⁶ with 45% taking place during childbirth.⁷ A key principle guiding the development of the post-2015 framework is “no-one left behind”.⁸ The data show that newborn babies were left behind—invisible in the MDG framework, and receiving scant policy attention and investment.^{9,10} Stillbirths were entirely missed and still do not appear in UN reporting for women’s and children’s health.⁷ Also missing in the current health goals is the clear link beyond survival to development outcomes, increasingly affected by insults around the time of birth and care of the baby, especially early nutrition.¹

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This is the fifth in a Series of five papers about newborn health

World Health Organization, Geneva, Switzerland (E Mason MD); The Partnership for Maternal, Newborn and Child Health, Geneva, Switzerland (L McDougall MSc, C Presern PhD); MARCH, London School of Hygiene and Tropical Medicine, London, UK (Prof J E Lawn PhD); Saving Newborn Lives, Save the Children, Cape Town, South Africa (J E Lawn); Research and Evidence Division (J E Lawn), Department for International Development, London, UK (G Mann PhD, A Beattie PhD); Ministry of Health and Family Welfare, Government of India, New Delhi, India (A Gupta MBA); Bill & Melinda Gates Foundation, Seattle, WA, USA (M Claeson MD); Department of Health, Government of South Africa, Pretoria, South Africa (Y Pillay PhD); Ministry of Public Health, Government of Cameroon, Yaoundé, Cameroon (M Baye Lukong MD); The Global Fund to Fight AIDS, Tuberculosis and Malaria, Geneva, Switzerland (M Wijnroks MD); Perinatal Care Project, Diabetic Association of Bangladesh, Dhaka, Bangladesh (K Azad FCPS); United States Agency for International Development, Washington, DC, USA (K Taylor MSFS); Center of Excellence in Women and Child Health, Aga Khan University, Karachi, Pakistan

Key messages

- Ending of preventable deaths: Accelerated change for child survival, health, and development needs increased focus on a healthy start. With nearly 3 million newborn babies dying annually, accounting for 44% of deaths in children younger than 5 years, progress has been slow and is now impeding change for child survival worldwide. Closely linked are 2.6 million babies stillborn each year, almost half occurring during labour. More than 15 000 babies die every day—ten every minute.
- Prioritisation of birth day risk: The day of birth is the most dangerous for mothers and their babies, resulting in nearly half of maternal and newborn deaths and stillbirths. The cost of inaction devastates families and societies, causing a substantial drain on human capital, through death, disability, poor growth, and lost potential for development and economic productivity.
- Counting of every newborn baby: Most newborn babies and nearly all stillborn babies are born and die without ever being recorded. One in three babies does not receive a birth certificate before their first birthday. This reflects fatalism around newborn deaths and stillbirths despite the fact that most of these deaths are preventable. Preterm birth, intrapartum complications, and infections are the leading causes of neonatal death.
- Investment for a triple return: Care around the time of birth saves mothers and their newborn babies and prevents stillbirths and disability. By 2025, high coverage of care would save 3 million lives (women, stillbirths, and newborn babies) every year at an additional running cost of US\$1.15 per head. Interventions delivered around the time of birth have the greatest potential (41% of the deaths averted), followed by care of small and ill newborn babies (30% of the deaths averted). By improving the quality of care for every birth now in facilities, we could reduce deaths by 2 million each year; and for the poorest still at home, deaths could be prevented by nearly a quarter through community-based strategies.
- Targeting of specific health-systems bottlenecks: Important impediments to scale-up of facility-based care with the highest effect on mortality outcome include finance and workforce, especially skilled midwives and nurses. Some low-income and middle-income countries are making remarkable progress, innovating to reach the poorest families with higher quality care at birth and care for small and ill newborn babies.
- Unprecedented opportunity for progress: the Every Newborn Action Plan is based on epidemiology, evidence, and global and country learning, setting a framework to end preventable newborn deaths and stillbirths by 2035. The action plan will also advance standards for quality of care, measurement of births, and deaths, and programmatic coverage with accountability for results.

(Prof Z A Bhutta PhD); Center for Global Child Health Hospital for Sick Children, Toronto, ON, Canada (Prof Z A Bhutta); and UNICEF, New York, NY, USA (M Chopra MD)

Correspondence to: Dr Elizabeth Mason, Department of Maternal, Newborn, Child and Adolescent Health, World Health Organization, 1211 Geneva 27, Switzerland
mason@who.int

Yet newborn deaths and stillbirths matter not only to the families and communities that lose them, but to societies and economies, which fail to benefit from their contributions to labour and intellectual capital. Birth is the moment in the human lifecycle with the greatest risk of death, disability, and lost development potential and the most crucial moment to invest. The generation born today is the workforce of 2030—a time when many countries, particularly those in Africa, hope to reap the so-called demographic dividend that comes from having an employed, healthy, and optimally productive working-age population caring for a smaller dependent population. This dividend, and the potential for accelerated economic growth, cannot be fully realised without addressing of newborn survival and health.¹ This is why a healthy start to life must be at the heart of the post-2015 agenda.

In this the final paper in The *Lancet* Every Newborn Series, we summarise findings from the first four papers

leading to an action plan to reduce newborn and maternal deaths and prevent stillbirths.

Assessment of progress and definition of priorities for action

In their Series paper, Lawn and colleagues¹ spotlight newborn survival and small babies as the heart of the unfinished MDG child survival agenda and argue that explicit targets with accountability are needed to drive ongoing progress. If neonatal mortality continues to fall at a much slower pace than mortality after the first month of life, targets for under-5 mortality will be unachievable.¹ A Promise Renewed (2012)¹¹ targets for ending of preventable child deaths by 2035 have attracted national commitments from more than 190 countries,¹¹ and country data assessments have sharpened the focus on the imperative to address newborn survival. As presented by Lawn and colleagues,¹ this Every Newborn *Lancet* Series proposes a global goal of ten or fewer deaths per 1000 livebirths for newborn babies and ten or fewer per 1000 total births for stillbirths by 2035 and an interim target of 12 or fewer deaths per 1000 livebirths for newborn babies and 12 or fewer per 1000 total births for stillbirths by 2030, aligning with other post-2015 targets for ending of preventable maternal and child mortality. These targets are ambitious for some higher burden countries, but are achievable even with existing interventions. Through a consultative process on targets and content in the plan, more than 50 governments, hundreds of partners, and more than 2000 individuals have been part of the Every Newborn Action Plan process and development (panel 1).

New epidemiological data underline the priorities for action in terms of where (which countries), when (around birth, when more than 40% of maternal and newborn deaths and stillbirths occur), what (the three leading causes of neonatal death: preterm, intrapartum complications, and infections, which also overlap with causes of stillbirths and maternal deaths), and who (small babies). More than 80% of all neonatal deaths are in low birthweight babies: two-thirds preterm and one-third term but small for gestational age.¹ Additionally around a third of stunting starts as small for gestational age and preterm babies, explaining some of the slow progress in reduction of stunting by failure to effectively target the starting point. Strategic investment in birth outcomes and care of small and ill newborn babies would be transformational for human capital and economic development, especially in low-income and middle-income countries. Lawn and colleagues¹ also present the global burden of deaths and disability after neonatal insults and especially for babies born too small and too soon. Neonatal conditions account for almost 10% of all disability-adjusted life-years worldwide, even without stillbirths being counted.

In their paper, Bhutta and colleagues¹³ estimate that high coverage (90%) of currently available interventions could save 3 million lives per year by 2025, including 162 000 women, 816 000 stillbirths, and 1.95 million

newborn babies—a triple return on investment. These evidence-based interventions fall into four groups: (1) integrated antenatal care; (2) quality care at birth, with access to basic and comprehensive emergency obstetric care, and the management of preterm labour, including the appropriate use of antenatal corticosteroids; (3) essential newborn care and, if needed, prompt resuscitation, plus routine postnatal care for all women and babies; and (4) care of small and ill newborn babies, including the prevention and management of neonatal infections, kangaroo mother care, and supportive care for preterm babies. This approach builds on promotive and preventive care in community settings to better quality care in

appropriately staffed and equipped facilities. Community care, especially with curative services, can prevent around 25% of neonatal deaths and is a feasible and important approach, especially in hard-to-serve populations, such as those that are rural or post-conflict. The greatest effect on newborn survival as well as maternal health and prevention of stillbirths is through facility-based care during labour, childbirth, and the first week of life, including care for small and ill newborn babies (figure 2). High coverage of these interventions is estimated to need an additional annual running cost of US\$5·65 billion for the 75 highest burden countries, amounting to \$1928 for each life saved, including stillbirths, newborn babies, and maternal

Panel 1: The Every Newborn Action Plan and movement

What is Every Newborn?

The Every Newborn Action Plan provides an evidence-based roadmap to reduce preventable newborn deaths and stillbirths, and to increase human capital through a healthy start in life. Women's health is closely linked and counting the effect on both makes the investment case much stronger. The evidence gives clear principles for action, but for each country context-specific adaptation linked to national strategies and accountability mechanisms is crucial.

How has the action plan been developed?

The plan content is based on *The Lancet* Every Newborn Series with data and evidence shaped by the input of 17 national consultation workshops in 2013, as well as two multicountry regional consultations, a global stakeholders' meeting, and consultations with health-care professional organisations.¹² An official WHO online consultation in 2014 gathered inputs from about 300 stakeholders, including more than 50 national governments, as well as donors and foundations, civil society groups, and the private sector to refine the mortality targets. The Every Newborn process is coordinated by UNICEF and WHO, with representation from a wide range of stakeholder groups (see names at end of paper), and is in support of the UN Secretary-General's Every Woman Every Child to implement the Global Strategy for Women's and Children's Health. Every Newborn is a movement of parent groups and more than 60 partner organisations responding to increasing demand from countries to accelerate action on newborn survival and health.

What does the action plan include?

- **Vision:** A world in which there are no preventable deaths of newborn babies or stillbirths, where every pregnancy is wanted, every birth celebrated, and mothers, babies, and children thrive and reach their social and economic potential.
- **Goals for 2035, linked to the post-2015 development framework:** For all countries to have a neonatal mortality rate of ten or fewer deaths per 1000 livebirths by 2035, and a stillbirth rate (death after 28 weeks' gestation) of ten or fewer per total births by 2035, with interim targets every 5 years to enable monitoring.¹ These goals have been developed on the basis of extensive consultation and the full wording includes an explicit focus on equity and on child development outcomes. Analyses underline that these goals can be reached by achieving universal coverage with existing interventions.^{13,14}
- **Guiding principles:** Country leadership, human rights, integration, equity, accountability, and innovation.

- **Actions:** The plan outlines the latest evidence on costs and expected effect of interventions on mortality outcome, and calls for implementation by all stakeholder groups. An expected output in countries is an integrated reproductive, maternal, neonatal, and child health plan, not a separate newborn plan, which is sharpened to include the highest effect interventions for care at birth and care of small and ill newborn babies in that country context. This emphasis lies at the heart of universal health coverage, and a functional health system that works for the poorest groups, as well as wider coverage along the continuum of care—notably also for family planning services, pregnancy care, and child health care.

The plan has five strategic objectives to achieve the targets (figure 1):

- 1 Strengthen and invest in care during the crucial period of labour, childbirth, and the first days of life.
- 2 Improve quality of maternal and newborn care.
- 3 Reach every woman and every newborn baby and reduce inequities.
- 4 Harness the power of parents, families, and communities for change.
- 5 Count every newborn baby: improve measurement and accountability, including birth and death registration.

How does Every Newborn build on other plans and efforts?

Every Newborn builds deliberately on the targets, interventions, strategies, and processes proposed by other efforts to promote women's and children's health. These efforts include *Committing to Child Survival: A Promise Renewed*,¹¹ with its emphasis on elimination of preventable child deaths by 2035, and the maternal mortality post-2015 targets, as well as *Family Planning 2020*. Every Newborn emphasises approaches consistent with the UN Commission on Lifesaving Commodities for Women's and Children's Health, which includes four life-saving commodities specific to newborn survival, the *Scaling Up Nutrition* framework for action, the *Global Immunization and Vaccine Strategy*, the *Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea*, and *Countdown to Zero* for eliminating Mother-to-Child Transmission of HIV and improving the health of women with HIV. Wider environmental change is also needed notably for WASH (water, sanitation, and hygiene) for all. Plans are an important step towards action; however, their proliferation can also promote issue-specific tensions and pull national stakeholders into multiple meetings, even distracting from implementation. Our key message is context-specific attention to ensure newborn babies no longer fall between the gaps in the continuum of care and between multiple plans. In view of the core value of a healthy start in life and the vulnerability of newborn babies, they deserve special attention within many issue-specific plans.

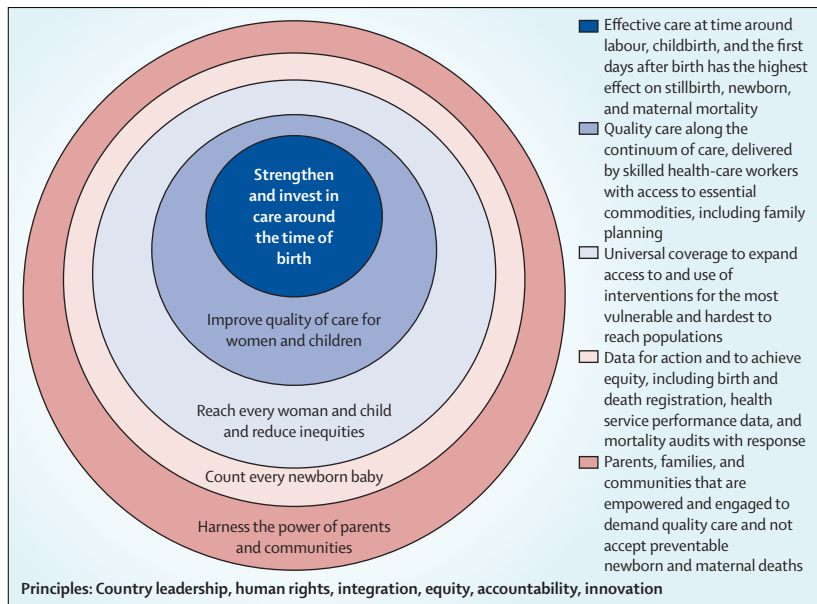


Figure 1: The five strategic objectives of the Every Newborn Action Plan

deaths, or an additional \$1.15 per head. Yet, coverage levels for interventions around this time are some of the lowest and most inequitable across the reproductive, maternal, newborn, and child health (RMNCH) continuum of care.^{2,13,15}

The paper by Dickson and colleagues¹⁵ is based on detailed analyses in eight high-burden countries (55% of neonatal deaths worldwide) and reveals various bottlenecks across the health system, starting with the lack of visibility and funding for newborn care in many settings. The most frequently identified health system barrier to scale-up was the lack of a health workforce with designated responsibility and the right skills to care for newborn babies, including those who are small and ill. These assessments emphasise the need for more midwives and to ensure that those midwives are skilled and equipped to care for newborn babies. The survival of newborn babies (especially those who are preterm), who can die in minutes, depends on the health system response and thus is a sensitive test of universal coverage.

Dickson and colleagues¹⁵ also assessed success factors in countries that have reduced mortality faster than their neighbours, such as workforce planning, financial protection measures, and dynamic leadership. Some countries, such as Peru, Nepal, and Malawi, have made remarkable progress, and more intentional south–south sharing could speed up progress.

Changing the trajectory for newborn survival, learning from the past decade

In their Series paper, Darmstadt and colleagues² reviewed progress since the 2005 *Lancet* Neonatal Survival Series¹⁶ and made the case that increasing of newborn survival is

both feasible and cost-effective, and the lynchpin of the continuum of care. The 2005 Series promoted the concept of the continuum of care through the lifecycle, and linking of home and hospital.¹⁷ In their scorecard of progress, Darmstadt and colleagues² concluded that rapid change has been made for problem identification and agenda setting, with increasing epidemiological evidence about where and when to focus to reduce newborn death and disability, including on preterm birth. More intervention studies and more policy-relevant communication of feasible interventions have led to faster policy formulation. The authors draw attention to publications in which evidence was linked to a wider movement amplified by women's voices, especially *The Lancet* Stillbirth Series (2011),¹⁸ *Born Too Soon: The Global Action Report on Preterm Birth* (2012),¹⁹ and the *State of the World's Midwifery* report (2011).²⁰

The biggest failures have been lack of investment in the highest-burden countries, incomplete or partial implementation, and major gaps in programmatic coverage data. Behind this situation lies a lack of leadership and lack of public voice and accountability on newborn babies and stillbirths, in view of predominant global attention on disease-specific issues. In practice, responsibility for newborn babies has fallen between reproductive, maternal, and child health and nutrition efforts, and neither maternal nor newborn health programmes managed to access major global funding streams.² Despite this overall disappointing effect, some issues such as neonatal tetanus have made major progress, reducing deaths ten-fold in the two decades of the MDG era. In the same timeframe, some middle-income countries have halved neonatal mortality; for example, China, Estonia, Turkey, and several Latin American nations, notably Peru and Brazil. In many cases, this progress has been linked to national government investment and deliberate pro-poor financing. So the picture is mixed, and the gap has widened between countries, especially for the poorest countries, and especially Africa. At current rates of progress, more than a century will pass before a child born in Africa has the same chance of survival as one born in an Organisation for Economic Co-operation and Development country.¹

Dichotomies, debates, and myths

Several debates recurred in both the Series analyses and in the consultations for the Every Newborn Action Plan. First, there is an apparent dichotomy of focus on the women or on her baby. Although this plan has a newborn title, its main message is to urge greater collective action to support women and babies together at the time of birth and consistently throughout the days and months after childbirth, so that the time of birth becomes the celebration that it should be.²¹ Whereas there is a clear recognition of the synergies of actions on saving mothers and newborn babies through integrated interventions, the term Every Newborn was chosen to underscore the importance of newborn outcomes and visibility in the UN

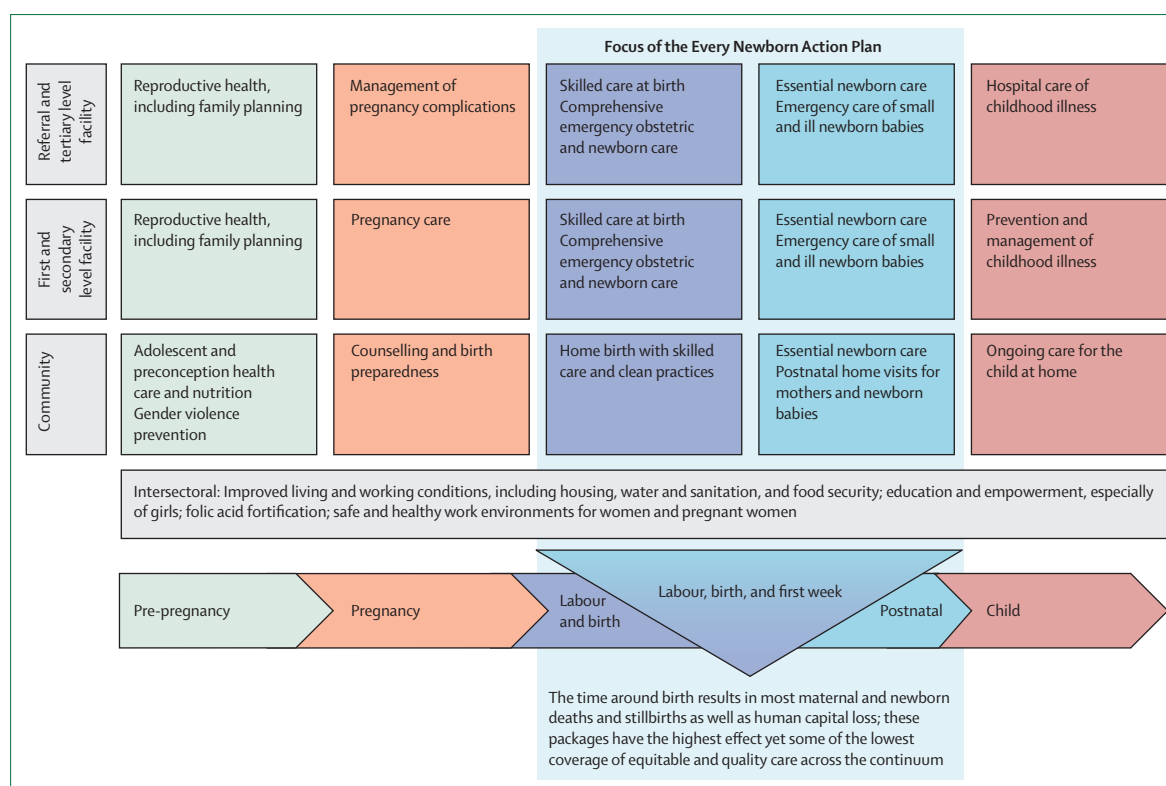


Figure 2: Evidence-based packages for the focus of the Every Newborn Action Plan

Secretary General's Every Woman Every Child effort supporting the Global Strategy for Women's and Children's Health.²² Babies and their mothers must be considered together—they are distinct yet interdependent. The baby is held by the mother and this should guide the integrated design of services, the responsibilities of health workers, and flow of funding. Separation of women and babies is a false dichotomy, and Every Newborn calls on advocates for reproductive and maternal health and nutrition to also stand for babies, and vice versa.²³

A second (false) dichotomy is between a continuum of care approach—ie, addressing of RMNCH and nutrition as an integrated whole—compared with focusing on where or when effect will be highest and the poorest families will gain the most. This dichotomy is akin to the debate of horizontal versus vertical approaches. On the basis of evidence on burden, effect, coverage, and equity gaps, the Every Newborn Action Plan is firmly focused on the time around birth, with the highest priority on quality of care at birth for every woman and every newborn baby—this gives a triple return on investment, with facility births and midwives at the heart of required efforts (figure 2). During the analyses of epidemiology and lives saved, as well as what has and has not worked in countries, we have recognised that the previous focus underemphasised care of the small and ill baby. More than 80% of neonatal deaths, and many stillbirths, are in low birthweight babies, especially those that are preterm. Preterm newborn babies

also have a high risk of disability (although most babies born after 28 weeks' gestation who survive are without significant disability). Both preterm and term infants who are small for gestational age have an increased risk of stunting and of adult-onset non-communicable diseases.

Some dichotomies that were a previous source of tension have shifted; for example, between community empowerment and care versus facility care.²⁴ Both are clearly important, and linking of the two enables more progress.²⁵ No country has achieved a neonatal mortality rate of less than 15 per 1000 livebirths without targeting small babies for care, including simple care at home as well as moving to more complex facility care. Indeed the basis for essential newborn care ("dry, warm, clean, feed"), started a century ago by the French obstetrician Pierre Budin, was the drive to care for "weaklings" or preterm babies.²⁶ While recognising the value of community empowerment and engagement, we are calling for intentional scale-up of quality maternal and newborn care in facility settings, especially in district hospitals.

The child health community is also shifting to recognition of the need for more work to strengthen hospital-based quality of care for children with pneumonia, malaria, HIV, and severe malnutrition, complementing successful prevention and primary care management.²⁷ With a future-casting agenda to 2030 and 2035, every country will be moving along a spectrum towards neonatal special care. This changing reality will

Panel 2: Taking integrated action with newborn babies at the start: the example of India

Since 1990, India's maternal mortality ratio has decreased by around 70%.²⁸ However, newborn deaths have decreased more slowly, with still roughly 760 000 deaths annually.⁵ To address this challenge, India is implementing the Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) strategy of the National Health Mission.²⁹ The newborn component of the RMNCH+A strategy is built on five pillars:

- 1 **Essential newborn care:** Promoting institutional deliveries is a key focus, and the Janani Suraksha Yojana (JSY; conditional cash transfer scheme³⁰) provides financial incentives for institutional deliveries both to pregnant women and to the ASHA (Accredited Social Health Activists), who serve as a link between the community and the health system. Building on the success of JSY and to mitigate out-of-pocket expenses, a key barrier for accessing of timely care and services, in 2011 India moved towards an entitlement-based approach through Janani Shishu Suraksha Karyakram (JSSK). JSSK guarantees every woman delivering in a public health institution to absolutely free and cashless services that include free drugs, diagnostics, diet, and transport. The introduction of JSY has resulted in the proportion of institutional births increasing from 40.7% in 2005–06³¹ to 83% in 2012–13.³² Additionally, a recent initiative has empowered assistant nurse midwives to give a pre-referral injection of gentamicin for management of sepsis in young infants (<2 months of age) and mandatory prophylactic vitamin K injection. This initiative has been supported by substantial efforts to increase quality and availability of emergency obstetric and essential newborn care at health facilities.
- 2 **Home-based newborn care:** India launched a home-based newborn care scheme in 2011 and is one of the first countries to have trained 600 000 ASHAs with specific skills to provide home-based newborn care during the first 42 days of life; they manage simple problems and refer to special newborn care facilities for advanced care.
- 3 **Ill and small newborn care:** At district level, sick newborn care units (SNCUs) have been established for newborn babies needing specialised health care. SNCUs have been rapidly scaled up, with 507 units established in 3 years—an increase of 176% over a baseline of 184 in 2005–2008.³³ These units provide simple and effective care for newborn babies with severe illness and birth complications. Newborn survival rates in SNCUs are around 90%. Key success factors for these SNCUs are appropriately trained doctors and nurses, adherence to evidence-based protocols, and monitoring of all SNCU personnel's performance.
- 4 **Enhanced focus on adolescent health and reproductive health:** Recognising that maternal mortality and child survival cannot be addressed in isolation, India has adopted a lifecycle approach situating newborn and maternal health at the centre of continuum of care—establishing clear linkages across services and care during crucial life stages. ASHAs provide reproductive health services including counselling for birth spacing and age-appropriate contraception methods to beneficiaries at home. The enhanced focus on spacing methods, including insertion of interuterine contraceptive devices (IUCDs) and postpartum IUCDs has resulted in almost 17 million women being protected from unwanted and unplanned pregnancies during the past 36 months.³³ Rashtriya Kishor Swasthya Karyakram (2014), India's new adolescent health programme, reaches out to 253 million adolescents with information and counselling on delaying of marriage and early pregnancies.
- 5 **Strengthening the health system and evidence-based, strategic management:** A crucial component of India's strategy to reduce preventable maternal and newborn deaths is strengthening the health system. To this end India has invested more than US\$19 billion,³³ trained more than 336 000 health workers including 8129 doctors, 2007 specialists, 11 925 Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) doctors, 251 738 assistant nurse midwives, 34 605 staff nurses, 13 725 paramedical staff, 4785 AYUSH paramedics, 10 902 programme management staff, and 20 000 ambulances or patient transport vehicles have been added to the public health system.³³

reduce deaths, but must urgently be linked to improved tracking of disability and specific quality improvement around safe oxygen use, eye care, and community follow-up and support to ensure child development is maximised.¹ For example, India's national programme includes both community and facility-based strategies, and specifically links small and ill newborn babies with home-based follow-up care (panel 2).

Action for Every Newborn

Overview

Building on the findings of this *Lancet* Every Newborn Series,^{1,2,13,15} we propose an action agenda to change the survival curve for stillbirths and newborn babies and to

move beyond survival to improved health and development. Underpinning this agenda is a greater understanding of what must be done differently. The Every Newborn Action Plan (panel 1) has had an 18 month gestation, building on the epidemiological and intervention evidence and analyses presented in this Series, and particularly on the recommendations from Darmstadt and colleagues² on what needs to change to accelerate progress, as well as the health system analysis presented by Dickson and colleagues.¹⁵ Throughout this time, the action plan content has been shaped by extensive consultations with countries and other stakeholders (appendix).

The core of the plan involves five strategic objectives (panel 1). The focus is on improved quality of care at

See Online for appendix

birth, but the plan requires change for health systems and social determinants, and especially parent voices to lead this movement (figure 1). The plan details these elements, but here we focus on what needs to be done differently and why, based on the top five issues identified by Darmstadt and colleagues:² leadership and more coordinated partnerships, parent voice, investment, implementation, and indicators with effective data collection and accountability for use in continual programme improvement. Here we start with leadership, because this has been a fundamental gap.

(1) Intentional maximisation of leadership and partnership

Leadership is essential for progress in relation to policy change, legislation, investment, implementation, advocacy, and popular representation.^{2,34} For newborn survival, much of the change to date has been promoted by the technical community, and several assessments show that this remains a small group.^{2,34} Unlike for HIV and malaria, the case for change for newborn babies has so far failed to connect to a political voice on the global stage. Apart from a few countries, these voices remain primarily technical. Parliamentarians play a crucial part in voicing the needs of women and children in their constituencies. The 2011 Pan African Parliament prioritised policy and budget action for maternal and child health³⁵ and the 2012 resolution on maternal and child health by the Inter-Parliamentary Union have been landmark moments in parliamentary action.³⁶ Champions support these efforts—whether tribal or religious leaders, or from sports or popular entertainment. Such leaders amplify the voices of ordinary citizens and communicate key messages to wide audiences, driving a sense of collective intolerance about the status quo and broadening social movements, bringing policy and investment needs to the attention of decision makers, timed to moments in policy and funding cycles. Advocacy networks for women's health have intentionally developed champions; for example, at the African Union and linked to the Campaign for the Accelerated Reduction of Maternal Mortality in Africa (CARMMA).³⁷ Recent years have seen growing public intolerance about women dying while giving birth. Among African leaders there are now more frequent mentions of maternal deaths than for AIDS.³⁷ The next step is for campaigners and the media to connect the protection of mothers with the protection of babies, especially in Africa where rates are highest and newborn deaths are frequently considered a norm.

As well as political leadership and champions, a wider community of technical leaders is crucial for change. Such leaders do not appear by accident—especially in high-burden countries, where there must be more intentional investment in technical and public health leadership skills, including opportunities for formal qualifications, since these bring credibility as well as capacity. Institutional and mentoring networks have been essential for HIV and malaria and vaccines, but are

lacking for RMNCH and need to be built for those wanting to develop leadership skills to address newborn health, including clinical, public health planning, research, and political voice.

Partnerships and alliances are critical. The community of newborn advocates is small and most effective when undertaken in the context of the wider RMNCH continuum of care—notably, together with maternal²³ or child health champions, or for champions of specific other conditions such as HIV, including prevention of mother to child transmission. There is no one health-care professional group active worldwide that stands for the baby, since most low-income and middle-income countries have few if any neonatologists or neonatal nurses. Hence multidisciplinary alliances across health-care professional teams³⁸ and with others are important for programmatic and political change.

(2) Parent voices for action as a means to wider accountability

At least as important as political leadership and widening of capacities of health-care professionals is the empowerment of communities. Parents can be highly effective voices for change, shifting social norms around the acceptance of newborn deaths, as well as holding health workers and the government accountable for quality care and mobilising communities to support pregnant women and families with newborn babies. Emotional devastation associated with a newborn death or stillbirth occurs every day all around the world.¹⁸ Yet in some settings, women are stigmatised for the deaths of their babies, especially stillbirths.¹⁸ Cultural practices also play a part and some reflect the acceptance of newborn deaths, such as delayed naming of the baby.³⁹ Since the voices of those who bear the burden are rarely heard, this invisibility promotes the concept that newborn deaths and stillbirths are inevitable. Greater attention and investment is needed in support of community-level networks and platforms from which ordinary voices can be heard, whether women's group meetings or via the proliferation of new media channels, including radio, mobile phone, and internet platforms. For those who have access, social media can provide ways to share experiences and connect with others,^{2,22} as shown by massive participation in World Prematurity Day in 2012 and 2013, including national events led primarily by parent advocacy groups.² Demand for action from women and communities are fundamental for accelerated progress.⁴⁰

At the community level, rising demand for facility-based maternal and newborn services has led to increases in the percentage of women accessing skilled care at childbirth,⁴¹ although disparities remain within and between countries.⁴² More information and support for better choices could help to build demand for quality services by encouraging better care-seeking practices in pregnancy and childbirth as well as healthier practices during pregnancy and postnatally (eg, through early

home visits to new mothers by community health workers).⁴³ Crucially, behavioural change interventions are not only for women, but also (or perhaps more so) for grandmothers, mothers-in-law, fathers, brothers, and other decision makers in the household, as well as front-line health-care workers.⁴⁴ Community programmes can provide education and empowerment, improving knowledge and shifting social norms.^{45–47}

Participatory women's groups target women of reproductive age, particularly newly married and newly pregnant women,⁴⁷ and follow a participatory learning and action cycle to identify and prioritise problems in pregnancy, childbirth, and the postnatal period.⁴⁰ Peers support new mothers and empower women to negotiate for change. Problems are addressed; for example, creating awareness, collecting funds to use for maternal and neonatal emergencies and arranging emergency transport, implementing their chosen strategies, and evaluating their activities. A systematic review and meta-analysis⁴⁷ of the effect of women's groups reported 37% reduction in maternal and 23% reduction in neonatal mortality. A WHO review⁴⁸ concluded that evidence of beneficial effect of such groups on neonatal mortality was clearer than the evidence of its effect on other outcomes, and recommended implementation in rural settings with low access to health services, in tandem with efforts to improve the quality of health services. These investments in women's empowerment and engagement will be most effective if they are linked to high-quality care within the health system, as shown in the first randomised controlled⁴⁹ trial of women's groups where this was an important input.

(3) Investment for effect and increased harmonisation in funding

This Series reports that an estimated 73% of newborn deaths, 35% of stillbirths, and 59% of maternal deaths can be averted at an additional annual running cost of just US\$5·65 billion or \$1·15 per head in the 75 highest burden countries—for a total of 3 million lives saved every year by 2025, with the biggest numbers in the poorest countries.¹³ The Global Investment Framework for Women's and Children's Health, supported by the *Lancet* Commission on Investing in Health, estimated that for every \$1 spent on health, including health system strengthening and the provision of quality of care at birth, economies would gain almost \$9 in economic and social benefits as a result of lower mortality and morbidity by 2035.¹⁴

To achieve this goal, we need increased funding through all channels (domestic, bilateral, and global),⁵⁰ improved alignment with national contexts and plans, and promotion of sustainable, transparent funding channels. Within this funding, increased accountability for spending on the interventions with the highest effect on mortality outcome and reaching the poorest groups is needed. Official development assistance (ODA) can be tracked; currently, the share of ODA funding for RMNCH

that refers to “newborn” (mainly through the phrase “MNCH”) is pitiful⁹ at less than 10%, especially in view of the large share of the disease burden and the demonstrated potential for lives saved.² Furthermore, there is almost no mention of “stillbirths” in more than an quarter of a million donor disbursements.⁹

Domestic funding accounts for most national health spending (ie, more than 70% in sub-Saharan Africa, and more in Asia, including out-of-pocket spending),⁵¹ and a steadily increasing domestic share of funding is necessary for ensuring sufficient funds are available for sustainable health systems building, which is key for success. Specific funding for RMNCH is also needed. However, 3 years after the report of the Commission on Information and Accountability for Women's and Children's Health in 2011, the one recommended financial indicator on national spending for RMNCH⁵² is available for only a handful of countries.

If the ambitions of “grand convergence” of life expectancy and health outcomes by 2035 are to be reached, as in the vision of *The Lancet* Commission on Investing in Health⁴ and Every Newborn goals for neonatal deaths and stillbirths, funding for newborn babies represents an important frontier for change. Funding for targeted newborn interventions is almost entirely missing, such as ensuring specific skills for health workers or specific commodities or key community aspects, either to reach women and babies at home or in women's groups, or to bring curative care closer to home.

To address this gap and see results in their investments, global funding initiatives will need to make three important changes in the way they operate. More could be achieved with existing funds if coordination and harmonisation among global funding platforms were strengthened and services were better integrated, and the highest effect care prioritised. Platforms such as the Global Fund to Fight AIDS, Tuberculosis and Malaria,⁵³ the Health Results Innovation Trust Fund,⁵⁴ the GAVI Alliance,⁵⁵ and others represent huge funding streams. First, each global health funding platform should explicitly state how it will contribute to reducing newborn deaths and stillbirths through its work. For example, the new funding model of the Global Fund will support countries to strengthen their health systems for the provision of integrated service delivery that could support maternal, newborn, and child health services beyond the three diseases.¹⁴ Also investments in support of the FP2020 effort⁵⁶ will contribute to improved outcomes for babies as well as girls and women. Second, integrated service delivery promotes increased efficiency for all services by, for example, taking opportunities to improve newborn outcomes by adding care with high effect on mortality outcome to other investments—eg, antibiotic treatment of neonatal sepsis being added to artemisinin-based combination therapy for malaria. Likewise, birth and the early postnatal period are crucial for optimum breastfeeding and the most important time

window for antiretroviral therapy for prevention of mother to child transmission of HIV, with more than 1 million children globally in need of effective treatment.⁵⁷ Growing cooperation between these major funding platforms promises to improve financial and technical support for integrated service delivery. Third, strengthened coordination among donors and funding platforms is crucial to identification of overlooked parts of the RMNCH continuum of care and to improvement of efficiency, in response to changing needs and defined gaps identified through robust monitoring and accountability.

(4) Implementation: increase health worker numbers and skills with attention to quality

Despite strong evidence and relatively low cost, many of the highest effect interventions targeting neonatal mortality have very low coverage and do not have appropriate data tracking mechanisms.¹³ Assessment of health-system bottlenecks are important to strengthen implementation.¹⁵ In every context, the major challenge is building and maintaining a health workforce with the skills to provide quality care during birth and to look after small and ill newborn babies. Health workers need evidence-based skills derived from pre-service and in-service training, including training in the care of small and ill newborn babies (WHO guidelines and training materials shown in appendix). To address the shortage in human resources, countries need specific human resource plans to increase the numbers and autonomy of midwives,²⁰ as well as to include nurses with specific neonatal care skills, and to ensure that all health workers are competent and confident in newborn care. Scaling up of home visits to mothers and newborn babies will help to close the coverage and equity gap of essential interventions necessary in the first fragile days after birth.⁴³ South-to-south learning through study tours can help uptake of innovations. For example, policy makers applied a national adaptation of community case management of neonatal sepsis in the Health Extension Worker package in Ethiopia, after a learning visit to Nepal.⁵⁸

The responsibility for planning implementation lies within Ministries of Health, and accountability is enhanced when managers allocate responsibility for newborn survival to one or more programme managers who are tasked with the coordination of planned activities within integrated RMNCH programmes. Several tools are available for evidence-based planning such as the Lives Saved Tool (LiST)⁵⁹ and national processes, such as Countdown to 2015 events,⁴² to support national evaluation and accountability.

Implementation must also be linked to programme learning and evaluation. More upstream research is also crucial to accelerate progress, particularly for prevention of preterm and small for gestational age births, for which there are currently very few high effect interventions.³⁸

(5) Indicators: counting every newborn baby, monitoring with local action and accountability

Core indicators to track progress on newborn outcomes have been prioritised in the Every Newborn Action Plan on the basis of a ranking process for those that are most central to tracking of effect and coverage and inputs for Every Newborn, prioritising ten indicators (ie, three effect on mortality outcome, three contact point coverage—also tracked by Commission on Information and Accountability and Countdown—and four neonatal-specific interventions) and counting births (figure 3).

Counting of births and deaths will eventually improve the data. In the 21st century, no child should be born and die without a single piece of paper left behind to mark their life. Likewise, no maternal death should go uncounted.⁶⁰ Improvement of civic and vital registration systems is a fundamental step in improvement of the capacity of countries to plan and monitor health investments and to respect the right of all citizens to be counted.¹

Urgent work is planned and must be executed to improve the metrics, both for these and other supporting indicators and to increase the number of countries routinely tracking them. This Every Newborn monitoring framework is the first milestone in the action plan (figures 3 and 4). Some indicators cannot be tracked through household surveys; for example, asking a woman if her baby needed resuscitation or was resuscitated. Hence, health facility data collection and routine health management information systems will be essential to measurement of further progress. Few indicators with

	Core indicators	Additional indicators
Effect on mortality outcome	(1) Maternal mortality ratio	
	(2) Stillbirth rate	Intrapartum stillbirth rate
	(3) Neonatal mortality rate	Low birthweight rate Preterm birth rate Small for gestational age Neonatal morbidity rates—eg, infection Rates of long-term disability after neonatal conditions
Coverage: Care for all mothers and newborn babies	(4) Skilled attendant at birth (5) Early postnatal care for mothers and babies (6) Exclusive breastfeeding to 6 months	Early initiation of exclusive breastfeeding
Coverage: Complications and extra care	(7) Antenatal corticosteroid use (8) Newborn resuscitation (9) KMC and feeding support (10) Treatment of neonatal sepsis	Caesarean section rate
Counting	Birth registration	Death registration including cause of death
Process indicators and norms and standards for service delivery packages	Every Mother Every Newborn Quality Initiative Care of small and ill newborn babies	

Figure 3: Indicators for tracking progress for Every Newborn

Blue=not currently routinely tracked. Bold=indicator needing further work to ensure availability of consistent data in routine information systems. Red=service delivery package for which norms and standards will be defined and tracked. All coverage indicators to be tracked in such a way that they can be broken down to assess equity—eg, urban or rural, regional, wealth quintile. KMC=kangaroo mother care.

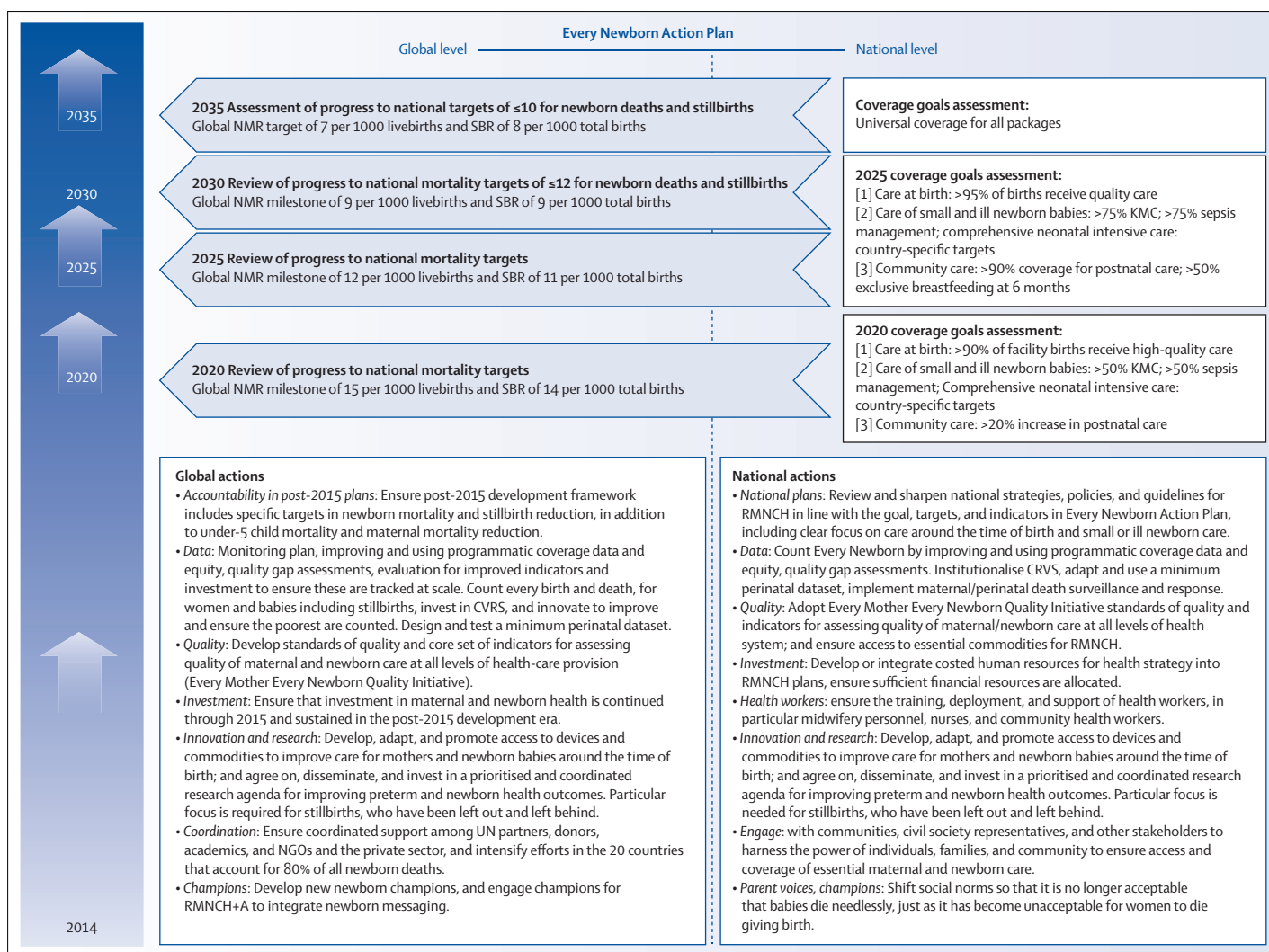


Figure 4: Milestones and actions at national and global level

NMR=neonatal mortality rate. SBR=stillbirth rate. KMC=kangaroo mother care. NGO=non-governmental organisation. RMNCH=reproductive, maternal, neonatal, and child health.

RMNCH+A=reproductive, maternal, neonatal, child, and adolescent health. CRVS=civil registration and vital statistics. See appendix for background on development of targets, milestones, and indicators.

relevance to newborn babies are in national routine tracking systems, and these need to be included, especially those outlined in figure 3 that are interventions with a high effect on mortality outcome that are not yet routinely tracked (eg, antenatal corticosteroids, neonatal resuscitation, kangaroo mother care).

Globally, accountability for RMNCH will be linked to the post-2015 accountability mechanism (figure 4) and it is expected that at global level some indicators will continue to be tracked through Countdown to 2015 country profiles and reports.⁴² These Every Newborn indicators should be included. Importantly, these data need to be used in-country to monitor progress and adjust programme implementation; for example, as part of health sector and district management reviews (figure 4). Some countries, including India, Nigeria,

Ethiopia, and Tanzania, have started to use subnational scorecards, in association with the African Malaria Leaders Alliance,⁶¹ CARMMA, Evidence4Action,⁶² A Promise Renewed,¹¹ and Countdown to 2015.⁴²

Action for the next generation

The time around birth and the first week of life is a crucial lifecycle moment that can provide a triple return on investment. New analysis in this Series shows how intimately linked childbirth and adolescence are, and how attention to both can accelerate change and maximise the opportunity of a demographic dividend and a healthy, stable population.¹

As the post-2015 world emerges, this vision of healthy societies, in which women and adolescent girls, newborns and children all thrive, must be at the heart of

Panel 3: Every Newborn call for action

Building on evidence from *The Lancet* Every Newborn Series and the Every Newborn Action Plan, we call for a renewed commitment to dramatically improve the health and survival of newborn babies and women in the next two decades.

National and global goals in the post-2015 development framework

Newborn babies and stillbirths should have explicit national and global goals. These targets align with A Promise Renewed target for children and are in support of targets for ending of preventable maternal mortality:

- By 2030, reduce national neonatal mortality to 12 or fewer deaths per 1000 livebirths and stillbirth rates to 12 or fewer per 1000 total births, resulting in global averages of nine and nine, respectively.
- By 2035, reduce national neonatal mortality to ten or fewer deaths per 1000 livebirths and stillbirth rates to ten or fewer per 1000 total births, resulting in global averages of seven and eight, respectively.
- Specific subnational equity targets should be set to reach families left behind, and to maximise development outcomes and minimise disability.

Milestones to track progress

To achieve these mortality goals, we commit to working with partners and national governments to develop and deliver the following milestones:

- An Every Mother Every Newborn Quality Initiative with evidence-based norms and standards for quality care for every mother and newborn around birth. This package will be developed in close partnership with maternal health and midwifery organisations, building from proven tools with an aim to ensure half of high-burden countries are using this package by 2020.
- Definition of a comprehensive, evidence-based package to reduce stillbirths. Additional research and innovation to address antepartum (during pregnancy) stillbirths is crucial. In the meantime, immediate progress can and must be made to reduce the 1.2 million annual intrapartum (during delivery) stillbirths.
- Definitions and measurement for the ten core Every Newborn indicators, along with an agenda for countries and partners to increase the frequency and quality of relevant data and link this to programmatic action.
- Universal birth and death registration, to provide crucial data and make a first step towards shifting social norms to guarantee every newborn baby the right to care, nutrition, and education. We call for a worldwide campaign starting in 2015, the last year of the Millennium Development Goals, to "Count Every Newborn" with a birth certificate for every baby.
- An accountability framework that links to the post-2015 architecture, with strong ownership by national governments, as well as tools to ensure that parents and communities can hold their leaders accountable for progress.

Implementation and national action

Countries should update their national health strategies to include the Every Newborn mortality goals, coverage targets, and milestones. National strategies should link to existing processes, such as health sector planning

and A Promise Renewed, and include actionable and measurable changes to meet the five Every Newborn Action Plan objectives:

- 1 Focus on care at birth for women and their babies, and care of small and ill newborn babies;
- 2 Address quality of care, including through adoption and scaling up of the Every Mother Every Newborn package; this will necessitate targeting of health system main bottlenecks particularly the shortage of skilled health workers, including midwives and neonatal nurses, requiring strategies in multiyear health sector plans, newborn survival commodities, and context-specific, robust, lower-cost devices;
- 3 Ensure equitable care that targets the poorest groups and ensures financial protection;
- 4 Empower parents and elevate their voices, especially those of women; and
- 5 Establish a monitoring and accountability framework to ensure that every newborn baby is counted at birth and that programmatic coverage data for interventions with high effect on mortality outcome are collected and used, including in national health information systems and perinatal audit.

Investment

Investments in care at birth and care of small and ill newborn babies will yield the highest effect. Stillbirths are an important component of the newborn investment case, and should also be included in programming and counted alongside women and babies.

- Increased investments from governments and donors and more intentional targeting from existing global funds are crucial for reversal of the slow progress for newborn survival. The investment should be commensurate to the burden and targeted to specific care with a high effect on mortality outcome at birth and for small and ill newborn babies, not merely adding the word "newborn" to a title.
- Stillbirths are an important part of the investment case, and should also be included in programming and counted alongside women and babies.
- Implementation research and upstream research investments are crucial to acceleration of progress.

Intentional development of capacity, leadership, and champions

We all have a responsibility to newborn babies, and stillbirths. Hence we call on all organisations that work for women and children to consider their role and mandate in acceleration of change for babies.

- Particular investment and attention is urgently needed to develop high-capacity leadership in high-burden countries that includes building both clinical and public health skills. By 2020 the ten highest burden countries should have pre-service specialist training for neonatal nurse skills and opportunities for higher-level clinical and public health skills for newborn programme design, evaluation, and research.
- Parents' or women's groups and community champions should be enabled to empower women and ensure that parent voices are heard by policy makers.

Specific milestones by year from 2014 to 2025 are detailed in the appendix.

that ambition. *The Lancet* Global Health 2035 has as its emblem the graph of "grand convergence" for child mortality between the world's poorest and richest countries.⁴ This transformation is totally dependent on improved progress towards ending of newborn deaths, which are just as preventable as postneonatal deaths, but

have lacked investment and action. Transformed human development and more equitable societies also depend on a healthy start. This Series and the Every Newborn Action Plan call for specific changes to ensure that Every Newborn is action with a plan and not merely another plan (panel 3). We call for the global community and

countries to intensify action and ensure that women—often themselves still children—are not left alone to care for their newborn babies.

Contributors

The paper was planned, drafted, and coordinated by EM and LM with JEL and MVK. The India panel was prepared by AG. The financing section was drafted by MC, CP, and AB. The indicators and milestones section and graphics were coordinated by JEL. All the named authors and the Every Newborn Study Team and Steering Committee contributed to the text and the call for action.

The Lancet Every Newborn Study Group

Joy E Lawn, Zulfiqar A Bhutta, Gary L Darmstadt, Kim E Dickson, Mary V Kinney, Elizabeth Mason, and Lori McDougall.

Every Newborn Steering Committee

Martina Baye Lukong, Ministry of Public Health, Cameroon; Anthony Calibo, Department of Health, Philippines; Bernadette Daelmans, World Health Organization; Luc de Bernis, United Nations Population Fund; Joseph de Graft Johnson, Maternal and Child Health Integrated Program; Cyril Engmann, Bill & Melinda Gates Foundation; Suzanne Fournier, Children's Investment Fund Foundation; Lily Kak, US Agency for International Development; Eve Lackritz, Global Alliance to Prevent Prematurity and Stillbirths; Gillian Mann, Department for International Development, UK; Charles Mwansambo, Ministry of Health, Malawi; Adetokunbo Oshin, Federal Ministry of Health, Nigeria; Vinod Paul, All India Institute of Medical Sciences; Yogan Pillay, Department of Health, South Africa; Joy Riggs-Perla, Save the Children, Saving Newborn Lives; Juana Willumsen, The Partnership for Maternal, Newborn & Child Health.

Every Newborn Advisory Group

Sabaratham Arulkumar, International Federation of Gynaecology and Obstetrics; Gloria Quansah Asare, Family Health Division, Ghana; Masee Bateman, USAID; Robert Black, Johns Hopkins Bloomberg School of Public Health; Elwyn Chomba, Ministry of Community Development Mother and Child Health, Zambia; Peter Colenso, Children's Investment Fund Foundation; Anthony Costello, University College London; Siobhan Crowley, ELMA Foundation; Gary Darmstadt, Bill & Melinda Gates Foundation; Frances Day Stirk, International Confederation of Midwives; Valerie DeFillippo, FP2020; Pablo Duran, World Health Organization; Helga Fogstad, NORAD; Craig Friderichs, GSMA; Maria Paulina Giusti, Ministry of Health, Peru; Leith Greenslade, MDG Health Alliance; Anuradha Gupta, Ministry of Health and Family Welfare, India; Jennifer Howse, March of Dimes; Chris Howson, March of Dimes; Janet Kayita, UNICEF; William Keenan, International Paediatric Association; Jonathan Klein, American Academy of Paediatrics; Antoinette Kome, SNV World; Ana Langer, Harvard School of Public Health; Karen LeBan, CORE Group; Silke Mader, European Foundation for Care of Newborn Infants; Joy Marini, Johnson & Johnson; Goldy Mazia, Latin America and Caribbean Neonatal Alliance; Betsy McCallon, White Ribbon Alliance for Safe Motherhood; Tjipo Mothobi, GBC Health; Assumpta Muriithi, World Health Organization; Karen New, Council of International Neonatal Nurses; David Oot, Save the Children; Lisa O'Shea, World Vision; Robert Pattinson, Medical Research Council, University of Pretoria; Carole Presern, The Partnership for Maternal, Newborn & Child Health; Nuzhat Rafique, UNICEF; Craig Rubens, Global Alliance for the Prevention of Prematurity and Stillbirth; Benjamin Schwartz, CARE USA; Jill Sheffield, Women Deliver; Will Snell, Development Media International; Howard Sobel, World Health Organization; Ann Starrs, Family Care International; Mariame Sylla, UNICEF; Peter Waiswa, Makerere University, Uganda; Simon Wright, Save the Children; Benjamin Yung, Department of Foreign Affairs, Trade and Development Canada; Nabila Zaka, UNICEF; HRH Princess Sarah Zeid of Jordan; and Nanbert Zhong, Peking University Center of Medical Genetics.

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We declare no competing interests.

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