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# 1 year after *The Lancet* Neonatal Survival Series—was the call for action heard?



Joy E Lawn, Simon N Cousens, Gary L Darmstadt, Zulfiqar A Bhutta, Jose Martinez, Vinod Paul, Rudolf Knippenberg, Helga Fogstad, for *The Lancet Neonatal Survival Series steering team*

## *The Lancet* Neonatal Survival Series, 1 year on

In March, 2005, *The Lancet* published a series of four articles<sup>1-4</sup> and two Comments,<sup>5,6</sup> highlighting a huge number of largely neglected deaths—the 4 million newborn babies who die every year, of whom 99% are born in developing countries.<sup>1</sup> 4 million is roughly the number of babies born every year in the USA or in the 23 largest countries of western Europe. It is also roughly the number of AIDS and malaria deaths combined in 1 year. Yet deaths in newborn babies are rarely mentioned in global-health priorities. A misconception has been that highly technical care is needed. On the contrary, our estimates suggest that up to three-quarters of these deaths could be prevented with low-technology interventions at an additional cost of less than US\$1 per head for the 75 countries with the highest mortality.<sup>2,4</sup> What is needed is the political will to ensure that these interventions reach the women and babies who need them.<sup>3,4</sup> 1 year on, we ask: what progress has been made over the past year in policy, in funding, and most importantly, in programmes in high-mortality countries?

Before discussing the commitments and events affecting newborn survival since March, 2005, we have a caveat—measuring the effect on policy and practice is complex, and attributing changes to *The Lancet* series is not possible and is not our aim. Our purpose is to promote and assess progress in reaching mothers and babies most in need.

## The series information: How many? Where? To whom?

The series booklets have been widely distributed in English (40 000 printed copies) and translated into French, Spanish, and Portuguese.<sup>7</sup> Indeed, the Mozambican Ministry of Health undertook the Portuguese translation of their own accord. A CD-ROM has been produced to provide the papers, available references, and a toolkit for action with clinical and programmatic implementation guides.<sup>7</sup> After two launches in London, UK, and Washington, DC, USA, several regional events were held in Pakistan, Egypt, and Peru, in April, 2005, all involving Ministers of Health. In Africa, various regional meetings of different audiences have profiled findings from the series. Mass media coverage of the series included articles in the five largest-circulation US newspapers, coverage in about 150 newspapers worldwide, and several radio interviews.

## Has attention and commitment to newborn health increased?

We believe that the answer is yes—but much more can still be done. Panel 1<sup>5,8-11</sup> outlines some of the progress we

have identified in profile, policy, programmes, and funding. We think deaths in newborn babies are now mentioned more on the health policy agenda, at least in child survival and maternal health circles—as attested to by the attention received at the Countdown to 2015 conference in London, UK, in December, 2005.<sup>11</sup> However, neither deaths in newborn babies nor in children or mothers appear on the agenda at high-level forums, such as the G8 summit, the Commonwealth Health Ministers meeting, and the World Economic Forum at Davos, Switzerland, in which attention to health tends to focus on HIV/AIDS, malaria, and tuberculosis. The World Health Assembly in 2005 also focused mainly on infectious disease emergencies, such as severe acute respiratory syndrome (SARS).

A specific change called for was that the neonatal mortality rate be added as an indicator under Millennium Development Goal 4 for child survival.<sup>4</sup> Despite ongoing discussions and recommendations by the Millennium Task Force, this inclusion has yet to happen. However, the neonatal mortality rate was included as an indicator to be tracked as part of the Countdown to 2015 series of meetings planned for the next decade.<sup>11</sup>

Increasing efforts have been made to include newborn health in global guidelines and national strategies, plans, and monitoring for maternal, neonatal, and child health. UNICEF has led the development of draft guidelines for newborn health programming (panel 1). UNICEF has been fast in changing policy, and this has resulted in a high demand from countries for technical support, which requires the strengthening of the capacity of regional and New York headquarters staff to meet this demand.

Ongoing progress is being made to adapt several important global strategies and programmes. The Integrated Management of Childhood Illness (IMCI) strategy, which did not previously address children aged less than 7 days, has new guidelines for the care of sick newborn babies, which are nearing completion. The Indian version of IMCI, the IMNCI (N for neonatal),<sup>4</sup> is being adapted by several other countries in Africa and south Asia. There is wider recognition that midwifery training should include training in simple care and resuscitation of newborn babies, although challenges remain in health-system roll-out, including a shortage of competency-based training, a lack of supervision, few resuscitation dummies for training, and insufficient supplies of bags and masks. A companion volume on neonatal deaths and stillbirths is being added to WHO's

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**Saving Newborn Lives/Save the Children—USA, and Institute of Child Health, London, Cape Town, South Africa**

(J E Lawn MRCP); **London School of Hygiene and Tropical Medicine, London, UK**

(Prof S N Cousens DipMathStat); **Department of International Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA**

(G L Darmstadt MD); **Save the Children/USA, Washington, DC, USA** (G L Darmstadt); **Aga Khan University, Karachi, Pakistan**

(Prof Z A Bhutta PhD); **Department of Child and Adolescent Health and Development, WHO, Geneva, Switzerland** (J Martinez PhD); **Department of Paediatrics, WHO Collaborating Centre for Training and Research in Newborn Care, All India Institute of Medical Sciences, New Delhi, India** (V K Paul MD); **Health Section UNICEF, 3 UN Plaza, New York, NY, USA** (R Knippenberg PhD); and **WHO Making Pregnancy Safer Initiative, Department of Reproductive Health and Research, Geneva, Switzerland** (H Fogstad MHA)



Figure: Stamp released by the Indian Government, November, 2005

### Panel 1: Positive changes for health of newborn babies in the past year since publication of *The Lancet Neonatal Survival Series*

#### Profile

- The World Health Report 2005 included a chapter on newborn babies and presented cause-of-death data for newborn babies, on the basis of estimates from the Child Health Epidemiology Reference Group used in *The Lancet* series. In April, 2005, health of newborn babies had a high profile during World Health Day in New Delhi, India, and in the Delhi Declaration, which promoted a major shift from maternal and child health to maternal, neonatal, and child health
- The Millennium Task Force report included a prominent section on newborn babies<sup>8</sup>
- The Disease Control Priorities Project (National Institutes of Health and World Bank) added a chapter on health of newborn babies, towards the end of revising the second edition<sup>9</sup>
- Leaders of WHO, UNICEF, and World Bank have made public commitments to improving newborn health, including Ann Veneman, new Executive Director of UNICEF, in her maiden speech at the World Health Assembly in 2005
- India accounts for almost 30% of neonatal deaths worldwide. On National Newborn Health Day, the Indian Government issued a special stamp highlighting the health of newborn babies (figure) and the Indian Prime Minister has made a commitment to address this "national shame"

#### Policy

- UNICEF's new health and nutrition strategy focuses on Millennium Development Goals 4 and 5 and on increasing coverage of essential interventions, recognising the importance of survival of newborn babies for child survival goals. UNICEF previously had no programme guidance on the health of newborn babies, but has developed a policy entitled "Strategic Guidance for Programming for Newborn Health"
- WHO ran a workshop to increase capacity of regional and subregional child health advisers to support countries in incorporating newborn health into child health strategies (New Delhi, December, 2005)
- Integrated Management of Childhood Illness (IMCI) materials, emergency obstetric care, and many other clinical and programmatic guidelines are being reviewed by various UN organisations and partners to incorporate or strengthen newborn health components

#### Partnering

- The Partnership for Maternal, Neonatal, and Child Health<sup>10</sup> was launched after the merger of three partnerships that worked together on the Comments for *The Lancet* series<sup>5</sup>
- The International Paediatric Association is launching a global movement of paediatricians for newborn health. At the African Congress of Paediatricians in Benin, in December, 2005, 27 African national paediatric associations signed up to join this movement
- The Norwegian Government has committed support for programmes related to Millennium Development Goal 4 in selected south Asian and African countries

#### Financial support

- World Bank funding for health-sector reform and strengthening now promotes an emphasis on health for newborn babies as well as mothers and children (eg, in a recent \$250 million grant for health-system strengthening to Democratic Republic of the Congo)
- The Bill & Melinda Gates Foundation has provided grants of \$60 million to Saving Newborn Lives/Save the Children-USA and \$24 million to the Program for Appropriate Technology and Health (PATH), to advance survival of newborn babies in high-mortality countries
- The Global Alliance for Vaccines Initiative (GAVI Alliance) has earmarked \$60 million for elimination of neonatal tetanus

#### Programme monitoring

- Inclusion of neonatal mortality rate as a Millennium Development Goal target has been recommended by *The Lancet* series steering team, and by task force on goals 4 and 5
- Tracking Child Survival Report, presented at Countdown to 2015 conference in London, included neonatal health indicators that were proposed in *The Lancet* series,<sup>4</sup> and will be monitored by existing population-based surveys in high-mortality countries<sup>11</sup>

maternal audit guide, *Beyond the numbers*. Work continues to improve the ability of verbal autopsy instruments in capturing deaths in newborn babies and identifying the causes of death. However, many issues remain unresolved in postnatal care—there is no international consensus on the where, who, and what of care provided to mothers

and babies in the first week after birth, when the risk of death for both is the highest.

### Have new resources been mobilised?

In view of the size of the problem, newborn, child, and maternal deaths receive relatively little funding,



especially if compared with the resources allocated to the Global Alliance for Vaccines Initiative (GAVI Alliance) and the Global Fund to Fight AIDS, Tuberculosis and Malaria.<sup>12</sup> Nevertheless, there are some encouraging signs. Interventions for newborn babies are now more commonly regarded as part of the funding for general health systems. For example, the World Bank is providing \$250 million to the Democratic Republic of the Congo for health system rehabilitation, and interventions for newborn babies are part of the national package. The Department for International Development (DfID) and the US Agency for International Development (USAID) have funded maternal and newborn health programmes in Pakistan with about \$250 million over 5 years. Spurred by a health policy review<sup>13</sup> and the launch of *The Lancet* Neonatal Survival Series in Islamabad, the Government of Pakistan is launching a new 5-year programme on maternal, neonatal, and child health under a new cell in the Ministry of Health. In Bangladesh, a comprehensive national policy now supports newborn health, newborn health-indicators are included in the national health-information system, and 11% of the national budget for health training is allocated to care of newborn babies. India has increased spending on public health in 2006 from 0·9% of the gross domestic product to 2–3% in 4 years, with most ploughed into the National Rural Health Mission to reduce the infant mortality rate and maternal mortality ratio. In several African countries, health of newborn babies has been included in national sector-wide planning and allocated resources by linking to initiatives to accelerate maternal mortality reduction (panel 2).

Neonatal tetanus still accounts for more than 200 000 deaths a year, despite a second global-elimination goal for 2005.<sup>1</sup> The GAVI Alliance has allocated \$60 million to the elimination of maternal and neonatal tetanus (panel 1), and has recently announced a commitment to wider health-systems strengthening with a “pot” of \$500 million. Since interventions for maternal, newborn, and child health are a well-recognised marker of an effective health system, the Alliance grants will hopefully contribute to scaling-up of MNCH interventions.

The Bill & Melinda Gates Foundation has allocated \$84 million to newborn health through two initiatives—Saving Newborn Lives/Save the Children-USA and Sure Start (PATH, Program for Appropriate Technology and Health; panel 1). For the next 6 years, Saving Newborn Lives will work with countries and partners to increase the coverage of effective interventions and to expand operations research relating to scaling-up of newborn care. Special emphasis will be on action in Africa.

Because of the need to integrate newborn-health interventions with maternal and child-health programmes, the separate tracking of resource flows for newborn health at the macro-level is difficult, and makes little sense to attempt. At the Countdown to 2015 conference in London, new work to develop a tracking method for resource flows for maternal and child health was presented. Improved tracking during the next few years is aimed to improve accountability of donor and local governments for their investments in maternal, newborn, and child health.<sup>11</sup>

### What has changed in countries?

Reductions in the global burden of neonatal deaths depend on effective action in individual countries, especially in those with the highest burden of deaths in newborn babies. In several large Asian countries, groups have been actively working to improve newborn health; for example, the highly influential National Neonatology Forum in India has more than 2000 members. In many African countries, newborn health (and maternal, neonatal, and child health in general) has received little attention or leadership so far, with public-health action focused on HIV/AIDS, malaria, and immunisation. This emphasis is changing (panel 2). In the past year, at least 20 African countries have requested technical assistance from WHO to integrate and scale up newborn health care. The Kenyan Paediatric Society has called for a national newborn-survival group and is planning specific actions.<sup>14</sup> Other countries, such as Uganda, have incorporated newborn care into their 5-year health-sector plan (panel 2).

Major challenges still remain in Asia and Africa. To seize opportunities and respond to country demand,

### Panel 2: Care of newborn babies in Africa—action in countries and led by countries

Sub-Saharan Africa has 46 countries with great variation, together accounting for more than 1 million neonatal deaths and including 16 of the 20 countries with the highest neonatal mortality rates. The third article in *The Lancet* series called for action in countries and led by countries.

- Within 1 month of publication of the series, at least eight African countries requested technical assistance from WHO to integrate and scale up health in newborn babies, and another 12 have since requested support
- Policy and programme changes have already begun in countries, which include:
  - In July, 2005, the Ugandan Government added a newborn health team to their cluster for maternal and child health in the next 5-year Health Sector Reform Plan, attaching specific interventions, a dedicated budget line, and a yearly review process
  - Tanzania has seen a 25% reduction in mortality in children younger than 5 years during past 5 years; however, the reduction in neonatal mortality has been less striking, with the government and the maternal, newborn, and child national partnership reviewing strategies to address deaths in newborn babies
  - In Ethiopia, scaling-up of community-based care, including newborn care,<sup>3</sup> is in progress, with almost 10 000 health-extension workers graduating in 2005 and another 30 000 in training
- The Road Map for Accelerating the Reduction of Maternal Deaths is a continent-wide policy process approved by the African Union, and now includes survival of newborn babies. The Road Map uses a systematic, stepwise approach to develop, accept, fund, and implement a national plan. Since its launch in 2004, at least 32 African countries have begun the process, and plans have been adopted in 12 countries, overseen by a regional task force. In some countries, health components for newborn babies could need review and strengthening, but the recognition and inclusion of care for newborn babies is an essential first step
- A large group of partners are working together to develop programme and policy guides, adapting approaches, and building capacity in organisations and countries. A publication, *Opportunities for Africa's Newborns*, is in preparation. This monograph will detail eight opportunities to integrate newborn care in existing programmes and provide profiles of 46 countries, plus a CD-ROM of relevant information
- In July, 2005, the African Union declared the acceleration of child survival, including that of newborn babies, to be priority
- Meeting of the First Ladies of West Africa at the end of 2005 included a presentation on survival of newborn babies

there is a need for more people to be funded to provide technical support, increase capacity, and work with ministries of health to institutionalise newborn care in existing country programmes—developing, implementing, and monitoring integrated, strategic plans, especially in Africa. Many countries have teams for HIV, malaria, and vaccines, but have no one in the ministries of health specifically to integrate newborn care into existing programmes. Strong management and negotiation skills are needed, since there are multiple programmes to link with: antenatal care, midwifery, emergency obstetric care, postnatal care, IMCI, nutrition and breastfeeding programmes, malaria, prevention of mother-to-child transmission/HIV, immunisation programmes, and community health-worker programmes.

Several countries are implementing community health-worker programmes. The human resources are staggering; In Ethiopia, 30 000 new health extension workers will be graduating this year. By 2010, India plans to deploy 300 000 village-based workers, with newborn and child care as a prime responsibility. Pakistan has expanded its successful Lady Health Workers programme from 70 000 to 100 000. In the enthusiasm to implement these ambitious programmes, the need to monitor their effect on the coverage of essential interventions and on mortality should not be forgotten.

### Are research inequities changing?

Although 99% of deaths in newborn babies occur in developing countries, less than 1% of published neonatal research during the past decade is relevant to deaths in low-resource settings.<sup>1</sup> It is therefore unfortunate that an unintended negative consequence of *The Lancet* series has been to foster, in some quarters, the misconception that since we have identified simple interventions that could prevent up to three-quarters of deaths in newborn babies, there is no need for research in low-resource settings. Although we know what we should be aiming for—high coverage of several simple cost-effective interventions—major questions remain about how to get there. The research agenda identified in every article in the series remains pertinent 1 year on, especially the need for effectiveness research to inform scaling-up of interventions in currently underserved communities, and how to implement effective maternal and newborn postnatal care.

There have been some positive developments. A study in Ghana<sup>15</sup> advances our understanding of the benefits of early breastfeeding on neonatal survival. A trial of community mobilisation and behaviour-change communications to promote simple essential practices for newborn care in the home and community has shown a 50% reduction in neonatal mortality in rural Uttar Pradesh, India.<sup>16</sup> Benefits from chlorhexidine cleaning of the newborn umbilical cord<sup>17</sup> and sunflower oil<sup>18,19</sup> for preterm babies have shown promise for potential scalability. Several trials funded by Saving Newborn

### Panel 3: Call for newborn survival and challenges

#### Action at national level

- By the end of 2007, produce and publish a plan of action to reach set national targets of neonatal survival to be implemented in maternal health and child survival programmes. This plan should be based on situation analyses, include a defined baseline neonatal mortality rate, be evidence-based, and specify strategies to reach the poorest families
- Finance implementation of the plan by identification and mobilisation of internal resources, and by seeking of external support when necessary
- Implement plan with defined targets and timelines
- Monitor progress and publish results regularly

#### Action at international level

- Include neonatal mortality rate as an indicator for Millennium Development Goal 4, with a target of 50% reduction between 2000 and 2015
- Find the resources to meet additional needs identified (\$0.96 per person in the 75 high-mortality countries), to achieve high coverage of interventions
- Promote partner and donor convergence at country level, as promoted by the Partnership for Maternal, Newborn, and Child Health, to increase efficiency and reduce reporting load on national governments\*
- Invest in health-systems research advancing how to reach the poor, as well as new research into postnatal care, stillbirths, and non-fatal outcomes around time of birth\*

#### Challenges

- Perceived competition between newborn survival and maternal or child survival—a false dichotomy, since if one loses, then all lose
- Potential conflicts between interventions at community and facility levels—another false dichotomy since both are needed
- Maternal, newborn, and child health is still a quiet ongoing stream of 11 million deaths a year, in a world of emergencies with higher profiles such as avian influenza and HIV/AIDS—current attention and funding remain inadequate for task
- Not enough people are available to follow through on country requests for support, and countries will not go on asking indefinitely

\*Items not originally in the call for action for newborn survival.<sup>4</sup>



Malawian mother and baby

Michael Biscaglia / Save the Children—USA

inaugural meeting. WHO is planning several studies in Africa to investigate packages for community-based newborn care.

The focus of *The Lancet* series on newborn survival was deliberate. However, as mortality reduces, non-fatal outcomes, especially in children surviving with disabilities, become increasingly important. Stillbirths, issues of maternal and fetal malnutrition affecting intrauterine growth, and long-term disability outcomes are still largely ignored in low-resource settings, and we still know little about how to address these problems. New systematic estimates for stillbirth rates in 190 countries will increase visibly for these neglected deaths, which are closely linked to newborn survival.<sup>20</sup> Nevertheless, we hesitate to expand the newborn research agenda too soon, in view of the very small number of relevant effectiveness trials.<sup>21</sup> A major need is to increase and strengthen the capacity for newborn research in Africa, and it is to be hoped that Asian researchers will contribute to this.

### Restating the call for action

A year has passed since a call to action for neonatal survival was made through *The Lancet* series. What has been achieved is encouraging, but certainly nowhere near what must be done to reduce neonatal deaths and achieve Millennium Development Goal 4. Much of our

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Lives/Save the Children phase 1, USAID, and the Burroughs–Wellcome Fund are close to completion. The largest paediatric research meeting in the world, organised by the Pediatric Academic Societies in 2005, included a special session on birth asphyxia in developing countries, and in 2006, the meeting will include neonatal infections in low-resource countries. The newly established Asian Society for Pediatric Research also focused on the challenges of global newborn care and survival during its

original call holds true (panel 3), but we emphasise the following points.

First, we repeat the call for country plans by the end of 2007. These do not need to be stand-alone plans for newborn health, but an overall strategy for how governments plan to reduce deaths in newborn babies, in safe motherhood, child health, and other related programmes. Because a high percentage of deaths at ages less than 5 years old are neonatal, no government that is serious about Millennium Development Goal 4 can afford to omit newborn health interventions. The RoadMap process in Africa provides an opportunity for all African countries to develop such plans in a public forum with accountability for results (panel 2).

Second, we call specifically for improved integration of newborn health with other relevant programmes, especially maternal health and child survival, and for enhanced integration between programmes—eg, HIV, malaria, sexually transmitted diseases, and the UN's Expanded Programme of Immunisation. This integration would benefit not only newborn babies but also mothers and children by increasing the rate of increase of essential interventions. Indeed, in the countries that have undertaken strategic planning, examination of newborn health can clearly serve as a catalyst to bring maternal and child health groups together and to link maternal, neonatal, and child care, with benefits for mothers, babies, and children. The Partnership for Maternal, Newborn, and Child Health's call for every country to have one plan for maternal, neonatal, and child health; one financing mechanism; and one monitoring and assessment plan is highly compatible.

Third, we call again for governmental commitment and leadership, with international partners' support to ensure that plans are translated into actions. Programme implementation does not just need increased funding, although current levels are clearly not commensurate with the number of deaths and the cost-effectiveness of the solutions.<sup>2</sup> Funding should be spent strategically, including investment in human resources. Increased personnel are needed to provide technical support; to work in ministries of health to link essential programmes for maternal, neonatal, and child health with each other; and to deliver services to mothers and babies, especially those in under-served populations. The World Health Report 2005<sup>21</sup> estimated that an additional 700 000 skilled birth attendants are needed to provide universal coverage of maternal and newborn services in 75 countries, where maternal and neonatal mortality is high.<sup>22</sup> However, a great deal can be achieved for maternal, neonatal, and child care through community-based interventions that can be delivered by community health workers. The current wave of new community health workers will be most effective in saving lives if highly effective interventions for maternal, neonatal, and child care are the core set of tasks, and if the lessons of the first revolution in primary health care are applied—ie, the

need for supervision, close links with the rest of the health system, and remuneration.

Finally, we call for donors and national governments to invest strategically in programmes for maternal, neonatal, and child care as a cornerstone for development and poverty alleviation and for achievement of the Millennium Development Goals.

## Conclusions

Increased commitment has been galvanised and changes have occurred over the past year, with real progress in some countries and organisations. *The Lancet Neonatal Survival Series* contributed to some of these changes, but which and how much is difficult to tell and really does not matter. There is still much to do and high demand from countries for help to do it. The launch of The Partnership for Maternal, Newborn, and Child Health provides new opportunities for maternal, neonatal, and child care. The real challenge ahead remains the provision of essential interventions to all mothers and babies, the integration and institutionalisation of interventions for newborn babies in programmes for maternal, neonatal, and child care, and the scaling-up of these programmes. We have much to learn about what works in different settings. This goal will need ongoing investment from countries and donors and should be seen for what it is: an investment in the health of the next generation. However, money is not all that is needed. Currently, too few people are involved and too little research is underway, in view of the size of the problem. We need more champions and researchers committed to asking and answering questions that can save many lives.

### Conflict of interest statement

We declare that we have no conflict of interest.

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