

# Integrated Strategies to Address Maternal and Child Health and Survival in Low-Income Settings: Implications for Haiti

Zulfiqar A Bhutta, MD, PhD

Perm J 2016 Spring;20(2):94-95

<http://dx.doi.org/10.7812/TPP/15-204>

## ABSTRACT

The Millennium Development Goals for improving maternal and child health globally were agreed on in 2000, and several monitoring and evaluation strategies were put in place, including “Countdown to 2015” for monitoring progress and intervention coverage to reach the goals. However, progress in achieving the goals has been slow, with only 13 of the 75 participating Countdown countries on track to reach the targets for reducing child mortality.

An overview of child mortality rates in low-income countries is presented, followed by a discussion of evidenced-based interventions that can bridge the equity gaps in global health. Finally, comments are included on the companion article in this issue, “Addressing the Child and Maternal Mortality Crisis in Haiti through a Central Referral Hospital Providing Countrywide Care” (page 59), and what is needed for that new project to succeed.

## INTRODUCTION

Most of the world’s sovereign countries signed the United Nations Millennium Declaration in the Year 2000 to address some of the greatest moral dilemmas of our times: unequal global health, especially maternal and child health; widespread poverty; and barriers to education and development. The Millennium Development Goals (MDGs) were established as a set of interrelated goals and targets to be met by 2015 including “Countdown to 2015” for monitoring progress and intervention coverage to reach the goals; MDG 4 and 5 set targets for all countries to reduce maternal mortality and mortality of children under age 5 years by 75% and 66%, respectively, from what they were in 1990.<sup>1</sup>

Despite major progress in reducing the burden of maternal and child mortality globally, progress has been uneven and slow. A mere 10 countries have almost two-thirds of the global burden of maternal and newborn deaths as well as stillbirths. It is estimated that 6.2 million children (uncertainty range [UR] = 5.7-6.9 million) younger than age

5 years died in 2013, a 63% reduction from 16.9 million (UR = 16.3-17.4 million) in 1970.<sup>2</sup> However, there are still wide disparities, and in 2013, child mortality rates ranged from a high of 151.4 per 1000 population (UR = 129.3-176.2/1000) in Guinea-Bissau to 2.2 (UR = 1.7-2.8) per 1000 in Singapore. Of the 75 Countdown countries that have almost 98% of all maternal deaths and deaths of children younger than age 5 years, only 13 countries are on track to reach MDG targets for child mortality. Other global estimates from the Institute of Health Metrics and Evaluation indicate that only 31 developing countries will reach MDG 4 targets by 2015.

Of the 6.2 million children who died before age 5 years in 2013, 51.8% (3.26 million) died of infectious causes and approximately 44% (2.76 million) died in the neonatal period.<sup>3</sup> The 3 leading causes of newborn deaths are preterm birth complications (0.97 million [15.4%], UR = 0.615-1.537 million [9.8%-24.5%]), pneumonia (0.94 million [14.9%], UR = 0.82-1.06 million [13.0%-16.8%]), and intrapartum-related complications

(0.66 million [10.5%], UR = 0.42-1.05 million [6.7%-16.8%]). Reductions in pneumonia, diarrhea, and measles collectively were responsible for half of the 3.6 million fewer deaths recorded in 2013 vs 2000. Causes with the slowest progress were congenital, prematurity-related deaths, neonatal sepsis, injury, and other causes. It is also clear that mere secular trends will not lead to global gains, and at present trends, the world would still lose 4.4 million children younger than 5 years in 2030 due to preventable causes.

An unrecognized and unaddressed burden of stillbirths exists globally and is not included in the current global burden of disease estimates.<sup>4</sup> Unfortunately, 76.2% of an estimated 2.64 million stillbirths (UR = 2.14-3.82 million) in 2009 worldwide occurred in South Asia and sub-Saharan Africa, mostly among rural populations. An estimated 45% (1.19 million, UR = 0.82-1.97 million) of these stillbirths occurred in the intrapartum period, reflecting a clear extension of the neonatal deaths related to intrapartum events, previously labeled as birth asphyxia deaths. The highest risk time is around birth, when more than 40% of maternal deaths (around 125,000) and combined stillbirths during labor and neonatal deaths (a staggering 2.2 million) occur. These deaths occur rapidly, requiring urgent response by health care workers.

## EVIDENCE-BASED INTERVENTIONS AND INNOVATIONS TO ADDRESS INEQUITIES

A series of rigorous research studies since 2003 have underscored the fact that we have a host of evidence-based interventions that can potentially reduce

Zulfiqar A Bhutta, MD, PhD, is the Robert Harding Inaugural Chair in Global Child Health at the Hospital for Sick Children, Toronto, Canada, and the Founding Director of the Centre of Excellence in Women and Child Health at the Aga Khan University in Karachi, Pakistan. He was a member of the independent Expert Review Group set by the UN Secretary General in September 2011 for monitoring global progress in the United Nations maternal and child health Millennium Development Goals. E-mail: [zulfiqar.bhutta@sickkids.ca](mailto:zulfiqar.bhutta@sickkids.ca).

child mortality. Multiple recent evidence syntheses indicate that we have a range of preventive, promotive, and therapeutic interventions that can affect newborn and child survival.<sup>5</sup>

Despite the knowledge and availability of information and guidelines, major gaps remain in implementation. This is reflected in vast inequities in coverage of key interventions between countries and, importantly, within countries. These differences are sometimes systematic between subpopulations with varying attributes such as poverty, sex, ethnicity, or geographic region. Understanding the social determinants that relate to the excess burden of child mortality and morbidity is critical to action. Poverty is a huge barrier and affects all levels of care. Much of the burden of maternal and child mortality and ill health is concentrated among the poorest countries of sub-Saharan Africa and South Asia. In many of these countries, the bulk of the mortality is clustered among the poor people, frequently residing in remote and rural populations with limited access to health care services. However, a sizeable proportion of deaths also occurs among urban poor individuals living in slums with limited social support networks and abysmal living conditions.

A major advancement in our understanding of intervention strategies is also the ability to bridge these equity gaps. In addition to the selection of evidence-based interventions, this has been made possible through a range of delivery platforms such as deployment of community health workers to reach populations in need, addressing financial barriers through global and local strategies, integrated delivery platforms, and innovations involving technology solutions for diseases of poor populations. However, mere supply-side factors are insufficient on their own without creating community demand. The latter has been essential to affecting newborn health and household behaviors, including improved care seeking by families through community support strategies, especially women's groups.<sup>6</sup>

Additional innovations such as mobile health technologies, or "m-health," have huge potential to reach populations at risk and also improve health worker performance. Indeed, m-health can be used for a wide range of purposes, including health promotion and illness prevention, health care delivery, training and supervision, electronic payments, and information systems. An additional key element critical to achieving equitable health care is the availability of high-quality health care at all levels of the health system.

### POTENTIAL OF THE PLANS FOR MATERNAL AND CHILD HEALTH CARE IN HAITI

In the article, "Addressing the Child and Maternal Mortality Crisis in Haiti through a Central Referral Hospital Providing Countrywide Care," on page 59 of this issue, we present an ambitious plan to fast-track improvements in child and maternal health in Haiti, including building a central referral hospital. The foray of a private, not-for-profit organization into areas of public health and one of the poorest countries of the world is a welcome move, and the planned set of interventions and services in Haiti is especially laudable. The development of integrated primary care and community mobilization strategies, coupled with the provision of tiered services for both secondary and tertiary care, affords a unique opportunity to provide high-quality health services at affordable costs in this poor country.

Although the genesis of the project may lie in philanthropy and humanitarian assistance, its long-term sustainability will depend on the development of financing programs that can be linked to social safety nets, cash transfers, and insurance plans. Given the emphasis on the forthcoming sustainable development goals for universal health care, this project offers a unique opportunity to "walk the talk." Its success lies not only in implementation and reach but also in robust monitoring/evaluation and accountability, the cornerstone of global health governance. ❖

### Disclosure Statement

The author(s) have no conflicts of interest to disclose.

### Acknowledgment

Kathleen Loudon, ELS, of Loudon Health Communications provided editorial assistance.

### References

1. The millennium development goals report 2014 [Internet]. New York, NY: United Nations; 2014 [cited 2015 Nov 24]. Available from: [www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf](http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf).
2. Wang H, Liddell CA, Coates MM, et al. Global, regional, and national levels of neonatal, infant, and under-5 mortality during 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2014 Sep 13;384(9947):957-79. DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)60497-9](http://dx.doi.org/10.1016/S0140-6736(14)60497-9).
3. Liu L, Oza S, Hogan D, et al. Global, regional, and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: an updated systematic analysis. *Lancet* 2015 Jan 31;385(9966):430-40. DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)61698-6](http://dx.doi.org/10.1016/S0140-6736(14)61698-6). Erratum in: *Lancet* 2015 Jan 31;385(9966):420. DOI: [http://dx.doi.org/10.1016/S0140-6736\(15\)60154-4](http://dx.doi.org/10.1016/S0140-6736(15)60154-4).
4. Bhutta ZA, Das JK, Bahl R, et al; Lancet Newborn Interventions Review Group; Lancet Every Newborn Study Group. Can available interventions end preventable deaths in mothers, newborn babies, and stillbirths, and at what cost? *Lancet* 2014 Jul 26;384(9940):347-70. DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)60792-3](http://dx.doi.org/10.1016/S0140-6736(14)60792-3). Erratum in: *Lancet* 2014 Jul 26;384(9940):308. DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)61001-1](http://dx.doi.org/10.1016/S0140-6736(14)61001-1).
5. World Health Organization; The Aga Khan University; The Partnership for Maternal, Newborn & Child Health. Essential interventions, commodities and guidelines for reproductive, maternal, newborn and child health: a global review of the key interventions related to reproductive, maternal, newborn and child health (RMNCH) [Internet]. Geneva, Switzerland: The Partnership for Maternal, Newborn & Child Health; 2011 [cited 2015 Nov 24]. Available from: [www.who.int/pmnch/topics/part\\_publications/essential\\_interventions\\_18\\_01\\_2012.pdf?ua=1](http://www.who.int/pmnch/topics/part_publications/essential_interventions_18_01_2012.pdf?ua=1).
6. Prost A, Colbourn T, Seward N, et al. Women's groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis. *Lancet* 2013 May 18;381(9879):1736-46. DOI: [http://dx.doi.org/10.1016/S0140-6736\(13\)60685-6](http://dx.doi.org/10.1016/S0140-6736(13)60685-6). Erratum in: *Lancet* 2014 May 24;383(9931):1806. DOI: [http://dx.doi.org/10.1016/S0140-6736\(14\)60761-3](http://dx.doi.org/10.1016/S0140-6736(14)60761-3).