



Fact Sheet

Newborn Deaths in Developing Countries: A Serious Problem with Real Solutions

Over the past 17 years, the number of under-5 child deaths around the world has declined — from about 13 million in 1990 to 9.2 million in 2007. Despite this encouraging news, the decline has involved little progress in reducing newborn mortality: the death of a child in the neonatal period within 28 days of birth. Each year, approximately 3.7 million children die within those first 4 weeks, which accounts for about 40 percent of all under-5 deaths.¹

Fortunately, with low-cost, proven health care interventions, an estimated two-thirds of these newborn deaths can be prevented, according to public health experts.²

Public and private organizations such as the Bill and Melinda Gates Foundation, the GAVI Alliance, PATH, Save the Children, USAID, and the World Health Organization have initiated targeted programs to address this alarming situation. In 2005, the *Lancet* published a comprehensive series on newborn survival, summarizing current methodologies while offering specific recommendations for progress.

Why 3.7 Million Children Are Dying Within 28 Days of Birth

About 85 percent of newborn deaths are caused by three major culprits: infections; prematurity and low birth weight; and birth asphyxia/trauma.

- Infections: Septicemia, pneumonia, meningitis, tetanus, and diarrhea (31%)
- Prematurity and low birth weight (31%)
- Birth asphyxia/trauma: Baby not initiating and sustaining adequate respiration at birth (23%)³



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Increasing coverage of basic, cost-effective health interventions could avert the majority of all newborn deaths.

Saving Children Impacts Us All

“No investment in global health has a greater return than saving the life of a child. ...With sufficient resources and political resolve, we can ensure a healthy start, and a promising future, for children everywhere.”

— Melinda Gates,
Bill and Melinda Gates Foundation

In addition, about 3 million stillbirths (born dead after 22 weeks) occur every year, 1 million of them during childbirth.⁴ Critical conditions including hemorrhage, hypertensive disorders (e.g., eclampsia), serious infections, and obstructed labor account for nearly 60 percent of deaths in mothers, and are major contributory factors in newborn deaths.⁵

A myriad number of issues affect newborn survival, including inadequate education for mothers, poor basic health care services, weak environmental standards, insufficient access to nutritious food, and limited access to comprehensive emergency obstetric and newborn care services. Broader societal issues like poverty, gender inequality, harmful cultural practices, and civil unrest also play an underlying role in newborn deaths. There is an underestimation in the number of newborn deaths and stillbirths in developing countries, as many of these babies die at home without ever having contact with the health system, and hence are never reported.

How to Save a Newborn

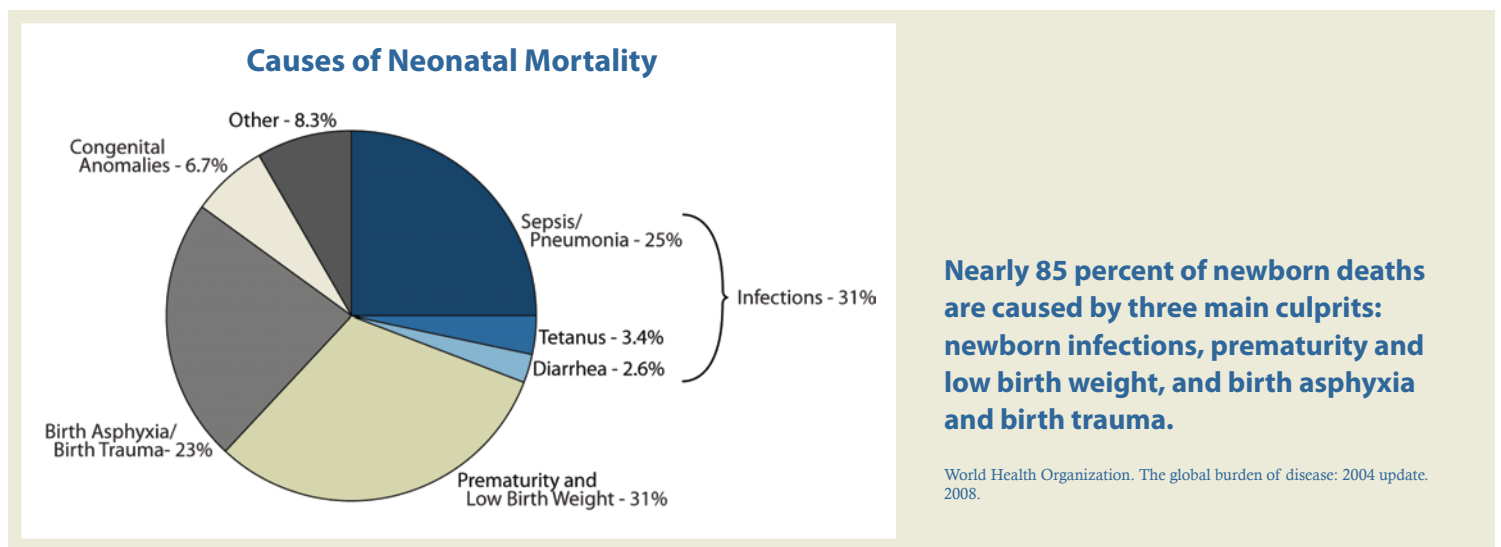
Effective health care interventions to save the lives of newborns range from the provision of antenatal care packages to training in relevant, culturally acceptable child care practices in the days and weeks after birth. Caring for small babies requires programmatically feasible and cost-effective interventions that can be delivered through the health system and accepted by communities.

During Pregnancy

Mothers need access to a antenatal care package that includes treatment for anemia, iron-folate supplementation, tetanus toxoid vaccination, medication to treat infections and sexually transmitted diseases, nirsevimir to prevent transmission of HIV/AIDS from mother to infant, preventive care and treatment for malaria during pregnancy, promotion of skilled care at birth; and promotion of effective postnatal care practices (e.g. early, exclusive breastfeeding, thermal protection, hygiene, extra care for the vulnerable low birthweight babies, illness recognition and appropriate care seeking).

The Birthing Process

- Women should deliver at a health facility with a skilled birth attendant, where possible. Birth attendants must be trained in clean and safe delivery practices, including care of the baby at birth; resuscitation for birth asphyxia; eye care; clean umbilical cord care; ways to keep the baby warm and dry; and simple resuscitation measures.



- The newborn should be breastfed immediately and exclusively and be observed for signs of infection. Items necessary for basic care during birth have been incorporated into inexpensive delivery kits that can be used by families, birth attendants, and hospital staff with basic instruction.⁶

The Newborn's First Days and Weeks

- The postnatal period, which is the first 6 weeks after birth, is the most neglected period in the pregnancy-delivery-postnatal continuum of care. This is particularly critical, as 75% of neonatal deaths take place in the first week, 50% being within the first 24 hours. The latter is more likely due to problems related to labor and delivery, resulting in severe birth asphyxia. However, subsequent mortality can be influenced by appropriate early postnatal care — the first 2 to 3 days being particularly important.
- Treatment of newborn infections must include timely care-seeking for danger signs, prompt identification of an illness, and treatment (as appropriate) with antibiotics.⁷ Since most newborn infections develop at home, it is critical that this take place at the community level. Such timely treatment within existing programs could prevent nearly all newborn deaths related to infections.
- Kangaroo mother care (KMC) — the practice of extended skin-to-skin contact between mother and newborn — is an inexpensive approach to caring for medically stable, hospitalized low birth weight babies, and is considered to be as effective as incubators. For example, in Malawi, more than 3,000 newborns have been reached through KMC training centers in six districts.^{8,9,10,11}

If all of these interventions were delivered at 90 percent coverage, about 67 percent of all newborn deaths could be averted.¹²



Indonesia: Training Workers to Resuscitate Newborns

In 2003, nearly half of all newborn deaths in the Cirebon district of Indonesia were due to birth asphyxia — when the child can't get enough oxygen during labor, during delivery, or immediately after birth. Averting deaths due to birth asphyxia is a challenge, especially for home births without the assistance of a skilled birth attendant. Even when a child is born in a health facility, providers may lack the essential skills or simple equipment to provide basic, life-saving care.

In order to address this situation in Cirebon, the international organizations PATH and Save the Children began a program for training community midwives (bidan di desas). These midwives were taught a series of initial steps for assessing and managing a newborn's condition, including the use of a locally produced tube & mask resuscitation device that could be used in home birth settings.

When PATH conducted an evaluation of the program, it found that newborn deaths due to birth asphyxia dropped by 47 percent in the district — at a cost of only \$42 per asphyxia death averted.¹³

Newborn Survival Depends on the Health and Well-Being of the Mother

Interventions for newborn health cannot be implemented in a vacuum, because the lives and health of mothers and newborns are closely linked. When mothers receive inadequate nutrition and become sick, their newborn babies face a higher risk of disease and death. Nearly one in every four newborns in developing countries is born with low birth weight, largely due to the poor health and nutritional status of the mother.¹⁴

Furthermore, if a mother dies in childbirth, then her newborn faces a much higher chance of dying during the first year of life, with remaining older children facing a greater risk of life-threatening illness. Newborn care must, therefore, be integrated into existing health systems and linked to broader care for mothers and young children to ensure sustainable impact at scale. Policies and programs must adopt the “continuum of care” approach, integrating care throughout the life cycle and the health system.

With additional resources, proven health interventions can be packaged and scaled up, ensuring effective care and saving the lives of the world’s most vulnerable — its newborn babies.

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- 1 UNICEF, The State of the World's Children 2009: Maternal and Newborn Health. 2009.
 - 2 Lawn JE, et al. 4 Million Neonatal Deaths: When? Where? Why? Lancet, 2005; 365:891-900.
 - 3 World Health Organization. The global burden of disease: 2004 update. 2008.
 - 4 Stanton C, Lawn J, Rahman H, Wilczynska-Ketende K, Hill, K. Stillbirth rates: delivering estimates in 190 countries. Lancet 2006; 367:1487-94.
 - 5 Khan K, Wojdyla D, Say L, Gulmezoglu A M, Van Look P. WHO analysis of causes of maternal death: a systematic review. Lancet 2006;367:1066-74.
 - 6 National Institutes of Health. Preterm Labor and Birth: What are preterm labor and birth? http://www.nichd.nih.gov/health/topics/Preterm_Labor_and_Birth.cfm
 - 7 Ibid.
 - 8 Cattaneo A, Davanzo R et al. Kangaroo mother care for low, birth weight infants: a randomized controlled trial in different settings. Acta Paediatrica, 1998; 87:976-85.
 - 9 Charpak N, Ruiz-Pelaez JG, Figueroa de Calume Z, Charpak Y. Kangaroo mother versus traditional care for newborn infants who are 2000g or less: a randomized controlled trial. Pediatrics, 1997; 100: 682-88.
 - 10 Ruiz-Pelaez J, Charpak N, Cuervo LG. Kangaroo mother care, an example to follow from developing countries. British Medical Journal, 2004-81.
 - 11 Worku B, Kassie A. Kangaroo mother care. Journal of Tropical Pediatrics, 2005; 52: 93-97.
 - 12 Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L. Evidence-based, cost-effective interventions: how many newborn babies can we save? Lancet 2005;365:977-88.
 - 13 Reducing Birth Asphyxia Through the Bidan di Desa Program in Indonesia, Final Report to Save the Children 2006, PATH.
 - 14 Anne Tinker and Elizabeth Ransom, “Healthy Mothers and Healthy Newborns: The Vital Link,” Population Reference Bureau and Saving Newborn Lives Initiative (April 2002).

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