

Child Survival in Bangladesh

KEY STATISTICS

Under-five mortality rate (deaths per 1000 live births)	65
Infant mortality rate (deaths per 1000 live births)	52
Neonatal mortality rate (deaths per 1000 live births)	37
Percentage of child deaths between age 1 and 17 due to injury	38*
Infants fully vaccinated by 12 months (%)	75**

All data from the Bangladesh Demographic and Health Survey, 2007, except:

* Bangladesh Health and Injury Survey 2003

** EPI Coverage Evaluation Survey 2009

BACKGROUND

Bangladesh has made significant progress in improving the health of its children. It is one of the few countries in the developing world that is on track to achieve Millennium Development Goal 4: reducing the under-five mortality rate by two thirds by 2015.

Bangladesh is among only six countries in the world that have reduced by half or more their child mortality rate since 1990 (from 151/1000 in 1990 to 65 in 2007). The infant mortality rate has also significantly declined to reach 52 deaths per 1000 live births in 2007 from 117 deaths/1000 in 1990.

Despite these inroads, challenges remain. While the mortality rates have improved overall, major inequalities among the population need to be addressed. The under-five mortality rate is 86/1000 for the poorest quintile while the richest quintile records only 43/1000¹. The recent Multiple Indicator Cluster Survey conducted in 2009 also shows huge geographical disparities with the least performing district, Sherpur, recording 102 deaths per 1,000 live births and the best performing one, Pabna, recording only 43 per 1,000.

Infant and neonatal mortality rates remain high and have not decreased substantially for the past five years. Today, neonatal mortality makes up more than half of all under-five deaths.

ISSUES

Survival is an enormous challenge for children younger than one year of age and especially those younger than one month, the neonates. In Bangladesh, 14 babies under one month of age die every hour and 120,000 every year.

Three quarters of these newborn babies die within their first week of life and almost fifty per cent die within the first 24 hours of birth, with most of these deaths occurring at home. The

¹ BDHS 2007

main causes of these deaths are infection (about 50 per cent), birth asphyxia and low birth weight or pre-term deliveries.

The knowledge of caregivers plays a crucial role. Simple life saving newborn care practices could save those babies, such as drying and wrapping, early initiation of exclusive breastfeeding, tactile stimulation and resuscitation, care of eyes, skin and umbilical cord, special care of low birth weight babies and early referral to a trained provider when they are sick. However, most families do not know about these simple care practices.

After the neonatal period, acute respiratory infections (ARI), diarrhoea and injuries - especially drowning - are the leading causes of death among children under five.

In Bangladesh, it is estimated that one in five deaths of children under-five is due to pneumonia². Only 37 per cent of children affected by ARI were taken to a facility or to a health worker in rural areas in 2007³. Many parents simply do not know what services are available, or they are unsure about the quality of care offered. They also tend to think that childhood illnesses are a "natural" part of growing up. The challenge is to reach families with a package of high-impact essential services for child survival using a community-based approach.

Unlike ARI, there has been progress in the management of diarrhoea. In 1993-1994, only 50 per cent of children with diarrhoea received oral rehydration therapy, while in 2007 that figure had increased to 77 per cent⁴. The greatest improvements have taken place in rural areas. In the future, vaccines for rotavirus and cholera as well as zinc treatment (already introduced) could play a critical role in reducing the number of diarrhoea-related deaths.

Injuries are another major challenge for Bangladeshi children. Injuries account for nearly two in every five deaths for children aged 1 to 17. Drowning alone is the leading cause of death for children between one and four years of age⁵. Other causes of injury deaths in Bangladesh are road traffic accidents, falls, burns, poisoning, animal bites, suicide, and violence. Of the children who do survive injuries, many are burdened with disabilities and face an uncertain future with extremely limited support. About 36 children become disabled every day from injuries.

With more than 46 per cent children under five years of age being underweight⁶, Bangladesh also records a high rate of malnutrition which contributes to weakening the immune system and ultimately results in higher child mortality.

Disparities in health and nutritional status of children are closely associated with income inequity, inequity in access to good quality nutrition, education, and health services. For instance, more than half of malnourished children in Bangladesh are also among the poorest.

Immunization has made good progress with 75 per cent of one-year-olds now fully immunized (CES 2009). Some 98 per cent of babies receive BCG, the first antigen given to newborns. An outbreak of polio in March 2006 prompted increased immunization activities that have helped keep Bangladesh polio-free since November 2006. Neonatal tetanus (NT) was eliminated in Bangladesh in May 2008. However for people in the remotest areas,

² BDHS 2004 (21%)

³ BDHS 2007

⁴ BDHS 2007

⁵ Bangladesh Health and Injury survey, 2005

⁶ BDHS 2007

accessing vaccines can be difficult. It is a continual challenge to reduce the number of children dropping out after the first immunization visit.

ACTION

UNICEF's child survival programme focuses on three main areas: the Expanded Programme on Immunization (EPI); the Integrated Management of Childhood Illness (IMCI) including newborn care; the prevention of child injuries. (On neonatal care, see Factsheet 'Maternal and Neonatal health').

Expanded Programme on Immunization (EPI)

The Expanded Programme on Immunization aims:

- to achieve full immunization coverage for 85 per cent of children younger than 12 months in low performing areas;
- to eradicate poliomyelitis (polio);
- to eliminate maternal and neonatal tetanus (achieved in Bangladesh);
- to expand Haemophilus Influenzae type b (Hib) vaccination against severe forms of pneumonia and meningitis
- to reduce measles mortality and morbidity.

To achieve these goals, UNICEF procures vaccines, cold chain equipment (such as refrigerators, cold boxes, ice packs) and other supplies (such as syringes and safety boxes). UNICEF also supports the strengthening of the national cold chain capacity in terms of management, procurement, installation and training of cold chain engineers.

UNICEF supports the Government in improving routine EPI coverage through its 'Reach Every District' strategy, focusing on 15 chronically low performing or hard-to-reach districts including the Chittagong Hill Tracts (CHT) and urban slums. UNICEF provides support in developing a local microplan that is reviewed quarterly, a crash programme to reach the un-reached, capacity building, communication and social mobilization activities.



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UNICEF is one of the partners of the Measles Initiative, supporting the Government of Bangladesh in one of the biggest-ever Measles Catch Up Campaigns in 2005-2006 and the follow-up national measles campaign which took place from 14 to 28 February 2010. This recent campaign targeted 20 million children aged between 9 months and 5 years while the 2005-2006 campaign reached 35 million children aged 9 months to 10 years, achieving 87 per cent coverage. UNICEF provided technical support for social mobilization and a mass media campaign, and procured vaccines and other supplies.

UNICEF also played a key role in elimination of neonatal tetanus in Bangladesh. Through the Maternal and Neonatal Tetanus (MNTE) campaign, tetanus toxoid (TT) vaccination was provided to an estimated 3 million women of child bearing age (15-49 years) in high-risk areas. Elimination was also obtained through increased coverage in routine immunization.

UNICEF supports the Government in implementing the National Immunization Days (NIDs). After polio cases were reported in Bangladesh in 2006, more than 12 NIDs have been organized between 2006 and 2010, reaching all children under five in Bangladesh. Since 2006, Bangladesh has been polio-free.

The nationwide introduction of *Haemophilus Influenzae* type b (Hib) vaccines through the routine immunization system in January 2009 will assume an important role in reducing mortality from ARI.

UNICEF also supports the yearly EPI coverage evaluation survey to ensure an effective collection of immunization-related data.

Integrated Management of Childhood Illness (IMCI)

UNICEF supports the Government of Bangladesh and NGOs to implement Integrated Management of Childhood Illness (IMCI) interventions with the objective to reduce child deaths due to major childhood killers: neonatal infections, pneumonia, diarrhoea, malaria and malnutrition. This can be achieved through increased coverage and improved quality of health care, especially at sub-district and community level. Improving the caring practices of caregivers is also part of this programme.

IMCI interventions take place both in health facilities and at community level.

In health facilities, the objective is to ensure quality treatment, counselling, follow-up and referral care for newborns and children under five. Major initiatives undertaken are:

- provision of appropriate training through establishing training centres;
- orientation of health managers on planning, implementing and monitoring;
- provision of job aids and logistics;
- regular supply of essential drugs;
- regular performance reviews through monitoring visits, district/divisional review meetings and feedback;
- development of information systems and data collection.

At the community level, UNICEF spearheaded the development of a national strategy for community-based IMCI. The strategy aims to 1) improve access to basic care and treatment at household and community level through community health workers 2) improve mothers' and caregivers' knowledge on caring practices and care-seeking behaviours.

IMCI interventions at community level include newborn care. UNICEF contributed to the development of all the training packages.

In communities, major activities include:

- counselling at household level by trained community health workers or promoters, including antenatal care;
- postnatal care visits carried out 48 hours after birth and provision of essential newborn care;
- identification and referral of sick newborn babies and sick children;
- training of village doctors to help them improve treatment by rational use of drugs and timely referral;
- mobilization of local opinion leaders to enlist their support to improved caring practices;
- communication activities using appropriate channels such as folk theatre, etc.

Basic health workers' training is also undertaken to improve the case management of childhood diseases at community level.



UNICEF is directly supporting the implementation of community-based IMCI interventions through an integrated package of maternal, neonatal and child survival interventions (MNCS) in more than 50 *upazilas* (sub districts) in 7 low performing and geographically inaccessible districts during the period 2008-2011.

At the national level, UNICEF is supporting the Government to decentralize the organization and management of service delivery. This involves training local managers; assisting with the micro-planning and management of services; maintaining the quality of care through

supportive supervision, and expanding the range of community interventions.

UNICEF provides considerable support in establishing effective health management information systems (HMIS). Some of the major initiatives include the development of necessary tools/software to capture adequate data, development of a web-based information system and training statisticians and service providers at various levels.

UNICEF also encourages better coordination and collaboration between the national/local health authorities and NGOs through the institutionalization of IMCI committees at various levels.

Prevention of Child Injury (see Factsheet ‘Prevention of Child Injury’)

UNICEF supported the Government in assessing the burden of child injury through conducting a nationwide health and injury survey in 2003. Through disseminating the groundbreaking findings in national and international forums, UNICEF has been able to draw policy makers’ attention to this public health issue. This resulted in the inclusion of injury prevention in major Government policy documents.

UNICEF is supporting an injury prevention operational research project that covers about 800,000 rural and 200,000 urban people. The project has three broad components: home safety, school safety and community safety programmes. An inbuilt surveillance system was established to measure the effectiveness. Two evaluations conducted in 2009 confirmed the effectiveness of the injury prevention strategies put in place through this pilot project.

IMPACT

Expanded Programme on Immunization

- National coverage for fully immunized children aged 12 months increased from 52 per cent in 2001 to 75 per cent in 2009. The access to immunization has been continually high (99 per cent in 2009). (CES 2009).
- Bangladesh was recognised for its efforts in improving immunization rates with a special award from the Global Alliance on Vaccines and Immunization (GAVI) in Hanoi in November 2009.

- Through the 2005-2006 nationwide measles campaign, approximately 27 million children were protected against measles, averting an estimated 10,000 deaths. After the campaign in 2006, the number of measles outbreaks registered was only 7 compared to 27 registered in the first two months of 2006 prior to the campaign. No measles outbreak was reported in 2007 and only one occurred in both 2008 and 2009.
- In the 15 low performing districts, full immunization coverage increased from 52 per cent in 2005 to 74 per cent in 2009. (CES 2009).
- Bangladesh had been free of indigenous polio virus since August 2000. The last outbreak of wild polio virus (imported) occurred in March 2006. Bangladesh has been polio-free since November 2006.
- Bangladesh achieved neonatal tetanus (NT) elimination status in May 2008. This is a major public health success, given the high incidence of Neonatal Tetanus prior to the introduction of immunization in 1990. Neonatal tetanus elimination contributed directly to reducing child mortality.

Integrated Management of Childhood Illness

- Bangladesh is rapidly expanding IMCI interventions in public health facilities and has so far covered more than 300 out of the 482 sub-districts, mostly through UNICEF support. However lack of adequate IMCI-trained staff coupled with the absence of an institutional supervision/monitoring system at sub-district level pose formidable challenges for proper implementation of this programme.
- The IMCI programme has contributed to substantially improve the quality and coverage of health services. Facility utilization by sick under-five children increased by 33 percent between 2006 and 2007 (to 17 per cent) in the facilities implementing IMCI. An independent review of these facilities evaluated the quality of care in terms of client satisfaction, service provision and facility preparedness. The review showed that the quality of care in these facilities improved by 50 per cent between 2006 and 2007.
- The community-based IMCI is being implemented in more than 50 sub-districts in 7 districts. This initiative will gradually expand to 45 new sub-districts by 2011.
- Essential Newborn Care, one of the five priority areas, has been introduced both in facility and community-based IMCI services following recommendations of the National Neonatal Health Strategy & Guidelines in Bangladesh, which was developed & approved by MOHFW in 2009 with technical and financial support from UNICEF.

Prevention of Child Injury

After three years of operation, the Injury Prevention research project was evaluated both by the researchers and an independent evaluation team. The findings of the evaluation show an overall reduction in injury deaths in the rural intervention areas. Injury death rates among children under 18 decreased from 48.7 to 34.8 per 100,000 children, which represents a reduction of more than 28 per cent. The most significant change occurred in fatal drowning which decreased by 45 per cent.

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