Review article

Child Mortality and Morbidity Reduction: A Great Achievement for Bangladesh

DOI: https://doi.org/10.47648/zhswmcj.2022.v0401.07

*Ahmed N,[1]

Abstract

Since the independence of Bangladesh in 1971, the Government of Bangladesh has been putting its best efforts at reduction of child mortality and morbidity. Child mortality reduction is considered an important indicator of socio-economic success under the Sustainable Development Goals (SDG). Bangladesh fared well with respect to reduction of child mortality which is measured by under-five mortality rate (U-5MR) and infant (children under one year of age) mortality rate (IMR). The U-5MR has gone down from 146 per 1,000 live births in 1990 to 84 in 2000 and further reduced to 40 per 1,000 live births in 2019. To understand the child malnutrition situation in the country, one important indicator we need to consider is the rate of underweight children under five years of age which decreased from 66% in 1990 to 22.6% in 2019. The Expanded Programme of Immunization (EPI) is being implemented for past several decades and it is an important way to deal with vaccine preventable diseases. About 85% of children 12-23 months are fully immunized in the country which is a major achievement made in this regard. The government for over two decades has been promoting early childhood development. It is well recognized by now that children's potential and capacities can be unleashed through early education, stimulation, psychosocial and cognitive development.

Keywords: Child mortality, Child morbidity, Immunization, Malnutrition, Child development.
Received on 05.07.2021; **Accepted on** 15.09.2021

Introduction

Since the independence of Bangladesh in 1971, the Government of Bangladesh has been putting its best efforts at reduction of child mortality and morbidity through supporting maternal, newborn and child health interventions delivered through the government's health system. Similarly, the government has been supporting other interventions aimed at reducing child mortality such as water, sanitation and hygiene (WASH), nutrition, early childhood development, basic education and communication for development. Besides material and financial contributions, the government did put in a substantial effort at capacity building to have in place institutional and organizational mechanisms to improve the efficiency and effectiveness of health system and behavior change at family and community levels.

Child mortality reduction is considered an important indicator of socio-economic success under the Sustainable Development Goals (SDG).[1] It was also a crucial indicator of progress under the Millennium Development Goals (MDG).[2] Target 3.2 under Goal 3 of the SDG calls for ending preventable deaths of newborns and children under five years of age. The government, development partners and NGOs have worked together diligently towards the same goal of child mortality and morbidity reduction in Bangladesh since its independence and even upto now since the rate is still high.

Situation Assessment

Bangladesh fared well with respect to reduction of child mortality which is measured by under-five mortality rate (U-5MR) and infant (children under one year of age) mortality rate (IMR). The U-5MR has gone down from 146 per 1,000 live births in 1990 to 84 in 2000 and further reduced to 40 per 1,000 live births in 2019.[3] The infant mortality rate (IMR) likewise came down from 92 per 1,000 live births in 1990 to 58 in 2000 and 34 in 2019.[3]

Bangladesh met the MDG target with respect to child mortality reduction. The socio-economic and health improvements in the country in the past decades have contributed to this success. Bangladesh has achieved respectable economic growth over the last two decades with a Gross Domestic Production (GDP) growth rate averaging 6-7% per annum that reached 8.1% in 2018-19. The country's GDP per capita has increased from US$206 in 1980 to US$1,855 in 2019.[4]

Economic growth has helped reduce poverty in the country. The reduction of population living below the poverty line from 56.7% in 1990 to 20.5% in 2018-19,

1. *Dr. Nawshad Ahmed PhD, Monitoring and Evaluation Expert, Technical Assistance to Social Security Reform Programme in Bangladesh, Ministry of Cabinet Affairs, Dhaka. Former Chief of Planning, Monitoring and Evaluation, UNICEF

***Address of Correspondence:** Dr. Nawshad Ahmed PhD, Monitoring and Evaluation Expert, Technical Assistance to Social Security Reform Programme in Bangladesh, Ministry of Cabinet Affairs, Dhaka. Email: nawnahid@gmail.com

and life expectancy at birth increased from to 72.3 years, also had a positive impact on child mortality reduction and this led to Bangladesh's achieving the MDG target of poverty reduction as well.[5] As a SDG target for 2030, we need to now strive to achieve an under-5 mortality rate of 25 per 1,000 live births.

Despite the fact that national poverty rate has come down in the country to 20.5% in 2018-2019, the rate is two times higher in Rangpur Division compared to Chittagong Division. It is apparent that social services are not equally distributed among the different regions and between urban and rural areas. While the country is moving towards becoming a middle-income country by 2026, the human development situation is not keeping pace with the economic progress achieved. Therefore, continuous work by the government, non-government sector and the development partners and UN agencies are required in the coming decades.

It is important to note that the highest deaths of children occur in the early months of life and is caused by complications largely associated with conditions of pregnancy and safe delivery. Neo-natal mortality stands at per 1000 live birth in 2019.[3] Low birth weight and prematurity are the two most important factors in neo-natal mortality. Several conditions in pregnancy like eclampsia and pre-eclampsia, infections, maternal malnutrition, malaria, hepatitis and anemia contribute to maternal and neonatal mortality. Complications in delivery can endanger both the lives of the mother and the newborn.

As the child grows, diarrhoea, acute respiratory infections, malaria, and vaccine preventable diseases continue to cause under-five morbidity and mortality. These diseases can even accelerate deaths of children if they are suffering from malnutrition. About 45% under-five mortality is generally attributable to malnutrition.

To understand the child malnutrition situation in the country, one important indicator we need to consider is the rate of underweight children under five years of age which decreased from 66% in 1990 to 22.6% in 2019.[3] Again, the percentage of stunted children declined from 51% in 2004 to 28% in 2019 [3]. About 26% of babies born with low birth weight (less than 2,500 grams) in the country are more prone to diseases. The prevalence of wasting among under-5 children has declined from 20% in 2000 to 9.8% in 2019.[3] The exclusive breastfeeding rate increased slowly from 46% in 1993 to 62.6% in 2019. Continued breastfeeding of children under one year of age has remained very high as a tradition in Bangladesh which was 93% in 2019. Supplementary feeding rate at age 6-8 months in 2019 was 75.5%.[3]

Micronutrient deficiencies remained high has been demonstrated by low iodized salt intake. About 76% households are consuming adequately iodized salt.[3] Significant deficiency in Vitamin A among children remains- about 20% of children are not receiving Vitamin A supplements. It is clear that child malnutrition is still high and needs to be addressed to further reduce under-five mortality in the country.

The Expanded Programme of Immunization (EPI) is being implemented for past several decades and it is an important way to deal with vaccine preventable diseases. About 85% of children 12-23 months are fully immunized in the country which is a major achievement made in this regard.[3] However, effort should be made to fully immunize 100% of children in the country. It is worth mentioning here that both maternal and neonatal tetanus, and polio have been eradicated from the country in 2008 and 2014 respectively.

Only 13% of 3-5 year old children attend a pre-school education programme in Bangladesh.[3] Again, only 9% of under-five children have access to children's books.3 In rural areas, children from poorer families have significantly lower development scores compared to children from richer families as early as at seven months of age. This difference increases with age and results in more school drop outs and reduced school attendance among the poorest families compared to the richest families. This poor educational performance shows up when children grow up and get less employment opportunities and lower income.

Nationwide, in 2019, 59% of births were assisted by a skilled health person and some 53.4% deliveries took place in a health facility which means that a significant proportion of births take place at home and often assisted by untrained traditional birth attendants ('dais').[3] Water supply situation has improved greatly and while 68% of the population used an improved drinking water source in 1990, 98.5% of the people had access to an improved water source in 2019.[3] The percentage of households with access to sanitary facilities stood at 84.6% in 2019, a huge improvement from only 34% in 1990.[3]

Other problems in health sector are: poor coordination among the four tiers of government (national, District, Upazila and Union), limited availability of necessary commodities and equipment, shortage of skilled and motivated human resources, difficulties in outreach to remote settlements and a weak referral system, financial and geographic barriers to access, poor quality of programme data, inadequate and ineffective monitoring systems, and lack of innovation to improve programme delivery.

Programme Interventions

In 2013, the government has committed itself to reducing the child mortality under an international initiative called "A Promise Renewed" and in 2014, it developed "Bangladesh Every Newborn Action Plan". This is a comprehensive plan to deal with both the supply and demand sides of the child and maternal mortality issue. UNICEF Bangladesh is an active partner to this initiative.

Child survival interventions require health, nutrition, WASH, early childhood development which should be provided as a package in a convergent manner. The public services delivered in Bangladesh is mostly uncoordinated. For example, child survival interventions which require health, nutrition, WASH, early childhood development are not provided as a package which negatively affects mortality and morbidity rates. By increasing synergy between these sectors, the impact on child survival can be improved since it will address the interrelated underlying causes of child mortality which are disease, lack of antenatal care, malnutrition of children and their mothers, limited availability of drinking water supply and poor hygiene practices.

The government recognized that malnutrition is a direct cause or underlying factor of child mortality. Nutrition is not only critical for the survival of young children, but also for their optimal physical and cognitive development. The effects of chronic malnutrition in the first 1,000 days of life, a period spanning from conception to a child's second birthday are largely irreversible, resulting in the major loss of human capital. Day 1 of the 1,000 plays a significant role for the development of the fetus and the future nutritional status of the child.

The combined efforts of the government and development partners helped make significant achievements in child malnutrition in Bangladesh. The rate of stunting of children declined from 63% in 1986 to 28% in 2019.3 Despite reduction in rate of stunting, there are still 5 million children under 5 years who are stunted. Again, 25% of children are born with a low birth weight of less than 2.5 kg.[5] These are areas which require convergence of interventions from all concerned sectors.

Full immunization coverage among children aged 12–59 months is 81% nationally [3] (2019). The rate however, is improving over time. Bangladesh has experienced impressive improvements in increasing immunization coverage over the last four decades and made a significant contribution to the reduction of childhood morbidity and mortality. Despite this success, the country recorded about 1,00,000 child deaths in 2016 and was among the top 10 countries that had the highest childhood mortality globally.[6] It is believed that half of these deaths could be prevented through immunization alone. Also, the burden of child mortality is highest on the poorest households. Children from the richest households are four times more likely to be fully immunized than the poorest households. Again, educated parents are likely to be wealthier and have better access to health facilities and immunization services.[7]

The government has been diligently working to remove the bottlenecks in health delivery system, some of which are the lack of necessary commodities and equipment and of skilled and motivated human resources; problems of access in remote areas, including lack of delivery points and a referral system; the cost and perceived poor quality of services; lack of awareness of the availability of services; and inadequate community mobilization. Gender-related barriers limit access to health care services for women and their children and impede progress towards more equitable and stronger health systems. Other issues such as poor-quality services that ineffectively respond to women's health needs, poor quality programme data and insufficient access to health information and poor participation of women in decision-making are significant contributing factors to maternal and child mortality and morbidity.

Analysis shows that there are several influencing factors to full immunization coverage in Bangladesh. These are: season of birth, birth order, maternal age, mother's educational qualification, employment status, socio-economic status.[8]

Children born in the summer and rainy seasons are 1.70 and 2.14 times more likely to be incompletely vaccinated as compared to winter season. Children whose birth order was 4–5 had 2.10 times more risk of incomplete vaccination.7 Children of less educated mothers are at increased likelihood of incomplete vaccination than those of mothers with a higher level of education. Maternal employment also raises the likelihood of incomplete vaccination. Children from the poorest households are two times at greater risk of incomplete vaccination than the children from the richest households.[9]

The government has been working to remove the main bottlenecks affecting maternal, new-born and child health which are: poor health-seeking behavior and use of traditional birth attendants rather than trained midwives in health facilities for deliveries.[10]

A number of misconceptions about harmful traditional practices are still prevalent as part of accepted cultural practice resulting in physical and psychological harm to the mother and child. Of particular concern is child marriage and practices associated during pregnancy and delivery including nutritional taboos. The government has been addressing these factors through social mobilization, community engagements with targeted groups of men and women with specific messages to change and adopt positive and healthy behaviours.[11]

The government has also a special emphasis on the use of media campaigns to inform mothers about the importance of oral rehydration therapy (ORT) to children with diarrhea. This knowledge should change their behavior towards use of ORT to children with diarrhea and prevent child mortality.[12]

The other area that the government and other stakeholders is social protection programmes that is aligned with the lifecycle approach. The child's age is considered in designing different social safety net pogrammes as the needs are different at conception and delivery, early years of the child, pre-primary, primary, secondary and adolescent years.[13]

The government for over two decades has been promoting early childhood development. It is well recognized by now that children's potential and capacities can be unleashed through early education, stimulation, psychosocial and cognitive development. Play and psychosocial stimulation along with adequate nutrition are essential for optimum growth and development of children. It has even been proved that early childhood parenting can address developmental deficits in undernourished children. Once these inert child capacities and talents are stimulated, children have the potential to grow and develop as a normal child and can demonstrate the human capabilities at a later age and contribute to the task of nation building.[14]

Conclusion

Finally, let us conclude by mentioning below the main strategies followed by the Government of Bangladesh to reduce child mortality and morbidity.

Integration and cross-sectoral linkages: It is very important to have strong integration and cross-sectoral linkages in effective programme implementation. In order to continue with the progress in newborn mortality reduction in Bangladesh, a high-impact facility-and community-based interventions and strengthened institutional capacities will be required for improvement of reproductive, maternal, newborn, child and adolescent health. This strategy is to break through the silo approach and implement a health and nutrition programme with continuum of care approach by following a life-cycle approach. The specific focus is on aligning nutrition intervention with prevention and control of pneumonia and diarrhoea, immunization, deworming and distribution of insecticide-treated bed-nets to combat malaria and other vector borne diseases.[15]

Capacity-building: Collaboration of different Ministries, Departments and local government bodies are to support the enhancement of capacity for better implementation of the programme in reproductive, maternal, newborn, child and adolescent health and nutrition interventions.[16]

Ensure availability of basic commodities: From the supply side, timely availability of vaccines, iron folate tables, vitamin A and D tables, iodized salt, deworming tablets, and iron supplements for women, nutritious food for malnourished children, and relevant drugs for children, pregnant women and mothers have to be ensured.[17]

Communication for development/behavioural change: The determinants of health-seeking behaviours include religious beliefs, cultural beliefs, the cost of services, distance to health facilities, trust on the service, level of education and health facility inadequacies such as stock-out of drugs and absenteeism of health personnel. Stronger communication/ social mobilization campaign using appropriate messages with special focus on diarrhea, malaria, immunization, and feeding practices are required.[18]

Gender is also a determinant of health seeking behavior. In order to improve health-seeking behaviors, gender responsive strategic behavioral communication interventions are being implemented. Also, the government is making efforts to end child marriage which has negative consequences like early pregnancy, birth complications and babies born with low birth weight which tends to perpetuate the intergenerational cycle of death and disability.[19]

References

1. United Nations, Sustainable Development Goals (SDG), 2015.
2. United Nations, Millennium Development Goals (MDG), 2000.
3. Bangladesh Bureau of Statistics and UNICEF, Multiple Indicator Cluster Survey (MICS), 2019.
4. World Bank national accounts data, GDP Per Capita. Available from: URL: https://data.worldbank.org/indicator/ NY.GDP.PCAP.CD?locations=BD.
5. Bangladesh Bureau of Statistics, National Low Birth Weight Survey of Bangladesh 2014. Planning division, Ministry of Planning, Government of the People's Republic of Bangladesh; 2015.
6. World Health Organization, Children: improving survival and well-being, Sept 2020.
7. Sarker AR, Akram R, Ali N and Sultana M. Coverage and factors associated with full immunisation among children aged 12–59 months in Bangladesh: insights from the nationwide cross-sectional demographic and health survey, BMJ Open, 9 July 2019. Available from: URL: https://bmjopen.bmj.com/content/bmjopen/9/7/e028020.full.pdf
8. Sheikh N, Sultana M, Ali N, Akram R, Mahumud RA, Asaduzzaman M and Sarker AR. Coverage, Timelines, and Determinants of Incomplete Immunization in Bangladesh, Trop. Med. Infect. Dis. 2018, 3, 72; doi:10.3390/tropicalmed3030072. Available from: https://www.mdpi.com/journal/tropicalmed
9. Khan M T, Zaheer S, and Shafique K. Maternal education, empowerment, economic status and child polio vaccination uptake in Pakistan: a population based cross sectional study. BMJ Open.

2017; 7(3): e013853. Available from: doi: 10.1136/bmjopen-2016-013853

10. Saha M, Odjidja EN (2017) Access to a Skilled Birth Attendant in Bangladesh: What We Know and what Health System Framework can Teach Us. Health Syst Policy Res Vol.4(4):66

11. Ending child marriage, A guide for global policy action. International Planned Parenthood Federation and the Forum on Marriage and the Rights of Women and Girls. Available from: URL: https://www.unfpa.org/sites/default/files/pub-pdf/endchildmarriage.pdf

12. Billah SM, Raihana S, Ali NB, et al. Bangladesh: a success case in combating childhood diarrhoea. J Glob Health. 2019;9(2):020803. doi:10.7189/jogh.09.020803. Available from: URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6816141/

13. UNICEF Bangladesh Country Programme for 2017-2020 Country Programme Document and Strategy Notes June 2016. Available from: URL: https://www.unicef.org/bangladesh/sites/unicef.org.bangladesh/files/2018-10/Bangladesh

14. World Bank. Bangladesh: Early Childhood Stimulation and Its Impacts. Available from: URL: https://www.worldbank.org/en/programs/sief-trust-fund/brief/building-parental-capacity-to-help-child-nutrition-and-health

15. United Nations. Working together: integration, institutions and the sustainable development goals World Public Sector Report 2018. Available from: URL: https://publicadministration.un.org/publications/content/pdfs/World%20Public%20Sector%20Report2018.pdf

16. Hossain J, Rahman N, Islam M H, Hasanuzzaman M, Roy K and Jenkins D. A multi-sector approach to improve nutrition: Experiences of the Nutrition at the Center project, Bangladesh. Field Exchange 59, January 2019. p54. Available from: URL: www.ennonline.net/fex/59/multisectorbangladesh

17. UNICEF. Children, food and nutrition, Growing well in a changing world, The state of the world's children 2019. Available from: URL: https://www.unicef.org/media/60806/file/SOWC-2019.pdf

18. Latunji OO, Akinyemi OO. Factors influencing health-seeking behaviour among civil servants in ibadan, Nigeria, Ann Ib Postgrad Med. 2018;16(1):52-60. Available from: URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6143883/

19. UNICEF Regional Office for South Asia. Gender Responsive Communication for Development: Mapping and Assessment of UNICEF Initiatives in Afghanistan, Bangladesh, Nepal and Pakistan, February 2018. Available from: URL: https://www.unicef.org/rosa/media/1746/file/Gender%20responsive%20communication%20for%20development.pdf