

Editorial

Anemia in Bangladesh: A Longstanding, Preventable Public Health Problem

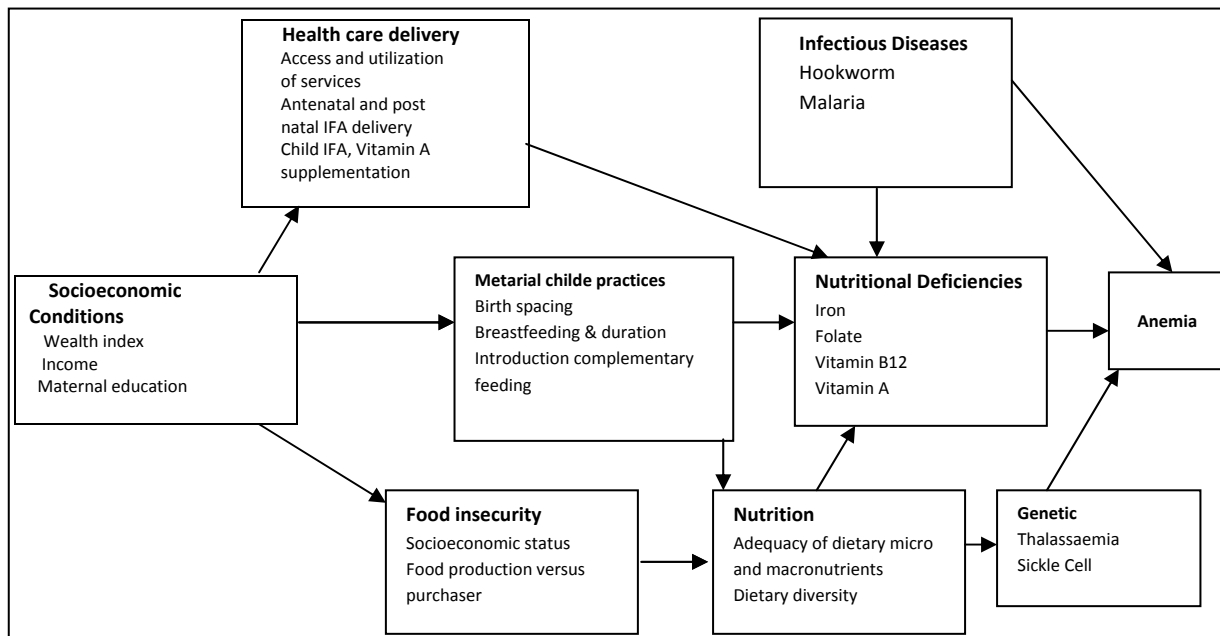
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Anemia is the disorder in which the concentration of haemoglobin in the blood is lower than the levels considered normal for a person's age and sex. Anaemia is a significant public health problem in Bangladesh, affecting the lives of 27 million children, adolescents and women. Its devastating effects on health and physical and mental productivity affect quality of life, particularly among the poor, and translate into significant economic losses for individuals and for the country. Over the last four decades, data on the prevalence of anemia indicated a high prevalence of anaemia in preschool children, without any trend for improvement. Similar information were also found for older children. The rates are very high at 30-40% for school-age children. The rates for girls are slightly higher than for boys. Nearly half of the pregnant women have anemia. Somewhat surprisingly, anemia is also highly prevalent in non-pregnant women and in adult males in Bangladesh.

The three main causes of anemia include i) Blood loss; ii) Lack of red blood cell production; and iii) High rates of red blood cell destruction. Some people have anemia due to more than one of these factors. Three main aetiologic categories are of concern in developing countries-micronutrients

deficiencies, chronic infection, and haemoglobinopathies. Genetically-inherited disorders of haemoglobin or haemoglobinopathies may be causal factors for anemia; however, their prevalence is among the least explored. Abnormal haemoglobin may be produced as a result of an alteration in the amino acid structure of the polypeptide chains of the globin fraction of haemoglobin, such as sickle-cell disease. In another form, the amino acid sequence is normal but the polypeptide chain production is impaired or absent for various reasons; these are thalassaemias. An estimated 3% and 4% of populations are carriers of beta-thalassaemia and Hb-E-associated disease, respectively in Bangladesh.

In this country, the anemia is commonly due to iron deficiencies and is hypochromic. Pasricha et al. model somehow explains the epidemiological causal pathway of anemia. In many developing countries, the principal reason for iron-deficiency anemia is poor dietary quality, and the intake of bioavailable iron is low. The diet of rural women of Bangladesh is principally based on cereal staples with high phytate content, which is a known inhibitor of iron absorption. The intake of iron from complimentary foods is critical for the infant from



six months as breast milk alone cannot provide for the infant's increased need for iron for accelerated growth during that period. A review of complimentary foods in developing countries concluded that requirements of iron might be difficult to meet from non-fortified complimentary foods, especially if animal products are not widely consumed. While iron is certainly crucial for normal levels of haemoglobin, iron is not the only nutrient which is responsible for nutritional anemia. Moreover, although iron deficiency is common in Bangladesh, it certainly does not totally explain the burden of anemia. Further studies are needed to better understand the causes of anemia.

Because of the severity of problem of anemia and the potential threat to health, survival and development of present and future generations, the prevention and control of anemia should be given immediate priority in the health and nutrition sectors of Bangladesh, particularly the school children who are not currently the target of anaemia prevention. Genetically produced anaemia can be prevented by appropriate counseling and the nutritional deficiency anemias require nutrition education as well as nutrient supplementation.

However, despite supplementation of iron folic acid tablets over the past few decades, no marked improvement has been noticed in the magnitude of anemia in Bangladesh. The special article published in this issue discussed the success and constraints of anemia control activities in Bangladesh. For anemia, the lack of progress over 40 years makes one cautious about being optimistic for the success of control programme unless aetiology of the problem is better understood. Thus, if anemia is to be addressed as a serious issue, there needs to be much more basic research to understand causes and physiology of anemia in Bangladesh. Different intervention packages are to be thought about and tested to control this enormous public health problem.

References

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