

Nutritional Surveillance Project

BANGLADESH: Nearing the Midpoint: Meeting the Nutrition Goals from the World Summit for Children by the year 2000



- (a) Reduction in severe, as well as moderate malnutrition among under-5 children by half of 1990 levels.
- (b) Reduction of the rate of low birth weight (2.5 kg or less) to less than 10 percent;
- (c) Reduction of iron deficiency anemia in women by one-third of the 1990 levels;
- (d) Virtual elimination of iodine deficiency disorders;
- (e) Virtual elimination of vitamin A deficiency and its consequences, including blindness;
- (f) Empowerment of all women to breast-feed their children exclusively for four to six months and to continue breastfeeding, with complementary food well into the second year;
- (g) Growth promotion and its regular monitoring to be institutionalized in all countries by the end of the 1990s;
- (h) Dissemination of knowledge and supporting services to increase food production to ensure household food security.

HKI/IPHN

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Nutritional Surveillance for Disaster Preparedness and Prevention of Nutritional Blindness

On September 30th, 1990 the World Summit for Children was held in New York at the United Nations. Member countries, including Bangladesh, committed themselves at the highest political level to goals and strategies for "ensuring the survival, protection and development of children as key elements in the socio-economic development of all countries and human society" (1). Member nations signed onto eight specific nutrition goals (reproduced on the front of this document) to be realized by the year 2000. The purpose of this report is to assess how Bangladesh is faring in regards to its stated goals. Helen Keller International, in cooperation with the Institute of Public Health Nutrition (IPHN) has coordinated a Nutritional Surveillance Project (NSP) in Bangladesh since April of 1990. The NSP is capable of addressing how Bangladesh is performing in regards to three of the stated goals:

- (a) Reduction in severe, as well as moderate malnutrition among under-5 children by half of 1990 levels.
- (e) Virtual elimination of vitamin A deficiency and its consequences, including blindness;
- (f) Empowerment of all women to breastfeed their children exclusively for four to six months and to continue breastfeeding, with complementary food well into the second year;

The methodology of the surveillance system has been detailed elsewhere (2). In brief, bimonthly cross sectional nutrition and socio-economic data is collected from 16 rural thanas (subdistricts) and 4 urban slum areas of Bangladesh with approximately 8000 children 6-59 months being surveyed each round. Strict quality control measures are in place and data quality has been found to be high. Only data from rural thanas will be presented in this summary.

Reduction of Severe and Moderate Malnutrition

Both severe and moderate malnutrition as measured by low weight-for-age (3) show relatively strong seasonal patterns with children suffering more from malnutrition during the preharvest months of August and October and less severely during the post-harvest months of February and April (Figure 1). Severe and moderate undernutrition increased for the first three years of the surveillance system and has subsequently decreased since October of 1992. October 1992 marked a time when rice prices in Bangladesh dramatically decreased providing an economic benefit to the rural poor. As of February of 1994 rice prices have again begun to rise.

If December 1990 levels are taken as baseline, 45.1% of children were moderately malnourished and 24% of children were severely malnourished (for a total of 69.1% moderately or severely malnourished). This compares to December 1993

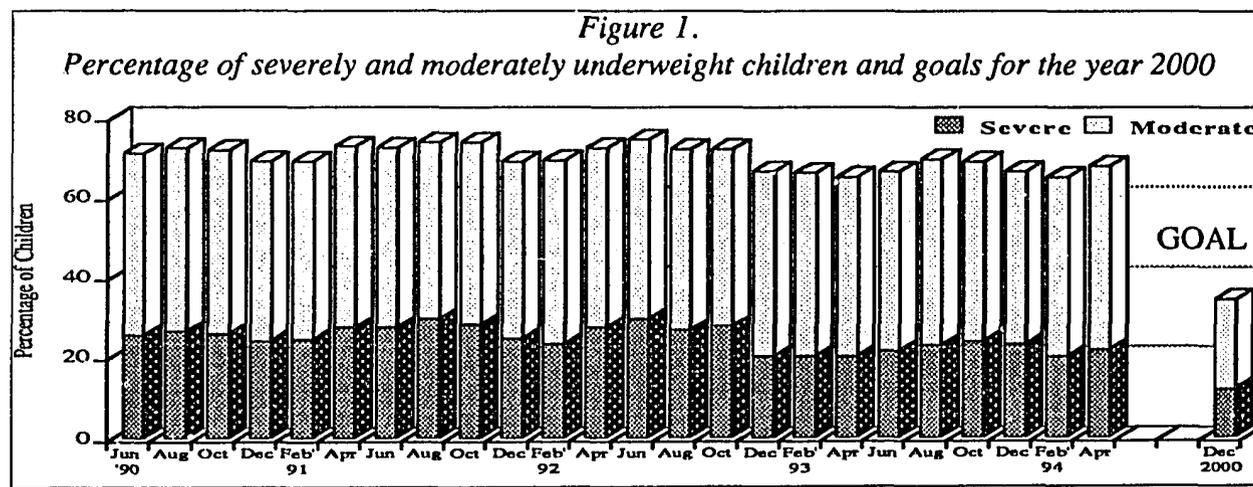
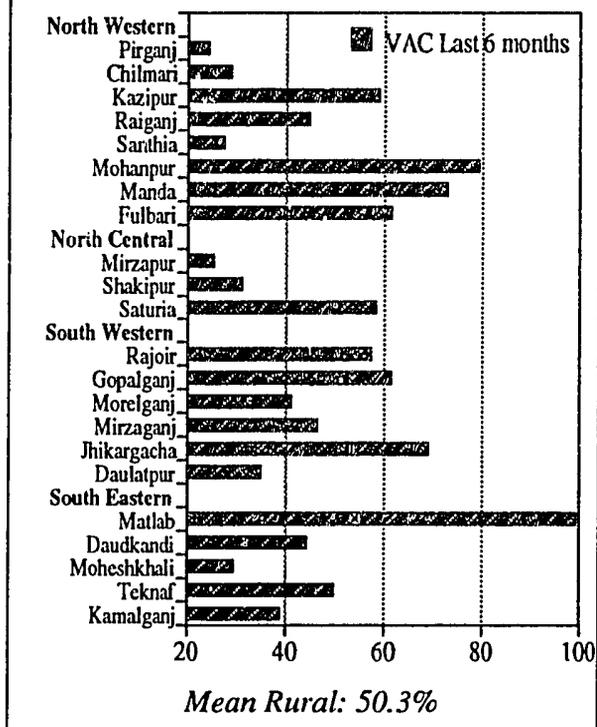


Figure 2.
Percentage of children 6-59 months receiving a vitamin A capsule (VAC) within the last 6 months, April 1994



levels of 42.4% moderately malnourished and 24.1% severely malnourished (total 66.5%). Reduction to half of 1990 levels would mean 22.5% moderately malnourished and 12% severely malnourished by December 2000 (total 34.5%).

Elimination of Vitamin A Deficiency

Vitamin A deficiency among children under five as manifested by nightblindness displays a relatively strong seasonal pattern. Nightblindness rates peak in October-December when natural sources of vitamin A are unavailable and costly. Rates decrease sharply as vegetables and fruits become plentiful in the early months of the year. The seasonal pattern has remained relatively constant since June of 1990. There has been a slight trend towards a worsening of nightblindness with the last two Octobers (1992 and 1993) having somewhat higher rates than the first two. Rates have varied from .5% to 1.4% with an average of .8%. Since December

1992, NSP has also collected data on night blindness of mothers. Rates range from 1% to 2.1%, indicating a serious public health problem with an average of 1.5% (4).

Data on vitamin A capsule (VAC) coverage in the rural areas shows that on average, approximately 53% of rural children receive a VAC during the regular twice yearly distribution period with the rate remaining relatively constant over the last four years, but there is extreme geographic variation as indicated in Figure 2. Although this is laudable coverage in a country of this size, greater efforts in both VAC and food based interventions such as home gardening are needed in order to eliminate vitamin A deficiency and its complications by the year 2000. Health and nutrition education is also a vital component to achieving this goal.

Promotion of Breastfeeding

The NSP does not measure exclusive breastfeeding prior to six months of age, but at six months, 44% of children are still exclusively breastfed. Breastfeeding is the norm in rural Bangladesh; over 80% of children are still being breastfed 24 months after birth, and 50% at 34 months after birth.

To summarize, Bangladesh has committed itself to the achievement of the nutrition goals from the World Summit for Children. Bangladesh will have to make renewed efforts to combat malnutrition, as there have been at best minor improvements since 1990. Despite the achievements of the VAC distribution program, vitamin A deficiency in children and in mothers remains a major public health problem.

- (1) UNICEF, 1990, *The World Summit for Children; A UNICEF Contribution to the World Summit for Children*, New York; UNICEF.
- (2) Helen Keller International, 1992, *Nutritional Surveillance Project for Disaster Preparedness and Prevention of Nutritional Blindness Handbook 1992*.
- (3) W/A <-2Z Scores and W/A <-3Z Scores.
- (4) Bloem, M et al., *Vitamin A deficiency among women in their reproductive years: an ignored problem*, (submitted).

Collaborating Organizations

Aga Khan Community Health Project, (AKCHP)
Bangladesh Rural Advancement Committee, (BRAC)
CONCERN
Gono Unnayan Prochesta, (GUP)
International Center for Diarrhoeal Disease Research, Bangladesh, (ICDDR,B)
Institute of Public Health Nutrition, (IPHN)
PROSHIKA
Rangpur Dinajpur Rural Services, (RDRS)
Society for Health Extension and Development, (SHED)
United Nations Children's Fund, (UNICEF)
Christian Commission for Development in Bangladesh, (CCDB)

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