

Watch Report

Report No. 4

Research and Evaluation Division, BRAC

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Report on Vitamin A Coverage September 1993 Data

Introduction

The devastating effects of vitamin A deficiency on eye and the high prevalence of nightblindness have been known to health service providers many years ago. However, the vitamin A deficiency as a major public health problem in Bangladesh has received attention only after the independence in 1971 when the dimensions of such deficiency is emphasized as the most important cause of irreversible loss of sight in childhood (HKI, 1985). Along with maintenance of visual functions such other characteristics as reproduction, physical growth during childhood, and maintenance of bone structure also depend on the supply of vitamin A.

In Bangladesh, nearly 1,000,000 children suffer from vitamin A deficiency of whom 30,000 go blind each year (HKI, 1993). As a result, the Bangladesh Program for the Prevention of Blindness (BPPB) began with the support of UNICEF in 1973 which has been operating a massive twice-a-year mass distribution of high potency vitamin A capsule along with long term nutrition education programs. The primary objective of the program has been to prevent nightblindness due to vitamin A deficiency where doctors or other trained personnel are not available.

In addition, this program has been expected to reduce morbidity and mortality in children.

This report assesses the coverage of vitamin A capsule distribution undertaken in two rural areas of the country, and its trend since September 1991.

Methodology

In 1986, BRAC launched a vital registration system, known as *Watch*, in three rural unions in its project area in Manikganj district, which consisted of 87 villages with a total population of 51,739. The program was introduced to document the demographic changes that was induced as a result of a development project with health, income generation, education, women's program in the area. The health component included oral rehydration therapy, immunization for both the mother and children, growth monitoring, nightblindness prevention, and health education. The registration system was expanded in 1987 to three more rural unions in Joypurhat district covering 63 villages with 35,708 population where no such development intervention was underway. BRAC has been collecting information on immunization coverage of children twice a year since January

1989 through its vital registration system covering six rural unions in Manikganj (central area) and Joypurhat (northern area). The study samples consisted of 100 percent of the children of age between 6 and 71 months in September 1993 living in the registration area and represented receipt of VAC during the 35th cycle of distribution.

Findings and Discussion

The distribution of vitamin A capsule (VAC) in September 1993 is reported to be nearly 75 percent (Figure 1). Although no gender variation is found, the geographical variation in coverage is reported very wide ($p < .001$). The coverage among male is 81.3 percent in the north compared to only 70.4 percent in the central. Almost similar variation in coverage is reported among female children.

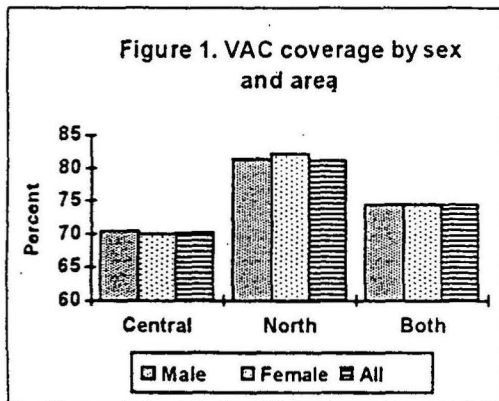
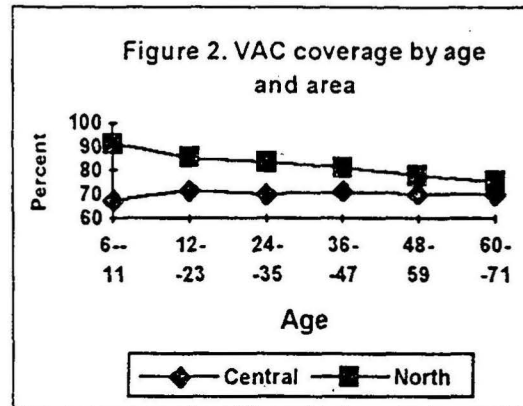


Figure 2 shows that the coverage rate varies by age of children ($p < .01$). The younger children are more likely to have received vitamin A than the older children. When age variation in coverage is broken down by area, the pattern is found same in the north while the coverage is reported lower among younger than older children in the central area.

Significant variation in coverage rate by union is reported in September 1993 data which ranges from 51.6 to 99 percent (Figure 3). Such differences in

coverage is a major cause of concern for service providers and certainly have policy implications.



The distribution of vitamin A capsule does not necessarily imply that all distributed capsules are given to the target children. Figure 4 reports that 92 percent, of those children who received capsules, are actually given while the status of the rests are not known. The confirmation of having capsule is much higher in the central (97.4 percent) than the northern (85.5 percent) area. No gender variation in giving capsule is reported in any area.

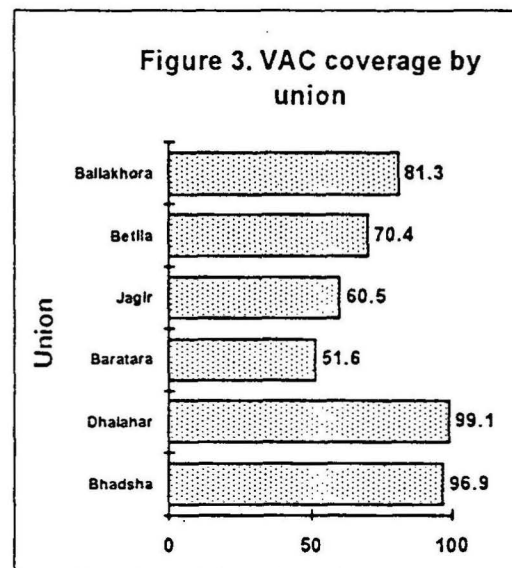
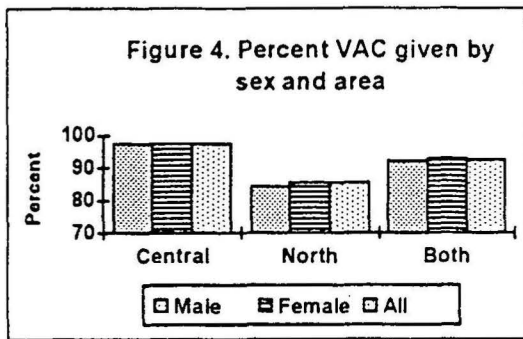
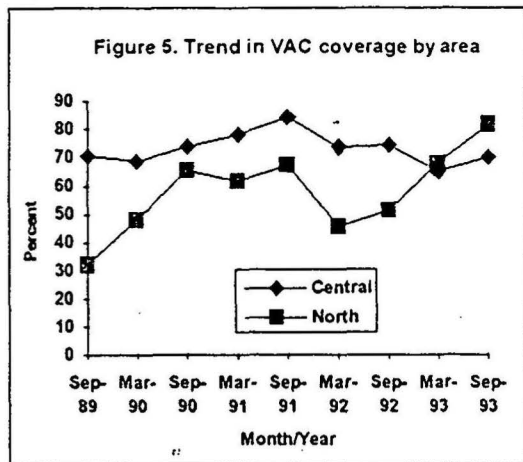


Figure 5 shows the trend in vitamin A capsule coverage since September 1989. The coverage was nearly 70 percent in the central area in September 1989 while it was only 35 percent nationally at that

time (IPHN/UNICEF, 1990). The coverage in the central area rose gradually to 85 percent after three years in September 1991, declined gradually to nearly 70 percent in March 1993, and began accelerating again.



In the north, on the other hand, the VAC coverage was only 33 percent in September 1989 but has reached the central coverage level after four years in March 1993 and surpassed in September 1993.



The reported coverage of vitamin A, although much higher than the national estimate, indicates the weakness of the distribution system of Blindness Prevention Program. The lower coverage in the central area in 1993 where a number of development interventions was underway compared to the remote northern area is surprising. While the causes of such differences are not known at this time, lack of adequate supervision and regular supply of capsules may be the major causes of poor coverage of vitamin A among

children. In areas where the coverage is poor, health service providers should be instructed to screen out nightblind children and provide necessary treatments.

References

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