

# Watch Report

Report No. 11

Research and Evaluation Division, BRAC

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## EPI Coverage in September 1994: Does Parents' Religious Belief Make Any Difference?

### Introduction

In Bangladesh, child mortality rate was nearly 13.2 per 1000 children in 1992 (BBS, 1993). Of these, at least 30 percent are attributable to vaccine preventable diseases (GOB, 1993). To achieve the goal of Universal Child Immunization, the Government of Bangladesh launched its Expanded Programme on Immunization (EPI) in 1985 (Murtaza, 1993). The total coverage of the programme, at the beginning, was only two percent (Murtaza, 1993) that increased to 84 percent in 1994 (EPI, 1994).

Although the rate of growth of EPI coverage has been quite impressive, the benefit of this newly adopted technology did not reach uniformly to all sectors of the community particularly in the remote rural settings. This report presents the EPI coverage in September 1994 in two areas of the country and looks at the socioeconomic differentials in coverage in both areas.

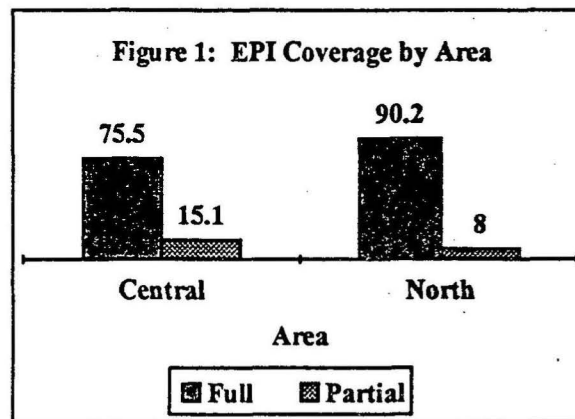
### Methodology

BRAC has been operating an intensive monitoring system, known as *Watch*, in three rural unions in its project area in Manikganj district (central area) since 1986. The system was introduced to document changes

induced by a development project in such areas as health, income generation, education and women's programme. The *Watch* was expanded in 1987 to three more rural unions in Joypurhat district (northern area) where no such development intervention was underway. The system has been generating information on immunization coverage twice a year since January 1989. This report uses the data of all children, aged 12-23 months, collected in September 1994.

### Findings and Discussion

The data show that the complete immunization coverage (i.e., having all required antigens and doses of vaccines) was 75.5 percent in the central and 90.2 percent



## Conclusion

The VAC coverage rate has recently suffered a serious set back. Though more marked in the North, in both the areas the decline has been much steeper. And it owes to inadequate program inputs - as revealed at the time of household survey. In most years, the coverage rate has been better in the central area. Surprisingly, in both the areas, the coverage rate is higher in the children of landless families. There exists much variation with union and religion, but no such relation with sex, mother's education or occupation status of father. Of all children, the coverage is highest in under one year age-group in the central area but in the North it is in the two years old children

## References

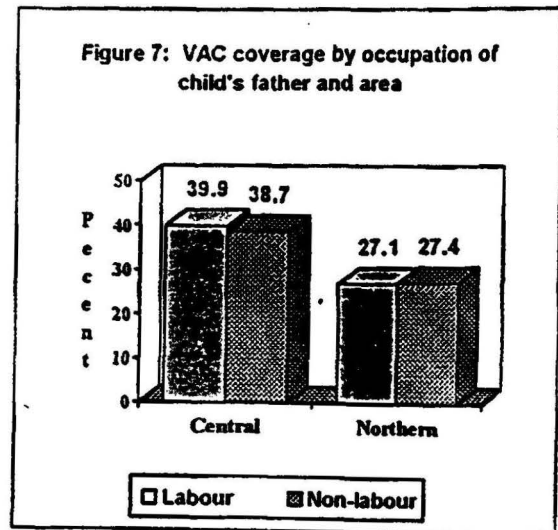
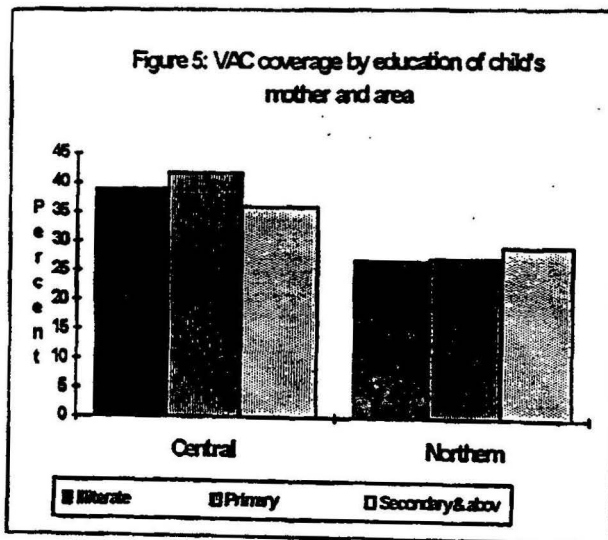
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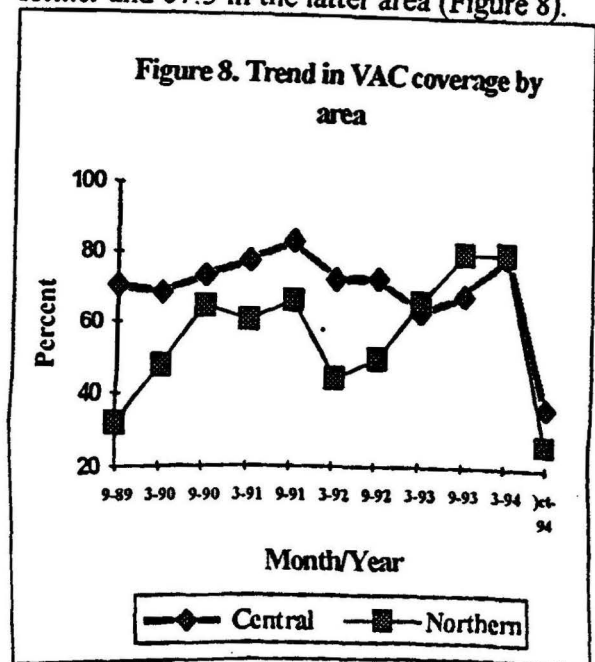
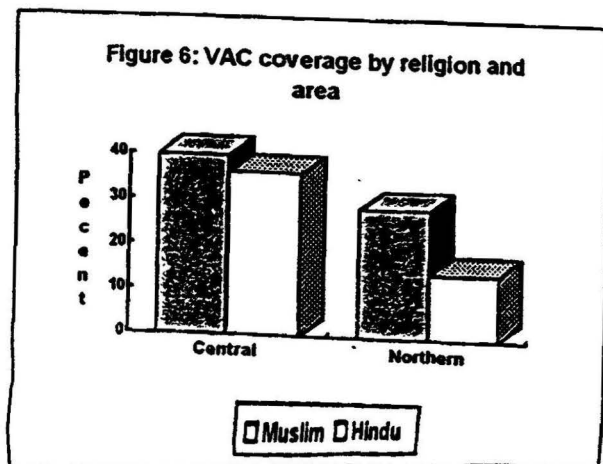
the highest education of mothers, (Figure 5). Of much surprise, in the central area, the highest rate (38.8 per cent) is found in the children of illiterate mothers.

(38.7 per cent). It is otherwise in the North. Here, it is higher in the non-labour (27.4 per cent) than the labour category (27.1 per cent) (Figure 7).



In both the areas, the VAC coverage is higher in the Muslim children than the Hindus. The difference is more marked in the North, here it is 28.5 per cent in the Muslim and 14.4 percent in the Hindu. In the central area, it is 39.7 per cent for the Muslim children and 36.0 for the Hindu. The 'p' value is .0001 (Figure 6).

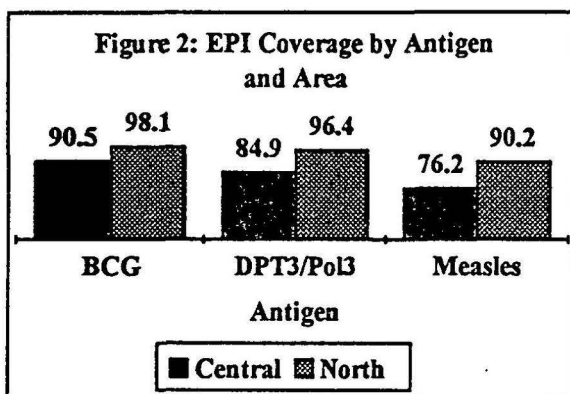
In both the areas, the VAC coverage rate shows some ups and downs over the study years, and these are more marked in the North. However, the data collected in October 1994 depicts a marked reversal. Even six months before, the coverage was 81.6 per cent in the central area and 82.1 per cent in North. Even in September 1991, the rate was 84.3 in the former and 67.5 in the latter area (Figure 8).



The coverage rate by occupational category differs from one area to another. In the central area, the VAC coverage is higher (39.9 per cent) in the children with paternal profession

in northern areas (Figure.1). Many of children in the central area (15.1%) had received immunization only partially.

The EPI coverage by antigen in each area shows that the BCG, being the first dose of vaccines, was highest in both areas followed by DPT3/Polio3 and measles. The coverage was reported highest in the central area for each antigen (Figure 2).



The EPI coverage varied significantly ( $p < .001$ ) by age (Figure 3). The variation appears to be more prominent among the non-Muslim than Muslim children.

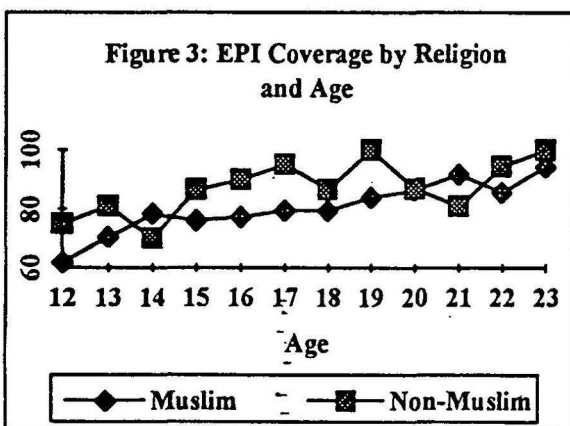
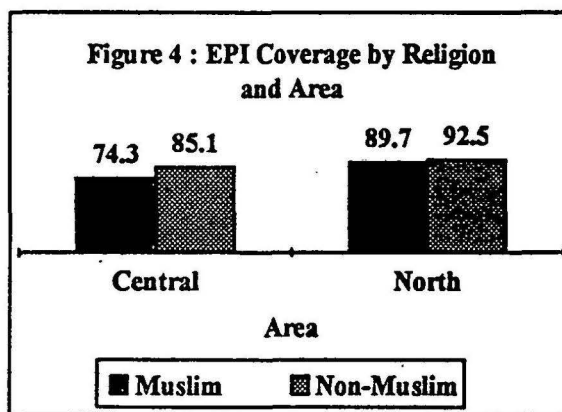


Figure 4 shows that the EPI coverage was found higher among non-Muslim than Muslim children in both the areas. The difference in coverage between Muslim and

non-Muslim children was significant ( $p < .05$ ) in central but not in the northern area.



The gender difference in coverage was prominent among non-Muslim children although not statistically significant but almost non-existent among Muslim children in both the areas (Table 1).

Religion	Boys	Girls
<b>Central</b>		
Muslim	74.2	74.5
Non-Muslim	90.6	80.5
<b>North</b>		
Muslim	89.7	89.6
Non-Muslim	88.5	96.3

When the total coverage is broken down into antigens, the non-Muslim children were found better covered than Muslims in the central and quite opposite in the north, although in the North no significant difference was found between the two religious communities (Table 2).

**Table 2: EPI Coverage by Antigen and Religion**

Antigen	Muslim	Non-Muslim
<b>Central</b>		
BCG	90.0	94.3
DPT3/Polio3 *	84.0	92.2
Measles **	74.9	86.5
<b>North</b>		
BCG	98.2	97.2
DPT3/Polio3	96.4	95.3
Measles	89.7	92.5

Note: \*\*p<.01 \*p<.10

Immunization acceptance rates by selected socioeconomic characteristics are shown in Table 3. Education of mothers and

**Table 3: EPI Coverage by Socio-economic Characteristics**

Socio-economic Characteristics	Muslim	Non-Muslim
<b>Mothers' Education</b>		
No-schooling **	78.4	87.9
I - V	83.3	85.0
VI +	90.0	93.9
Significance level	p<.01	NS
<b>Land Size</b>		
Land less *	79.1	86.7
1 - 199 d	82.1	89.7
200 d+	83.3	90.2
Significance level	p<.05	NS
<b>Labor Sale</b>		
Yes	78.5	84.2
No **	82.7	90.1
Significance level	p<.05	NS

Note: \*\*p<.01 \*p<.05

households' ownership of land were found positively associated with EPI coverage. The

differentials in coverage by education and land ownership were statistically significant among Muslims but not among non-Muslims. The children of labour households were relatively less immunized than the children of others and the difference was significant (p<.05) among Muslim children (Table 3). Difference in coverage between the children of two religious groups were prominent where mother had no education and household had no land and did not sale labour.

This report shows that significant socioeconomic differentials in child immunization coverage existed in September 1994. While the age and gender variation in coverage in both areas were minimum such other factors as religious belief of parents, education of mother, and socioeconomic status of the household still have important role in accepting immunization.

## References

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*This report has been prepared by Samir R. Nath of the Research and Evaluation Division of BRAC in December 1994.*