Watch Report

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Decline in Child Immunisation in Rural Bangladesh: Issues for Policy Implication

Abstract

The study was conducted on all the under two children living in 70 BRAC surveillance villages in 10 districts of Bangladesh. The data were collected in October 1996. A decline was observed in immunisation coverage in 1996 compared to 1995 coverage in the same area. However, the lowest coverage area like Kishoregonj showed an increase from 27.7 percent to 43.8 percent in one year. In high coverage districts with the immunisation rate more than 90 percent, there was a decline. Such district-wise variation was statistically significant ($p<0.001$). This effective and efficient way of reducing morbidity and mortality has started showing stagnation and in some areas a clear reversal. The study also reinforces the finding of some previous studies that parental education plays a significant role in child immunisation. Hence, the issue of developing much needed socio-cultural infra-structure through education has an implication on policy planning.

Introduction

Immunisation of children is a survival issue for millions in Bangladesh. In terms of efficacy and efficiency, it is one of the most reliable means to improve the health status of a population. Its importance has prompted the public health professionals to consider the immunisation coverage as a reliable and comparable indicator for measuring coverage of Primary Health Care (PHC) services in a country. The recent success in immunisation has contributed significantly in eliminating or controlling the major communicable diseases globally, thus helped reduce child morbidity and mortality. In Bangladesh, although the program was launched in 1979, the intensified Expanded Program on Immunisation (EPI) began in 1985 and attained a spectacular success within a short time. The EPI focuses on six childhood diseases that cause more than one-third of the global mortality among children under 5. These six vaccine preventable diseases are measles, tuberculosis, polio, diphtheria, pertussis and tetanus.

The major problem for EPI is its sustainability - both financial and institutional. It was found that only 30 percent of the expenditure is covered by the government, the rest is borne by the donor agencies (University of Amsterdam, 1994). The country can not bear the total costs of such a huge program. Such inadequacies have been instrumental in launching a satellite clinic approach to make the immunisation services accessible to the target children. For the full coverage, it is required that a child must attend 4-5 immunisation sessions in the first one year of life. But in Bangladesh, many geographical enclaves are still underserved. In these areas, the outreach service centres are not in adequate numbers and the road

communication system is still in bad shape. The poor people seldom can afford the cost of travelling a long distance. Hence, EPI presents an organisational challenge to the health workers and an inconvenience for parents and guardians. In 1992, the EPI coverage for the six targeted diseases reached 80 percent of the world's children. Such a "near miracle" success prompted the EPI leaders to believe that the global disease control through immunisation is realisable. On the other hand, the public health personnel started to realise it a very difficult uphill task, so the sustenance of the current rate of coverage remains a matter of great concern for them.

BRAC's Watch project maintains a surveillance system in ten districts and collects information on health and demographic indicators including immunisation each year. The present report analyses the immunisation data collected in October 1996 and compares with those collected in September 1995.

Methodology

BRAC has a nationally representative monitoring system, known as Watch, in 70 villages located in 10 districts of Bangladesh. All the children aged under 2 living in these 70 Watch villages were taken as the survey population. In October 1996, a total of 2, 239 children were interviewed, of them 1, 156 were under 1 and 1, 083 were within 1-<2 years of age. The interviews were conducted with structured questionnaires by experienced field staff of BRAC. The children who received all required doses of BCG, DPT, polio and measles were considered fully immunised for the analysis. Those who received even a single dose less than the required doses were categorised as partially immunised. The "none category" included those who did not receive any vaccine at all.

Findings

Figure 1 shows a decline in immunization coverage in 1-<2 years age-group. This is true not only for full coverage against six preventable diseases, rather for immunization against individual disease like BCG, DPT, polio and measles. It is interesting to note that decline in the coverage has taken place more or less uniformly for all individual diseases. In 1995, 78.0 percent of 1-<2 years children were fully immunised, but in 1996, the rate declined to 76.4 percent. Of all components of EPI, BCG got the highest coverage, 94.7 percent in 1995. But in 1996, it came down to 92.9 percent.

Figure 1: Immunization Coverage in 1-<2 years children by year.

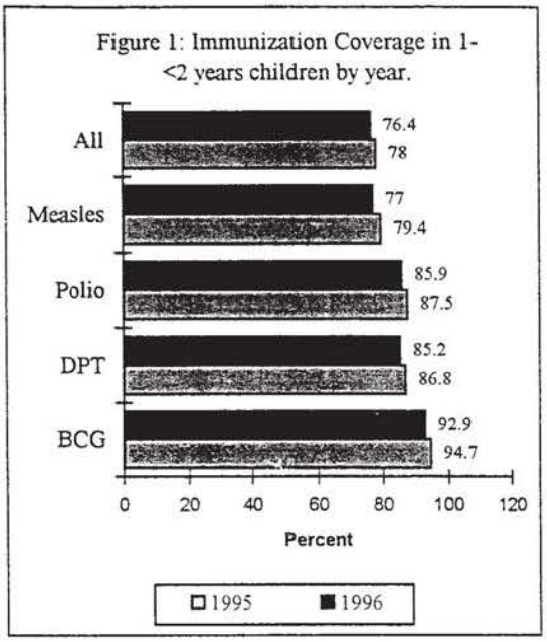


Figure 2 shows that even in under 1 children, the immunisation coverage has declined almost equally for all the components of the EPI. Immunisation coverage for all EPI components was 19.4 percent in 1995 and declined to 17.1 percent in 1996. For BCG, the coverage was 80.4 percent in 1995 and increased to 92.9 in 1996. The coverage for DPT was 48.6 percent in 1996.

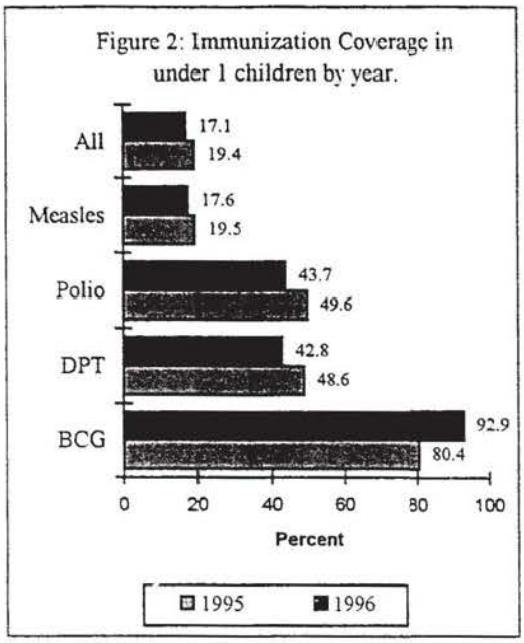


Figure 3. shows that immunisation coverage does not show any uniform pattern of decrease or increase in all the districts. It has declined in half of the districts. The decline is more pronounced in areas where the coverage was comparatively higher in previous years viz. Kushtia, Jamalpur, Jhalkathi and Cox's Bazar. In Kushtia, the highest coverage area in the surveillance districts, the rate has declined from 93.8 percent in 1995 to 88.2 percent in 1996. In Kishoregonj, the lowest coverage area, the coverage has increased significantly, from 27.7 percent in 1995 to 45.8 percent in 1996. Another long stride in the increase has taken place in Moulvibazar, where it the coverage increased from 75.0 percent in 1995 to 87.1 percent in 1996. In Jessore, there was a negligible increase, from 87.7 percent to 88.2 percent. The variation has been found statistically very significant ($p<0.001$).

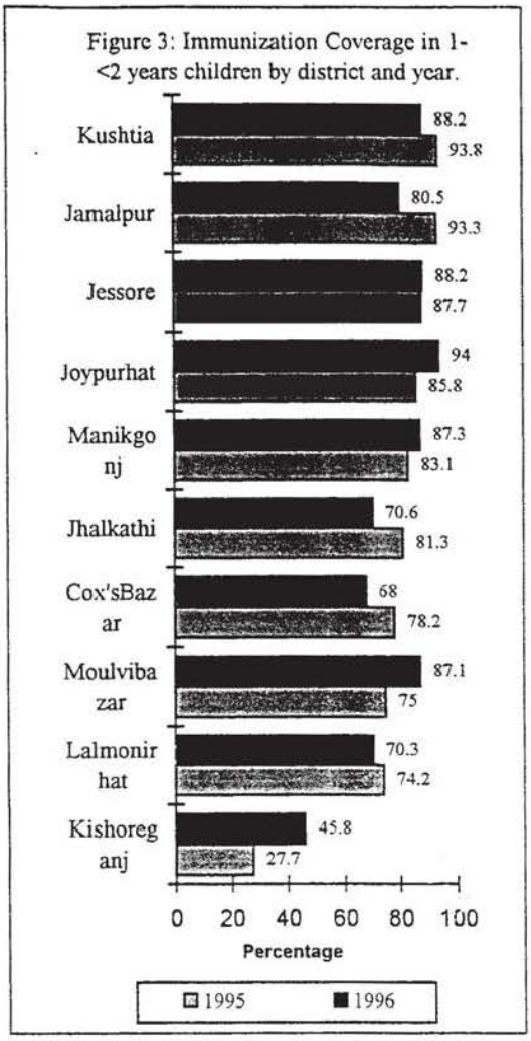


Figure 4 shows that immunisation coverage significantly increases with the education of mother ($p<0.05$). The children of illiterate mothers had immunisation coverage rate of 74.2 percent, while it was 83.7 percent among children of mothers with six or more years of schooling. Among children of mothers with primary education, the rate is 78.3 percent.

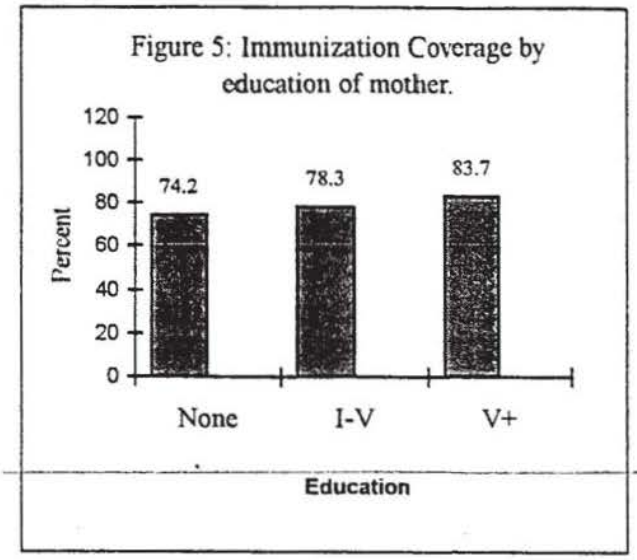
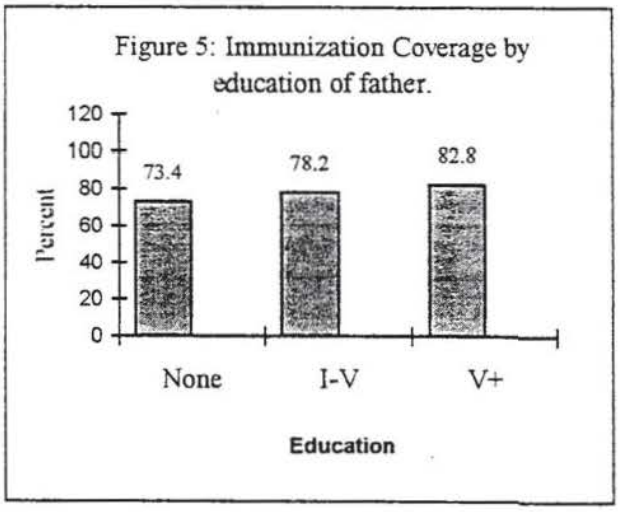


Figure 5 shows that education of fathers also had impacts on immunisation of their children. The highest immunisation coverage was 82.8 percent in children with paternal education of 6 years or more. It is lowest (73.4 percent) among children of illiterate fathers. Primary level of parental schooling significantly increases the rate to 78.2 percent ($p<0.005$).



Discussion

Although other development indicators did not show much impressive achievement in Bangladesh the immunisation of children attained a " near miracle success". The reality behind this success owes to some external factors. With pressure and support from WHO and UNICEF, national vaccination programs, in developing countries tend to be characterised during their initial years by rapidly growing coverage and emphasis on developing and securing logistic arrangements (the cold chain; vaccine procurement) and management procedures (Strefland, 1995). In this regard, Bangladesh was not an exception. Amid marked inadequacies of its health facilities, the rapid increase in immunisation coverage was accredited as a crucial factor in reducing mortality and morbidity in children. The country's recent improvement in health status, including uplift in average life span, largely owes to this high immunisation coverage. But this health intervention has already started showing some stagnation. This study suggests a cautious review of the whole situation. The much claimed "near miracle" success has started a recession in many districts. In some high success areas the rate of increase has already been arrested or reduced. It has become much explicit that the most effective and efficient method of mortality reduction in this poor country has not been replenished with enough strength in treading its uphill task of implementation. So far the program has been a supply-side initiative, the demand-side - the recipient end of the program - has not been fully mobilised. One of the most catalyst forces in prople's mobilisation has been the parental education. Along with many previous studies, this study reinforces the view too. Unless this human component of the much-needed socio-cultural infrastructure is adequately developed, how long the donor dependent supply-side initiative can sustain a high level of immunisation? Along with improving efficiency and effectiveness of the program performance, this issue needs to be adequately addressed by the policy makers. Only this way the demand-side of the program can be successfully incorporated as active stakeholders of the program.

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