Nigerian Journal of Paediatrics 1996; 23 (3): 55-61

Reasons for Default from Childhood Immunization in a Riverine Community

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Summary

Nte AR, Nkanginieme KEO, Oruamabo RS. Reasons for Default from Childhood Immunization in a Riverine Community. *Nigerian Journal of Paediatrics* **1996; 23 : 55.** In April 1991, 181 children aged between four and 59 months, were surveyed, using a questionnaire adapted from the WHO infant immunization questionnaire, to determine the immunization status. The parents of the 94 (51.9 percent) children who were partially or non-immunized were interviewed further in order to find out the reasons for default from immunization. Major reasons given included lack of knowledge in 66.00 percent, presence of obstacles in 25.5 percent and lack of motivation in 8.5 percent. Specific reasons were lack of knowledge of the place and time of immunization in 24.5 percent, fear of adverse reactions in 24.5 percent and lack of immunization centres in 14.9 percent of the subjects. It is suggested from the present findings that regular availability of and increased access to immunization services together with community education on the available vaccines and their adverse effects, will help to improve coverage rates of immunization.

Introduction

IMMUNIZATION coverage of Nigerian children, aged between 12 and 23 months reached the universal childhood immunization (UCI) target of 80 percent by 1990.[1] From 1977 when the Expanded Programme on Immunization (EPI) was launched in Nigeria, the problem of low coverage was observed and it led to the relaunching of the programme between 1985 and 1987.[2] In 1988/89, immunization days for the nation, State and Local Governments were introduced in an effort to attain the UCI target. Among children aged between birth and 11 months by 1990, immunization coverage rate reached 70 percent for measles and 95 percent

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for BCG.[3] The coverage has gradually dropped to the present low rate of between 30 and 50 percent for all antigens.[3,4] Partly in recognition of this low rate, the EPI was renamed National Programme on Immunization and plans are being made to relaunch the programme.

In order not to encounter the failures of the past, it is pertinent to find out why the initial high coverage rate was not sustained. During the 1989 survey in Nigeria, it was found that lack of information and motivation formed 80 percent of the reasons for default from immunization.[2] By 1991, however, these factors contributed 45 percent of the reasons for default.[1] There is thus need for periodic review of immunization services so as to identify impediments to the attainment and sustenance of immunization targets.

Ikuru town, a riverine community in the Andoni-Opobo Local Government Area of Rivers State has a health centre which started immunization services in 1974. The services were sporadic initially, but became regular after the launching of EPI in the LGA, in 1987. This survey was therefore conducted to identify the reasons why parents failed to have their eligible children completely immunized.

Subjects and Methods

An immunization coverage survey was conducted in April 1991 to determine the immunization status of all children resident in the community who were born between May 1986 and December 1990. A resident child was one who had spent the previous one month in the community.[5] In order to be included in the survey, the child had to undergo physical examination. The WHO infant immunization questionnaire was adapted for use in the survey.[6,7] Interviews were conducted by one of the authors in English or in local Andoni language, if the parents did not understand English. All households in Ikuru town were visited and all children born in the years stated above were recruited. In each household, the mother of an eligible child was asked to describe the immunizations that the child had received, the routes of administration, doses and dates, where possible. For those children whose immunization cards were available, the mother's history of immunization was confirmed from the cards. For those who did not have immunization cards, history of immunization was accepted if the vaccines were properly described.[6] Each child was then examined for the presence of a BCG scar. A scar measuring at least 3mm in diameter in the deltoid region, was accepted as evidence of successful BCG immunization.[8] The parents of all the children who did not get fully immunized were interviewed further to find out the most important reason(s) for this.

Data analysis was undertaken in order to calculate the following rates, using the following formulae:[6,7]

$$\text{BCG Scar Rate} = \frac{\text{Total number of children who had visible BCG scar}}{\text{Total number of children surveyed}} \times 100 \text{ percent}$$

$$\text{Immunization status (full, partial, none)} = \frac{\text{Total number of children with a particular immunization status}}{\text{Total number of children surveyed}} \times 100 \text{ percent}$$

cards, although they all claimed to have received BCG immunization. Eight (88.9 percent) of these nine subjects had BCG scars. Of the remaining 78 children with immunization cards and BCG documentation, 67 (85.9 percent) had BCG scars. Among the 70 children whose mothers gave a history of BCG immunization, 56 (80 percent) had BCG scars. There was thus, no significant difference in the numbers of children who had or did not have BCG scars when immunization records by card, or by history was considered (X^2 = 0.5422 with Yates's correction df = 1, p> 0.25). The number of the subjects with BCG scars was 123 (68 percent).

The reasons for default from immunization as given by the parents of the 62 partially-immunized and 32 non-immunized children are shown in Table II. Lack of information was given by 62 (66.0 percent) of the 94 parents and the presence of obstacles given 24 (25.5 percent) of the parents; these were commonest reasons for default. Other reasons were lack of knowledge of the place/time of immunization, fear of adverse reactions and absence of an immunization centre. Religious group prohibition was also an important reason.

TABLE II

Reasons for default in immunization and Ages of 62 partially-immunized and 32 non-immunized Children

Reason	Age (months) and Immunization status					
	Partial		None		Total	Percent of total
	<9	>9	<9	>9		
A Lack of information						
1 Unaware of the need for immunization	0	3	-	4	7	7.4
2 Unaware of the need to return for 2nd or 3rd dose	0	8	0	0	8	8.5
3 Place/time of immunization unknown	6	12	3	2	23	24.5
4 Fear of adverse reactions	-	14	-	9	23	24.5
5 Child had measles	-	1	-	-	1	1.1
Total	6	38	3	15	62	66.0
B Lack of motivation						
6 Postponed until another time	-	1	-	-	1	1.1
7 No faith in immunization	-	-	-	2	2	2.1
8 No reasons/uniterested	-	2	-	1	3	3.2
9 Child refused/ran away	-	-	-	2	2	2.1
Total	-	3	-	5	8	8.5
C Presence of obstacles						
10 No immunization centre	3	8	-	3	14	14.9
11 Prohibition by religious groups	-	1	-	3	4	4.2
12 Vaccine not available	1	-	1	0	2	2.1
13 Child ill, not taken for immunizatio	-	0	1	-	1	1.1
14 Child ill, taken, but not immunized	-	-	-	2	2	2.1
15 Mother not at home	-	1	-	-	1	1.1
Total	4	10	2	8	24	25.5

Discussion

In the present survey, the reasons given for default from immunization were similar to those reported in the 1989 survey in Nigeria, but different from those of the 1991 survey, thus suggesting that while at the national level, efforts were made to reduce the impact of lack of knowledge and presence of obstacles on default from immunization, at the village level, there was not much done to effect a change. These facts may account for the lack of sustenance of the high immunization level achieved in 1990 in the country. In the present study, obstacles such as absence of regular immunization centres, and factors such as lack of knowledge of the places and times of immunization, fears of adverse reactions, among others, continue to constitute problems to the Expanded Programme on Immunization (EPI) in the country. Thus, in late 1995, lack of vaccines virtually crippled immunization services. The relaunching of the National Programme on Immunization is therefore, a timely and commendable effort.

Studies in Bhutan in 1985 showed that the lack of knowledge of the benefits of immunization led to a low public demand for it;[9] there was also lack of awareness of the need for immunization. Parents complained that the long distances they had to travel for immunization was responsible for their children defaulting from immunization. These reasons for default, coupled with the high dropout rates, led to the suggestion that health education, tracing of defaulters and further development in terms of accessibility and availability of immunization services, would lead to improvement in coverage rates. In the 1990-94s, Bhutan sustained its childhood immunization coverage at 81 and 96 percent for DPT3 and BCG, respectively. The role of immunization delivery services is further highlighted, not only by the present study, but also by the findings of Burundi that centres immunizing on daily basis had higher immunization coverage and lower dropout rates. [10]

Fears of adverse reactions as given in the present study have continued to play an important role in default from immunization.[2 9] To combat the non-acceptability of BCG scars by Somalians, a rescheduling of immunization was done and BCG was given last.[11] Although sex differences did not exist in the immunization status of our subjects, fear of brain damage from pertussis vaccine has been found to account for a higher immunization coverage among females than males and, in some instances, less acceptance of pertussis than other vaccines.[12 13] Fears of adverse reactions have also led to the suggestion that parents need better education to accept the existing vaccines, while efforts are being made to develop safer vaccines.[12 14] The need for better education of parents on immunization, is highlighted by the roles played by non-awareness of the need to return for the 2nd or 3rd doses of a multiple-dose vaccine, non-awareness of the need for immunization and religious prohibition of immunization found in our study. Religious groups need to be mobilized if active participation of their members in health-care programmes is to be ensured.[15 16] Other reasons given in our study, though perhaps not important, should be considered since they may become as important when the major ones have been controlled.

The similarity in the BCG scar rate among children whose immunization records were

seen and those who had history of BCG immunization in the community, supports previous suggestions that in rural areas, because of low card retention rates, history of immunization as well as card evidence of immunization should be accepted.[8 17] It should be noted that the WHO and our national surveys on immunization have been based on data obtained from both sources.[1 6 7] It is therefore, suggested that to improve and sustain the immunization coverage in our community and indeed, in other rural communities, there should be an increased access to regular immunization services. Health education of parents about the target diseases, vaccines and their adverse effects, should be regularly carried out so as to increase the demand for immunization. All social and religious groups should be mobilized for active participation in immunization services. There is also the need for periodic surveys to identify any new reasons for default from immunization so as to be able to eliminate such reasons.

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