

## REASONS FOR PARTIAL/NON- IMMUNIZATION WITH ORAL POLIO VACCINE/TRIPLE ANTIGEN AMONG CHILDREN UNDER FIVE YEARS

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### ABSTRACT

To identify the reasons for non-immunization/postponing immunization, parents of 615 poliomyelitis (APM) children and 908 children attending the Outpatient Department (OPD) for other ailments were interviewed. A total of 165 (26.9%), 185 (30.1%) and 264 (43%) among APM and 645 (71%), 183 (20.2%) and 80 (8.8%) among OPD children were immunized, partially immunized and unimmunized, respectively. Forty two per cent and 21% among parents of APM and OPD children, respectively in the unimmunized group were unaware of the need for immunization. The other reasons are minor illnesses, lack of interest, fear of side reaction, non-availability of vaccine or vaccinator. The decision to withhold immunization was mostly by parents when the child had some minor illnesses, mostly respiratory infections.

It is recommended to educate the health personnel—clinicians and para-clinical workers by seminar and training and the public through mass media and group contact on the need for and completion of the immunizations.

**Key words:** Unimmunized, Polio Vaccine

Immunization is one of the most effective way of preventing immunizable diseases. Though made available for free supply at hospitals and health centres, the utilization of these facilities by the parents is unsatisfactory. Contraindications for immunization, both absolute and relative are few and they vary from country to country(1). Parents cite a vast number of reasons for discontinuing or not immunizing their children. A study was planned with the objective to know the parents, view for non-immunization/postponing immunization for their children. This would help us to improve in implementing the immunization for programme effectively.

### Material and Methods

The study was conducted at the Institute of Child Health, Madras during 1988-89. The study population consisted of two groups: the general medical outpatient department (OPD) children under five years attending the hospital, selected at random and the other group consisted of all hospitalized cases of acute poliomyelitis (APM). The patients attending OPD were mostly from Madras city and of poor socio-economic status. The APM children were

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mostly from outside the city of Madras and were also of poor socio-economic status. The parents, mostly mothers, were interviewed regarding immunization status of their children and reasons for not completing immunization or non-immunization, using a predefined questionnaire, in local language by the Research Officers. Since our primary concern was about oral polio vaccine (OPV) and DPT, we considered these two immunizations. Whenever possible, immunization status was documented from the records maintained by parents. If the child had received at least three primary doses of OPV and DPT it was labelled as "Immunized". The reasons given by the parents for non-immunization or not completing the immunization were categorized as per the module issued by the Ministry of Health and Family Welfare, Government of India(2).

## Results

The total number of APM cases recruited were 614 and from OPD 908. Among APM cases, 165 (26.9%) were immunized, 185 (30.1%) were partially immunized and 264 (43%) were unimmunized. Among children from OPD 645 (71%), 183 (20.2%) and 80 (8.8%) were immunized, partially immunized and unimmunized, respectively. Only 14.1% (27/191) among APM cases and 48.5% (148/305) among OPD children in the age group of under one year were immunized. Because of poor information or deficient data, 38 and 33 of APM cases, 9 and 95 of the OPD cases among unimmunized and partially immunized, respectively were excluded from analysis.

The various reasons given for non-immunization or postponement of immunization are shown in *Table I*. For non-immunization among APM cases, the most

common reason (42%) given was that the parents were not aware of the need for immunization (90% of whom were from rural areas of Tamil Nadu and Andhra Pradesh), followed by minor illness in 20%. Among the OPD children, the corresponding figures were 21 and 42% ( $p < 0.001$ ). For incomplete immunization, the reasons attributed were the unawareness of the need to return for 2nd or 3rd dose, in 13% among APM cases compared to 5% among OPD children ( $p < 0.01$ ). Other reasons observed were lack of interest, fear of side reaction and non-availability of either vaccine or vaccinator (*Table I*). The decision to refrain from immunization, initial or subsequent dose, was mostly parental, the reason being minor illnesses mostly URI (*Table II*).

## Discussion

The immunization card was available for documentation in a few cases only. The validity of the data was ensured by making sure that the informant had understood the question and come out with the correct information needed. The earlier study conducted at Vellore had shown a concordance of 85% between the records and the mother's response ( $k = 0.905$ )(3). The high proportion of parents who were unaware of the need for immunization as reported by previous workers over decades(4-9) has not improved very much. This is of great concern. Our data shows that unawareness was more among parents from rural area, emphasizing the need for effective health education for consumers especially rural population and implementation of immunization programme by the health care providers. Illness of child, the second common reason for irregular immunization in this study was observed by other workers also(4,5,7,10). The most common ailment

TABLE I—Reasons for Non-Immunization/Postponement of OPV/DPT

	APM cases				Outpatient Children			
	Unimmunized		Partially immunized		Unimmunized		Partially immunized	
	n	(%)	n	(%)	n	(%)	n	(%)
1. Unaware of need for immunization	94	(41.6)	—	—	15	(21.1)	—	—
2. Unaware of need to return for 2nd/3rd dose	—	—	17	(12.9)	—	—	4	(4.6)
3. Fear of side reaction	16	(7.1)	1	(0.8)	—	—	2	(2.3)
4. Wrong ideas about contraindication	1	(0.4)	3	(2.3)	4	(5.6)	2	(2.3)
5. Lack of interest	19	(8.4)	11	(8.3)	—	—	3	(3.4)
6. Vaccinator absent	5	(2.2)	8	(6.1)	3	(4.2)	—	—
7. Vaccine not available	18	(8.0)	11	(8.3)	5	(7.0)	4	(4.6)
8. Parents too busy	5	(2.2)	13	(9.8)	3	(4.2)	7	(8.0)
9. Family problems including illness of mother	6	(2.7)	10	(7.5)	6	(8.5)	8	(9.0)
10. Child not brought	37	(16.4)	47	(35.6)	11	(15.5)	35	(39.7)
11. Child ill, brought & not given	8	(3.5)	2	(1.5)	19	(26.8)	18	(20.5)
12. Other reasons	17	(7.5)	9	(6.9)	5	(7.0)	5	(5.6)
Total	226	(100)	132	(100)	71	(100)	88	(100)

reported was acute respiratory infection (ARI). Eventhough, it is repeatedly stressed that mild ARI is not a contraindication, finding of these studies give impression that the message has not yet reached the concerned medical and paramedical personnel.

A good proportion among partially immunized were unaware of the need to return for 2nd or 3rd dose, and had fear of side reactions. A similar finding was reported in earlier studies also(4,7,10). This stresses the importance of intensifying education for both providers and consumers. Our data shows the persistence of the observations namely, lack of faith and interest in immunization, reported in earlier stud-

ies(4,5,7,10). This may be due to poor motivation of the population for immunization as discussed by other workers also(9,11).

The non-availability of vaccine reported through the years(5,7) is to be taken care of, by making the vaccine available throughout the year in all primary health care units and in close proximity to the community. Finally, the parents must be educated through mass media and by group or individual contact of the parents community to have the child immunized when it is due, even if the child is having minor ailment like URI.

There is a possibility of bias in this study due to exclusion from analysis among partially unimmunized group in the OPD

TABLE II—Personnel and Illness as Reasons for Withholding or Postponing Immunization

	RI	Diarrhea	RI & Diarrhea	Others*	Total#
<b>I. Poliomyelitis Cases</b>					
<i>(a) Unimmunized</i>					
Clinicians	9 (64.3)	2 (14.3)	2 (14.3)	1 (7.1)	14 (31.1)
Nurses	1 (100.0)	—	—	—	1 (02.2)
Parents	19 (63.3)	1 (03.3)	7 (23.3)	3 (10.0)	30 (66.7)
<i>(b) Partially immunized</i>					
Clinicians	3 (100.0)	—	—	—	3 (06.1)
Nurses	—	1(100.0)	—	—	1 (02.0)
Parents	30 (66.7)	2 (04.4)	6 (13.3)	7 (15.6)	45 (91.9)
<b>II Outpatient Department</b>					
<i>(a) Unimmunized</i>					
Clinicians	16 (88.8)	—	1 (05.6)	1 (05.6)	18 (60.0)
Nurses	—	—	—	—	—
Parents	11 (91.7)	—	1 (08.3)	—	12 (40.0)
<i>(b) Partially immunized</i>					
Clinicians	16 (94.1)	—	1* (05.9)	—	17 (32.1)
Nurses	1 (100.0)	—	—	—	1 (01.9)
Health workers	1 (100.0)	—	—	—	1 (01.9)
Parents	23 (67.7)	2 (05.9)	5 (14.7)	4 (11.7)	34 (64.2)

Figures in parentheses are percentages.

RI = Respiratory infection.

# Total: in column percentage for each subgroup; rest are in row percentage for each subgroup.

\* Includes fever, jaundice, dysentery, measles.

population. But we feel the proportions of various reasons are not likely to be dissimilar.

To conclude, for improving the immunization coverage, we suggest effective provider and consumer compliance by maintaining adequate supply of vaccines throughout and intensifying health education among population and health care personnel to immunize children even when they have minor ailments.

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## NOTES AND NEWS

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### XVIII ANNUAL CONFERENCE OF GUJARAT STATE BRANCH OF IAP

The 18th Annual Conference of IAP, Gujarat State branch will be held on *14th February, 1993* at IFFCO Auditorium, Gandhidham (Kutch).

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