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Table 1: Comparative observation on the booth activity day during National Immunization Days for polio in

Observations	NIDs, 2007		NIDs, 2008	
	January	February	January	February
No. of target children	29925	30569	38145	38145
No. of children immunized	23917	23933	26992	27603
	(79.9)	(78.3)	(70.8)	(72.4)
Two booth workers attended last training	33	38	47	42
Two booth workers attended last training	(40.7)	(46.9)	(45.2)	(40.4)
One community member	22	26	31	25
	(27.2)	(32.1)	(29.8)	(24.0)
Workers mabilizing shildren to the basth	9	9	10	9
	(11.1)	(11.1)	(9.6)	(8.7)
Correct finger marking of children	29	38	58	36
	(35.8)	(46.9)	(55.8)	(34.6)

'Figures in parentheses indicate percentages, NIDs - National Immunization Days

authors in their study reported that television and public announcement by vehicles fitted with loud speakers were the main sources of information for the polio round.^[1]

Awareness about the VVM was checked in 277 staff members of 81 booths during 2007 and in 348 staff members of 104 booths of Valsad and Vapi during 2008 [Table 2]. In the four rounds evaluated, no staff members were found to have complete knowledge about VVM. Less than half (48.4%) of staff members interviewed had heard of VVM in 2007, which was a little higher (about 57%) in 2008. Similar findings were observed by Puri *et al.*^[2] Among those who had heard about it, awareness was very poor about its function, how to read it and when OPV should have been discarded in both the years of study.

The low coverage was a result of manpower shortage at booths, as many booths had two or three booth staff instead of four; lack of community participation with many children found unimmunized during house-to-house visits; poor community mobilization with inadequate numbers of community members present at booths to mobilize the children; and untrained vaccinators not motivating people for community participation. Aggarwal et al.^[3] similarly observed that manpower shortage was responsible for lower coverage at booths. In Vapi city in all the rounds, a good number of booths were run exclusively by volunteers, clerical staff, peons and sweepers working in the nagarpalika, with poor knowledge about VVM. So, it became necessary for volunteers to look after vaccines. Thus ignorance about VVM can badly affect the IPPI.^[4]

Table 2: Awareness pattern among various staff categories about Vaccine Vial Monitor in district Valsad in 2007 and 2008*

Year	Heard About VVM	Site/location of VVM On Vial	Correct Description of VVM	Correct Function/ How is VVM read	When to discard OPV
2007	134	109	92	101	90
	(48.4)	(81.3)	(68.7)	(75.4)	(67.2)
2008	198	149	127	141	82
	(56.9)	(75.3)	(64.1)	(71.2)	(41.4)

'Figures in parentheses indicate percentages, VVM - Vaccine Vial Monitors

COMPARATIVE EVALUATION OF INTENSIVE PULSE POLIO IMMUNIZATION IN DISTRICT VALSAD IN THE YEAR 2007 AND 2008

Sir,

India has started Intensive Pulse Polio Immunization (IPPI) since 1995. An important improvement made in IPPI during 1998 was use of Vaccine Vial Monitors (VVM). The VVM is a small square, made of heat sensitive material, placed on an outer colored circle printed on the label of the OPV vial. There are four stages to read the VVM. In stages 1 and 2, the color of the square remains light gray. It changes with exposure to high temperature to gray in stage 3 to match the color of the outer circle, while in stage 4 the color of the square becomes darker than the outer circle color.

The present study was conducted during the National Immunization Days (NIDs) of January and February rounds of IPPI in 2007 and 2008. Evaluation was done on booth activity day and also on the house-to-house activity days in Valsad and Vapi cities of

Valsad district. Valsad city had 30 booths and Vapi city had 52 booths in 2007, while in 2008, Valsad city had 45 booths and Vapi city had 59 booths. As a part of supervision and monitoring, the author himself visited all the booths during these rounds. All the staff members present at the time of the visit were interviewed using a predesigned and pretested questionnaire. An attempt was made to find out whether they knew about importance of VVM and how they would read and interpret changes in its color, if any, after they had given consent. Simultaneously, correct steps were explained to those with imperfect or no knowledge about VVM, and this was communicated to the local health authorities for future improvement. Parents or guardians who brought children to the booth were also interviewed regarding their source of information about the IPPI round. Houseto-house visits were made on the two days after booth activities.

More than 70% children were vaccinated at booths during all the NIDs of IPPI [Table 1]. Less than 50% of booth workers attended the last vaccinator training which was arranged for them before these rounds. Participation from community members like social workers, local leaders or college students was also very poor (about 30%). In all these rounds, hardly 10% of booth workers were found actively involved in mobilizing parents or guardians of children to take them to polio booths for vaccination. Correct finger marking of children was about 43% only. No booth was found with VVM in stage 3 or 4. The main source of information about the IPPI round was television and microphone announcements in all the rounds. Some

A few unimmunized children were found during house-to-house visits. The reasons were that children were not at home at the time of the health team's visit, or parents were not at home, not aware of polio round or were too busy. Bandyopadhyay et al.[5] made similar observations in their study at Delhi. During the house-to-house visits, closed houses were to be marked as "X" and visited again at the end of the day's activity. If houses remained closed then they remained "X" marked, but if any unimmunized child was found, he should have been vaccinated and the house marked as "P". However, X to P conversion was not observed at all at the end of day in all the rounds of IPPI. The reason was the large number of houses to be covered by each team per day. Study results reveal a deficit in pulse polio program implementation even after many years of campaigning. A number of observers^[1,2,4] have reported similar types of deficits repeatedly at same and different centers with no categorical corrections or improvements. This calls into question the rational planning and implementation of such a massive program.

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