IMMUNIZATION

Report on Knowledge, Attitudes and Practices - Implements

FEBRUARY - 1988

By: INDIAN MARKET RESEARCH BUREAU.

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By INDIAN MARKET RESEARCH BUREAU
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NOTE ON THE REPORT

The report has been divided into six major sections. These are :

- Immunization
- Practice-related knowledge
- Programme
- Understanding the people
- Practice related issues
- Media

In each section, comments have been made for all respondents as a whole. Where relevant, specific details have been provided for districts, metros, doctors, workers, types of health centres and specific districts or metros.

Complete data is available in computer printouts. The top breaks used have been clubbed together in 3 different printouts, as follows :

A : Total
. District . Metro . Doctor . Worker

B : Total
. Government hospital/dispensary . PHC . PHS
. Private practitioner/dispensary . Performance categories

C : Total
. 12 individual districts . 4 individual metros

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All through the report, districts have been marked with a special sign to indicate performance category. Three signs have been used. These are :

* - Good performance district
\+ - Medium performance district
° - Poor performance district

The performance levels of each of the 12 districts are as follows :

Good +	Hamirpur
	Gwalior
	Nanded
	Anantpur
Medium +	Allahabad
	Iddukki
	Puri
	Kheda
Poor °	Bharatpur
	Madurai
	Nadia
	Purnia

SUMMARY

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1.0 IMMUNIZATION

1.1 The immunization schedule

The five vaccines that comprise the immunization schedule were well known to implementers. Within these, DPT and OPV vaccines were the best known (96% and 94% respectively of all respondents mentioned these spontaneously).

With help, all 5 vaccines were recognized by over 95% of all respondents as being part of the schedule. Awareness levels in the North zone were marginally lower than those in the other zones.

Detailed knowledge pertaining to each of the vaccines was as follows :

	No. of doses	Target recipient	Earliest age	Interval
TT	2 dose (80%)	Pregnant woman (99%)	-	-
BCG	1 dose (98%)	Child aged below one year (96%)	Before 3 months age (85%)	-
DPT	3 doses (92%)	Child age below one year (97%)	3 months (63%)	1 month (69%)
OPV	3 doses (85%)	Child aged below one year (98%)	3 months (63%)	1 month (73%)
Measles	1 dose (98%)	Child aged below one year (95%)	9 months (67%)	-

1.2 Diseases prevented by the vaccines

Implementers had correct knowledge with regard to the diseases prevented by each vaccine. The only weak link was that about 15% of the respondents did not spontaneously associate the DPT vaccine with prevention of tetanus.

1.3 Symptoms of diseases and perceptions of seriousness

Polio was associated with paralysis of the affected limb, fever and headache. Over 65% of all respondents believed that polio was very serious; another 36% felt that it was serious.

Diphtheria was associated with swelling and/or a white membrane in the throat and fever, cough and cold. 74% of all respondents believed that diphtheria was a very serious disease; 24% felt that it was serious.

Pertussis was associated with constant coughing and a whoop during the cough. 42% of respondents considered the disease to be very serious while 47% felt that it was serious.

Tetanus was associated with the body becoming rigid, the jaw getting locked and with convulsions. 84% of all respondents believed that this disease was very serious.

Tuberculosis was associated with persistent cough and fever, weight loss and fatigue. 42% considered TB to be very serious whereas 45% considered it to be serious.

Measles was associated with fever, rash, cough and watery eyes. 35% of the respondents felt that the disease was very serious while 45% felt that it was serious. 14% said that it was not serious.

2.0 PRACTICE RELATED KNOWLEDGE

2.1 Contraindications

Fever, cough and cold and diarrhoea/vomiting were seen as contraindications to vaccination. Fever of over 100°F was seen as a contraindication for DPT vaccine (95%), OPV vaccine (63%) and measles (63%). Diarrhoea and vomiting were seen as contraindications for the OPV vaccine by over 75% of all respondents. TT was one vaccine that was relatively unhindered by contraindications. 24% of all respondents believed that there were no contraindications to the TT vaccine.

Skin diseases and boils were seen as contraindications for DPT, BCG and measles vaccines by nearly one-third of all respondents. Malnutrition, on the other hand was mentioned as a contraindication by only 18% - 20% of all respondents.

2.2 Maintainence of vaccines - Temperature

Only 44.6% of all respondents could state the correct temperature at which vaccines would need to be stored namely, +4°C to +8°C, 29% gave an incorrect answer while 26% said that they did not know. Correct responses came more from doctors than from workers.

The error was made mainly on the side of lower temperatures, including temperatures at freezing point and below. Very few respondents spoke of storing vaccines at temperatures higher than +8°C.

2.3 Number of recipients needed to open a vial

On an average, implementers said that 6 recipients would be needed for them to open a ten-dose vial. There was a difference in the responses given by doctors and workers. 32% of doctors said that one child would be sufficient reason to open a 10 dose vial. The mean was 5.1 children. Workers, on the other hand, tended to wait for larger numbers and required an average of 7.1 children in order to open a 10-dose vial. There was a difference in the responses between PHC and sub-centre respondents. At the PHCs the single largest response favoured one child as being sufficient for opening a 10-dose vial; at the sub-centre, the response centred around 8 children.

2.4 Left-over vaccines

If more than ½ a vial of vaccine was left over, both doctors and workers would tend to put it back for re-use. If less than ½ a vial was left over, doctors would tend to throw it away while workers would tend to put it back.

DPT and TT vaccines would have a greater chance of being put back in the refrigerator while measles and BCG vaccines would tend to get thrown away. OPV vaccines were not clearly in any one category but, in the final analysis, would stand a greater chance of being put back than of being thrown away.

2.5 Case-studies

A couple of hypothetical situations were studied to obtain an insight into the extent to which correct immunization practices had been understood.

In one case, respondents were asked to assume that a child's third dose of DPT/OPV had been delayed to the age when the child would also be eligible for the measles vaccine. Respondents were asked if they would give all three vaccines together under the circumstances. 50% of the respondents said that they would do so, 45% said that they would not do so. Willingness to give 3 vaccines together was higher at the district level than at the metro level.

The main reason for not being willing to do so was the fear of unusually strong side effects or other reactions.

The other situation pertained to the measles vaccine. Respondents were asked if, in a situation where the parents of a child said that the child had already had an attack of measles, they would give the measles vaccine nevertheless or refrain from doing so. 73% of all respondents said that they would not give a measles vaccine under those circumstances, the main reason being that natural immunity would have been developed with the measles attack.

3.0 PROGRAMME

3.1 Targets

71% of all respondents said that the immunization target was that 75% of all eligible infants and pregnant women were to be vaccinated in that year.

64% of the respondents were aware that these targets had to be maintained for the future. The others either felt that these targets were only for 1987 (21%) or did not know.

Within those who did not know that the immunization programme was of long-term duration, only 43% were aware that it would be a continuous process. The others assumed varying durations ranging from 2 years to 20 years.

3.2 Appraisal of own centre

16% of respondents rated their own centre's performance as being excellent, 30% said their performance was very good while 42% felt that it was good. 8%rated their performance as being fair to poor.

There were two types of explanations given for the ratings; one was a justification of the rating per se while the other was an explanation of the performance.

Positive ratings were justified by respondents on the basis of a good proportion of the target having been achieved and 'many' children having been vaccinated. Good-excellent performance was spontaneously attributed to the following factors :

- cooperation received from the people
- positive attitudes of workers
- regular supply of vaccines.

The factors that were spontaneously mentioned to explain a negatively rated performance were :

- lack of education/understanding among the people and the need for extensive persuasion

- infrastructural problems

- fear of side effects

3.3 Special training

53% of all respondents (70% of workers at the district level) said that they had received special training for immunization.

Of those who said that training had been received, almost all (93%) expressed satisfaction with the training.

The training manual had been seen by 62% of all respondents; illustrations were recalled by an additional 4% . Only 48% of all respondents currently possessed the manual. The large majority (83%) agreed that the manual would be useful. Awareness and current possession of the manual was higher amongst workers than amongst doctors.

4.0 UNDERSTANDING THE PEOPLE

4.1 Decision makers in the family

The decision maker in the family on the subject of getting a child immunized was seen as being the mother

by 75% of all respondents. On the subject of giving the TT injection to a pregnant woman, 59% said that the woman concerned would take the decision while 23% felt that her husband would be the decision-maker. 11% felt that the female elder in the family would be the decision maker.

If a child had to be taken to the village doctor (or a nearby doctor), 49% felt that the decision would be taken by the mother while 36% felt that it would be the father's decision. If, however, a child had to be taken to a doctor in the town (or a doctor who lived far away), 61% felt that the decision would be taken by the father.

Decisions to take a child to the local faith healer were believed to be taken mainly by the women in the family - the elder women (45%) or the child's mother (27%).

4.2 People's attitudes to immunization

A child's parents were seen to be unambigously in favour of immunization. This was the opinion of 93% of all respondents.

Grandparents however, were seen to favour immunization by only 59% of all respondents. 17% felt that grandparents were opposed to immunization while 19% felt their attitude was one of indifference.

The others in the village who were clearly seen to be in favour of immunization were the school teacher (92%), the village midwife (83%) and the village chief (82%). Village elders were seen to have a favourable attitude by only 75% of the respondents. The faith healer was believed to be clearly opposed to immunization (39%) or indifferent to it (14%).

Workers felt more strongly than doctors that elders were opposed to immunization. Assuming that workers are closer to people and therefore have a better understanding of the situation, it would be prudent to tailor communication such that it reaches out to and convinces the older generation.

4.3 Assessment of overall attitudes of the people

In terms of awareness of immunization, 88% of the respondents believed that most people in their territory were aware of immunization. 81% also said that most people were cooperative and willing.

However, when negative statements were read out, they were not opposed strongly. Thus, 55% of the respondents agreed that some people were indifferent and 53% agreed that people had to be coaxed.

The contradiction implicit in this tendency to agree with positive and (to a lesser extent)

negative statements reveals a higher level of discontent than was willingly admitted to. We conclude that there was in fact greater resistance to immunization than would be immediately apparent.

4.4 Refusal

On being directly questioned, over 50% of the respondents said that some people did refuse vaccinations. There was a slightly higher level of refusals reported by district level workers.

The persons who refused vaccinations were predominantly described as people who were illiterate or uneducated. Backward classes, labourers and poor people were other descriptions used to describe the typical refusers.

The most important reasons attributed to such refusals were :

- lack of education and belief in vaccines
- fear of fever and/or adverse reactions
- traditional beliefs.

Implementers felt that if people had to be effectively persuaded on the subject of infant immunization, this would have to be done by means of education through personal contact and documentary films.

4.5 Attitudes of implementers

Implementer attitudes were measured by means of a series of statements which respondents could agree or disagree with. The statements, and the proportion of respondents who expressed agreement with that statement, are being presented below

Attitude to work	% who agreed
1. Convincing people to get their child immunised is frustrating work	27
2. This job involves important and useful work	99
3. Working with illiterate people can be boring and tiring	41
4. I would prefer to work in a town rather than in a village	40
5. People here do not really believe that vaccinations can prevent disease	14
6. People suspect that vaccinations are not given for the prevention of disease but some other motive	16
7. Once a child has been vaccinated people will come forward on their own to get their next child vaccinated	89
Knowledge regarding immunization	
8. TT and DPT vaccines should not be allowed to freeze	75

		% who agreed
9.	Keeping vaccines at room temperature for 2-3 hours is okay	24
	Practices	
10.	The cold chain system beyond HQ is very weak and breaks down easily	45
11.	Most vaccines loose potency because it is impossible to maintain them at the correct temperature	62

99% of all respondents revealed that the child was normally brought for immunization by the mother.

Mothers kept track of due dates on the basis of immunization record cards or on the basis of fixed days which would be advertised. Alternately, workers took the responsibility of reminding parents on the due date or actually taking the vaccination to the house of the child. The former (mother-oriented) memory system was more prevalent except for three districts - Purnia, Nadia and Nanded where the latter (worker-oriented) memory system was more prevalent. In metros, the onus of remembering dates rested almost entirely with the mother.

5.0 PRACTICE RELATED ISSUES

5.1 Preservation of vaccines for outreach sessions

Two out of three respondents transported vaccines to outreach session well protected in ice. The responses

given by the balance one-third could be interpreted either way. It is difficult therefore to reach a clear conclusion on this issue.

During the session, 82% of the respondents reported preservation practices that would be acceptable. These were of keeping the vial in a cup of ice, on top of an ice-pack, on a plastic bag filled with ice or back in the vaccine carrier itself. The remaining 18% respondents reported practices that would not be acceptable such as putting the vial on the table, in a cup of water or in the shade.

5.2 Sterilization

Needles and syringes were sterilized by some respondents at the health centre and by others at the outreach camp. Both practices were reported in equal measure. The majority (77%) sterilized instruments before the session while others, (20%) did so during the sessions.

Sterilization was mostly 'achieved' by boiling the instruments. The error however lay in the understanding of time required to achieved sterilization. Inquiry revealed that 50% of all respondents boiled instruments for 20 minutes or less and these 20 minutes included the time taken for water to reach boiling point. Only 15% used the autoclave method for sterilization.

5.3 Availability of consumables

There appeared to be no problems in terms of availability of consumables. The two items in which some availability problems were reported were vaccine cards and the BCG vaccine. Over 20% of respondents in 6 out of 12 districts reported irregular supply of the vaccine.

5.4 Posters/tin plates

80% of all respondents (91% - 95% at the PHC and PHC levels, respectively) reported receipt of tin plates and posters. Doctors and workers in districts reported that an average of 117 posters/tin plates had been received. In metros, on the other hand, an average of 23 posters/tin plates were reported received by each respondent. There were wide variations in numbers received between districts. Some districts such as Bharatpur[o] and Allahabad[+] reported high receipts (an average of 335 and 245 respectively) while others reported considerably lower receipts (6 in Gwalior*,10 in Nanded*).

There were seven basic pictures and messages. Data on posters/tin plates received revealed that the types were equally distributed.

Respondents were asked to rate each poster on a scale ranging from poor to excellent. The two pictures that

received the highest rating both pertained to polio. It is hypothesized that the combination of familiarity of the disease and the dread of disability made these posters most effective.

The second highest rating was received by two posters - 'mother and dead child' and 'tetanus picture of infant with bandaged head'.

The lowest ratings were given to three posters - "Tetanus - child with tube in the nose', 'TB-node on neck' and 'Father and healthy child'.

This rating bears out the hypothesis that posters, in order to be effective, need to have three characteristics - familiarity, probability of occurence and dread as perceived by the target audience.

5.5 Problems in practice

One out of three respondents said that they had no problems that caused any obstruction to their work. The others however did speak of problems. The first five problems that were mentioned were as follows, in order of frequency of mention

- Transportation problem
- Resistance from people
- Problems regarding vaccine supplies
- Cold chain maintainence
- Shortage of workers

5.6 Areas if improvement

Upon being asked, respondents ranked possible improvement areas as follows :

- information to people about immunization
- supply of vaccines
- cold chain maintainence

Doctors spoke more in terms of cold chain maintainence, supply of vaccines and system of travel; workers wanted improvement in the system of travel, supply of vaccines and in reduced ratios of people : Centres.

6.0 MEDIA

The main sources by which people in villages heard of happenings outside their village differed by the type of news in question.

National happenings were heard of through national media. These were the radio (87%), newspapers (65%) and television (52%).

District level happenings were heard of mainly through the newspaper (52%) followed by the radio (38%). Word-of-mouth, particularly in terms of news brought by travellers, accounted for an additional 20% of the reported sources.

Personal contact either with travellers or visitors from neighbouring villages accounted for most of the news that was received about events in neighbouring villages. News about events in nearby villages was disseminated by means of announcements, proclamations made by village elders or chiefs and by means of posters and leaflets.

Information regarding the visit by a health team was given by health workers or the ANMS. Visits were announced over megaphone; the services of village chiefs were also taken for the purpose. In addition, notices, pamphlets or posters were sometimes used.

In terms of the overall penetration and credibility of mass media, the radio ranked highest followed by cinema. 66% of the implementers said that radio was most likely to reach village people and 73% said that the people believed in the news given by the radio. Cinema was believed to reach people (42% of the implementers said so) and was credible (56%). Posters had higher reach than newspapers but newspapers were more credible than posters.

Messages that would convince

Finally implementers were asked for their suggestions on messages that would convince people to get their child immunized. The main suggestions were as follows :

- explain advantages of vaccination
- give health education to parents
- name the diseases that can be prevented and explain these
- explain the consequences of not vaccinating a child

DETAILED FINDINGS

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1.0 IMMUNIZATION

1.1 The immunization schedule

1.1.1 Awareness of vaccines

All respondents were asked to talk of the immunization schedule as known to them. They were assisted by a series of questions, starting with a question on the names of the various vaccines that would form part of the immunization schedule.

Spontaneous mention of vaccine names were as follows :

(Base : 312)

Rank	Name	Total %	Highest mention
1	DPT	96.2	PHC = 100%, South zone = 99%
2	OPV	94.2	PHC = 97%, North zone = 97%
3	Measles	87.8	PHC = 98%, West zone = 97%
4	BCG	83.3	PHC = 98%, West zone = 92%
5	TT	79.2	Govt Hospitals = 88% South zone = 90%
6	Others	39.4	PHS = 55%, East zone = 56%

Ref : Tables B-8, C-9

BCG was spontaneously mentioned more often by workers than by doctors at the district level (90% workers : 80% doctors). The inverse was true for the metros (57% workers : 70% doctors).

TT was spontaneously mentioned as part of the schedule by only 79% of all respondents. Doctors, especially

at the metro level, mentioned TT more often than workers. (80% doctors : 78% workers; At the metro level the ratio was 74% doctors : 62% workers). In the South zone 90% of all respondents mentioned TT; the figures for the other three zones are : North zone - 79%; East zone - 79%; West zone - 75%.

Other vaccinations (over and above these five) were mentioned as part of the schedule by 39% of all respondents. This implies inaccurate knowledge and probably, some guesswork. Other vaccinations were mentioned significantly more often by workers (76%) than by doctors (24%). They were also mentioned more often in the East zone districts.

Respondents were then prompted on the vaccines that they had not mentioned to see if they were at all aware of the vaccine as being part of the immunization schedule.

Total awareness of vaccines was as follows :

(Base : 312)

Name of vaccine	Total %	Remarks
TT	97.4	Low amongst metro workers : 81% Low in Hamirpur* (85%) and Nanded* (95%)

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Name of vaccine	Total	Remarks
BCG	95.8	Low in North zone : 86% and amongst private practitioners : 81%
DPT	98.4	Low amongst metro workers : 95% Low in Hamirpur* (85%) and Nadia° (96%)
OPV	99.0	Low amongst metro workers (95%) Government hospitals 97%)
Measles	95.5	Low amongst private practioners (85%), metro workers (81%), Hamirpur* (80%), Nadia° (92%)

Ref : Tables B-9, C-9

The factors that emerge as being significant are :

- Metro workers do not seem to be fully conversant with the immunization schedule.

- Hamirpur implementers, inspite of belonging to a "good category" district, reveal a surprising lack of awareness.

- The South, East and West zone districts emerge as being more aware of the vaccines in the immunization schedule than the North zones.

Total Awareness

Vaccine	North %	South %	East %	West %
TT	95	100	100	99
BCG	86	100	99	97
OPT	95	100	99	100
OPV	100	99	99	100
Measles	93	99	96	100

Ref: Table C-9

1.1.2 Details regarding each vaccine

a/ Tetanus Toxoid

i/ No. of doses - TT

80% of all respondents said that TT vaccine was a 2-dose course.

There were wide variations in the understanding of the number of doses.

93.5% of PHC respondents and 94.5% of PHS respondents spoke of tetanus as being a 2-dose course In contrast, only 40% of private practitioners mentioned 2 tetanus doses; 44.7% of them mentioned 3 doses.

This emphasis on 3 doses was revealed by 50% of all respondents in Iddukki+. In Gwalior*, 18% spoke of 3 doses. However, in all other districts,

over 80% of all respondents thought of TT vaccine in terms of 2 doses.

In metros, however, TT was not always thought of in terms of 2 doses. 59.3% of doctors and 35% of workers in metros spoke of 2 doses; 47% of workers in metros spoke of 3 doses.

In summary the views on TT doses were as follows :

2 doses : 80% of all respondents particularly from districts, from PHCs and PHSs.

3 doses : 13.8% of all respondents, particularly from Iddukki+; workers in four metros and some private practitioners thought of TT in terms of 3 doses.

1 dose : Mentioned by only 6% of all respondents. Greater emphasis on one dose in Bharatpur° and Allahabad+ districts, amongst doctors and workers in metros and amongst private practitioners.

The widespread perception amongst implementers of TT as a 2-dose vaccine was in contrast to the understanding held by mothers who thought of TT essentially in terms of 3 doses.

ii/ Target recipient - TT

On this subject there was little or no argument. 99% of all respondents said that the TT vaccine was for pregnant women. The three respondents who did not specify were 2 doctors from the East zone and one worker from a metro.

b/ BCG

i/ No. of doses - BCG

BCG was predominantly seen as a one-dose vaccine (98.3%). Only a couple of workers at the PHC/PHS level mentioned 2 doses.

ii/ Target recipient - BCG

96% of respondents said that the BCG vaccine was meant for a child aged below one year. 11.7% said it was for a child above one year. There is therefore an overlap of 7.7% which is the proportion of respondents who mentioned both below 1 year and above 1 year. These were mostly from Gwalior* (41% overlap) Nanded* (23.8% overlap), and Purnea° (17.4% overlap). Private practitioners and workers in metros mentioned both age groups more often than others.

Looking at this in conjunction with the earlier statement, namely that BCG was seen as a one-dose vaccine by 98% of all respondents indicates clearly that respondents were not thinking in terms of booster doses. They were instead revealing a lackadaisical attitude where their response would have been that either below one year or above one year would be a suitable age for the BCG vaccine.

iii/ Earliest age - BCG

The majority of the respondents believed that BCG vaccine was to be given by the age of 3 months (85.3%). Half of all respondents said the vaccine was due before 2 months of age; 35.5% said it was due at 3 months.

Government hospitals and private practitioners were in favour of BCG at below 2 months age; PHC and PHS respondents were in favour of the age of 3 months.

Over two-thirds of respondents from Allahabad+, Purnia°, Puri+ and Nanded* were in favour of BCG at 3 months.

At the district level, doctors (61%) spoke of BCG before 2 months while workers (48%) spoke of BCG at 3 months; in the metros, both doctors (82%) and workers (74%) spoke of BCG being due before the age of 2 months.

c/ DPT

i/ No. of doses - DPT

DPT vaccine was known to be a 3 dose vaccine. This was stated by 92% of all respondents. In Nadia° and Hamirpur* districts a few respondents mentioned 4 doses. However, their numbers were small.(3.6%). Four doses, when mentioned were usually from PHCs at the district level.

Workers at the metro level, particularly in Calcutta mentioned 5 doses of the DPT vaccine.

ii/ Target recipient - DPT

The target recipient was mostly seen as a child below one year (96.7%). In the metros, (and to some extent in the districts) there was additional mention of a child above one year.

(%)

	Total	District	Metro	Doctor	Worker
Base: All aware of DPT	307	260	47	114	193
	96.7	96.9	95.7	96.5	96.9
Both below 1 year and above 1 year	14.3	11.9	27.6	17.6	12.4

Ref : Table A-16

All doctors from metros who were aware of DPT mentioned the pre-one year old as the target recipient. In addition, 29.6% mentioned the post-one year old too.

Mention of the older age group points to an awareness and inclusion of the booster does as part of the immunization schedule. However, the majority of all respondents did think of the immunization schedule as only the basic schedule and not the booster doses.

iii/ Earliest age - DPT

The earliest age, as stated by 62.9% of all respondents, was 3 months. 22.8% of the respondents spoke of an age of less than 2 months. These were more from metros and from government hospitals. In Hamirpur*, Madurai° and Kheda+ districts, respondents mentioned the starting age as being less than 2 years.

	Base: All aware of DPT vaccine	Below 2 months %	3 months %	Over 3 months %
Hamirpur*	17	70.6	23.5	5.9
Madurai°	24	45.8	37.5	16.7
Kheda+	22	59.1	36.4	4.5
Metros	47	36.2	53.2	6.4
Districts	260	20.2	64.6	11.2

Ref : Table C-17

In Anantpur*, 29.2% of all respondents gave the starting age as 4 months.

ii/ Interval between 2 doses - DPT

68.8% of all respondents at the district level and 89% of all respondents at the metro level stated that the correct interval between 2 doses was one month.

(%)

				Major variations				
				South		West		
Base: All aware of DPT vaccine	Total 307	District 260	Metro 47	Iddukki+ 24	Anantpur* 24	Nanded* 21	Kheda+ 22	Gwalior* 22
One month	72.0	68.8	89.4	41.7	0.0	61.9	63.6	72.7
Two months	12.4	13.1	8.5	41.7	0.0	-	36.4	-
Over 2 months	13.1	15.3	0.0	16.6	100.0	38.4	-	27.3

Ref : Table A-18, C-18

As is apparent, the knowledge in South and West zones pertaining to the interval between 2 doses of the DPT vaccine was very different from the national average.

90% of private practitioners were in favour of a one-month interval as compared 67% at the PHC/PHSs and 71% at the government health centres.

d/ OPV

i/ No. of doses - OPV

Most government related health personnel saw OPV as a 3 dose vaccine. Private practitioners and respondents from the metros were however, divided in their opinions between three and five doses.

The details are as follows :

(%)

						Major variations			
Base: All aware of OPV vaccine	Total 309	District 262	Metro 47	Doctor 114	Worker 195	Iddukki+ 24	Madurai° 24	Bombay 24	Calcutta 12
3 doses	84.5	89.3	57.4	74.6	90.3	58.3	79.2	33.3	41.7
5 doses	11.7	6.9	38.3	18.4	7.7	37.5	20.8	66.7	50.0
Others	3.8	3.8	4.3	7.0*	2.0	4.2	-	-	8.3*

* Mainly 4 doses

ii/ Target recipient - OPV

The pre-one year old was seen by 98.4% of all respondents as being the target recipient. 16.2% spoke of the post-one year old too, referring to the booster doses. (This could account for the 5 or 4 doses mentioned by some respondents). Less than one percent of all respondents spoke of the target recipient as the post-one year old only.

Higher mention of both age groups came from private practitioners, and from Gwalior* and Nanded* in the West zones.

The details were as follows :

(%)

						Major variations			
Base: All	Total	District	Metro	Doctor	Worker	Gwalior*	Nanded*	Purnia°	Bombay
aware of OPV vaccine	309	262	47	114	195	22	21	24	12
Child below 1 year	98.4	99.3	93.6	98.2	98.5	100.0	100.0	95.8	91.7
Child above 1 year	16.2	13.0	34.0	19.3	14.4	45.5	52.4	25.0	75.0

Ref: Tables A-20; C-20

iii/ Earliest age

Opinions with regard to the earliest age were divided.

The majority (62.5%) said that the starting age was 3 months; 23% mentioned an age of 2 months or less while

14.5% gave an age above 3 months as the starting age.

The details were as follows :

(%)

Base: All aware aware of OPV vaccine	Total 309	District 262	Metro 47	Doctors 114	Worker 195
Upto 2 months	23	19.5	42.6	24.6	22.1
3 months	62.5	61.4	40.4	58.8	64.6
4 months+	14.5	19.1	17.0	16.6	13.3

(%)

	Major differences					
Base: All aware of OPV vaccine	Hamir-pur* 20	Anant pur* 23	Kheda+ 22	Nanded* 21	Bom-bay 12	Cal-cutta 12
Upto 2 months	60	9	59	5	64	58
3 months	30	65	36	57	9	17
4 months+	10	26	5	38	27	25

Ref: Tables A-21; C-21

The tendency in the North zone was to start earlier, at 2 months or before that.

vi/ Interval between 2 doses - OPV

The interval between 2 OPV doses was mostly seen as being one month. Private practitioners and metro respondents were more wholly in favour of a one-month interval. In some districts, particularly in the South zone, the responses favoured a two-month interval.

Details were as follows :

(%)

				Major differences					
Interval	Total	District	Metro	Govt Hospitals	Anantpur*	Iddukki+	Madurai°	Kheda+	Nanded*
Base* :	309	262	47	99	23	24	24	22	21
One month	72.8	70.2	87.2	71	-	46	75	64	71
2 months	12.9	13.4	10.6	18	-	42	25	36	28
Over 2 months	14.3	16.4	2.2	11	100	12	-	-	1

* All aware of OPV vaccine

Ref: Tables A-21, B-21, C-21

Responses from Anantpur*, a "good category" district were surprising as the majority stated that the interval between 2 OPV doses would be 3 months or more.

There were no real variations in responses given by doctors and workers. 75% in the former category and 71% in the latter placed the interval at one month.

v/ Measles

i/ No. of doses - Measles

Measles was predominantly seen as a one dose vaccine. This was stated by 97.7% of all respondents. There were no real variations by district/metro, doctors/workers or by type of centre

ii/ Target recipient - Measles

The target recipient was largely seen as being the child aged less than one year (95.3%). However, 14.4% also mentioned that the vaccine was to be given to a child aged over 1 year. Since an overlap of 10% is

incongruant with the earlier statement of measles being a one-dose vaccine, this overlap connotes uncertainity or flexibility rather than booster doses.

Measles injections for a child above the age of one year were mentioned by private practitioners and in some districts. There were no real variations between district and metros or between doctors and workers. The details were as follows :

(%)

				Major differences				
	Total	District	Metro	Gwalior*	Nanded*	Purnia°	Govt Hospitals	Private practitioners
Base*	298	256	42	22	21	23	96	45
Below 1 year	95.3	96.1	90.5	100	95	83	96	93
Above 1 year	14.4	14.5	14.3	45	62	26	8	20

* All aware of measles vaccines

Ref: A-24, B-24, C-24

iii/ Earliest age - Measles

Two-thirds of the respondents mentioned 9 months as the age for the measles dose. The remaining one-third mentioned both earlier and later ages. The average age mentioned across the country was, however, 9.1 months.

The variations across centres and respondent groups become clearer if looked at in terms of the average age mentioned.

Average age (Months)

Base: All aware of measles vaccine; figure in brackets

Total	(298)	9.1			
District	(256)	9.1	Doctors	(109)	9.3
Metro	(42)	9.2	Workers	(189)	9.0

Govt hospitals	(96)	9.3
PHC	(63)	9.1
PHS	(94)	8.9
Private practitioners	(45)	9.2

Variations within districts and metros were as follows :

Higher age			Lower age		
Allahabad*	(15)	9.6	Purnia°	(23)	8.2
Iddukki	(23)	10.0	Puri+	(22)	8.8
Madurai°	(24)	9.5	Kheda+	(22)	8.8
Bombay	(12)	10.0	Delhi	(11)	8.5

Ref: Tables A-25; B-25; C-25

1.2 DISEASES PREVENTED BY VACCINES

The questions asked to respondents in this context was "What are the diseases prevented by each of these vaccines ?" Each vaccine was mentioned and respondents were asked to name the diseases.

The answers were predominantly correct. Total responses are given below :

(Base : 312)

Name of vaccine	Disease prevented	% mention
TT	Tetanus	96.5
BCG	TB	97.1
OPV	Polio	99.0
DPT	Tetanus	84.9
	Diptheria	95.2
	Whooping cough	97.1
Measles	Measles	97.1

Ref : Tables A-31 to A-35

TT vaccine was credited with preventing whooping cough, diptheria by a handful of respondents, mainly doctors from both districts and metros.

BCG and OPV were fairly clearly associated with TB and Polio respectively.

The knowledge that DPT provided protection against tetanus was somewhat weak, particularly amongst workers, at both state and metro levels. Data from private practitioners and PHS' showed lower than average awareness of tetanus prevention through DPT.

Measles vaccine was strongly associated with prevention of measles. Only four respondents from the districts confused the vaccine with prevention of tetanus.

1.3 SYMPTOMS OF DISEASES AND PERCEPTIONS OF SERIOUSNESS

1.3.1 Polio

a/ Symptoms

The most important symptoms of polio were paralysis of the affected limb (82.4%) and fever and pain in the head (68.3%).

The latter was mentioned more often by doctors. The former was mentioned more often in the districts and by workers. The details are as follows :

(%)

Symptoms	Total	District	Metro	Doctors	Workers	Zones North	Zones South	Zones East	Zones West
Base: All respondents	312	264	48	115	197	57	72	70	65
Fever/headache	68.3	67	73	82	60	56	93	71	45
Paralysis of limbs	82.4	81	90	77	85	63	83	89	86
Pain in limb	34.9	33	46	38	33	19	42	43	25
Difficulty in standing/ walking	9.6	10	6	9	10	12	7	7	15

Ref: Tables A-36, C-36

In the North zone, there were several symptoms mentioned. In the South zone (including Madras metro) responses were focussed more clearly around fever/headache (100% mention in Anantpur*, Madurai° and Madras) and paralysis of the limb(s).

In the West and East zones paralysis of the affected limb was the main symptom mentioned. It was mentioned by all respondents in Bombay, Gwalior* and Nanded*and Calcutta. While fever/headache were mentioned by 71% of the respondents in the East zone, it was mentioned by less than 45% of respondents in the West zone. The other symptoms that were mentioned were :

- difficulty in walking/standing - 9.6%
- limbs become weak/thin - 7.1%
- high fever and vomiting - 6.1%
- weakness - 6.1%

b/ Seriousness

Polio was considered serious or very serious by over 98% of all respondents. More respondents in metros and in the worker group considered polio to be very serious disease than in the districts. The details are as follows :

(%)

	Total	District	Metro	Doctor	Worker
Base:*	312	264	48	115	197
Very serious	65.4	64	71	62	68
Serious	32.7	34	27	37	31

	North	Delhi	South	Madras	East	Calcutta	West	Bombay
Base*:	57	12	72	12	70	12	65	12
Very serious	58	75	68	92	73	92	59	25
Serious	40	25	31	8	27	8	39	67

* All respondents

Ref: Table A-37, C-37

Attitudes towards polio in the West zone were clearly less anxious than those in the East and South zones.

1.3.2 Diphtheria

a/ Symptoms

The main symptoms of diphtheria were as follows :

(%)

Base: All respondents	Total 312	District 264	Metro 48	Doctor 115	Worker 197
Swelling in the throat	64.1	62	75	69	61
White membrance in throat	57.7	55	71	67	52
Fever/cough/cold fits	50.0	51	44	59	45
Child cannot eat	39.1	39	40	34	42

Ref: Table A-38

Doctors were clearly more conversant with symptoms of diphtheria than workers. Similarly, there was more familiarity with the symptoms in the metros than in the districts.

Within districts, there was greater familiarity with the diphtheria symptoms in Puri+, Nadia°, Anantpur* and Madurai°. In the city of Bombay, respondents were more conversant with the symptoms of diphtheria than in other cities.

Apart from those mentioned above, other symptoms of

diphtheria that were mentioned were :

- difficulty in breathing - 15.7%
- pain and swelling, white tissue in throat - 9.3%
- difficulty in speaking - 4.2%

b/ Seriousness

The majority (74%) considered diphtheria to be a very serious disease. The detailed breakup was as follows :

(%)

	Total	District	Metro	Doctor	Worker
Base: All respondents	312	264	48	115	197
Very serious	74.0	74	73	78	72
Serious	23.7	24	23	20	26
Not serious	1.6	2	2	1	2

Ref : Table A-39

Clearly, there were not many variations between perceptions of seriousness in districts and metros. Doctors considered the disease to be marginally more serious than workers did.

Within districts, diphtheria was considered more serious in Gwalior^{+}, Madurai^{o}, Nadia^{o}, Iddukki^{+}, Puri^{+} and Nanded* than the others. Within metros, diphtheria got a higher seriousness rating in Delhi, followed by Madras, Calcutta & Bombay, in that order.

There were no major variations in familiarity with the disease or in the perceptions of serious by type of health centre.

1.3.3 Pertussis

a/ Symptoms

The two main symptoms of pertussis that were mentioned were that the child keeps coughing and that there is a whoop during the cough. The mention of the whoop came significantly more from metros than from districts and from doctors than from workers. Within types of doctors, this symptom was mentioned more often by doctors in government hospitals and the private practitioners.

The main symptoms mentioned were as follows :

(%)

	Total	District	Metro	Doctor	Worker	North	South	East	West
Base: Child	312	264	48	115	197	57	72	70	65
keeps coughing	70.2	70.5	68.8	67.0	72.1	71.9	65.3	78.6	66.2
Whoop during cough	71.2	67.8	89.6	83.5	64.0	50.9	72.2	62.9	83.1
Vomiting after cough	51.0	52.3	43.8	53.0	49.7	50.9	43.1	55.7	60.0
Fever	22.4	22.3	22.9	27.0	19.8	21.1	23.6	18.6	26.2
Watery/ reddish/ shut eyes	13.1	14.4	6.3	7.0	16.8	10.5	8.3	34.3	3.1

Ref : Table A-40; C-40

Other symptoms mentioned were :

- face becomes red - 6.7%
- difficulty in breathing - 5.4%
- cough - 3.2%

In the North zone, apart from other symptoms, the fact that the face became red was mentioned by 15% of the respondents.

b/ Seriousness

The disease was considered to be serious by 47% of the respondents and very serious by 42% of the respondents. While the disease was considered serious, it received a lower seriousness score than other diseases such as polio and diphtheria. It was considered to be more serious than measles and TB.

Almost all respondents in Gwalior* (96%) considered pertussis to be very serious. Two out of three respondents in Nanded* felt the same. In Hamirpur* and in Madurai°, over 50% believed that the disease was serious. On the whole, workers believed that the disease was very serious (45%) more than doctors did (37%).

1.3.4 Tetanus

a/ Symptoms

The main symptoms of tetanus that were mentioned were that the body would become rigid, the affected person would get convulsions and the jaw would get locked. Doctors mentioned lock jaw more often while workers mentioned that the body becomes rigid.

The main symptoms mentioned and differences by different categories of persons or places were as follows :

(%)

	Total	District	Metro	Doctor	Worker
Base: All respondents	312	264	48	115	197
Body becomes rigid	72.4	72.3	72.9	60.9	79.2
Lock-jaw	66.7	67.8	60.4	82.6	57.4
Convulsions	61.9	61.4	64.6	75.7	53.8
Fever	16.7	18.2	8.3	16.5	16.8

Ref : Table A-42

Lockjaw was mentioned more by doctors at the district level, mainly in PHCs. There appeared to be greater familiarity with the disease in some districts than in others in that several symptoms were mentioned by a majority of the respondents. These districts were Anantpur*, Puri+, Gwalior*, Kheda+, Nanded* and Hamirpur*

Other symptoms that were mentioned were :

- neck/face/lips become rigid - 6.1%
- unable to swollow/digest/eat - 4.2%
- difficulty in breathing - 1.9%

b/ Seriousness

The disease was clearly in the very serious category with an overall seriousness score of 2.8. 84% of all respondents considered the disease to be very serious. 92% of the respondents in metros believed that this disease was very serious as compared to 83% of the respondents in the districts. It was considered most serious in the North zone, particularly in Bharatpur° and Gwalior* districts. It was also considered very serious by respondents in Gwalior* and Nanded* districts. 91% of private practitioners categorised the disease as being very serious as compared to 80% of the respondents in government hospitals and dispensaries.

1.3.5 T.B

a/ Symptoms

The main symptoms of tuberculosis as given by the respondents were persistent cough and fever, child would lose weight and look tired. There were variations in the viewpoints between doctors and workers as well as between districts and metros.

Symptoms	Total	Districts	Metro	Doctors	Workers
Base: All respondents	312	264	48	115	197
Persistent cough/ fever	88.5	90.2	79.2	93.9	85.3
Child loses weight	63.5	61.7	72.9	74.8	56.9
Child looks tired	39.4	37.9	47.9	40.0	39.1

Ref: Table A-44

There was greatest familiarity with TB in the three districts of the South zone and in Puri+ and Kheda+ districts.

Enlarged lymphnodes and glands in the neck were only mentioned by 9% of all respondents. These respondents came largely from the three districts of Purnia°, Nadia° and Nanded*.

Other symptoms that were mentioned were :

- spits blood from the mouth - 9.6%
- weakness - 4.8%
- chest pain/ribs pain - 4.5%

TB was considered serious rather than very serious and received an overall seriousness score of 2.3 out of 3. Doctors tended to consider the disease just serious whereas workers classified it as very serious.
The ratings on seriousness were as follows :

(%)

Base*:	Total 312	District 264	Metro 48	Doctors 115	Workers 197	Nadia° 24	Puri+ 22	Gwalior* 22	Nanded* 21
Very serious	41.7	40.5	47.9	29.6	48.7	54	50	91	62
Serious	45.2	46.2	39.6	51.3	41.6	46	50	9	33

* All respondents

Ref: Table A-45; C-45

1.3.6 Measles

The main symptoms of measles as stated by the respondents were fever, rash, cough and watery eyes. There were no major differences in symptoms mentioned by district versus metro or by doctor versus worker.

In Hamirpur*, Anantpur* and Puri+, there was higher familiarity with the symptoms of measles. On the whole respondents were considerably more familiar with the symptoms of mealses than they were with symptoms of the other vaccine-preventible diseases.

The differences by district/metro or by doctors/workers were as follows :

(%)

Symptoms	Total	District	Metro	Doctor	Worker
Base: All respondents	312	264	48	115	197
Fever	95.8	96.6	91.7	96.5	95.4
Rash	90.7	90.9	89.6	92.2	89.8
Cough	43.6	43.6	43.8	46.1	42.1
Watery eyes	37.8	38.3	35.4	36.5	38.6
Body becomes reddish	14.4	15.9	6.3	13.9	14.7

Ref: Table A-46

b/ Seriousness

Measles received the lowest seriousness rating amongst all 6 diseases with as many as 14% of the respondents saying that the disease was "not serious". 35% said that the disease was very serious while 49% felt that measles was serious.

For comparison purposes, the scores received by the other diseases were as follows :

(Base : 312) (%)

	Very serious	Serious	Not serious	Mean scores
Polio	65.4	32.7	1.6	2.6
Diphtheria	74.0	23.7	1.6	2.7
Pertussis	42.0	47.4	7.4	2.4
Tetanus	84.0	13.5	0.6	2.8
TB	41.7	45.2	12.8	2.3
Measles	34.9	49.4	14.1	2.2

(Ref: Tables A-37, 39, 41, 43, 45, 47)

It was interesting to note that doctors considered measles non-serious more than workers did; similarly, more respondents from districts considered the disease to be non-serious as compared to metro level respondents. In Anantpur* and Iddukki+, over one third of the respondents said that measles was not serious. In Allahabad+, 20% said that it was a non-serious disease.

2.0 PRACTICE-RELATED KNOWLEDGE

2.1 CONTRAINDICATIONS

Respondents were asked if there were any situations or circumstances when a child should not be given vaccinations. Responses by vaccination type, are given below. These give the overall picture for all the vaccines. Each vaccine will then be studied for perceptions regarding contraindications and differences, if any, by districts and metros, within districts and by type of respondent.

(%)

	Vaccine type				
	DPT	OPV	TT	BCG	Measles
Contra-indications					
Cough/cold	54.2	48.7	27.6	39.4	39.7
Diarrhoea/ vomiting	54.5	75.3	33.0	40.7	44.2
Fever less than 100° F	54.5	46.8	35.3	41.3	47.8
Fever more than 100° F	74.7	63.1	50.3	57.1	62.8
Malnu-trition	19.6	19.9	15.4	17.9	17.6
Skin disease/ boils	35.3	29.5	23.7	32.1	32.1
Others	15.7	13.8	9.6	11.9	13.8
None	3.2	2.6	24.4	12.2	5.8
Don't Know	2.9	3.2	17.3	13.8	10.9

Base : All respondents - 312

Ref: Tables A-54, 55, 56, 57, 58

Contraindications were most strongly associated with DPT and OPV vaccines. 94% of the respondents mentioned some contraindication or the other in connection with those vaccines. The lowest association of contra-indications was with the TT vaccine where only 58% of the respondents mentioned any and as many as 24% said that there were no contraindications for TT.

The health circumstances that were strongly associated with avoiding vaccines were high fever (over 100°F), diarrhoea and/or vomiting, fever below 100°F and cough/cold, in that order. Skin diseases and boils were seen as contraindications by about a third of all respondents for most vaccines.

We will study each of the contraindications in detail :

2.1.1 Cough and cold

This contraindication was mentioned by 61.2% of all respondents. It was mentioned more often at the metro level (67%) than at the district level (60%).

Cough and cold was most commonly seen as a contra-indication for the DPT vaccine, followed by the OPV vaccine. 39% of the respondents believed it to indicate that measles and BCG vaccines should also not be given. Only 28% were opposed to giving TT vaccine when the patient had a cough or cold.

66% of the workers mentioned cough and cold as contra-indication as compared to only 53% of the doctors. In metros, 76% of all workers mentioned cough and cold in this context.

2.1.2 Diarrhoea and vomiting

There were seen to be contraindications by 77% of all respondents. The vaccine that was most commonly seen to be banned under the circumstances was OPV followed by DPT. The rationale was possibly that OPV being an oral vaccine would be rendered ineffective by the presence of diarrhoea or vomiting.

55% of all respondents felt that DPT could not be given during diarrhoea/vomiting, 44% of all respondents felt the same with regard to the measles vaccine and 41% felt the same way with regard to BCG.

Diarrhoea/vomiting was seen as a contraindication more often by doctors (80%) than by workers. Doctors in metros were more unanimous in their ban on vaccines during diarrhoea/vomiting with 85% of them citing it as a contraindication.

2.1.3 Fever below 100° F

59% of all respondents mentioned this situation as a contraindication, with the main ban being on the DPT vaccine, followed by measles, followed by OPV, BCG and TT.

Workers mentioned low fever as a contraindication more often than doctors (62% versus 54%). Respondents in the four metros believed that low fever was a contraindication significantly more often than respondents in the districts (69% verus 57%).

2.1.4 Fever above 100° F

This was quoted as a contraindication by 80% of all respondents. It was seen as a signal for not giving DPT vaccine (75%),measles (63%), OPV (64%), BCG (57%) and TT (50%).

In the metros, as many as 93% of all doctors mentioned fever above 100° F in this context. At the district level, though, high fever was mentioned as a contra-indication by more workers (81%) than doctors (74%).

As with other contraindications, there was a greater belief in not giving vaccines during high fever amongst metro respondents than amongst district respondents.

2.1.5 Malnutrition

Malnutrition was not a widely recognised contra-indication for immunization. Only 24% of all respon-dents mentioned it, and these respondents came mainly from the districts. There was no real difference between doctors and workers on this score.

Malnutrition was seen as a contraindication for almost all vaccines in equal proportions. 20% of the respon-dents mentioned OPV and DPT vaccines, 18% mentioned BCG, and measles and 15% mentioned the TT vaccine.

2.1.6 Skin diseases and boils

40% of all respondents mentioned this condition, making it a more widely recognized contraindication than malnutrition. Larger proportions of workers (43%) mentioned that skin diseases/boils would be an indication to not vaccinate than doctors (35%). As with malnutrition, skin diseases and boils were mentioned more often at the district level (42%) than in the metros (27%).

For each vaccine, there were some respondents who said that there were no contraindications meaning that the vaccine could be given under any circumstances. The details are as follows :

No contraindication

(%)

Base:All respondents	Total 312	Doctor 115	Worker 197	District 264	Metro 48
DPT	3.2	4.3	2.5	3.8	Nil
OPV	2.6	3.5	2.0	3.0	Nil
TT	24.7	31.3	20.8	22.0	39.6
BCG	12.8	19.1	9.1	10.2	27.1
Measles	6.1	9.6	4.1	5.7	8.3

Ref: Tables A-54, 55, 56, 57, 58

TT was the one vaccine that was believed to be permissible under any circumstances by one out of four respondents. BCG was also seen to be relatively free of the constraint of contraindications as compared to DPT, OPV and measles, each of which had some contra-indication or the other, in the opinion of almost all respondents.

2.2 MAINTAINENCE OF VACCINES : TEMPERATURE

The objective of the question on temperatures at which vaccines should be maintained was to check if respondents were aware of the +4°C to +8°C temperature range at which all vaccines would ideally need to be preserved.

The correct answer, namely that vaccines should be kept at the centre or clinic at a temperature that ranged from +4°C to +8°C.came from 44.6% of all respondents.

26.3% said that they did not know the answers while 29% gave an incorrect answer.

For reasons of clarity we will divide responses for this analysis, i.e respondent type analysis, into 3 segments, correct responses, incorrect responses and "don't know" responses.

The correct responses more came from doctors than from workers both at metro and district levels, with district level doctors scoring a slight edge over metro level doctors. The "don't know" responses came mainly from workers particularly at the district level and, within them, particularly at the sub-centres. Incorrect responses came equally from both groups.

The broad break-up of responses is as follows :

	Total	Doctors	Workers
Base :	312	115	197
	%	%	%
Correct	44.6	59.1	36.0
Incorrect	29.1	29.6	29.0
Don't know	26.3	11.3	35.0

	Total		Doctors		Workers	
	District	Metro	District	Metro	District	Metro
Base :	264	48	88	27	176	21
	%	%	%	%	%	%
Correct	44.7	43.8	61.4	51.9	36.4	33.3
Incorrect	26.5	43.7	26.1	40.7	26.7	47.7
Don't know	28.8	12.5	12.5	7.4	36.9	19.0

Ref: Table A-59

Clearly there were more wrong notions held by respondents at the metro level, both doctors and workers.

The major mistake at the metro level was that respondents believed that vaccines were to be frozen. Thus, out of the 48 respondents in metros, 7 believed that vaccines were to be maintained at 0°C, another 7 responded by saying that vaccines were to be kept at freezing point or in deep freeze and 3 spoke of temperatures that were below −10°C. Thus, metro level responses can be accounted for as follows :

	Metro		Metro	
	No.	%	Doctors Nos.	Workers Nos.
Base :	48	100	27	21
Correct	21	43.8	14	7
Don't know	6	12.5	2	4
Below −10°C	3	6.3	1	2
Freezing point/ deep freeze	7	14.6	3	4
At 0°C	7	14.6	4	3
Above +8°C	1	2.1	1	-
Not specified	3	6.3	2	1

Ref: Table A-59

A metro-wise analysis reveals that respondents were best informed in Bombay. The metro wise break-up of responses is as follows :

	Bombay Nos	Calcutta Nos	Delhi Nos	Madras Nos
Base	12	12	12	12
Correct	9	2	8	2
Don't know	0	1	1	4
Below -10°C	0	1	-	2
Freezing point/ 0°C	2	8	1	3
Above +8°C	0	-	-	1
Not specified	1	-	2	-

Ref: Table C-59

In Calcutta, the belief in keeping vaccines at freezing point seemed to be widely prevalent. In Madras and Calcutta, the proportion of correct answers was very poor.

At the district level, the highest proportion of correct responses came from the West zone, particularly from Kheda + and Nanded* districts (73% and 67% respectively). Two other districts had a higher-than-average score of correct answers. These were Gwalior* (50%) and Bharatpur° (50%). The lowest proporportion of correct responses came from Madurai° (20.8%), Purnia° (33.3%) and Puri^{+} (36.4%).

There appeared to be a correlation between knowledge on this subject and the performance categories.

	Good	Medium	Poor
Base :	87	83	74
	%	%	%
Correct	49.4	49.4	36.2
Don't know	25.3	27.7	33.0
Incorrect	25.3	22.9	30.8

(Ref: Table B-59)

At the district level, errors were once again mainly with regard to lower temperatures.

	District level	District	
		Doctors	Workers
Base :	264	88	176
Below 4°C :	%	%	%
- 20°C to -10°C	12.1	10.2	13.1
0°C	4.5	2.3	5.7
Freezing point/ deep freeze	1.1	2.3	0.6
+1°C to +4°C	5.7	10.2	3.4
Above 8°C	3.0	1.1	4.0

Ref : Table A-59

2.3 NUMBER OF RECIPIENTS NEEDED TO OPEN A VIAL

One deterrant to complete immunization of a child would be non-receipt of the vaccination after a mother had taken the trouble to take her child to the doctor or health centre. One of the several reasons for which a child would be sent back would be an insistence on the part of the doctor that sufficient numbers should be present to justify the opening of a vial.

In order to check if indeed such constraints operate, respondents were asked to specify the number of children due for DPT vaccine that he/she would need before opening a 10-dose DPT vial.

19.6% of all respondents said that they would open a vial if even 1 child was present; 17% said that 10 children would need to be present. The remaining 63% of the responses were for varying numbers, as given in the table on the following page.

8% did not give an answer to this question. Of those who did give an answer, the frequency distribution was as follows :

Respondents who answered :

No. of Children	Total No.	Total %	Total Cumulative	Doctors	Workers
Base :	287	100		102	185
	No.	%	%	%	%
1	61	21.2	-	32.3	15.1
2	7	2.4	23.6	2.9	2.2
3	0	-	23.6	-	-
4	7	2.4	26.0	2.9	2.2
5	44	15.3	41.3	18.6	13.5
6	27	9.4	50.7	10.8	8.6
7	23	8.0	58.7	4.9	9.7
8	36	12.5	71.2	5.9	16.2
9	9	3.1	74.3	2.0	3.8
10	53	18.5	92.8	15.7	20.0
More than 10	20	7.0	99.8	3.9	8.6
				Mean = 5.1	7.1
				Median = 4-5	6-7

Ref : Table A-66

The average (mean) was 6.2 children needed while the median was at 6.0.

There was an appreciable difference in the responses given by doctors and workers.

32.3% of all doctors felt that the presence of one child was sufficient reason to open a vaccine vial. The mean lay at 5.1 children while the median requirement was 4-5 children.

The mode was clearly at one child.

By contrast, the mode in the analysis of worker responses lay at 10 children (20% of all responses)! The median was at 6-7 children while the mean value was 7.1 children. Only 15% of the workers said that one child provided sufficient reason to open a ten-dose vial.

Analysis of the data by the health worker categories and private practitioners revealed that the knowledge at the level of primary health centres was most in keeping with desired norms, as is clear from the averages given below :

	Govt hospital/ dispensary	PHC	PHS	Private practitioner
Mean	6.5 children	5.3 children	6.8 children	5.9 children
Median	6-7	5-6	7	7
Mode	10	1	8	1

Ref: Table B-66

2.4 LEFT-OVER VACCINES

On the whole, the instinct of preserving seemed to emerge stronger than that of throwing away or destroying. Presuming that the decision to keep or throw away would vary by the quantity of vaccine left over in a vial, respondents had been asked to talk of their action with regard to less than half-a-vial of vaccine being left over after an immunization session and more than half a vial of vaccine being left over.

The responses were as follows :

(%)

	Less than ½ vial			More than ½ vial		
	Total	Doctors	Workers	Total	Doctors	Workers
Base: All respondents	312	115	197	312	115	197
Throw away	39.1	43.5	36.5	18.6	23.5	15.7
Put back	40.4	36.6	42.6	55.8	48.7	59.8
Depends on the vaccine	12.2	13.9	11.2	14.4	17.4	12.7
Others	3.2	-	5.6	4.5	0.8	6.7
Don't know	5.1	6.0	4.1	6.7	9.6	5.1

Ref: Table A-67

Of those who said that they would put the vaccines back in the refrigerator, a few (26-30%) explained that they would mark it or place in a separate container before putting back in the refrigerator.

The decision to keep back or to throw away would vary by the type of centre to which the respondent belonged. If more than half a vial was left over, 66% of the respondents at a PHC and 61% at a sub-centre would tend to put the vaccine back. Assuming inadequate equipment for prolonged cooling at the sub-centre, the majority decision to put the vaccine back causes concern.

	Less than ½ vial				More than ½ vial			
	Govt hospi-tal	PHC	PHS	Pvt prac.	Govt hospi-tals	PHC	PHS	Pvt prac.
Base	102	63	94	53	102	63	94	53
	%	%	%	%	%	%	%	%
Throw away	41	33	38	43	18	19	15	26
Put back	39	54	39	28	54	65	61	40
Depends on the vaccine	15	11	11	11	20	10	13	13
Others	1	-	11	-	-	-	-	-
Don't know	4	2	1	17	7	3	1	21

Ref : Table B-67

As we have seen, 12% of the responses in case less than ½ vial was left over and 14% in case of more than ½ a vial was left over depended on the vaccine in question.

The vaccines that would tend to be put back were DPT and TT. The vaccines that would tend to get thrown away were measles and BCG. OPV would have a greater probability of being put back than being thrown away.

Decision by vaccine

(Base : 47)

Base: Those whose decision would depend on the vaccine	Put back %	Throw away %
DPT	83	9
OPV	64	32
Measles	6	81
TT	75	17
BCG	13	75

Ref: Table A-69

The sample size is too small for any meaningful analysis by doctors and workers. However, one feature that emerges strongly is that no doctor spoke of putting back a measles vaccine. 17 out of the 20 doctors said that they would throw it away. While 3 workers spoke of putting the measles vaccine back, 21 out of the 27*workers also said that they would throw it away.

* Those not accounted for said "don't know"

2.5 CASE-STUDIES

A couple of hypothetical situations were presented to the respondent and he was then asked to talk of the action that he would take in such a situation.

The first one was with regard to giving multiple vaccines at a time to a child. The other was with regard to the measles vaccine.

2.5.1 Multiple vaccines at a time

The question asked was as follows :

"We have spoken about the ideal immunization schedule. However, take a case where a child was late for his third DPT Polio vaccine and was eligible for the measles vaccine. In such a case, would you give him all three together ?"

50% of the respondents said that they would. 44% would not and 5% did not know. The details were as follows :

(%)

	Total	Doctor	Worker	District	Metro
Base: All respondents	312	115	197	264	48
Yes	50.3	48.7	51.3	53.8	31.3
No	44.2	48.7	41.6	40.5	64.6
Don't know	5.4	2.6	7.1	5.7	4.2

Ref: Table A-48

Higher willingness to give all 3 vaccinations together in the districts appears to be a function of the UIP efforts. However,inter district variations were wide.

Four districts where a high proportion of people said that they would give all three vaccinations together were :

	Base	Said yes
Nadia°	24	83.3%
Bharatpur°	22	77.3%
Anantpur*	24	75.0%
Hamirpur*	20	65.0%

The districts were a higher-than-average proportion of people said that they would not give all three vaccines together were :

		Said no
Puri+	22	77.3%
Kheda+	22	68.2%
Iddukki+	24	54.2%
Gwalior	22	50.0%

Ref: Table C-48

Amongst metros, respondents in Delhi were emphatic that they would not give three vaccines together with 92% of the respondents saying 'no'. In Calcutta, two out of three respondents said 'no'. In Bombay and Madras, 50% of the respondents said 'no'.

The main reason for not giving three vaccines at a time was that the side-effects could be unusually strong (34.8%). There was also the fear that there could be other reactions (21%) though the nature of these other reactions was not specified. Two other reasons

mentioned by over 10% of the respondents were that the body would be too weak to resist multiple vaccines (12.3%) and that, if multiple vaccines were given at a time they would be ineffective with the result that the child would not get immunized (10%).

An analysis of these four main reasons by type of respondent reveals the following :

	Total	Doctor	Worker	District	Metro
Base: Who said 'no':	138	56	82	107	31
Unusually strong side effects	34.8	28.6	39.0	37.4	25.8
Other reactions	21.0	16.1	24.0	22.4	16.1
Body too weak to resist multiple vaccines	12.3	17.9	8.5	13.1	9.7
Child would not be immunized	10.1	16.1	6.1	5.6	25.8

Ref: Table A-49

The figures that have been underlined serve to highlight the type of worker and location where this view was more strongly held.

The question on the reasons for not giving multiple vaccines was an open-ended one with the result that a wide range of responses were received. The other responses are listed below along with the percentage frequency of that response.

(Base : 138)	% who gave the reason
Reasons	
The mother will object, will not understand	4.3
At least one month gap necessary*	4.3
Multiple vaccines cannot be given	4.3
If side effects occur, it would be difficult to locate reasons for the side effect	2.2
If child late, then earlier DPTs invalid	1.4
Cause pain	1.4
No instructions to that effect have been received	1.4
Take up (effectiveness of vaccine) reduced	0.7
Vial (presumably measles vial) opened only if enough children present	0.7

* Question possibly misunderstood

Ref: Table A-49

2.5.2 Measles vaccine

Two questions were asked with reference to the measles vaccine.

a/ The first question concerned the respondent's own personal view with regard to the advisability of preventing measles.

The overwhelming view was in support of the prevention of measles. 91% of all respondents believed that measles should be prevented. 100% of the workers in metros favoured prevention. In contrast, as many as 15% of the doctors in metros felt that measles should not be prevented. There were no major variations by doctors and workers on the whole and in districts.

The negative responses revealed interesting patterns. In the metros, 17% of the doctors in Calcutta and 8% each in Bombay and Delhi were not in favour of the prevention. Amongst the districts, the highest negative opinion came from Madurai (33.3%). By contrast, 100% of the respondents in Madras had been in favour of preventing measles. Some negative opinion was also expressed in Kheda^{+}, Iddukki^{+} and Bharatpur^{o}and Puri^{+} districts.

Those who expressed the belief that measles should not be prevented (23 respondents) were asked for the reasons for this negative reaction. Since the number of respondents were few the range of reasons given are being listed below in order of frequency of mention.

	Frequency
Because measles cannot be prevented	7
Vaccine not really effective	5
Measles is not a serious disease	4
Preventing measles could be harmful	2
Complications of vaccinations serious	1
One attack of measles gives natural immunity	2
Not specified	2

b/ The other area of inquiry with regard to measles was as follows :

"If a mother/father said that her child had already had measles, would you still give the measles vaccine or would you refuse ?"

73% of all respondents said that they would not give the vaccine, 23% said that they would give while 3.5% did not know. The details were as follows :

	Total	Doctors	Workers	(%) District	Metro
Give	23.1	22.6	23.4	25.4	10.4
Not give	73.4	75.7	72.1	71.6	83.3
Dont Know	3.5	1.7	4.6	3.0	6.3

There were no real differences in the responses given by doctors and workers though doctors were somewhat more likely to not vaccinate a child who had reportedly already had an attack of measles.

Between districts and metros though there was a clear difference. Only 10% of the respondents in metros would give a measles vaccine in this situation as compared to 25% of the respondents at the district level. This difference seems to reveal, once again, the effect of UIP training.

There were wide variations within districts, too. The districts where respondents favoured giving a vaccine nevertheless and those where respondents preferred to not give the vaccine have been listed separately below.

Average "would give" = 25.4%

	% who would give		% who would not give
Gwalior*	63.6	Purnia°	4.2
Nanded*	57.1	Allahabad+	6.7
Hamirpur*	35.0	Iddukki+	8.3
Madurai°	33.3	Puri+	9.1
Bharatpur°	27.3	Kheda+	9.1

Anantpur* = 25% Nadia° = 25%

Ref: Table C-52

The reason for not giving a vaccine was common to the vast majority of those who said they would not give namely, that natural immunity would have got developed by that one attack of measles - 82.5% (Base : 229).

The other reasons given by small numbers of respondents were as follows :

		%
1.	Child may suffer from fever/get reaction	5.7
2.	Vaccine can worsen the condition*	4.4
3.	People recognize measles (∴ believe report)	2.2
4.	Would refuse after verifying by asking for symptoms	1.7
5.	Instructions already given to that effect	1.7
6.	Unless he is in the 9-12 month age group	1.3

* Question apparently not understood.

The reasons given by a few respondents such as reasons 3, 4 and 6 indicate that the refusal would not be blind but based on well-thought-out reasons and are therefore reassuring. Interestingly, more of these responses came from workers than from doctors.

3.0 PROGRAMME

3.1 TARGETS

3.1.1 Coverage Targets

The UIP districts had been selected for intensive immunization attention with the clearly defined target of having 75% of all eligible infants and pregnant women immunized in 1986. That target was to be maintained and improved upon in the years that followed. In order to see if respondents were aware of these targets, each respondent was asked to mention the percentage of eligible infants in their territory that were to be vaccinated in 1987.

Since only the districts were in fact bound by these targets, it would only be reasonable to look at data originating from districts for this study and not the metros.

	District Total	Doctors	Workers	PHC	PHS
Base :	264	88	176	63	94
	%	%	%	%	%
Below 70%	11.7	11.3	12.0	12.7	8.6
75%	7.6	3.4	9.7	9.5	11.7
Above 75%	63.2	61.3	64.2	63.5	64.9
Not specified	17.4	23.9	14.2	14.3	14.9

Ref: Table A-94

The proportion of respondents who did not answer this question can be read as those who did not know the

17.8% said that they did not know the answer. Details are given in the table below :

	Total	Doctors	Workers
Base* :	169	57	112
	%	%	%
For 1-2 years	3.6	-	5.4
3-5 yrs or upto 1990	10.7	15.8	8.0
15-20 years or upto 2000 AD	7.7	12.3	5.4
A continuous process	42.6	33.3	47.3
For the duration of our working life	7.1	5.3	8.0
Till 100% target achieved	10.7	17.5	7.1

Ref :Table A-96

* District level respondents who had said that immunization levels were to be maintained for the future.

An understanding of the continuous nature of this programme (as expressed by statements 4 and 5 above) was expressed by 100% of the respondents in Hamirpur*. The details by district were as follows :

	Continuous process	For as long as we are working	Total	DK	Others
Hamirpur*	100.0	-	100.0	-	-
Bharatpur°	73.7	-	73.7	-	26.3
Allahabad+	20.0	-	20.0	10.0	70.0
Anantpur*	20.8	-	20.8	58.3	20.9
Iddukki+	5.3	10.5	15.8	26.3	42.1
Madurai°	35.0	25.0	60.0	5.0	35.0

Ref : Table C-96

	Continuous process	For as long as we are working	Total	DK	Others
Purnia°	60.0	20.0	80.0	20.0	-
Nadia°	27.3	18.2	45.5	27.3	27.2
Puri+	54.5	-	54.5	-	45.5**
Gwalior*	55.6	11.1	66.7	11.1	22.2
Kheda+	21.4	7.1	28.5	7.1	64.4
Nanded*	63.6	-	63.6	27.3	-

** All said upto 1990

Ref: Table C-96

3.2 APPRAISAL OF OWN CENTRE (DISTRICT)

42% of all respondents said that the immunization performance of their centre had been good, 30% said that it had been very good while 16% said that the performance had been excellent.

The differences in appraisal by doctors and workers were as follows :

	Districts Total	Doctors	Workers
Base :	264	88	176
	%	%	%
Excellent	16.3	13.6	17.6
Very good	30.3	26.1	32.4
Good	41.7	45.5	39.8
Fair	7.2	9.1	6.3
Poor	0.8	-	6.3
Don't know	3.8	5.7	2.8

Ref : Table A-75

The perception of respondents in the district and the status of the district as per reported levels of immunization were at variance.

The details are as per the table given on the next page.

Rating of immunization performance

(Mean Score : Max = 5)

Good districts		Medium distircts		Poor districts	
Hamirpur*	3.9	Allahabad÷	3.7	Bharatpur°	4.1
Anantpur*	4.0	Iddukki+	3.5	Madurai°	3.5
Gwalior*	2.6	Puri+	3.3	Purnia°	3.6
Nanded*	2.6	Kheda+	2.7	Nadia°	2.8

Ref: Table C-75

3.2.1 Reasons for excellent-very good rating/performance

a/ The reasons as understood by the respondents fell into two broad categories. There were those who gave a justification of their self-assessment of very good-excellent performance.

These were broadly as follows :

i/ "A good proportion of the target has been achieved" = 39.9%

	%		%
Doctors	41.2	District	36.6
Workers	39.2	Metro	53.3

Ref : Table A-76, C-76

Other centres where respondents expressed satisfaction that a good proportion of targets had been achieved were Kheda+ (66.7%), Purnia+ (54.5%), Hamirpur* (47.1%) and Gwalior* (40.0%).

ii/ "Because many children had been vaccinated": 11.8%

The gist of this statement is the same as the one quoted above, though this statement is less precise than the earlier one. 25% of the respondents who had rated their centre's performance as being very good to excellent in Allahabad+ and Puri+, gave this justification.

iii/ The other statements that explained the rating were :

"No complaints of vaccinated child getting the disease" : 3.9%

"No complaints/problems" : 2.6%

"Satisfactorily met all conditions like cleanliness and care" : 1.3%

b/ The other category of responses were those where respondents sought to explain the factors that had contributed to this very good/excellent performance.

i/ The first credit went to people whose positive attitudes to vaccination were believed to be a major contributory factor to the centre's success in this sphere. "People are willing and cooperative. They are aware of and believe in vaccinations". This statement (or part thereof) was made by 24.8% of all respondents. Keeping in mind that the

question was an open-ended one, spontaneous responses of this nature serve to highlight the importance of creating a positive attitude in people in order to make the EPI successful.

A large proportion (73%) of these responses came from the three districts of the South zone namely Anantpur*, Iddukki+, and Madurai° followed by the North zone districts. Only one district each in the other zones - Puri+ and Nanded* had this comment made by a couple of respondents each.

ii/ "Workers are cooperative/work as directed/work with interest" : 11.1%

This statement came as much from workers as from doctors, but was made mainly in the districts, with particular reference to the three districts in the South zone.

iii/ "Cold chain system properly maintained" : 8.5%.

This was mentioned by one or two respondents each in Hamirpur*, Allahabad+, Anantpur*, Purnia°, Gwalior* Kheda+, and Nanded*.

iv/ "We educate people on health, keep track of immunizations due" : 7.8%

This statement, interestingly, came entirely from workers. One third of these respondents came from

Purnia°. The other districts where workers spoke of health education and follow-up were Nanded*, Allahabad+ Hamirpur* and Madurai°.

v/ "Regular supply of vaccines" : 6.5%

Credit was given to the system by workers, mainly from districts and a couple of doctors. Of all respondents who made this statement, over 50% came from Anantpur* district. The other districts where one respondent each spoke of regular supply of vaccines were Hamirpur*, Anantpur+, Madurai° and Gwalior*.

vi/ "We sterilize syringes properly" : 3.3%

vii/ "Polite behaviour with people" : 1.3%

viii/ "Regular vaccination schedule & timing " : 1.3%

3.2.2 Reasonsfor "good" rating

Of those who had rated the performance of their centre as being "good", 73% gave positive justifications for the rating whereas 27% gave negative justifications. This can be explained by the angle from which the respondent was viewing the response. 73% believed that a "good" rating was positive and superior to a "fair-poor" rating. 27% felt that a good rating was a compromise and gave reasons to explain why the performance could not be rated "very good" or excellent".

Positive : (Base : 90)

Reasons that explained rating :

Achieved good proportion of the target	21.6%
Because many children vaccinated	5.4%
No complaints/problems	2.7%
No complaint of vaccinated child getting the disease	2.0%

Reasons that explained good performance :

People are willing/cooperative/aware of/ believe in vaccinations	20.9%
Workers are cooperative/work as directed/ work with interest	6.1%
We educate people on health/keep track of vaccines	3.4%

Ref : Table A-78

All other reasons, as given in numbers 5-8 in section 'a' above, were mentioned by 2-3 respondents each.

3.2.3 Reasons for negative rating

(Includes negative reasons given for "good" rating plus reasons for fair and poor ratings.)

The reasons given here were varied and, as such, each statement did not have the support of large numbers of respondents. However, they reveal the problems as perceived by implementers and, are therefore important in the total understanding of the immunization task.

The fact that the most frequently mentioned reason, both positive and negative pertained to the attitude of people emphasises, once again, the importance of information, education and communication to develop positive attitudes.

- People uneducated/refuse to understand	9.5%
- Conditions not ideal/infrastructural problems (mostly East zone)	8.1%
- People afraid of side effects/fever	6.1%
- People need lots of persuasion/are not convinced	5.4%
- Coverage could be higher/was higher earlier	5.4%
-	Numbers
- Poor cold chain maintainence	3
- Need better supplies	3
- Staff not cooperative/sincere	2
- Cannot be done scientifically	2
- Insufficient coverage through outreach	2
- Training dissatisfactory/insufficient	1
- Communication/explanation difficult	1
- Propaganda/ publicity/awareness insufficient	1
- Limited number of patients	1
- Pressure of other govt. programmes	1

3.3 SPECIAL TRAINING FOR IMMUNIZATION

In response to a direct question on whether special training for immunization had been received or not, 53% said that they had been given special training while 47% said that they had not. The proportions were inversely related between doctors and workers as follows :

	Total	Doctor	Worker
Yes	53.2	33.0	65.0
No	46.8	67.0	35.0

It is relevant to look at doctor and worker responses by district and metro :

	District		Metro	
	Doctor	Worker	Doctor	Worker
Base	88	176	27	21
	%	%	%	%
Yes	35.2	69.9	25.9	23.8
No	64.8	30.1	74.1	76.2

Ref : Table A-70

It would appear that the chief recipients of the training were workers at the district level. 68% of the respondents at the sub-centres and 63.5% at the health centres said that they had received special training. By comparison, only 45% at the government hospital and only 30% of the private practitioners said so.

Of those who said that special training had been received, 38% said that it was very satisfactory and another 55% said that it was satisfactory. Thus 93% were satisfied with the training. The districts where a high level of satisfaction was expressed were Allahabad^{+}, Anantpur* and Kheda^{+}. The districts were satisfaction expressed was lower than the national average were Iddukki^{+}, Madurai^{o}, Puri^{+}, Gwalior* and Nadia^{o}. In other districts the level of satisfaction expressed was in keeping with the national average. (Ref : Table A-71, C-71).

Of the few respondents (11 numbers) who rated the training as "not satisfactory" or "very unsatisfactory", the complaints were as follows :

		Nos.
1)	Insufficient training to give injection	3
2)	Need a refresher course	1
3)	Insufficient training on overall schedule	1
4)	Training period too short	1
5)	No training on persuading villager	1

4 respondents had not specified the areas of dissatisfaction.

The training on immunization had included a manual which had been distributed to all UIP districts. Respondents were shown a copy of this manual, both the cover and the inner pages (since covers had differed by period and place). They were asked if they had ever seen the manual, or at least the illustrations. They were then asked if they currently had the manual with them and whether the manual was useful. The responses to each of these questions are presented in the table given below :

(%)

	Those who said "Yes"				
	Total	Doctor	Worker	District	Metro
Base :	312	115	197	264	48
Ever seen manual	61.9	44.3	72.1	68.9	22.9
Ever seen illustration	66.0	54.8	72.6	73.5	25.0
Currently have	48.4	33.0	57.4	54.9	12.5
Useful	83.0	77.4	86.3	85.6	68.8

Ref : Table A-73

Once again, wide differences emerge between doctors and workers. Intra-district data reveals that district level workers were the main recipients of the training. 80% of them had seen the manual and 64% currently had it with them.

Responses on the usefulness of the manual clearly have to be interpreted to mean not just actual usefulness but also perceived potential usefulness since 83% of all respondents felt that the manual was useful when only 62% had ever seen it.

The manual, where available, was available in the following languages.

District		Languages
North		
Hamirpur	:	Hindi 67% , English 22%
Bharatpur		Hindi 87% , English 13%
Allahabad		Hindi 67%, English 33%
South		
Anantpur		Not specified
Iddukki		Malayalam 80%, English 20%
Madurai		Tamil 74% , English 26%
East		
Purnia		Hindi 65%, English 35%
Nadia		Bengali 80%, English 20%
Puri		Oriya 83%, English 17%
West		
Gwalior		Hindi 80% , English 20%
Kheda		Gujarati 67%, English 33%
Nanded		Marathi 83%, English 17%

Ref : Table C-74

The main languages in which the manuals were avaialbe on a national basis were :

Hindi	32%
English	22%

4.0 UNDERSTANDING THE PEOPLE

As we have already seen, cooperation in the people or the lack of it plays an important role in the success of the immunization programme. In an effort to understand the role played by family members we asked implementers to talk of the decision makers in the family on health care, on people's attitudes with regard to immunization and reasons for rejecting immunization, if at all rejected. These questions also sought to assess the extent to which implementers were alert to and aware of the attitudes and reservations or problems of people in their territory.

4.1 DECISION MAKERS IN THE FAMILY

Respondents were asked to name the family members who would be the decision makers with regard to the following aspects of health care.

4.1.1 Immunization of the child

75% of all respondents said that the decision to get the child immunized would be taken by the mother of the child. 27% of all doctors felt that this decision would be taken by the father while only 19% of the workers expected that the father would do so.

There was not much difference in responses between districts and metros.

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
Decision of immunisation	%	%	%	%	%
Mother of child	74.7	69.6	77.7	74.2	77.1
Father of child	21.8	27.0	18.8	22.0	20.8
Elder(Male)	1.3	0.9	1.5	1.5	-
Elder(Female)	1.6	0.9	2.0	2.0	-

The role of family elders was on this subject. The doctors who felt that fathers would be the decision makers came mainly from districts. In metros, there was greater consensus that the mother was the decision maker.

4.1.2 TT for pregnant woman

There was an interesting division of opinion on this score between districts and metros. In the districts some implementers felt that the concerned woman would not be the decision maker. The decision to take the pregnant woman for the TT injection would be taken by the husband or the family elder-female (presumably the mother-in-law). In metros, most implementers believed that the woman concerned would herself take the decision.

(%)

	Total	Doctor	Worker	District	Metro
Base :	312	115	197	264	48
Mother of child (i.e. woman concerned)	58.7	59.1	58.4	55.7	75.0
Father of child	23.4	19.1	25.9	25.8	10.4
Family elder (male)	2.2	3.5	1.5	2.3	2.1
Family elder (female)	10.6	10.4	10.7	11.7	4.2
Others	1.9	4.3	0.5	2.3	-

Ref : Table A-84

It does seem peculiar that if a woman can be the decision maker for her child's immunization, she should be passive with regard to immunization for herself. The answer could lie in the traditional self-effacement that women in India are conditioned into practicing which makes her neglect aspects of her own health care. This conclusion is further supported by the fact that the woman in the metro, who is less tradition bound and more independent, was seen as the decision maker more often than the district level woman. It also reveals that the fact that the TT injection protects the child is not fully understood.

4.1.3 Taking a child to a doctor in the village

For metro respondents, this question was altered to read "taking the child to a doctor in the neighbourhood".

Only half of all respondents felt that this decision would be taken by the mother (49.4%). At the metro level, two out of three respondents (66.7%) said that the mother would be the decision maker. The role of men seemed to become more important in this decision of taking a child to the

doctor with almost 40% of the respondents either saying that the decision maker would be the father of the child or the grandfather.

	Total	Doctors	Workers	District	Metro
Base	312	115	197	264	48
	%	%	%	%	%
Mother of child	49.4	47.0	50.8	46.2	66.7
Father of child	35.6	35.7	35.5	38.3	20.8
Family elder(Male)	4.2	7.0	2.5	4.5	2.1
Family elder (Female)	5.4	3.5	6.6	6.4	-
Others/Don't know	5.4	6.9	4.6	4.6	10.4

Ref : Table A-84

While responses from doctors and workers were very similar, there was greater confidence in the role of the mother in metros.

4.1.4 Taking a child to a town doctor

In metros, this was asked as "taking the child to a doctor in distant part of the city".

In districts, two out of three respondents said that the father would be the decision maker. In metros, respondents continued to feel that mothers would be the decision makers. However, one third of the doctors in metros felt that the father would be the decision maker, as compared to only 19% of the workers in metros who felt so.

	Total	Doctors	Workers	District	Metro
Base	312	115	197	264	48
	%	%	%	%	%
Mother of child	30.1	31.3	29.4	23.9	64.6
Father of child	60.9	57.4	62.9	67.0	27.1
Family elder (Male)	3.5	5.2	2.5	3.8	2.1
Family elder (Female)	2.2	1.7	2.5	2.7	0

Ref : Table A-84

4.1.5 Taking child to local faith healer

This was clearly seen to be the domain of the grandmother, followed by the mother and the grandfather. The father of the child, according to implementers, had little role to play in this decision.

	Total	Doctors	Workers	District	Metro
Base	312	115	197	264	48
	%	%	%	%	%
Mother of child	26.6	29.6	24.9	21.6	54.2
Father of child	4.2	7.8	2.0	4.9	-
Family elder (Male)	11.5	8.7	13.2	12.9	4.2
Family elder (Female	45 .2	39.1	48.7	50.8	14.6

Ref : Table A-8

Metro respondents believed once again that the mother would be the decision maker. In metros, therefore, most implementers clearly believed that child health related decisions would be taken by the child's mother. In districts, the father and grandparents appeared to have a larger role to play.

4.2 PEOPLE'S ATTITUDES TO IMMUNIZATION

Respondents were asked for their opinion with regard to the attitudes of people with regard to immunization. Attitudes of those people who could directly or indirectly influence the mother were covered. The overall responses for each of the influencer groups covered were as follows :

(Base : 312)

(%)

	Perceived as being			
	In favour	Against	Indifferent	DK/CS
Father of child	92.6	1.6	3.2	2.6
Mother of child	93.3	2.6	2.2	1.9
Paternal grandfather	59.3	16.7	18.9	5.1
Paternal grandmother	59.0	17.6	18.9	4.5
Village chief	82.4	1.0	7.4	9.3
Village elders	74.7	3.8	10.9	10.6
School teacher	91.7	0.6	2.6	5.1
Faith healer	19.6	39.4	13.5	27.6
Dai (midwife)	82.7	2.9	4.2	10.3

Ref : Table A-85

In the opinion of the respondents, except for the faith healer, and, to some extent the grandparents, none would be against immunization. One pattern that appears to be interesting is that "elders" appeared to be less in favour of immunization than others. If this is looked at in conjunction with other data from depth

interviews where support or opposition from family elders did seem to account for some difference between a child being partially or fully immunized, it becomes clear that communication needs to be aimed at elders such that negative attitudes be changed. These negative attitudes tend to be of two types - either they are opposed to interference with nature or they intrinsically lack faith in the efficacy of the injections. Communication would need to illustrate that prevention is possible and that newer medical inventions do call for different practices which were not the norm in earlier generations but they can help avoid needless disabilities and deaths which were, in fact, the norm in earlier generations.

A table on the differences between doctor and worker opinions is given below :

	In favour of		Against		Indifferent	
	Doctor	Worker	Doctor	Worker	Doctor	Worker
Base	115	197	115	197	115	197
	%	%	%	%	%	%
Father	93.0	92.4	0.0	2.5	3.5	3.0
Mother	92.2	93.9	0.9	3.6	4.3	1.0
Grandfather	59.1	59.4	7.0	22.3	24.3	15.7
Grandmother	57.4	59.9	7.8	23.4	27.0	14.2
Village chief	74.8	86.8	0.9	1.0	8.7	6.6
Village elder	66.1	79.0	0.9	5.6	14.8	8.6
School teacher	89.6	92.9	0.0	1.0	3.5	2.0
Faith healer	17.4	20.8	36.5	41.1	14.8	12.7
Dai (Midwife)	73.0	83.3	3.5	2.5	6.1	3.0

Ref Tab;e : A-85

The percentages short of 100 are accounted for by the "don't know" response. Workers appeared to feel more strongly than doctors that grandparents were opposed to immunization. Doctors felt that grandparents, along with other village elders and the faith healer, were merely indifferent. To the extent that workers, being closer to village folk in terms of socio-economic profile would have their finger on the pulse, it would be prudent to assume that the older generation are actively opposed rather than indifferent to immunization and tailor communication accordingly.

Differences in opinion between district and metros are expressed below :

	In favour of		Against		Indifferent	
	District	Metro	District	Metro	District	Metro
Base	264	48	264	48	264	48
	%	%	%	%	%	%
Father of child	91.7	97.9	1.9	-	3.8	-
Mother	92.8	95.8	3.0	-	2.3	2.1
Grandfather	54.9	83.3	19.3	2.1	20.8	8.3
Grandmother	54.5	83.3	20.5	2.1	20.5	10.4
Village chief	86.4	60.4	1.1	-	8.0	4.2*
Village elders	77.7	58.3	4.5	-	11.7	6.3*
School teacher	92.8	85.4	0.8	-	2.7	2.1
Faith healer	20.1	16.7	44.3	12.5	14.8	6.3**
Dai (Midwife)	85.6	66.7	3.0	2.1	4.2	4.2

* 35% said "don't know" at the metro level

** 65% said "don't know" at the metro level

Ref : Table A-85

Much of the belief in negative attitudes was at the district level rather than at the metro level. Metro respondents appeared to see very little opposition to immunization since, in their opinion, the people in the territory were either in favour of or indifferent but not against immunization.

4.3 ASSESSMENT OF OVERALL ATTITUDES OF THE PEOPLE

Four statements were read out to respondents. They were asked to state if, in their opinion, the statement was true for most people in their territory, for some people or for none.

The statements are being analysed below :

4.3.1 Statement

"People are aware of immunization"

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
Most	88.1	82.6	91.4	88.3	87.5
Some	10.6	14.8	8.1	10.6	10.4
None	-	-	-	-	-
Don't know	1.3	3.0	0.5	1.1	2.1

Ref : Tables A-86, B-86, C-86

There seemed to be a consensus of opinion on this score. 88% of the respondents were of the opinion that most people in their territory were aware of immunization.

There were only 3 districts where more than 15% of the respondents felt that some people were not aware of immunization. These were Bharatpur° (18.2%), Nadia° (16.7%) and Gwalior* (18.2%). In 4 districts, over 90% of the respondents said that people were aware of immunization.

These were : Hamirpur* (100%), Purnia (91.7%), Puri+ (5.5%) and Nanded* (90.5%).

Respondents at sub-centre were most confident about high levels of awareness amongst the people. 93.6% said that most people were aware of immunization. Private practitioners, on the other hand, were not as confident. Only 75.5% of the private practitioners said that most people were aware of immunization. 18.9% felt that some were aware while others were not aware.

It is significant that not a single respondent said that none of the people were aware of immunization.

4.3.2 Statement : "People are cooperative and willing"

On this statement, too, 81% agreed that most people were cooperative and willing. Once again, not a single respondent said that none of the people were cooperative.

These were, however interesting differences between metros and district and between the opinions of doctors and workers.

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
	%	%	%	%	%
Most people	81.1	74.8	84.8	79.2	91.7
Some people	17.3	21.7	14.7	19.3	6.3
None	-	-	-	-	-
Don't know/ Can't say	1.6	3.5	0.5	1.5	2.1

Ref: Tables A-86, B-86, C-86

Workers were clearly more satisfied with the extent of cooperation received whereas one out of 5 doctors had reason to believe that while some people were cooperative, others were not.

There was a clear difference between metro and district perceptions too. At the metro level, 91.7% of all respondents said that most people were cooperative and willing. At the district level, as many as 19% of all respondents felt that not all respondents were cooperative.

Dissatisfaction with cooperation came mostly from the primary health centre respondents.

	High Cooperative			Low Cooperative	
	Most	Some		Most	Some
	%	%		%	%
Hamirpur*	100	0	Purnia°	71	29
Bharatpur°	91	9	Nadia°	50	46
Iddukki+	92	8	Gwalior*	59	41

4.3.3 Statement : "People are indifferent but do not resist"

The negative statement brought on negative to middling responses. However, the interesting facet of this statement is that while respondents were unwilling to disagree with a positive statement, they did not oppose a negative statement with equal strength. The interpretation is that attitudes of the people to immunization were not as cooperative and willing as initially agreed by the respondents; their agreement with the statement would include a measure of politeness; the truth is likely to be closer to their reactions to the negative statements.

(%)

	Total	Doctors	Workers	Districts	Metros
Base :	312	115	197	264	48
Most	17.9	20.0	16.8	20.5	4.2
Some	54.5	52.2	55.8	57.6	37.5
None	23.1	20.0	24.9	19.3	43.8
Don't know	4.5	7.8	2.5	2.7	14.6

Ref Table A-86

Over half of all respondents said that some people were indifferent but did not resist immunization. 21% at the district level felt that this statement was true for most people in their territory. 44% of the metro respondents however felt that this statement was not true for any people in their territory. Clearly, there was greater cooperation from people in the metros.

The districts which reported that most people were indifferent were Bharatpur° (46%), Allahabad+(53%) and Anantpur+ (33%). The districts which reported that none of the people were indifferent were Madurai° (75%), Purnia° (38%), Puri+ (38%), Puri+ (22%) and Nadia° (21%).

An interesting observation here is that districts which were reportedly not performing well in terms of achievement of targets reported a relatively low level of indifference. Assuming target achievement reports are accurate, this could mean that implementers did not have their fingers on the pulse and were not sensitive to the feelings of people in their territory vis-a-vis immunization.

4.3.4 Statement : "People resist immunization and have to be coaxed"

Over half of all respondents agreed with this statement, too, saying that some people resisted immunization. One out of three respondents felt that this statement was not true for any respondents in their territory. The details were as follows :

(%)

	Total	Doctors	Workers	Districts	Metros
Base :	312	115	197	264	48
Most	7.7	3.5	10.2	9.1	-
Some	53.2	47.8	56.3	58.3	25.0
None	33.7	41.7	28.9	27.7	66.7
Don't know	5.4	7.0	4.6	4.9	8.3

Ref: Tables A-86, C-86

In keeping with the trend revealed earlier, resistance was not reported in metros to the same extent to which it was reported in districts. The districts which reported high resistance (i.e. responded - most people resist immunization) were Allahabad^{+} (27%), Anantpur* (29%) and Nadia^{o} (29%). The responses from Anantpur are difficult to explain since Anantpur otherwise emerges as an aware and involved district.

A large number of district respondents said that some people resisted immunization. These were :

Hamirpur*	80%	Allahabad^{+}	47%	Bharatpur^{o}	77%
Anantpur*	42%	Iddukki^{+}	75%	Madurai^{o}	13%
Gwalior*	56%	Puri^{+}	77%	Purnia^{o}	68%
Nanded*	33%	Kheda^{+}	82%	Nadia^{o}	50%

There appeared to be no pattern by reported target achievement levels. The districts which reported least resistance were Madurai° (75%) and Nanded* (67%).

An analysis of the responses by type of health centre shows that respondents at the PHC and PHS levels reported higher resistance than those at the headquarters. Private practitioners reported least resistance.

Base : People resist immunization.....	Government hospitals	PHC	PHS	Private	Metro level
	102	63	94	53	48
	%	%	%	%	%
Most	8.8	7.9	9.6	1.9	0
Some	47.1	63.5	60.6	39.6	25.0
None	40.2	27.0	24.5	45.3	66.7
Meanscore (Max = 3)	1.6	1.8	1.7	1.3	1.2

Ref : Table B-86

The pattern indicates that as urbanization increases, cooperation tends to increase.

4.4 REFUSALS

The last statement was verified once again by means of a direct question that sought to understand if parents of eligible children ever refused vaccinations even when efforts were made to persuade and convince them.

Once again, responses were coded as most, some, and none refuse.

The details are given below :

(%)

Refusals	Total	Doctors	Workers	Districts	Metros
Base :	312	115	197	264	48
Most	2.9	0.9	4.1	3.4	0
Some	50.0	45.2	52.8	56.4	14.6
None	47.1	53.9	43.1	40.2	85.2

Ref : Table A-87

In keeping with earlier reporting patterns, metro respondents stated that by and large, none of the parents refused vaccinations. Over half of all doctors were in agreement with that statement. Workers, particularly at the district levels, reported some refusals.

By giving a score of 3 to the statement that "most refuse", 2 to the statement "some refuse" and 1 to the statement "none refuse", the mean scores arrived at result in the following table.

Mean score (max = 3 : Most refuse; min = 1 : None refuse)

Overall	: 1.56		
Doctors	: 1.47	District	: 1.63
Workers	: 1.61	Metro	: 1.15

Government	: 1.51
PHC	: 1.63
PHS	: 1.69
Private	: 1.32

Districts

North		South		East		West	
Hamirpur*	: 1.35	Anantpur*:	1.25	Puri+	:1.8	Gwalior*	; 1.9
Allahabad+	: 1.9	Iddukki +	:1.6	Nadia°	:1.7	Nanded*	: 1.4
Bharatpur°	: 1.7	Madurai°	:1.4	Purnia°	:2.1	Kheda+	: 1.6

Ref : Tables B-87, C-87

4.4.1 Profile of the refusers

The profile of the people who refused vaccinations, as perceived by the implementers, was as follows :

(Base = 165)

Description	Who gave this description %
Illiterate/uneducated	69.1
Backward classes	18.2
Labourers	17.6
Poor people	14.5
Orthodox people	8.5
Muslims	8.5
People with blind faith in God or in faith healers	7.9
Farmers/cultivators	5.5
People who had a bad experience with immunization	4.2
Elderly people	3.6
Anybody - does not differ by caste, education, social status	3.6

Ref : Table A-88

Clearly, one dominating feature that seemed to set the "refusers" apart in the opinion of the implementer was lack of education or literacy. Other features such as poverty and backwardness could be additional but would, by that very fact, include illiteracy.

It must be remembered that the question on the profile of the refuser was an open-ended one. The responses received were spontaneous.

4.4.2 Reasons for refusal

In the opinion of those who were implementing the programme, the main reasons for refusing permission to immunize a child were as follows :

	% who gave this reason		
	Total	Doctors	Workers
Base	165	53	112
Reasons			
. Lack of education and belief in vaccines	38.8	47.2	34.8
. Fear of fever	27.3	11.3	34.8
. Fear of adverse reaction	20.6	18.9	21.4
. Traditional beliefs/ customs	17.6	18.9	17.0
. Fear of pain/ swelling	6.7	3.8	8.0
. Bad experience with vaccination	5.5	11.3	2.7
. Don't see need to vaccinate healthy child	5.5	3.8	6.3
. Wage loss due to fever because of vaccines	5.5	3.8	6.3

Ref : Table A-89

Other reasons, given by a couple of respondents each were :

- because child will cry (workers)
- people do not understand benefit (doctors)
- vaccination time inconvenient (doctor/worker)
- fatalistic (worker)
- prefer to go to private doctor (worker)
- afraid that it may be family planning injection (worker)

Once again, these responses were open-ended and spontaneous. The reasons may be supported by relatively small numbers but serve to illustrate the range of reasons that could exist that result in vaccination services being refused. The ranking of reasons in terms of the frequency of mention serves to indicate the extent to which each reason was spontaneously believed in. However, since the research design was qualitative in nature, the ranking serves only as an illustration and need not necessarily reflect the relative importance of each reason as being true for the relevant universe.

4.4.3 Possible methods of persuasion

A few methods were suggested by the respondents, once again on a spontaneous basis. These were as follows :

Methods	Base : 165 % who suggested Total	Doctors	Workers
1. Person-to-person contact and education	54	64	49
2. Education through documentary films	39	39	39
3. Local leaders should be involved	19	25	16
4. Economic help	4	4	4
5. Make vaccination compulsory/use force	3	2	4

Ref : Table A-90

The main focus of the methods suggested revolved around education of the target audience. The important point to be noted here is that both suggestions pertaining to education involved audio-visual communication - one was person-to-person where the trainer would be physically present to explain, answer, interact and demonstrate. The other was through documentary films.

We believe that respondents were trying to emphasise (but could not articulate the same) that communication had to be active, something that reached out and held the attention of the target audience. Thus, they were referring to dynamic, aggressive methods of communication rather than inert, passive methods (for example, the print medium, posters, banners).

Implicit in the choice of these type of active media could be an understanding that the rural/semi-urban parent did not have the education and therefore the understanding or interest to absorb the importance or the scope of immunization. A passive medium could get ignored. The medium had to grab the attention and convince.

The other methods suggested revolved around force, either implicit as in involving local leaders or explicit as in using force or making vaccination compulsory. The numbers in favour of the latter two suggestions were, however, very few.

4.5 ATTITUDES OF THE IMPLEMENTERS

A set of statements were read out to the respondents. They were asked to agree or disagree with each of the statements on the basis of their personal opinion, beliefs or feelings. Each of the statements are being set out below and the responses are being analysed for each.

4.5.1 Statements regarding implementers attitude to his work

a/ Statement : "Convincing people to get their child immunized is frustrating work"

27% of all respondents agreed with this statement. Workers and district level respondents expressed more frustration than doctors and metro level respondents.

(%)

	Total	Doctors	Workers	District	Metro
Base	312	115	197	264	48
Agree	27.2	19.1	32.0	29.9	12.5
Disagree	72.1	80.0	67.5	69.3	87.5
Not specified	0.6	0.9	0.5	0.8	-

Ref: Table A-103

These comments are consistent with those made earlier that there was greater resistance from district level parents than those in the metros.

One out of three workers expressed frustration. Since agreement with the above statement would not

reflect too well on the respondent it would be realistic to assume that the level of frustration is in fact higher than stated. The fact that doctors expressed low agreement could be a reflection of their lesser role in the job of persuasion. The highest level of agreement came from sub-centre respondents which supports the hypothesis of increasing resistance with decreasing urbanization.

b/ Statement : "This job involves important and useful work" - 99% of all respondents agreed with this statement, with the figure rising to 100% in the metros. There was clearly no dispute on the importance and usefulness of this work.

c/ Statement : "Working with illiterate people can be boring and tiring" - For a socially unacceptable statement, this received a high level of agreement at 41% of all respondents.

(%)

	Total	Doct s	Workers	District	Metro
Base :	312	115	197	264	48
Agree	41.0	41.7	40.6	43.9	25.0
Disagree	58.3	57.4	58.9	55.7	72.9
Not specified	0.6	0.9	0.5	0.4	2.1

Ref : Table A-103

There was little difference between doctors and workers in terms of their agreement with this statement. In the metros, however, 73% of all respondents disagreed with this statement.

d/ Statement "I would prefer to work in a town rather than in a village"

40% of all respondents agreed with this statement. More doctors than workers agreed with this statement.

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
Agree	40.4	52.2	33.5	39.4	45.8
Disagree	58.0	45.2	65.5	58.7	54.2
Not specified	1.6	2.6	1.0	1.9	-

Ref : Table A-103

It was significant that two out of three workers disagreed with this statement indicating that they were quite satisfied with the idea of working in rural areas. 66.5% of the workers in districts disagreed with this statement; 57% of workers in metros also felt the same way. Doctors on the other hand expressed a higher desire to work in urban areas.

4.5.2 Statements regarding implementers understanding of attitudes of the people :

a/ Statement : "People here do not really believe that vaccinations can prevent disease"

The majority disagreed with this statement. They believed, therefore, that people had faith in the concept of immunization. The acceptance of immunization was, by that logic, a conscious aware acceptance rather than an unthinking or cynical compliance.

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	204	48
Agree	13.8	8.7	16.8	15.5	4.2
Disagree	85.9	91.3	82.7	84.1	95.8
Not specified	0.3	-	0.5	0.4	-

Ref : Table A-103

The differences between district and metro attitudes begin to fall into a pattern. The understanding of and belief in immunization was clearly higher in metros. Workers in metros were all in disagreement (100%) with the statement. 19% of the workers in districts agreed with the statement though only 9% of the doctors did so. The higher agreement by workers could be a function of their close contact with the people and therefore needs to be taken seriously. Highest agreement came from respondents in sub-centre villages.

b/ Statement : "People suspect that vaccinations are not given for the prevention of disease but some other motive"

As with the earlier statement, over 80% disagreed with it, reinforcing the finding that the attitude of the average receipient of immunization was neither skeptical nor suspicious. However, a higher percentage of workers in districts agreed with this statement as compared even to this the earlier one. None of the workers in the metros agreed with this statement.

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	204	48
Agree	16.0	10.4	19.3	17.8	6.3
Disagree	83.7	89.6	80.2	81.8	93.8
Not specified	0.3	-	0.5	0.4	-

Ref : Table A-103

Thus, while suspicion regard immunization was not a major problem, it would deserve some attention in rural areas. In sub-centre villages, 23.4% of respondents (almost one out of every four) agreed with this statement. While experience and the percolation effect from urban to rural areas would in time create greater confidence, it would be necessary to be aware that, in small villages, some suspicion and skepticism exists and would have to be handled with explanations and patience.

c/ Statement : "Once a child has been vaccinated, people will come forward on their own to get their next child vaccinated"

The idea behind this statement had been to see if, in the opinion of implementers, parents understood the benefits of immunization well enough to be self-motivated after an initial introduction.

89% agreed that this would be so. Both doctors and workers were in equal agreement on this score.

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	204	48
Agree	89.4	88.7	89.8	88.6	93.8
Disagree	9.9	11.3	9.1	10.6	6.3
Not specified	0.6	-	1.0	0.8	-

Ref : Table A-103

Only 10% of all respondents disagreed with this statement. This faith in parents becoming self motivated augurs well for the long-term functioning of the EPI programme since, in the final analysis, persuasion would have to stop and a demand for immunization services from the target audience should begin.

14% of the respondents in sub-centre villages disagreed with this statement, again confirming the conclusion that parents in rural areas would need more attention in order to help them overcome suspicion, doubt and indifference.

4.5.3 Statements related to knowledge regarding immunization

a/ Statement : " TT and DPT vaccines should not be allowed to freeze"

The correct answer to this statement would be in the affirmative. However, 24% of all respondents disagreed with this statement revealing that, in their opinion, freezing these vaccines would be acceptable. The proportion at 24% is disturbingly high since freezing, if being actually practiced, could be damaging a large proportion of vaccines. This incorrect knowledge was more widely held in metros, where 33.3% of all doctors and 23.8% of workers disagreed with the statement.

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
Agree	74.7	84.3	69.0	75.4	70.8
Disagree	24.4	15.7	29.4	23.5	29.2
Not specified	1.0	-	1.5	1.1	-

Ref : Table A-103

The doctors who most widely agreed with this statement were private practitioners (Agree - 79.2%). The level of agreement by type of health centre was as follows :

(%)

	Base	Agree	Disagree
Govt hospital/dispensary	102	75	25
Primary health centre	63	79	21
Health sub-centre	94	69	29
Private practitioner/hospital	53	79	19

Ref : Table B-103

The misconceptions therefore were higher amongst implementers in the govt health network.

b/ Statement : "Keeping vaccines at room temperature for 2-3 hours is okay"

Once again, this statement was clearly erroneous and should have been disagreed with. Instead, as many as 24% of all respondents agreed with this statement. Agreement, and the misconception implicit within that, came more from districts than from metros.

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
Agree	23.7	22.6	24.4	25.0	16.7
Disagree	75.3	77.4	74.1	74.2	81.3
Not specified	1.0	-	1.5	0.8	2.0

Ref : Table A-103

It would appear that while implementers in metros err on the side of freezing vaccines, at the district level implementers err on the side of allowing vaccines to become warm. If this statement is looked at together with the earlier question (Refer section 2.2) where 48% of the implementers at the district level would not throw away a half - used vial and 68% would not throw away a vial of which less than half had been used, the implications cause concern. Chances are that one out of 8 implementers would put a vial back in the fridge after having left it at room temperature for 2-3 hours and re-use the vaccine from that vial.

4.5.4 Statements regarding practices

a/ Statement : "The cold chain system beyond the HQ hospital is very weak and breaks down easily"

45% of all implementers in the districts agreed with this statement. 50% of the implementers in metros agreed with this statement. However, since the metro respondents were not talking on the basis of experience but on the basis of perceptions and hearsay, their views are not of primary concern.

(%)

	Total	Doctors	Workers	PHC	PHS
Base :	264	88	176	63	94
	%	%	%	%	%
Agreed	45.1	48.9	43.2	30.2	47.9
Disagreed	51.5	45.5	54.5	66.7	51.1
Not specified	3.4	5.7	2.3	3.2	1.1

Ref : Table A-103

Two factors emerge from this analysis. Firstly, that doctors spoke of cold chain breakdowns more than workers did, albeit only marginally so. Secondly, breakdown problems seemed to occur more at the sub-centre level than at the primary health centre level. This is logical but nevertheless an area that would need attention if people in interior villages are to benefit from effective immunization.

b/ Statement : "Most vaccines loose potency because it is impossible to maintain them at the correct temperature"

The extent of agreement with this statement is a cause for grave concern. As many as 62%, almost two out of three implementers, agreed with this statement. The details were as follows :

(%)

	Total	Doctors	Workers	District	Metro
Base :	312	115	197	264	48
Agree	62.2	66.1	59.9	61.0	68.8
Disagree	36.2	32.2	38.6	37.5	29.2
Not specified	1.6	1.7	1.5	1.5	2.0

Ref : Table A-103

There was greater agreement at the metro level where, prima facie, there appears to be less cause for difficulty in maintaining vaccines at correct temperatures. The agreement in metros came from doctors (74%) than from workers. The same was true for districts.

An analysis by type of centre reveals the following :

	(%)			
	Govt hospitals	PHC	PHS	Private
Base :	102	63	94	53
Agree	62.2	72.5	50.8	67.9
Disagree	36.2	26.5	47.6	28.3
Not specified	1.6	1.0	1.6	3.8

Ref : Table B-103

PHS respondents contradict themselves on this score. While 48% had agreed that the cold chain system breaks down easily, an almost equal number did not agree that vaccines lost their potency because of the same problem. This could either mean that their understanding of the cold chain was faulty, or their understanding of vaccines and the maintainence of vaccines potency was faulty or both.

4.6 BRINGING THE CHILD FOR IMMUNIZATION

The child was normally brought for immunization by the mother. This was revealed by 99% of all respondents. Only 3 respondents said that the child was normally brought by the father.

However, 76% of the respondents said that the child would sometimes be brought by the father. 41% were of the opinion that sometimes a grandparent brought the child.

The father or grandparent accounted for most of those occasions when the mother did not bring the child. Some others who were spontaneously mentioned by a few respondents, were, in order of priority.

Brother or sister of the child	9.3%
Women, other than mother	4.8%
Uncle	4.5%
Aunt/Sister-in-law	4.5%
Anganwadi/Health worker	1.6%

Ref : Table A-79

4.7 KEEPING TRACK OF DUE DATES

The methods of keeping track as revealed by respondents could be broadly divided into 2 categories :

- those which did not involve actual implementer participation and could be termed "parent-oriented" meaning that the onus of keeping track lay with the parent. In this category were three methods
  - . Cards given to parents and referred to by them for the due vaccination dates
  - . Fixed days advertised
  - . Parents check with worker
- those which involved active implementer participation and where parents play a relatively passive role. In this category were the following methods :
  - . Parents are reminded
  - . Parents are called on due date
  - . Vaccination given at the house on due date
  - . Worker goes to the house and fetches

The two categories were not mutually exclusive and often co-existed. However, there were differences by district and these differences revealed the level of active participation that implementers maintained to ensure complete immunization.

A look at each district in terms of the broad methods of keeping track of dates reveal the following picture.

(%)

North	Base (Nos.)	Parent-oriented	Implementer oriented	Overlap
Hamirpur*	20	65	40	5
Bharatpur°	22	59	45	4
Allahabad+	15	67	40	7
South				
Anantpur*	24	92	21	13
Iddukki+	24	58	54	12
Madurai°	24	88	88	76
East				
Purnia°	24	38	67	5
Nadia°	24	75	100	75
Puri+	22	73	50	23
West				
Gwalior*	22	86	32	18
Kheda+	22	91	14	5
Nanded*	21	57	86	43

Ref : Table C-81

Barring a few districts, the majority of the districts seemed to rely predominantly on parent-oriented methods of keeping track of dates.

The overall dependence on the various methods listed earlier was as follows :

	Total %	District %	Metro %
Cards are given	71.5	69.7	81.3
Fixed days are advertised	0.3	0.4	-
Parents check with worker	0.6	0.8	-
Parents are reminded	34.0	37.9	12.5
Parents are called on due date	10.9	11.7	6.3
Vaccination given at home on due date	2.2	2.3	2.1
Worker goes house-to house and fetches	1.9	1.9	2.1

Ref : Table A-81

There was clearly greater intervention and effort made by implementers at the districts than at the metros. In the districts, there was also greater use of simultaneous reminder methods than in the metros.

5.0 PRACTICE RELATED ISSUES

5.1 PRESERVATION OF VACCINES FOR OUTREACH SESSIONS

5.1.1 Transportation

All respondents who ever moved out to outreach centres to implement the EPI programme were asked a few questions to establish whether vaccines were being transported to outreach camps in a manner that would help preserve their potency.

It was a question that was difficult to get an honest response to since the correct answer would be known to most respondents. The objective, however, had been to ascertain the actual practice rather than test knowledge of correct answer. Respondents were therefore asked to describe how they would carry vaccines for an outreach session. Interviewers were briefed to probe till they understood the answer fully but to not prompt.

The responses received were coded in a code list that had attempted to differentiate between responses that included the mention of ice and those which did not.

Of those who gave any reply to this question (234 respondents), the responses were as follows :

Those who said only	%
- Carry in vaccine carrier	26.5 *
- Vials in plastic bag in carrier	1.3 *
- In vaccine carrier with ice	25.6
- In vaccine carrier with frozen ice pack	24.8
- With ice packs filled with cold water	1.7
- In thermos with ice	3.8
- In an ice-box	5.6 *
- Kidney tray	0.4
- No special care required	0.9

Ref : Table A-61

The remaining 9.4% gave a combination of the above responses.

The areas of concern surrounds those responses which did not specifically mention ice or frozen ice packs (Marked by an aesterisk *). It could be assumed that the respondents meant to include ice when they used words such as vaccine carrier or ice box. If that assumption were true, there would be no cause for worry since almost 90% of the respondents would then have been using acceptable methods of vaccine transportation. If, however, it is assumed that non-mention of ice or ice packs means non-use, there would because for concern since in that case only 67% of the respondents would have been transporting vaccines as required.

5.1.2 Placement of vaccine during an immunization session

Proper preservation of vaccines requires that vaccines be kept at a cool temperature (+4°C to +8°C) from the time of manufacture to the time of injection. It would therefore be important for implementers to preserve vaccines in a cup of ice during the session.

Out of the 261 respondents who were involved in outreach camps (these included 12 private practitioners/workers in private clinics) 40% put the vials in a cup of ice during the session. Another 28% attempted to keep the vaccine cool by putting it on top of an ice pack or in a plastic bag filled with ice during the session. An additional 13.8% put the vaccine back in the vaccine carrier. Thus, 82% revealed practices that were correct (or at least acceptable) as well as an awareness of the need for special care of the vaccines during a session.

The details of these responses are as follows :

	Total	PHC	PHS	Doctor	Worker
Base :	261	62	94	81	180
Acceptable practices	%	%	%	%	%
1. In a cup of ice	40.2	37.1	42.6	40.7	40.0
2. On top of an ice pack	20.3	14.5	30.9	18.5	21.1
3. Ice bag/plastic bag filled with ice	8.0	8.1	9.6	6.2	8.9

Ref : Tables A-62, B-62

	Total	PHC	PHS	Doctor	Worker
	%	%	%	%	%
4. Put back in carrier	13.8	25.8	10.6	8.6	16.1
Dubious practices					
1. On table/tray	8.8	8.1	8.5	7.4	9.5
2. In cup with water	3.1	1.6	1.1	2.5	3.3
3. In shade	1.5	3.2	1.0	2.5	1.1
4. In plastic cover	1.5	1.6	1.1	1.2	1.7
5. Polio vaccine gets put on ice	1.1	1.6	1.1	1.2	1.1
6. At room temperature	0.8	-	-	2.5	-
7 Only one vial carried out of the clinic	0.8	3.2	0	1.2	0.6

Ref : Table A-62, C-62

5.2 STERILIZATION

5.2.1 Place

Needles and syringes were sterilized in equal measure either at the health centre or at the outreach camp. The other place was at the house of the child, though this was mentioned by only a few respondents. There was not much difference in responses between doctors and workers.

The details are as follows :

Place	Total	Doctors	Workers	Govt Hospt	PHC	PHS	Pvt Hospt
Base	261	81	180	198	62	94	7
	%	%	%	%	%	%	%
At centre	50.5	53.1	49.4	55.1	46.8	44.7	57.1
At camp	48.7	39.5	52.8	39.8	54.8	55.3	28.6
At house of child	3.1	2.5	3.3	5.1	1.6	1.1	14.3

Ref : Tables A-63,B-63

Only one respondent said that he used disposable syringes and therefore did not sterilize the needles.

Instruments were mostly sterilized before a session rather than during a session. Only a small proportion of respondents sterilized after a session to keep ready for the next session.

Time	Total	Doctor	Worker	Govt Hospt	PHC	PHS	Pvt Hospt
Base	261	81	180	98	161	94	7
	%	%	%	%	%	%	%
Before session	76.6	75.3	77.2	74.5	85.5	74.5	57.1
After session	4.2	3.7	4.4	7.1	4.8	-	14.3
During session	20.3	17.3	21.7	19.4	8.1	28.7	28.6

Ref : Table A-64, B-64

5.2.2 Method : The most common method of sterilizing instruments was by boiling. 77.6% of all respondents used this method The duration for which instruments were boiled however, differed as follows :

Method	Total	Doctors	Workers
Base	312	115	197
	%	%	%
Boiling	77.6	67.0	83.8
1 - 10 minutes	13.5	12.2	14.2
11 - 20 minutes	36.2	22.6	44.2
21 - 30 minutes	24.0	27.0	22.3
45 minutes	3.2	5.2	2.0
60 minutes	0.6	0.0	1.0
Autoclave	15.4	21.7	11.7
Keep it in hot water	1.0	0.9	1.0
Use a sterilizer	0.3	0.9	-
Disposable : not sterilized	3.5	5.2	2.5
Not specified	2.2	4.3	1.0

Ref : Table A-65

Almost 50% of all respondents (35% of doctors and 58% of workers) boiled the instruments for less than 20 minutes. Added to this is another finding which pertains to the understanding of boiling instruction. Some res-

pondents had mentioned that boiling time included time taken for water to reach boiling point. Thus, if they were instructed to boil instruments for 20 minutes, they would put the instruments in ordinary water, put the pan on the flame and count 20 minutes from that point onwards.

While it is not necessarily true that all implementers interpreted boiling time in this manner, it would be erring on the safer side to assume that all those who claimed to boil for 20 minutes or less were not achieving effective sterilization.

By that standard, sterilization methods could be broadly broken up as follows :

	Total	Doctor	Worker
Base :	312	115	197
	%	%	%
Effective			
(Boil 21+ minutes, auto-clave, disposable)	46.7	59.1	39.5
Ineffective			
(Boil less than 20 minutes, Keep in hot water, use sterilizer)	51.0	36.6	59.4
Not specified	2.2	4.3	1.0

Ref : Table A-65

Clearly, doctors reported more effective practices than workers. The overall picture however, causes

concern. There appears to be a case for stronger training in the area of sterilization of instruments with particular emphasis on :

- definition of duration of boiling
- the importance of effective sterilization

5.3 AVAILABILITY OF CONSUMABLES

The majority of the respondents reported regular supply of six items which were being studied. The order in terms of regularity of supply was as follows :

% Who said it was regularly available :

(%)

	Total	District	Metro
Base :	312	264	48
DPT vaccine	90.7	91.3	87.5
TT vaccine	89.4	91.3	79.2
OPV	80.8	80.3	83.3
Measles vaccine	80.8	81.4	77.1
Vaccine cards	72.1	73.5	64.6
BCG vaccine	63.8	63.6	64.6

Ref : Table A-26

It would be pertinent to look at this data by district. (Ref Table C-26)

5.3.1 DPT vaccine

91.3% of all respondents at the district level reported that they received regular supply of DPT vaccines. Only 7.2% felt that the supply was irregular. The districts which reported an above-average irregularity of supply were Madurai° (16.7% said irregular) and Gwalior* (13.6%). Except for one respondent in Anantpur*, none reported that the DPT vaccine had never been received.

5.3.2 TT vaccine

91.3% of the respondents in districts said that they received a regular supply of the TT vaccine. Irregular supply was reported from Madurai (20.8%) and Nanded* (19%). Three respondents in Madurai° (12.5%) and one in Purnia° said that the TT vaccine had never been received. This could, however, be a reflection on their awareness rather than actual supply.

5.3.3 OPV vaccine

Regular supply was reported by 80.3% of the district respondents. However, 17.8% said that the supply was irregular which is higher than reported for for DPT (7.2%) and TT (6.1%).

The factor that causes concern however is that the district average of 17.8% was a result of some districts which reported very high level of irregularity. These were Hamirpur* (60%), Gwalior * (41%), Nanded* (29%), Purnia° (29%) and Madurai° (21%). 3 out of these 5 districts are high performance districts.

5.3.4 Measles vaccine

81.4% of the district level respondents said that they received a regular supply of the measles vaccine.

(The supply in the metros was not quite as regular). Complaints with regard to irregular supply or non-receipt were focussed around the South zone districts and Purnia°. Details are as follows :

		Irregular %	Never %
District average		11.0	4.5
South :	Anantpur*	8.3	8.3
	Iddukki+	16.7	12.5
	Madurai°	25.0	4.2
East :	Purnia°	20.8	20.8
West :	Nanded*	23.8	-
	Gwalior*	18.2	-

Ref : Table C-26

5.3.5 Vaccine cards

73.5% of all respondents at the district level reported that vaccine cards were regularly received. 7.2% reported irregular supply. The factor that causes concern, however, is that 12.5% of all respondents said that they had never received vaccine cards. There was no difference between the "never received" claim made by doctors and workers. At the district level, 12.5% in each group said that these cards had never been received. Thus, it is unlikely that the non-receipt complaint could be based on non-awareness.

Complaints of non-receipt and irregular supply came mainly from the following districts.

(%)

	Irregular	Never	Not specified
Purnia°	29.2	50.0	8.3
Nanded*	4.8	47.6	4.8
Iddukki+	-	16.7	25.0
Allahabad+	26.7	-	6.7
Anantpur*	-	20.8	-
Madurai°	12.5	4.2	4.2

Ref : Table C-26

5.3.6 BCG Vaccine

The largest problem seemed to be in the area of BCG vaccine supplies. At the district level, only 63.6% claimed regular supply. As many as 24.6% (one out of every four respondents) said that the supply was irregular while 7.2% said that it had never been received.

There were some patterns here that were different. Firstly, as in the case of the measles vaccine, a greater proportion of respondents in metros (16.7%) claimed that they had never received the measles vaccine. Secondly at the district level, 17% of the doctors said that the BCG vaccine had never been received as compared to only 2% of the workers who said so. This was the only item for which a larger proportion of doctors claimed non-receipt.

The highest non-receipt complaints came from the South zone districts followed by the East zone districts. District-wise data is as follows :

		Supply of BCG Vaccine			
		Regular	Irregular	Never	Not specified
		%	%	%	%
North :	Hamirpur*	50	30	-	20
	Bharatpur°	68	23	5	5
	Allahabad	68	7	13	13
South :	Anantpur*	54	17	29	-
	Iddukki+	33	58	8	-
	Madurai°	46	38	13	4
East :	Purnia°	42	46	13	-
	Nadia°	83	17	-	-
	Puri+	91	9	-	-
West :	Gwalior*	86	14	-	-
	Kheda+	77	9	5	9
	Nanded*	71	20	-	9

Ref: Table C-26

Anantpur, inspite of being a "good performance" district had close to 30% of respondents claiming that the BCG vaccine had never been received. There is a discrepancy between such a claim and high achievement of targets.

5.4 POSTERS/TIN PLATES

Posters and tin plates on the subjects of polio, tetanus and TB had been made and distributed amongst UIP districts. Respondents were questioned with regard to receipt and use of posters/tin plates and their opinion on each of the poster/tin plate types.

5.4.1 Receipt of posters/tin plates

Almost 80% of all respondents said that they had received these posters/tin plates. This figure was much higher at the PHC and PHS levels where an affirmative response was given by 90.5% and 94.7% of respondents respectively. 83.3% of the people in government hospitals or dispensaries said that they had received the posters. In contrast only 32.1% of private practitioners had received any posters.

There were differences between districts and metros and between doctor and worker responses.

(%)

	Total	Doctor	Worker	District	Metro
Base	312	115	197	264	48
	%	%	%	%	%
Yes	79.5	68.7	85.8	84.8	50.0
No	20.5	31.3	14.2	15.2	50.0

Ref : Table A-97

All those who said that posters/tin plates had been provided were asked to state the total number of posters received. Doctors said on an average, that 150 posters/

tin plates had been received while workers said that closer to 90 posters had been received. The figures were higher where looked at specifically by district and by metro.

	District			Metro		
	Doctor	Worker	Total	Doctor	Worker	Total
Average numbers received	170	95	117	53	7	34

Ref : Table A-98

There were wide zonal variations. In the North and South zones, an average of 267 and 151 posters/tin plates were mentioned by each respondent. In the East and West zones, an average of 46 posters/tin plates were mentioned. Within zones too there were district-wise variations that were wide enough to merit individual mention here.

	Average number of posters/tin plates received
Hamirpur*	178
Bharatpur°	335
Allahabad+	245
Anantpur*	50
Iddukki+	100
Madurai°	291
Purnia°	74
Nadia°	25
Puri+	42
Gwalior*	6
Kheda+	138
Nanded*	10

Ref: Table C-98

Barring Hamirpur*; there seemed to be an inverse relationship between the good performance districts and the posters received by them. Low performance districts namely Bharatpur° and Madurai° reported the highest receipt of posters

5.4.2 Types of posters received

There were seven basic pictures that were converted into posters and tin plates and distributed amongst health centres.

This study showed that each poster and tin plate had been received by between 65-70% of all respondents of There was considerable amount of multiple receipt.

Each respondent reported receipt of, on an average, 4.9 types of posters and 4.6 types of tin plates.

Interviewers had been asked to report on display of posters and tin plates on the basis of actual sighting of the same rather than by questioning the respondents.

Either posters or tin plates were reported to have been displayed inside the health centre in 39-46% of the interviews and outside the health centre in 32-35% of the interviews.

Looking at display data specifically by type of picture and type of health centre, the following picture emerges.

Base: To whom provided	Govt Hospt. 85			PHC 57			PHS 89		
	In	Out	None	In	Out	None	In	Out	None
	%	%	%	%	%	%	%	%	%
Mother & dead child	47	38	28	39	39	46	39	26	47
Father & child	40	37	31	44	39	42	39	25	48
Polio boy standing	52	41	28	46	37	49	42	26	47
Polio boy crawling	47	41	29	44	42	42	43	26	45
TB-node on neck	48	39	27	44	42	40	42	21	45
TT bandaged head	48	40	31	49	39	42	44	26	45
TT tube in nose	48	41	25	42	35	46	40	26	44

Ref : Table B-101

5.4.3 Rating of posters

All respondents were asked to rate the posters on a 5-point scale ranging from excellent to poor. The ratings were given a score such that an excellent rating would receive a score of 5 while a poor rating would receive a score of 1. The ratings received by each of the six types of posters/tin plates on an overall basis are as follows :

Appendix Number	Picture	Mean Score (Max = 5 = Excellent)
I	Mother & dead child	3.5
II	Father and child	3.2
III	Polio boy standing	3.7
IV	Polio boy crawling	3.8
V	TB-node on neck	3.2
VI	TT-bandaged head	3.5
VII	TT-tube in nose	3.3

Ref : Table A-102

The differences are not wide. However, they do reveal a trend in terms of the type of pictures that were highly rated by implementers.

a/ The top two : The highest ratings were given to the two polio pictures (III & IV). There could be several explanations for this. Firstly, direct interaction with mothers of young children revealed that the fear of disability was greater than the fear of death. Secondly, polio was a widely recognised and feared disease. The poster therefore portrayed something that was both known and feared; it would have aroused dread and curiosity with regard to the purpose of such a poster which in turn would serve as the mother's point of introduction to immunization.

Another hypothesis is that the picture of a boy suffering from polio would be more likely to strike an answering chord in the viewer as she (the mother)

could have come across a lame child before. This disability would therefore appear real and possible. The other pictures possibly do not arouse the same fear since they fall outside the average rural mother's range of experience.

Finally, we have stated a hypothesis in our analysis of mother's attitudes and practices namely that the mothers does not really understand the full scope of immunization in the sense of the diseases against which protection is provided and the gravity of these diseases. However, she knows and dreads polio and possibly accepts or seeks out immunization to protect her child from polio. It is possible that implementers, realizing this, gave higher marks to the posters that highlighted polio and disability.

b/ The second two : The two pictures that were rated as being next best (mean score 3.5) were the "mother and dead child - III)" and the "tetanus picture of an infant with a bandaged head - IV)".

Once again, the explanation for these pictures getting a higher rating could lie in two factors - dread and possibility.

The sight of a mother with a dead child would not be unknown to the rural mother. An infant with a bandaged head would also fall within the realm of a mother's experience. Thus, she would identify with and dread these two possibilities. The posters would possibly arouse in her the necessary combination of fear and desire to protect

c/ The last three : The three posters that were rated lowest on the rating scale were "Tetanus - child with tube in nose - VII" (Mean score = 3.3), "TB-node on neck - IV" (Mean score = 3,2), "Father and healthy child - II" (Mean score = 3.2).

The fact that these received a lower rating than the others bears out the explanation given earlier. The pictures were either too unfamiliar to be real (Pictures VII and IV) or too mild to be threatening (Pictures IV and II).

The picture of an infant with a tube in the nose, while dreadful, was removed from rural reality and therefore would not arouse the fear that picltures of a more possible/plausible situation could.

The picture of the node on the neck would most probably not be understood by an illiterate audience to be anything more threatening than a boil which was too common-place to merit much thought.

The messages that were sought to be delivered by the picture of a man carrying a healthy child namely, the active role of the father and the rewards of immunization were probably not received. The picture did not serve the function of creating interest in or demand for immunization since it aroused no fear.

5.5 PROBLEMS IN PRACTICE

Respondents were asked to name the one problem which, in their opinion, formed the main obstacle to their work. The question was asked in an open-ended format, allowing the respondent to spontaneously mention the problem that first surfaced in his mind.

5;5.1 No problems (Ref: Tables A-91, B-91, C-91)

A third of all respondents said that there were no problems that obstructed their work. This figure was lower in the districts (30.3%) but considerably higher in the metros (50%). 2 out of 3 workers in metros said that there was no problem.

This absence of problems was expressed to differing degrees across districts. In Madurai° district, 75% of all respondents stated that there were no problems. Given that the district belonged to the poor performance category, this claim rings false or speaks of extreme inefficiency. In Anantpur* district, 52.8% of all respondents, said that there were no problems. The third district where over a third of the respondents expressed "no problem", was Nadia° in the East zone. Barring these, less than 30% of the respondents in other districts said that there were no problems.

5.5.2 Obstacles to the work (Ref: Tables A92, B-92, C-92)

Implementers were asked to talk about the problems that formed an obstacle to their work. They were asked to talk of the main problem and other problems.

All problems that were mentioned (the question was open-ended) were weighted in terms of their being mentioned in the context of main or other problems. The ten main problems that emerge as a result are as follows :

Rank

1 Transporation problems

2 Resistance from people

3 Problems regarding vaccine supplies

4 Cold chain maintainence

5 Shortage of workers

6 Lack of faith/confidence in vaccination

7 Financial problems

8 Problems with regard to sterilization

9 Difficulty in convincing people regarding vaccination

10 Lack of sincerety in workers

11 Illiteracy in people

Other problem areas that were mentioned were as follows, in order of frequency of mention :

- Problems regarding supply of other necessities
- Problems of space
- Workers not trained
- Load shedding
- Infrastructural problems
- Payment unsatisfactory
- Dishonesty (corruption, misappropriation)
- Side effects of injections
- Language problems
- Mobile population therefore difficult to keep records
- Unhygienic surroundings
- Worker-public interaction
- People go out of town and miss due dates
- Non-availability of vaccine cards.

The purpose of listing all the problems in the order of the frequency or order of their mention is to provide an understanding of the range of problems that existed.

5.6 AREAS OF IMPROVEMENT

A list of six possible areas of improvement was provided to the respondents.

They were asked to choose the one area which they considered to be most important, if improvement in that area could be guaranteed. They were then asked to pick the area of improvement that they considered was second most important and then the third most important area.

The areas of improvement sought differed by doctors and workers as well as between districts and metros.

On the basis of the total sample, the order in which the six areas were ranked is as follows :

Rank	Improvement in the area of	Mean Score (Max = 3)
1	Information to people about immunization	1.52
2	Supply of vaccines	1.08
3	Cold chain maintainence	1.05
4	System of travel to villages	1.05
5	Greater number of immunization centres per village/locality	0.95
6	Supply of consumables	0.39

Ref : Table A-93

All respondent groups were agreed on the two areas of improvement that ranked first and last respectively.

The most important area where improvement was wanted was with regard to providing information to villagers or people about immunization. Doctors and workers, in districts and in metro ranked this area the most important area where improvement was needed.

Clearly, providing information and education to the people, namely communication, is the need of the hour.

The area which aroused the lowest sense of urgency and was common to all groups was the supply of consumables. The most likely interpretation of this is that there was no problem in this area and that needles, syringes and other items required for immunization are available in quantities that are perceived as being adequate by the implementers.

The ranking of other areas differed considerably amongst the four groups both in terms of the order and the mean scores.

	Doctors	Mean score		Workers	Mean score
2	Cold Chain maintainence	1.21	2	System of travel	1.13
3	Supply of vaccines	1.06	3	Supply of vaccines	1.10
4	System of travel	0.91	4	Greater number of centres : people	0.98
5	Greater no. of centre: people	0.89	5	Cold chain maintainence	0.96

Each group was clearly looking at the areas of improvement based on the problems faced by them in the implementation of the immunization programme. Doctors mentioned cold chain maintainence as the second most important area in which improvement was needed, possibly because they were accountable for the performance of their centre and understood the role of the cold chain in effective immunization. Workers on the other hand laid stress on improvement in the system of travel to the villages since immunization in outreach areas would be likely to fall more often in their lot.

Both doctors and workers independently placed supply of vaccines as the third area in which improvement would be desired.

In the fourth place, doctors felt that improvement in the system of travel would be desirable while workers opted for greater numbers of centres for a given population. Once again, it is apparent that the actual burden of implementation fell on the workers who probably felt that the load per centre was too high.

In the fifth place, doctors spoke of more centres for a given population while workers mentioned improvement in the cold chain system. The latter is a cause for concern since it indicates a non-appreciation of the importance of the cold chain in the view of the workers.

There were wide differences in the priorities between districts and metros. The areas of improvement are listed separately as ranked by district and metro respondents.

District		Metro	
1. Provide information to people about immunization	1.56	1. Provide information to people about immunization	1.31
2. System of travel	1.12	2. Greater number of centres : people	1.25
3. Cold chain maintainence	1.08	3. Supply of vaccines	1.14
4. Supply of vaccines	1.07	4. Cold chain maintainence	0.89
5. Greater number of centres : people	0.89	5. System of travel	0.69
6. Supply of consumables	0.37	6. Supply of consumables	0.54

The problem areas in districts and metros become apparent on the basis of the above rankings. One striking aspect is that in metros the second most important area of improvement was considered to be a greater number of centres for a given population. The high density of metro population possibly placed a greater load per metro doctor or worker than in the districts.

6 MEDIA

In every aspect of this KAP study, one objective had been to inquire into the means of reaching out to village people. In the case of implementers, we asked them to talk about the main sources of information for various sorts of happenings, at national, district and village levels. We also elicited information about the formal media which, in the opinion of the villagers, would be suitable for communicating with villagers.

6.1 MAIN SOURCES OF INFORMATION FOR VILLAGERS

6.1.1 Information regarding national happenings

In the opinion of the implementers, the main sources of information with regard to national happenings were :

Media	% of implementers who mentioned
Radio	86.7
Newspaper	65.2
TV	51.5

Ref : Table A-104

These three were clearly the main sources for information about national level happenings. Other sources mentioned by significantly smaller numbers of respondents were :

Local heads	:	3.8%
Cinema/cultural programme	:	2.7%
Working people coming to village	:	2.7
Posters or magazines	:	1.9

There were some differences by district in the relative importance of the first three media. In Bharatpur°, Allahabad+, Madurai°, Puri+ and Gwalior* TV seemed to be an important source of information for villagers.

In the Northern districts of Hamirpur*, Bharatpur° and Allahabad+, in Nadia° and Puri+ in the East and in Nanded* district in the West, over 90% of implementers mentioned the radio as an important source of information about national events.

The newspaper was mentioned by over 75% of all respondents in the three South zone districts and in Puri+ district of the East.

All three mass media are being reported on at length in the next section.

6.1.2 Information regarding district level happenings

For this kind of information, the newspaper emerged as being the most important medium, followed by the radio and word of mouth.

Media	% of implementers
Newspaper	51.5
Radio	37.5
Travellers (traders, farmers etc)	15.2
Public meetings, word-of-mouth	14.8
TV	12.1
Social/village/health workers	9.8
From service people (those going out of the village for work)	6.1

Ref : Table A-105

There were district-wise differences. The newspaper as a source was more frequently mentioned in Anantpur*; Puri+ Gwalior*, Madurai° and Bharatpur°.

Public meetings and word of mouth communication was mentioned in the East zone districts by one-third of the implementers.

6.1.3 Information about happenings in neighbouring villages

The two main ways in which villagers got the opportunity to hear of happenings in neighbouring villages were through personal contact particularly with travellers, or visitors from neighbouring villages and through announcements.

		%
. Personal contact :		62.5
Person-to-person contact	30.3	
Travellers	21.6	
Visitors from neighbouring villages	10.6	
. Announcements (particularly with regard to fairs, markets etc.)		15.2
. Local village worker or elder		9.8
. Village pradhan		7.2
. Posters		6.4
. Newspaper		5.3
. Propaganda by cinema		4.5
. Events fixed by custom are known		3.1
. Pamphlets are given		2.3
. Relatives		3.8
. Health worker, teacher, anganwadi worker dai, postman, chowkidar, purohit (temple priest)		5.0

Ref : Table A-106

The last category clubs together all the persons who become sources of information. Health workers and teachers play a marginally more important role than the others. However, village leaders and village elders remain an important source for news that are not likely to be covered through mass media.

It is interesting to note that announcements, posters and pamphlets together play an important role in generating

awareness. However, it must be remembered that information regarding fairs or market days etc. is information that intrinsically has the potential to capture the interest of villagers since it promises fun and excitement. The message regarding immunization availability would not have that pull. Thus, while this data reveals that pamphlets and announcements do work, the nature of the announcement must be borne in mind while deciding on the media to be used.

6.1.4 Information regarding health teams visit

Implementers reported that the main source of information regarding the health team's visit were as follows :

- Health workers, A.N.M, Other workers	56.0%
- Propoganda/Publicity/Megaphone announcements	12.1%
- Village chief/Pradhan	9.8%
- Health worker visits houses	7.2%
- Notice issued/Posters/Pamphlets	7.2%
- Fixed schedule for immunization	4.9%
- Panchayat	2.7%
- Chowkidar	2.7%
- Teacher	2.3%
- Village elders	2.3%

reaching the villages are few and even those are not seen by all villagers. Posters we hypothesize, would be noticed by larger numbers because of their intrinsic non routine nature as well as the association of posters with news that directly concern the village. However, implementers felt that newspapers had marginally higher credibility than posters.

TV followed after newspapers indicating that the reach of TV is still not widespread.

Leaflets were believed to be more likely to reach villagers than hoardings, possibly because the news carried in leaflets would be perceived as being more pertinent to the village than general-purpose hoardings.

We recommend from this data that the kind of media vehicles that are most likely to reach the rural audience would be those that

a/ depend on the audio-visual medium rather than the printed word

b/ are perceived as having some news or information that is pertinent to the people of that village. In the latter case, the printed medium works since word of the news carried in the poster/leaflet would be spread by those are literate to the rest.

6.2 MASS MEDIA

Data was collected on the basis of media that reached in villages and media that people were most likely to believe in. The objective of the latter question was to see if there were perceived to be any differences in the credibility of different media.

The eight media vehicles that were thus evaluated and the ratings received were as follows :

Media	Reaches people %	Believed in %
Radio	66.3	73.1
Cinema	42.4	55.7
Posters	38.6	48.9
Newspaper	37.9	53.8
TV	30.7	45.5
Leaflets	20.1	17.8
Hoarding	16.7	20.8
Magazine	8.3	13.6

Radio and cinema emerged as being the two media vehicles that reach the village people and are believed in as well. Both are based on audio communication (listening) rather than on reading and therefore would logically have appeal for illiterate people.

The two vehicles that were rated as next most likely to reach villagers were posters and newspapers. The order of ranking suggests that the number of newspapers

reaching the villages are few and even those are not seen by all villagers. Posters we hypothesize, would be noticed by larger numbers because of their intrinsic non-routine nature as well as the association of posters with news that directly concern the village. However, implementers felt that newspapers had marginally higher credibility than posters.

TV followed after newspapers indicating that the reach of TV is still not widespread.

Leaflets were believed to be more likely to reach villagers than hoardings, possibly because the news carried in leaflets would be perceived as being more pertinent to the village than general-purpose hoardings.

We conclude from this data that the kind of media vehicles that are most likely to reach the rural audience would be those that :

a/ depend on the audio-visual medium rather than the printed word

b/ are perceived as having some news or information that is pertinent to the people of that village. In the latter case, the printed medium works since word of the news carried in the poster/leaflet would be spread by those are literate to the rest.

6.3 MESSAGES THAT WOULD CONVINCE

Finally, respondents were asked to give their suggestions with regard to messages that could most effectively convince rural people on the need for immunization.

The largest number of suggestions were in the area of educating people with regard to health and the advantages of immunization. Some of the suggestions in this context were as follows :

	%
. Explain advantages of vaccination	23.1
. Give health education to parents	19.7
. Name and explain the diseases that can be prevented	15.9
. Explain consequences of not vaccinating	14.0
. Explain that it protects children from severe/fatal diseases	9.8
. Explain that vaccine is the easiest way to protect your child	6.1

This group accounted for 88.6% of the suggestions. Two issues that emerge from these suggestions are :

1/ Implementers seem to strongly feel that there is a gap in communication with regard to the fact that the immunization course helps protect the child from some serious diseases. People do not know the diseases which can be prevented, understand the severity of diseases or really understand prevention.

2/ Implementers seem to feel that a combination of fear appeal and reward appeal needs to be used to make an impact.

The other suggestions were with regard to promises that could be made and fears or misconceptions that could be removed. These were :

. Makes children healthy and happy	6.1%
. Explain that government gives vaccination free	3.0%
. Reduce fear of side effects	1.9%

A few respondents (5 to be precise) spontaneously said that the current TV message was very good.

Respondents also had suggestions with regard to the best media to be used. These were :

Cinema	15.9%
Personal contact	12.5%
Leaflets/posters/pamphlets	9.5%
Radio	5.3%
TV	4.9%
Mike/Megaphone	3.4%
Press	0.4%

An interpretation mentioned earlier has been re-validated. That is that the medium used to communicate the immunization message would need to be an active medium rather than a passive one. It would need to reach out and grab attention and not expect to draw attention.

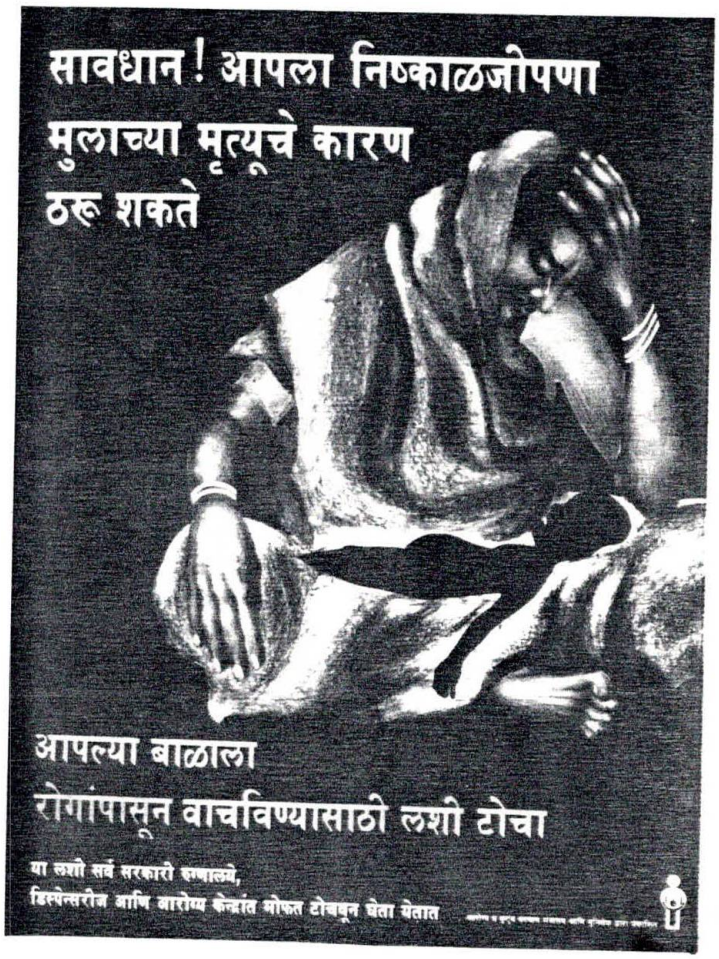
APPENDIX I - VII

POSTERS

IMRB
Indian Market Research Bureau

APPENDIX I

MOTHER AND DEAD CHILD



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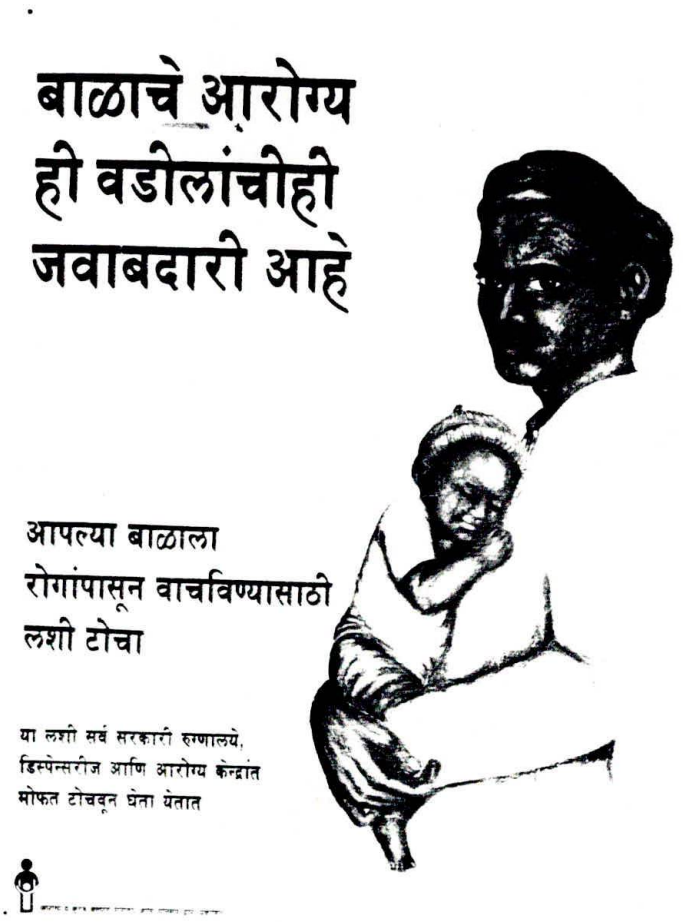
Indian Market Research Bureau

APPENDIX II

FATHER AND CHILD



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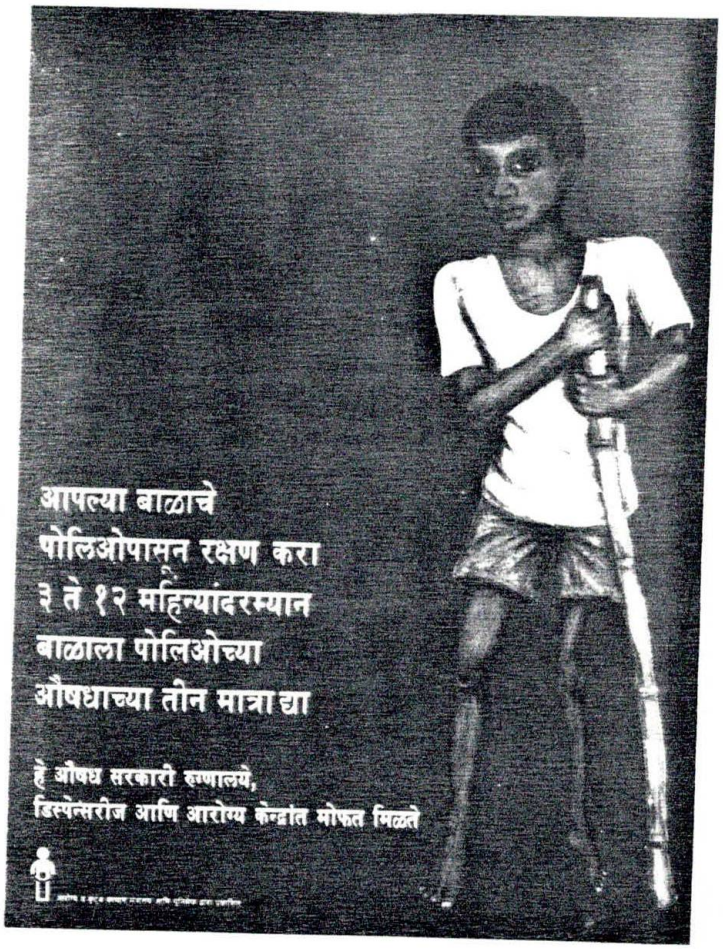
Indian Market Research Bureau

APPENDIX III

POLIO BOY STANDING



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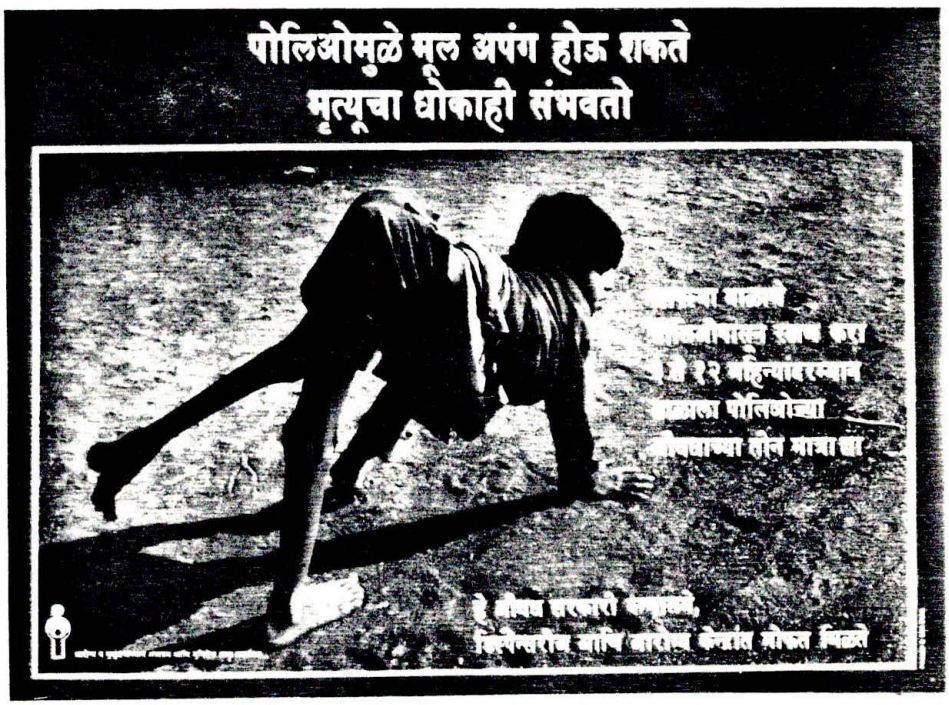
Indian Market Research Bureau

APPENDIX IV

POLIO BOY CRAWLING



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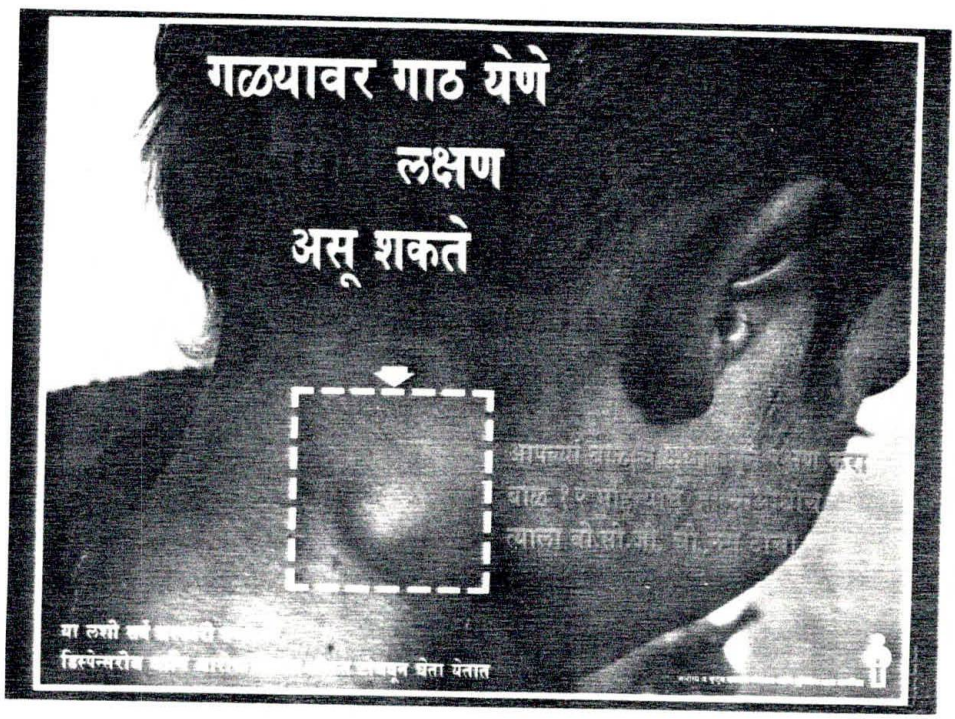
APPENDIX V

TB-NODE ON NECK



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APPENDIX VI

TT-BANDAGED HEAD

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Indian Market Research Bureau

APPENDIX VII

TT-TUBE IN NOSE

IMRB
Indian Market Research Bureau

APPENDIX VIII

QUESTIONNAIRE

IMRB
Indian Market Research Bureau

IMRB/JN 40396/APRIL 1987

										1

1—10

IMMUKAP—IMPLEMENTER INTERVIEW

Name of Respondent _____

Name of village _____ Category _____ District Code _____
OR
Name of town _____

Address _____ District Code _____

Date _____ Name of interviewer _____

Sr. No. of interview _____ Name of Supervisor _____

Backchecked : 1 Accompanied : 2 Neither : 3

'Unit' Category : Metro : 1 District Headquarter : 2
PHC : 3 PHS : 4 Without health centre : 5

11

CLASSIFICATION DATA

1. Health Centre Information Sheet No. _____

12-15

Q.1 What would you say is your job with regard to immunization ? What else ?
(IF MORE THAN ONE, NOTE ORDER OF MENTION UNDER RANK)
ANSWER PERTAINS TO :

			Rank
Immunizing/vaccinating children	:	1	
Health education	:	2	
Keeping track/records	:	3	
Maintaining cold chain and vaccines	:	4	
Sterilizing and preparation	:	5	
Others (specify _____	:	6	
_____			

16-21

2. Can you tell me the recommended immunization schedule ?

2a What are the vaccines given ? (CODE UNDER COL. 2a) DO NOT PROMPT

ASK FOR EACH VACCINE CODED UNDER COL 2a

2c What is the name used for this vaccine by the local people ?

2d How many doses are to be given (CODE UNDER 2d)

2e To whom is this vaccine to be given (CODE UNDER 2e)

2f What is the earliest age at which it can be given ? (CODE UNDER 2f)

2g (IF MORE THAN ONE DOSE) What should the interval between two doses ? (CODE UNDER 2g)

PROMPT ON VACCINE NOT CODED UNDER COL 2a ;

2b Does _____ vaccine also form part of the schedule :

IF YES CODE UNDER 2b. ASK ALL QUESTIONS GIVEN ABOVE UNDER Q. 2c—g. PROMPT ON NEXT UNCODED VACCINE AND REPEAT CONTINUE TILL YOU HAVE PROMPTED ON ALL UNCODED VACCINES.

	2a/b	2d	2e		2f		2g		
TT									
BCG									
DPT									
OPV									
Measles									
Other									

22—76

CODE BELOW FOR Q. 2

Vaccine Name	2a Spontaneous	2b Aided	2c Local Name	2d No. of doses	2e To whom: Pregnant woman	2e To whom: Child below 1 yr.	2e To whom: Above 1 yr.	2f Earliest age (Mnths)	2g Interval (mths)
TT	1	2		—	1	×	×	×	×
BCG	1	2		—	×	2	3	—	×
DPT	1	2		—	×	2	3	—	—
OPV	1	2		—	×	2	3	—	—
Measles	1	2		—	×	2	3	—	×
Others	1	×		—	×	2	3	—	—

Q.3a Here are a list of consumable items that you need for a vaccination session. Is the supply of these regularly available ? READ OUT EACH ITEM

ITEMS	Regular supply	Irregular	Never received
BCG vaccine	1	2	3
TT vaccine	1	2	3
DPT vaccine	1	2	3
OPV vaccine	1	2	3
Measles vaccine	1	2	3
Vaccine cards	1	2	3

77—82

3b How many needles and syringes do you have that are usable ?

Needles (all sizes together) : _____

Syringes : _____

83—88

3c What are the diseases that are prevented by these vaccines ?
(NAME VACCINE AND CODE) (IF LOCAL NAME DIFFERENT—REF. Q. 2 ABOVE—USE LOCAL NAME)

	Tetanus	Polio	Dip-theria	Whooping cough	Measles	TB	Others
TT	1	2	3	4	5	6	7
BCG	1	2	3	4	5	6	7
OPV	1	2	3	4	5	6	7
DPT	1	2	3	4	5	6	7
Measles	1	2	3	4	5	6	7

89—123

(MULTIPLE CODES FOR ONE VACCINE OR ONE DISEASE ARE ACCEPTABLE)

4. For each of the diseases, please answer the following (NAME ONE DISEASE AT A TIME AND ASK) :

4a. What are the major symptoms of this disease ? CODE UNDER COL. 4a.

4b. On a scale of very serious, serious and not serious, where would you rate this disease ? CODE UNDER COL. 4b

2

1—10

Disease	Symptoms	4a.	4b Very Serious	Serious	Not Serious
Polio	Fever and pain in head : 1 Pain in limb : 2 Paralysis of affected limb : 3 Others (SPECIFY) ..... : 4 Don't know : 5		1	2	3 11—16
Diptheria	Child cannot eat properly : 1 Swelling in throat : 2 White membrane in throat : 3 Any other(SPECIFY) ..... : 4 Don't know : 5		1	2	3 17—22
Pertussis	Child keeps coughing : 1 Whoop during cough : 2 Vomitting after coughing : 3 Any other (SPECIFY) ..... : 4 Don't know : 5		1	2	3 23—28
Tetanus	Body becomes rigid : 1 Convulsions : 2 Lock jaw : 3 Any other (SPECIFY) ..... : 4 Don't know : 5		1	2	3 29—34
TB	Child looks tired : 1 Child loses weight : 2 Persistent cough & fever : 3 Others (SPECIFY) ..... : 4 Don't know : 5		1	2	3 35—40
Measles	Fever : 1 Rash : 2 Watery eyes : 3 Cough : 4 Eyes sensitive to light Any other (SPECIFY) ..... : 5 Don't know		1	2	3 41—46

5. What are the local names for each of the following as understood by people here ?
READ OUT EACH ITEM.

	Local name
Tetanus	
Polio	
Diptheria	
Whooping cough	
Measles	
TB	
Umbilical cord	

6a. We have spoken about the ideal immunization schedule. However, take a case where a child was late for his third DPT/Polio and eligible for the measles vaccine. In such a case, would you give him all 3 together ?

Yes : 1
No : 2
DK/CS : 3

47

IF '2' CODED, ASK :
Why not ?

48-53

6b. Do you personally believe that measles **should** be prevented by vaccination ?

Yes : 1
No : 2
DK/CS : 3

54

IF '2' CODED, ASK : Why do you say so ?

55-60

6c. If a mother/father said that her child had already had measles, would you still give the measles vaccine or would you refuse ?

Give : 1
Refuse : 2
DK/CS : 3

61

IF '2' CODED, ASK : Why would you refuse ?

62-67

---

7. Are there any situations or circumstances (medical term : contraindications) when you should refuse vaccination to a child ? What situation ? For what vaccination ?

	DRT	OPV	TT	BCG	Measles
Cough/cold	1	2	3	4	5
Diarrhoea/Vomitting	1	2	3	4	5
Fever below 100°F	1	2	3	4	5
Fever above 100°F	1	2	3	4	5
Malnutrition	1	2	3	4	5
Skin disease/boils	1	2	3	4	5
Others.....	1	2	3	4	5
No situations or circumstances	1	2	3	4	5
Don't know/Can't say	1	2	3	4	5

68-112

8. At what temperature must vaccines be kept at the health centre/in your clinic ? (DO NOT PROMPT)

+4° to +8°C	: 1
Other (SPECIFY)_____	: 2
Don't know	: 3

☐ 113

9. **ASK PRIVATE PRACTITIONER/PRIVATE HOSPITALS :**

Do you ever take vaccines to any place outside this clinic/hospital ?

Yes : 1 No : 2 DK : 3

☐ 114

IF '1' CODED CONTINUE, IF '2' CODED MOVE TO Q.10e

ASK ALL EXCEPT THOSE WHERE '2' CODED IN Q.9

10a Can you describe how you would carry vaccines for an immunization session ? (DO NOT PROMPT) (PROBE TO UNDERSTAND FULLY)

Carry in vaccine carrier	: 1
Keep vials in plastic bag in carrier	: 2
Carry in vaccine carrier with ice	: 3
Carry in vaccine carrier with frozen ice packs	: 4
Ice packs filled with cold water	: 5
No special care required	: 6
Don't know	: X
Others (SPECIFY) _____	: Y

☐☐ 115-120

_____

_____

10b How should vials be kept during an immunization session ?

In a cup of ice	: 1	Don't know	: 3
On top of an ice pack	: 2	Others (SPECIFY BELOW)	: 4

_____

_____

☐☐ 121-126

☐☐☐☐☐☐☐☐☐3 1-10

10c Where do you sterilize all needles and syringes for an outreach session ?

At health centre	: 1	Others (SPECIFY)_____	: 3
At outreach camp	: 2		

☐☐ 11-12

10d When do you sterilize them (SINGLE CODE)

Before the session	: 1
After the session to keep ready for next session	: 2
During the session	: 3
Others (SPECIFY)_____	: 4

☐☐ 13-14

10e Which method of sterilization do you use (SINGLE CODE)

Boil for 1—10 minutes	: 1
Boil for 11—20 minutes	: 2
Boil for 21—30 minutes	: 3
Autoclave	: 4
Keep in antiseptic solution	: 5
Keep in hot water	: 6
Others (SPECIFY)_____	: 7

☐☐ 15-16

11. If you had a 10-doze DPT vial, what is the minimum number of children that you would need before you opened the vial ?

Minimum number of children : _____

☐☐

12a What would you do if you had less than ½ vial of vaccine left over after a session ? And what would you do if you had more than ½ vial of vaccine ?

	Less than ½	More than ½
Throw it away	1	1
Put it back in refrigerator	2	2
Mark it and put it back in refrigerator	3	3
Depends on the vaccine	4	4
Others _____	5	5
Don't know	6	6

19-24

IF '4' CODED, ASK :

b Which vaccine would you put back and which would you throw away ?

	Put back	Throw away
DPT	1	2
OPV	1	2
Measles	1	2
TT	1	2
BCG	1	2

25-29

13a Were you given special training for immunization ?

Yes : 1 No : 2

30

IF YES :

Today how satisfactory do you feel this training was compared to what you need ? (SHOW CARD 'A')

Very satisfactory : 1
Satisfactory : 2
Not satisfactory : 3
Very unsatisfactory : 4
Don't know : 5

31

IF '3' OR '4' CODED ASK :

Could you specify the areas in which the training was unsatisfactory ?

_____

_____

32-39

13b **SHOW MANUAL** (OPEN AND SHOW SOME ILLUSTRATED PAGES)

	Yes	No
Have you ever seen this manual ?	1	2
Have you seen these illustrations ?	1	2
Do you currently have it with you ?	1*	2
Is the manual useful ?	1	2

40-43

* SPECIFY LANGUAGE

_____

SHOW CARD 'A'

14. How would you rate the immunization performance of your centre ?

Excellent	: 1
Very good	: 2
Good	: 3
Fair	: 4
Poor	: 5
DK/CS	: 6

44

What do you say so ?

_____

_____

45-52

15a. Normally, who brings the child for immunization ?

	Mainly	Sometimes
Mother of child	1	1
Father of child	2	2
Grandparent	3	3
Others.....	4	4

53-60

15b. How does a parent keep track of due dates of vaccinations ?

Cards are given : 1
Parents are reminded : 2
Parents are called on due date : 3
Vaccinations given at the house on due date: 4
Others.....
..... : 5

61-62

ASK FOR ALL EXCEPT THOSE WHO CODED '4' IN Q. 15b.

16a. Do mothers usually bring the children on the due date ?

All mothers bring child on due date	: 1
Most mothers bring child on due date	: 2
Some mothers bring child on due date	: 3
Most mothers do not bring child on due date	: 4
None of the mothers bring child on due date	: 5
Don't know/Can't say	: 6

63

IF '3', '4' OR '5' CODED :

16b. What you think are the reasons for this ?

_____

_____

_____

64-73

---

17. In your opinion, who in the family mainly decides on :
(SINGLE CODE FOR EACH ITEM)

ITEM	Mother of child	Father of child	Family elder Male	Family elder Female
Immunization of child	1	2	3	4
TT for pregnant woman	1	2	3	4
Taking child to a doctor in the village	1	2	3	4
Taking child to a town doctor	1	2	3	4
Taking child to local faith healer	1	2	3	4

74-78

18. With regard to the people in your region would you say that the following people are in favour of immunization, against Immunization or indifferent to it ?

	In favour of	Against	Indifferent	DK
Father of child	1	2	3	4
Mother of child	1	2	3	4
Grandfather of child (Paternal)	1	2	3	4
Grandmother of child (Paternal)	1	2	3	4
Village chief	1	2	3	4
Village elders	1	2	3	4
School teacher	1	2	3	4
Faith healer	1	2	3	4
Dai	1	2	3	4

79-87

19. For each of the following, would you say the statement is applicable for most people in your territory, some people or none of the people ?

	Most	Some	None	DK
People are aware of immunization	1	2	3	4
People are cooperative and willing	1	2	3	4
People are indifferent but do not resist	1	2	3	4
People resist immunization and have to be coaxed	1	2	3	4

88-91

20a Do any mothers/parents ever refuse vaccine even when efforts are made to convince/persuade them ?

Most refuse : 1 Some refuse : 2 None : 3

92

IF '1' OR '2' CODED IN 20a, ASK :

20b Who are the people who refuse ? What features do they have in common ?

93-100

20c Why do you think they refuse ?

101-108

20d In your opinion, what could be done by government or others to convince or persuade them ?

109-116

21. If you were asked to name one problem that forms the biggest obstacle to your work, which would you name ? (NOTE UNDER MAIN PROBLEM)
What are the other problems that obstruct your work ?

Main problem : _____

_____ 117-118

Other problems : _____

_____

_____ 119-126

SHOW CARD B : 4 1-10

22. If improvement could be guaranteed in any of the following areas, which would you pick as being the most important ? And which would be second most important ? And third ?

	Rank
Information to villages about immunization	
Supply of vaccines	
Supply of ~~dai~~ Comsumables (needles, syringes)	
Storage of vaccines—cold chain maintenance	
System of travel to villages—roads, transport	
Greater number of immunization centres per village	

11-16

23a What % of the eligible infants in your territory have to be vaccinated in 1987.

_____ % 17-18

23b Will these levels of immunization have to be maintained for the future or is it only for 1987 ?

Only for 1987 : 1

To be maintained for the future : 2 19

IF '2', FOR HOW LONG : _____ 20-21

_____

SHOW POSTER ALBUM

24a A set of posters/tin plates had been made on the subject of immunization

Were these provided to you ?

Yes : 1 No : 2 22

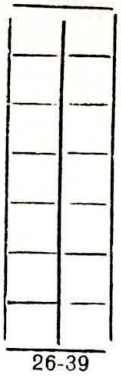
IF YES, ASK Which ones ? CODE UNDER COL. 24a

How many were there in all (approx) Total Number _____ 23-25

24b CHECK IF DISPLAYED AND CODE UNDER COL. 24b. IF INTERVIEW NOT DONE IN DISPENSARY OR CENTRE, CODE '3' UNDER 24b.

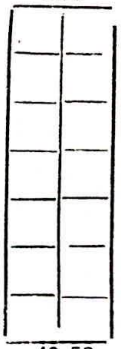
24c With reference to the ones you have, how would you rate them in terms of their effect in making people willing to give immunization (SHOW CARD). Please pick the phrase that most appropriately describes your rating of the posters/tin plates.

24a



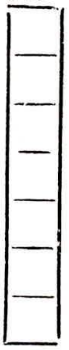
26-39

24b



40-53

24c



54-60

Poster / Tin plate name	24a PROVIDED Poster	24a PROVIDED Tin plate	24b Displayed Yes INSIDE	24b Displayed Yes OUTSIDE	24b Displayed DK	24c Excellent	24c Very good	24c Good	24c Fair	24c Poor
Mother & dead child	1	1	1	2	3	1	2	3	4	5
Father & child	2	2	1	2	3	1	2	3	4	5
Polio boy standing	3	3	1	2	3	1	2	3	4	5
Polio boy cram	4	4	1	2	3	1	2	3	4	5
TB-mode on neck	5	5	1	2	3	1	2	3	4	5
TT-bandaged Lead	6	6	1	2	3	1	2	3	4	5
TT-tube in nose	7	7	1	2	3	1	2	3	4	5

25 I have here a set of statements. As I read out each one, please tell me whether you agree or disagree with the statement :

	Agree	Disagree	
1. Convincing people to get their child immunized is frustrating work	1	2	☐ 61
2. TT and DPT vaccines should not be allowed to freeze	1	2	☐ 62
3. People here do not really believe that vaccinations can prevent disease	1	2	☐ 63
4. This job involves important and useful work	1	2	☐ 64
5. The cold chain system beyond the HQ hospital is very weak and breaks down easily	1	2	☐ 65
6. People suspect that vaccinations are not given for the prevention of diseases but some other motives	1	2	☐ 66

		Agree	Disagree	
7.	People have fears with regard to vaccination side effects.	1	2	☐ 67
8.	Working with illiterate people can be boring and tiring	1	2	☐ 68
9.	I would prefer to work in a town rather than a village	1	2	☐ 69
10.	Keeping vaccines at room temperature for 2—3 hours is okay	1	2	☐ 70
11.	Once one child has been vaccinated, people will come forward on their own to get their next child vaccinated	1	2	☐ 71
12.	Most vaccines loose potency because it is impossible to maintain them at the correct temperature	1	2	☐ 72

FOR DISTRICT LEVEL INTERVIEWS ONLY

26. What would you say is the main source of information for villagers in this district, with regard to :

a. National happenings : _____ ☐☐ 73—78

b. District level happenings : _____ ☐☐ 79—84

c. Neighbouring village incidents, fairs, melas, etc. _____ ☐☐ 85—90

d Health Team's visit : _____ ☐☐ 91—96

27 In your opinion, what message would be best to convince people about immunization. What should they be told to most effectively convince them ?

_____ ☐☐ 97—104

28. **SHOW CARD 'C'**

For people in the villages, which of these media should be used :

a. Which do people believe most in ?

b. Which one would be most likely to reach them ?

	a Believe in	b Reach them		a Believe in	b Reach them
Radio	1	1	Hoardings	6	6
TV	2	2	Leaflets	7	7
Newspaper	3	3	Cinema	8	8
Magazine	4	4	Others.....	9	9
Posters	5	5	(Specify)		

☐☐ 105—122