		Location		Normal/HR		Religion	
% down	All	Rural	Urban	Normal	High Risk	Hindu	Muslim
Others	1.9	2.1	-	1.6	3	0	3.3
SAFE DELIVERIES (FOUR CLEANS MET)	9.4	9.3	-	7.9	15.2	9.3	9.8

5.9 Postnatal Complications

It is crucial that the women be under observation after the delivery for possible signs of postnatal complications. Some of these complications are excessive bleeding, fever after delivery, foul smelling vaginal discharge due to uterus infection, weakness, fits, urinary problem etc.

In West Bengal almost two thirds did not experience any complications after delivery. The major complications mentioned by the respondents are excessive bleeding (more than one fifth), fever (18%) and fever with foul smelling discharge (8%; only in rural areas).

Table 46 Postnatal Complications

Base : All	Postnatal Complications					
% down	Base (Number)	None	Excessive Bleeding	Fever	Fever with foul smelling discharge	Others
ALL	296[24]	61.8	22.3	17.6	5.4	3.0
LOCATION						
Rural	208	56.7	24	18.8	7.7	4.3
Urban	88	73.9	18.2	14.8	0.0	0.0
NORMAL/HIGH RISK						
Normal	240	62.5	22.1	17.1	4.6	3.4
High Risk	56	58.9	23.2	19.6	8.9	1.8
RELIGION						
Hindu	173	62.4	22.5	14.5	5.2	2.5
Muslim	79	57	29.1	24.1	5.1	4.5
CASTE						
SC	57	63.2	19.3	15.8	3.5	3.4
ST	26*	-	-	-	-	-
Others	169	59.2	27.8	18.3	6.5	4.6
PLACE OF STAY [25]						

[24] Figures may not exceed 100% because of multicoding.
[25] Place of stay in last 4 months of last pregnancy

With In laws	202	58.9↓	26.7	18.8	6.4	5.3
With own parents	44	68.2↑	13.6	11.4	4.5	3.8
Own	50	68	12	18	2	1.8

- Base too low not analysed further

5.10 Postnatal Care

Postnatal care, especially during the first few weeks of delivery, is of critical importance to the mother and her new born. Government of India guidelines recommends three postpartum visits of the Health service personnel in first 10 days.

Close to one third of women who delivered during last year received postnatal check up (PNC). Fourteen per cent received at least one visit while only five percent received more than three visits. The average number of checks the respondents received is 2.1 (mean calculated amongst all those who received PNC).

A high majority (69%) of the respondents did not receive any postnatal check up. Across religion, there were differentials observed. Almost three fourth of the Muslim women didn't receive any post-natal check up.

Table 47 Postnatal Checkups

	Postnatal Checkups					
Base: All who had a live birth % across	Base (Number)	Did not receive at all	Received one checkup	Received 2-3 checkups	Received more than 3 checkups	Mean no. of checkups [26]
ALL	289	68.5	14.2	12.8	4.5	2.1
LOCATION						
Rural	205	70.7	10.7	13.2	5.4	2.2
Urban	84	63.1	22.6	11.9	2.4	1.8
NORMAL/HIGH RISK						
Normal	233	69.5	13.3	12	5.2	2.1
High Risk	56	64.3	17.9	16.1	1.8	1.9
RELIGION						
Hindu	171	63.2	17	14	5.8	2.1
Muslim	78	74.4	10.3	12.8	2.6	2.2
CASTE						
SC	56	62.5	25.0	10.7	1.8	1.6
ST	26*	-	-	-	-	-
Others	167	67.1	13.2	14.4	5.4	2.2
PLACE OF STAY						
With In laws	197	69.0	15.7	11.7	3.6	1.9
With own parents	43	67.4	9.3	18.6	4.7	2.3
Own	49	67.3	12.2	12.2	8.2	2.4

* Base too low not analysed further

[26] Based on those who received the checkup.

CONTENTS - QUALITATIVE

DETAILED FINDINGS - QUALITATIVE

Overview of the different segments

1 Beneficiaries

Six Focus Group Discussions were held amongst both fathers and mothers of children below 5 years (4 FGDs) and women who had had a pregnancy of at least 28 weeks in the last one year (2 FGDs), across the clusters. 8 to 10 respondents participated in each group.

The **attitude and perception towards health** differed across segments. Most of the beneficiaries in the urban clusters were more involved with health care and as such had greater awareness and consciousness regarding these matters. They recalled a greater number of health care practices as compared to their rural beneficiaries.

"Should give proper diet"

"Should make sure that the child is clean, has a bath properly"

"Even use Dettol for germs"

The urban beneficiaries had better access to the health services, like government hospitals as well as private clinics and both were located within accessible distances. However, despite the easy availability of government facilities and services, they preferred going to private doctors owing to the following reasons:

- Belief that services that are paid for are better
- Non-friendly attitude of the doctors for government facilities
- High levels of inconvenience

"Dates are also a problem, they ask you to come on specific dates"

"Have to stand in long queues"

Observation: The urban beneficiaries do not mind contributing monetarily for services if the services that give them quality combined with convenience.

On the other hand, there was a perceived sense of helplessness among the rural Beneficiaries as they felt that they could not really do much for the children owing to financial restraints and adverse environmental conditions, like unhygienic living conditions, etc.:

"There is so much dirt around, the child will get ill"

"Don't have money to give to Doctor"

They also had to travel longer distances to avail these services. In some cases, people did mention health workers visiting them and advising them on health related matters.

"They visit the village every month ...explain to the mothers very well about giving their children vaccines" (Beneficiaries)

"Call mothers for a meeting to make them aware as to what to do to prevent diseases" (Service Providers)

The local sub-health centre did not figure in the context of health services available to them.

"The sub-centre is almost non – existent...children have to be taken at own expenses for vaccination"

2 Service Providers

The profile of Service Providers included a mix of health workers such as AWW, Medical Officers, ANMs, Supervisors and Local Dais. Most of the Service Providers had received basic education up till class ten, except the Local Dai who was uneducated. Their range of experience varied from 6 years to 28 years. We visited a total of 10 Service Providers across the state.

The Service Providers were requested to describe their roles and responsibilities in each; IPPI, Routine Immunization and ,Maternal Care. It is interesting to note that while describing these, on their own, the Service Providers did not mention some very obvious responsibilities that they have been assigned. The following table captures their responsibilities:

Segment	Routine Immunization	IPPI	Maternal Care	Additional responsibilities at probed level
➢ Medical Officer	➢ In charge of entire program in the area ➢ Inspecting and supervising activities of health centre and junior staff ➢ Ensuring regular field visits and availability of materials at the sub-centres ➢ Ensuring coverage of all children ➢ Administering the RI vaccines	➢ Supervising the entire program in their areas ➢ Timely delivery of the medicines to different health centres ➢ Administration of polio drops ➢ Imparting training to health workers ➢ Dealing with problems related to IPPI campaign	➢ Responsible for all Maternal Care activities in the area under supervision	➢ Birth and death registry ➢ Involved in multipurpose health work like Malaria Eradication programs, Family Planning programs etc. ➢ Raising health awareness among people ➢ Insuring proper maintenance of records at health sub-centres

Segment	Routine Immunization	IPPI	Maternal Care	Additional responsibilities at probed level
➢ Supervisors (Both ICDS and Health Supv.)	➢ Reaching out and communicating to mothers the relevance of Routine Immunization ➢ Supervision of all work done by AWW's (In case of ICDS Supervisor) ***Did not mention the supervision of work done by ANMs***	➢ Reaching out and communicating to people the importance of IPPI ➢ Physically administering the drops ➢ Ensuring complete coverage by house to house visits ***Failed to mention the maintenance of Cold Chain***	➢ Ensuring intake of iron folic acid tablets and tetanus injections by pregnant women	➢ Supervising the work of AWWs (under ICDS) ➢ Distributing nutritional supplements to pregnant women ➢ Involved in Malaria Control and Census related work ➢ Collecting reports from different centres (ICDS Supervisors)
➢ ANM	➢ Responsible for vaccination of all children ➢ Involvement in special programs e.g. Leprosy Programs	➢ Supervising various activities of IPPI ➢ Holding meetings with Panchayat members and ICDS workers ➢ Administering dosages to children ➢ Conducting door to door immunization	➢ Health check up of pregnant women and advice in case of any complication ➢ Administering vaccines to expectant women ➢ Implementation of Family planning programs ➢ Post natal check ups of women	➢ Visiting door-to-door to inform and teach people to prepare ORS
➢ AWW	➢ Informing new mothers about importance of vaccines ➢ Door to door visits to inform and inquire about health	➢ Administering drops to children ➢ Marking their fingers post vaccination ➢ Preparing list of names of all children in the area	➢ Making the ***pregnant*** women aware of ***ANC*** ➢ Monitoring pregnancy through external check ups (One AWW)	➢ Hold meetings with mothers of small children on various diseases ➢ Holding meetings with mothers of children (3-6 years) for Prime Minister's Yojna

Segment	Routine Immunization	IPPI	Maternal Care	Additional responsibilities at probed level
	Did not mention certain roles, like: ➢ *Maintaining register for all children with immunization schedules*		➢ Informing mothers of dos and don'ts during pregnancy ***Did not mention the following:*** ➢ ***Registering new pregnancies***	➢ Visiting door-to-door to inform people regarding the different health care programs
➢ Local Dai	➢ Informing the mothers about dates of vaccination camps ➢ Helping at the health centre, 'boiling the needle/syringe	➢ Help in administering drops to the children both at home and at the booths	➢ Attending deliveries ➢ Helping out at time of vaccination of pregnant women	➢ None

Basis of responsibility: according to the Service Providers, they were given responsibilities on the basis of familiarity and comfort with the area they lived in as it was felt that they knew the area and the people better. This also helped them in building up personal contact with the b.

Level of satisfaction: the Service Providers across the rural and urban areas expressed their dissatisfaction with the incentives and remuneration that they are given, though they do not openly express it. In one exceptional case, a Medical Officer expressed his satisfaction with his remuneration package. According to the supervisors, the training provided to them should be relevant to the tasks they are allotted. One ANM felt that she should receive more training for Routine Immunization and Maternal Care. The AWWs felt that their work was much more than the honorarium they were getting. The Service Providers, especially those involved in fieldwork, gave certain suggestions as to the support that they expected from the government:

- Felt that some kind of ID cards should be given to them to facilitate their work and increase trust of people in their services
- Items like calculators to facilitate in work
- Long term benefits like gratuities, bonuses, pensions, living quarters etc. be provided to them.
- Desire for better remuneration

Infrastructure and Training: Most of the Service Providers expressed overall satisfaction with the infrastructure provided to them and claimed that they had received adequate training, with regard to IPPI:

- Training with regard to storing of vaccines
- Administration of vaccines to children (2 drops)
- Checking the quality of vaccines
- IEC material

Most of the Service Providers also felt that they had been provided adequate training in **Routine Immunization**. However, some in the rural areas did not have confidence in their abilities for actions they were required to take under certain circumstances:

> *"Have some doubt ...the condition under which child can be vaccinated...in case he has fever? (ANM)*

However, a few of the Service Providers expressed the need for **additional training in terms of information on vaccines**.

> *"Necessary to know what vaccines are there in Routine Immunization, their effects and side effects"*

There was also a demand for a doctor to be present at the booths. However, in terms of **Maternal Care**, the Service Providers felt that the facilities provided to them were inadequate in terms of both training and infrastructure. There was a felt need for **better equipment** for ante-natal check up at the health centres.

> *"What training was given was enough, but there were no such arrangements or facilities here"*

> *"Should have facilities for blood sugar, urine examinations during ante natal check ups"*

3 Influencers

The profile of Influencers that we met during the course of the study included Panchayat members, Political Activist and Local Club Members. The club members and the political activist enjoyed clout in the villages by virtue of being active participants in the local activities. **In all 6 such influential people were visited across the state.**

The Influencers were involved in IPPI campaign at various stages as given below:

Involvement in IEC activities, arranging for volunteers

↓

Arrangements for Polio Day

↓

Actual administration of Polio Drops

The nature of involvement varied. Some of the common activities they mentioned included:

- Calling the children from the house on Immunization Days
- Explaining to people the relevance of the drops and convincing them to take the same
- IEC activities like door-to-door campaigning, public announcements, etc.
- Arranging for volunteers

- Challenges faced: The Influencers did not have to face any problem in the urban areas. In the rural areas, however, there were certain doubts in the minds of the people that they had to encounter:

- Administration of Polio drops will make the child fall sick
- Doubts among Muslims that Polio drops cause infertility
- People demanding written assurances regarding Polio drops

Suggestions for improvement: The influencers felt a number of steps can be taken to improve the services of the program. They mentioned the following ways in which they would like **to contribute to the program additionally**:

- To explain to people the importance of the IPPI campaign and benefits of Polio drops through audio-visual (TV) projector system (In Urban High risk areas)
- Holding meetings with mothers to explain to them the importance of the IPPI campaign
- Mobilizing resources within their own clubs and ensuring door-to-door campaigning. Also delegating work to different groups within the club
- In predominantly Muslim areas, ensuring participation of an influential member from within the community. Also, ensuring the participation of Muslim women (Urdu speaking) for door-to-door campaigning

However, they felt that training should be provided to them in order to make them more confident and to help them in carrying out their roles better.

Additionally, they felt that the program would improve if it had support from different segments of the society like doctors, government, etc. **Following were some of their suggestions:**

From community:

- The observer effect was a very powerful tool in eliciting participation from people, i.e. when people saw others visiting the booth; they also were motivated to do the same.
- Educated and influential people should take active steps to spread the message of IPPI (like teachers, government functionaries, etc.)

From government:

- Better training of health workers and influencers on how to deal with the queries of the beneficiaries
- Better transport for beneficiaries who live far off from the booths
- Provision of proper refrigeration for the storage of the drops

Doctors:
The participation by doctors seems to emerge as one of the most important requirements in the program. The doctors could help in the campaign because:

- People had a lot of trust in doctor
- Doctors due to their credibility can help in dispelling doubts about the drops
- Presence of doctors helps in giving the program a lot of 'importance'

Volunteer training
The influencers suggested a four-step strategy to train the volunteers from the community to take part in the campaign:

- Selection of appropriate volunteers from the community

  "Those who want to work for society do not need external motivation"

  "Getting the members of the community who are interested"

1. Appropriate training: Appropriate training consisted of teaching the volunteers how to contact people, how to convince them, etc. The most appropriate person to impart the training would be the local doctor.

2. Allotment of responsibility for distinct areas

3. Remuneration: It was felt the remuneration was very important to sustain the interest of volunteers, besides giving them due respect for the work they put in.

Observation: Money seems to be the biggest factor that could raise the motivation of the existing and potential volunteers.

Role in Routine Immunization: the Influencers did not play an active role in Routine Immunization in their areas. Their involvement was mostly limited to the IPPI campaign.

IPPI

1 Perception of Polio

Polio as perceived by people: Polio was recognized as a dreaded disease as the respondents were aware that it rendered the children's limbs useless:

"Hands and legs will bend"

"Not be able to move limbs"

"Initially there will be fever, then hands and legs will be affected"

"Face will be contorted"

The parents were aware that it is a life long, crippling disease. This was also the key reason for concern among them as they felt that the child would become a burden on the others. Also, it would affect the child both physically as well as psychologically.

Observation:
At this point it would be important to note that there was some confusion about the exact nature of the disease, as it was confused with other diseases which created deformation of limbs, for example Congenital anomalies.

2 Awareness of IPPI Campaign

People across segments and groups were aware of the IPPI campaign and claimed to have complied with the IPPI dosage whenever the camps had been held. Most of them also claimed that their children had been immunized at the booth itself.

The Beneficiaries had received information regarding the Polio day about a week to 15 days in advance. Most of the respondents felt that information regarding Polio day should be ideally given to them 2 – 3 days in advance, so that people would not forget about it. (In one urban High Risk Area, people claimed that they had not been informed regarding the Polio Day due to some political rivalries in the area.)

However, according to the Service Providers, there were still some segments of people like the uneducated and orthodox classes (especially among the Muslim community) who had not understood the relevance of the problem and still abstained from getting drops administered to their children. There were also some instances of negative publicity regarding Polio drops that fuelled incorrect perceptions, for example:

- Rumors that Polio drops induce infertility
- Some doctors advise patients not to get the drops by spreading the message that too many doses can be harmful to the child

3 Motivators and Barriers

Some factors that acted as **motivators** and **de motivators** for people include:

Motivators	Barriers
➢ Prevention of polio ➢ Prevention of problems related to the disease ➢ Excessive media publicity, leading to increased awareness ➢ Influence of peer group or other community members taking their wards for immunization ➢ Door-to door campaign where the health workers personally informed the beneficiaries about polio program ➢ Advice given by health workers	➢ Certain **beliefs** among people ➢ People have been able to evade the disease without polio drops ➢ Healthy children had in-built capacity to resist the disease ➢ ***Skeptical about the quality of drops being given as they felt that these were expensive drops, yet were being freely distributed*** ➢ Fear of child falling sick after administration of drops *"Some had fear that child will fall sick"* ➢ **Profile of people** within the community who do not avail the services include, ➢ Working mothers who were not able to take time off to take their children to the booths ➢ Orthodox Muslims who believed that God decides the fate of all ➢ Lower levels of education and awareness ➢ **Other causes** ➢ Child too small to be carried to the Booth ➢ Negligence, owing to greater number of children, consequently not able to pay individual attention ➢ Observed side effects of the drops, like fever, pain, etc. ➢ Social barriers, like women not being allowed to go outside home

Apart from the above factors, the **Influencers also mentioned certain factors** that they felt acted **as motivators and barriers** for compliance with the IPPI campaign among people in their areas:

Motivators	Barriers
➢ Significant decline in number of Polio afflicted children ➢ Belief that polio drops safeguard children from other diseases as well, like diphtheria, measles, paralysis, etc. ➢ Active participation by clubs and influential people has given the program a higher stature in the people's mind.	➢ Service Providers do not reach laborers at their place of work ➢ Lack of transport for reaching booths located far off from their homes ➢ Communication was predominantly in Bengali, a language not understood by the non-Bengali sections

Suggestions to remove barriers: there were certain **suggestions** forthcoming **from the Influencers,** which they **felt, if implemented, could improve compliance within the community**:

IEC Related:

- ➢ Training local people to impart knowledge within the community
- ➢ Involving Urdu speaking women in Urdu speaking areas in the campaigning
- ➢ Using publicity materials, especially audio-visual material, to spread awareness about the disease and the campaign
- ➢ Publicity material to be in languages suited to the area
- ➢ Celebrities to be used in advertisements
- ➢ Teachers and Doctors to be used in promoting the campaign
- ➢ Live cases of afflicted Vs. Non afflicted children should be shown to make the contrast evident and create a greater impact

Program Related:

- ➢ Increase involvement of local people by door-to-door campaigning
- ➢ Presence of doctors in booths to help in removing doubts associated with Polio drops
- ➢ More training to other health personnel, besides doctors at the booths to deal with problems / doubts of people
- ➢ Arrangement of transportation facilities in case of booths in remote areas
- ➢ Health workers to pay more attention to the Muslims to remove their doubts and apprehensions by greater inter personal contact

4 IEC Material

People easily recalled the IEC materials related to IPPI:

- Television ads (urban)
- Publicity by the police and the arrangements they make

  "On polio day, the police arrange for vehicles to take the children to the booths"

- Publicity campaigns undertaken personally by important society members like the local party members, local CMC staff, etc.
- Posters with photographs of polio afflicted children
- Mike announcements before the program (rural)
- Door to door campaign by the health workers (rural)
- Social discussions among the housewives on health related issues or verbal communication amongst them (urban)

Most effective methods: There were certain IEC materials that were stated to have been more effective by most of the respondents. These were:

- Mike announcements as these are
  - better understood by the illiterate people and
  - effective in reaching women inside their homes

- **Drum beating** – as these are capable of catching peoples' attention
- Festoons, banners and posters with mothers taking child for immunization
- **Door-to-door** campaigning

Least effective methods:

- Posters / other written material in languages that are not comprehended in specific areas
- Posters, banners etc. that are not effective for illiterates

5 Booth Vs Home Strategy

	Booth	Home
➢ **Advantages**	➢ Centrally located and convenient ➢ Fixed timings, making it easier to plan for the event ➢ More professional set up enhances faith on quality of services and vaccines ➢ Faith on credibility of health workers: *"There will always be some doubt about the person if he just comes to the house and gives drops"*	➢ Convenient for families where the women are not allowed to go outside their homes ***(especially among the Muslims)*** ➢ With many children, it is easier to give Polio drops at home ➢ Overcrowding at Booths causing inconvenience ➢ Convenient for mothers with very small children as they cannot be taken to booths

	Booth	Home
➢ **Disadvantages**	➢ Problem in carrying very small children to the booths ➢ Daily wagers unable to go to the booth ➢ Women alone at home unable to take child to booth ➢ Social restrictions among certain communities like Muslims – women not allowed to go out of home ➢ There are problems when children are sick. There is fear that the illness may accentuate if the child is taken out in that condition.	➢ Apprehension regarding credibility of Service Providers ➢ Lack of faith in the quality of the vaccines as carrying them in the sun could harm them ➢ Increased workload of Service Providers ➢ Encourages attitude of complacency among the Beneficiaries who wait for Service Providers to come to them, rather than they themselves taking the initiative

Observation:
A result of the combined strategy is that people know that the NID will be followed by door-to-door immunization. This promotes an attitude of complacency among beneficiaries.

6 Perception on repeat dosages

Certain doubts emerged regarding the need for repeat doses even among some people belonging to the educated sections of society. However, this did not affect compliance with the campaign as they had been advised by the doctors to do the same. At the same time the respondents were able to come up with certain other rationale for repeat doses, like

"It prevents the chance of the child getting the disease totally"

"If the child misses the first time, he can take it the second time"

"With repeat doses the child will remain healthy"

7 Perception of Service Providers

The health functionaries perceived the IPPI program as an extra burden over and above the work already assigned to them. Besides this, there were some practical problems faced during the campaign such as:

- **Most stated that there was non-availability of the vaccines on time. For E.g., at times the vaccines reach them later in the day or sometimes they run short of vaccines, in which case the additional requirement cannot be met immediately**
- Some felt that there was also non-availability of refrigerators to store the vaccines at the sub-centres
- Few stated that there was lack of adequate staff to help out in the program

8 Role of CBOs and NGOs

There was negligible involvement of CBOs and NGOs in health care activities in the rural areas. In these areas it seemed that the Village Panchayat was the only organization involved in IPPI. It had the responsibility for IPPI in the village, i.e. publicity, transportation of vaccines, providing workers for the day and making arrangements at the booths. This organization was also responsible for keeping a record of children vaccinated and those missed out. There were also certain Local Clubs, that were mostly involved in publicity and motivation of Beneficiaries for the Polio Day.

In urban areas, there was reportedly more involvement of CBOs and NGOs as compared to the rural areas. There were certain organizations like the Lions Club, CUDP (Calcutta Urban Development Project) etc. in these areas that were mainly involved in informing people regarding the IPPI campaign and motivating them for compliance.

Observation: Need to involve NGOs and CBOs at the rural level also, as these would involve workers belonging to the communities being targeted.

Certain key **observations and recommendations** on the IPPI campaign have been given below:

Observations	Recommendations
➢ The compliance behavior for polio vaccination is ***lower*** among the uneducated class and the Muslim community.	➢ An effective strategy to overcome the barriers prevalent in these two segments has to be developed.
➢ New barriers to the campaign emerging and old ones still existing ➢ Resulting from growing skepticism in the minds of the parents.	➢ Need to educate them on the importance and relevance of the vaccine
➢ Observation of side effects in children who were administered the polio dosage made the other beneficiaries skeptical about the effectiveness of the dosage ***"A kid fell ill and started vomiting / loose motions after having Polio drops"***	➢ Participation by doctors would help in: ➢ Clarifying the doubts of parents regarding side effects ➢ Treating the child
➢ There are certain beliefs such as 'healthy children have in-built capacity to fight polio', 'people who have not had the drops have still evaded polio', etc. which pose as significant barriers against IPPI ➢ There is skepticism about the drops, as these are given free of costs	➢ Make them understand that the program is for their own benefit and not for the benefit of the government ➢ These beliefs could be tackled by Interpersonal Communication by Influencers
➢ Visiting the booths is not a comfortable option for poorer sections (economic barriers), the uneducated and the Muslim community (social barriers)	➢ The barriers regarding booths can be tackled by making the house-to-house strategy more effective ➢ Reach all people at homes ➢ At their place of work

IPPI – Some Trends Observed

MOTIVATORS

Year 2000 – Findings	Year 2001 - Findings	Implications
➢ Protects child against Polio ➢ Protects against other diseases besides Polio ➢ Belief that child will become healthy if these drops are given	These beliefs have been carried over from last year	↘ Need to reinforce the belief that protection of child against Polio is necessary
➢ Influence of IEC Material	➢ New materials that have been developed locally, besides the ones existing earlier	↘ The IEC materials have an effective influence in generating awareness for the program. ***Locally developed materials attract more attention***
➢ Influence of Health Workers and the advice given by them act as motivators	Still exists ➢ New motivator in the form of Peer group influence / observer effect	↘ Apart from Health Workers, members within community play an important role in influencing people
➢ Realization of need for compliance for preventing Polio	Still exist ➢ New factors emerging: ➢ Decline in number of Polio cases attributed to the success of the campaign	↘ Desire to 'keep my child healthiest' could be tapped to enhance compliance
	➢ Increased participation of NGOs and Local clubs (in the urban areas) have lent a higher stature to the program	↘ Need to precipitate further for increased coverage

BARRIERS

Year 2000 – Findings	Year 2001 - Findings	Implications
➢ Non-awareness of campaign and lack of understanding of purpose	Still exists in some cases	
	➢ Belief that children have in-built capacity to fight diseases	↘ Need to educate Beneficiaries on purpose of vaccine
➢ Aware, yet unable to avail owing to various reasons ➢ Daily wagers unable to leave work ➢ Difficulty in commuting ➢ Social restrictions	Still exist in few cases	↘ Providing facilities within approachable distance could lead to higher compliance ↘ Need to address the social barriers that exist by aiming specific campaigns against these
➢ Aware, yet unwilling to comply, owing to: ➢ Complacency ➢ Belief that child suffering from ailments cannot be administered OPV ➢ Poverty and the belief that vaccination requires monetary payment ➢ Misconceptions – drops cause infertility or even death in children ➢ Affluent families prefer going to private practitioners ➢ Inconvenience at booth – long queues ➢ Belief that small children should not be carried outside home initially	New barriers have emerged ↓ ➢ Doubt on quality of drops as they are provided free of cost Still exist, though to a lesser extent ➢ In some places, communication problem as local language / dialect not used	↘ Need to give detailed information on the vaccine ↘ Adapt IEC materials in local languages ➢ Misconceptions still floating around in society ↘ This barrier has to some extent been tackled by the participation of local clubs and NGOs. Could be further enhanced with their help ↘ Need to facilitate vaccination of small children at booths by educating that "no child is too young"

Routine Immunization

1 Knowledge about various diseases

The respondents mentioned a number of diseases in the context of health related problems of children. The most commonly mentioned diseases included – fever, cold & cough, malaria and stomach related diseases. Measles and Asthma were also mentioned as bothersome diseases.

The knowledge check about the symptoms of various diseases revealed the following responses:

Disease	Urban response	Rural Response
Measles ('Ham')	**Most Beneficiaries were aware of the following symptoms:** ➢ Red rashes ➢ Fever ➢ Cold & cough ➢ Greater susceptibility to pneumonia	**Most were aware of the following:** ➢ Red rashes ➢ Fever
Polio	➢ Hands & legs become numb and thin ➢ Child is paralyzed ➢ Deformation of limbs	*In some areas concerned with congenital weakness of limbs*
Tetanus ('Dhanustankar')	**Most of the respondents were aware of these symptoms:** ➢ Body bends ➢ Occurs both in mothers and children ➢ Convulsions	**Few Beneficiaries were aware of the symptoms**
Childhood TB	**Some Beneficiaries were aware of the following symptoms:** ➢ Fever for a prolonged period of time ➢ Lack of proper appetite	**Few Beneficiaries were aware of the symptoms**
Diphtheria	➢ Throat swelling ➢ Problem in food intake	Not clear
Whooping cough	Not clear	➢ Breathing problem accompanied with cough

As can be evinced from the above table there were significant gaps in the knowledge of the rural beneficiaries regarding diseases like Childhood TB and Tetanus. There were differences in the diseases considered as most dangerous in the urban and rural segments:

Urban		Rural
➢ Polio ➢ Diphtheria ➢ Tetanus		➢ Polio

2 Knowledge and awareness about RI

Most of the beneficiaries were aware that the children needs to be given some injections post birth. This was because they had received the card or advised by the doctors to do so. It was felt that the compliance of the urban beneficiaries was more regular as compared to the rural beneficiaries. This was because they seemed more aware and it was easy for them to access the facilities for RI. However, in both segments the exact clarity as to why the doses are given was lacking.

> *"To prevent the children from getting Polio, fever, stomach upsets...to keep them healthy"*

The name of the vaccines that the beneficiaries were aware of, included:

Vaccines	Awareness
➢ Measles	➢ For prevention of Measles ***Most of the respondents were aware in the urban areas, while only a few were aware in the rural areas.***
➢ Polio	➢ For prevention of Polio ***They did not seem to be aware of the difference between Polio drops administered under Routine Immunization and those given under IPPI (as part of a special campaign). A common response was "My child had OPV for Routine Immunization. I had taken him to the IPPI camp"***
➢ BCG	➢ Not aware of its true purpose ➢ Known by its name in urban areas ***In rural areas, some know it as the 'vaccine given at the time of birth' ("Janam ka teeka")***
➢ DPT	➢ Not aware ➢ Tetanus vaccine known as a separate vaccine, given to pregnant women and children to prevent infection from cuts and wounds

The respondents availed the immunization facilities from the government hospitals. The primary grievance in the urban segment was that there were long queues with inadequate personnel to handle the pressure. In the rural segment the problem was that the facilities were located very far and each visit meant a lot of expenses for the respondents. Some times they had to travel to the neighboring villages or nearby towns for these facilities and it became worse in the absence of proper transportation.

Observation: Overall the impression that was garnered was that as of now the knowledge and awareness levels about RI was restricted to the educated and those people who were alert to health related issues. As of now the relevance of RI has not be comprehended by all. ***(Supported by Quantitative research, where reasons such as 'not aware of the need for all vaccines / doses' and 'have no faith in the vaccines' were mentioned).***

Action Point : The compliance behavior of the beneficiaries needs to be made regular, helping them understand the relevance of the doses can do this.

Infuencers who were not connected with the health department had very scarce knowledge about RI.

Suggestions for further motivation: There were certain **suggestions** forth coming for motivating people for Routine Immunization:

- Door-to-door campaigning by health workers to give information to people about it
- Explaining to pregnant women the link between vaccines and diseases ***during the IPPI campaign***

  "Ask us to get child vaccinated...but why, they don't tell us"

- Street corner plays in local languages
- Distribution of pamphlets and leaflets to new mothers by hospitals / health centres

3 IEC Material

Urban	Rural
➢ The maximum influence was from interpersonal sources like relatives, neighbors, and elders in the family, etc.	➢ Interpersonal communication by health workers
➢ The influence of the doctors and government hospital was also operational. Routine Immunization cards also served as a reminder →	➢ IPC was the main source of information for the rural beneficiaries
➢ Some of the respondents also mentioned TV.	

In comparison to the IPPI program the sources of awareness for the program are very scarce. The Cards issued to children and IPC by grassroots level health workers were mentioned as sources of awareness.

Action Point: The campaign to create awareness about RI needs to be expanded in terms of:

- Number of people to which it reaches
- Communicating the purpose for which vaccine needs to be given
- **Information on session, date and time**

4 Motivation and Barriers for RI

The primary motivation and barriers regarding RI include:

As mentioned by the beneficiaries

Motivation	Barriers
➢ Belief that the child will remain healthy and well. (This belief was stronger in the urban class and hence their motivation was also stronger than the rural segments). ➢ Advise by doctors to get the child immunized	➢ Lack of awareness and knowledge about the benefits and relevance of Routine Immunization. (Most of the respondents, especially in the rural segments had very vague notions about the purpose of Routine Immunization) ➢ There were some side effects of the vaccine like fever, local pain, etc. on a few of the children. Observation of these negative consequences inhibited the other mother's from getting their child immunized. ➢ Long distance between the centres where the vaccine were given and the respective homes of the respondents (especially in the rural areas)

Observation: **The barriers against RI can be removed by imparting knowledge about the diseases and vaccines.** The benefits of RI once understood by the beneficiaries can act as motivators, drawing them towards RI .

As mentioned by the service providers

The service providers also provided some additional insights as to why the beneficiaries did not avail the RI services

- ***Certain myths / belief about vaccines in general hampered the compliance. Some of these which surfaced in the rural areas, during the course of the study include:***
  - ***Belief that vaccines can create side effects***
  - ***Belief that for generations people have survived without vaccines and therefore it is not very important***
  - ***Belief that vaccines can affect fertility***
- ***The resistance and barriers are more amongst the uneducated, the Muslim and the schedule castes in the urban areas.***

As mentioned by the Influencers

According to the rural influencers it was very difficult to get the vaccines, as the local centres in the village did not offer these. The Beneficiaries had to travel long distances to reach the government hospitals or private doctors. This acted as a de-motivator for many of the beneficiaries.

5 Problems faced by the Service Providers

The health workers mentioned that their training was not adequate and they needed some more inputs. The training imparted may not have been very consistent. For example one of the medical officers received the training from organizations like WHO and West Bengal Group, while the other Medical Officer said that he had received no training on Routine Immunization.

However, those who did receive training mentioned the following as areas where they received information,

- care of young mothers
- the nature of vaccines
- how and when to give vaccines

Nevertheless, the Service Providers did not seem to be confident, in-spite of the training they had received:

> *"I would like to know if the vaccine can be given to the child in all conditions, even when he is sick?"(AWW)*
>
> *"We should know both the positive and negative impact of the doses"*

This lack of confidence / detailed knowledge may be attributed to the following reasons:

- Very little hands-on training
- No development of skills

Some of the other problems mentioned in the context of Routine Immunization included:

- Dearth of sufficient syringes and needles
- Lack of timely arrival of vaccines

6 Injection safety practices

The respondents across the segments were aware of the negative consequences of utilizing used injections. They knew that there was potential threat of diseases spreading because of lack of injection safety practices. They injection safety practices that they knew of included –

- **Washing** the needles in hot water
- **Boiling** for about 5 minutes before using (in case of recent mothers) i.e. sterilization
- Using **disposable** syringes

This however, points towards a lack of correct knowledge on the part of the Beneficiaries whether the practices followed by the health functionaries were safe or not, as most of them have not seen the correct practices being followed.

Certain **key findings and recommendations** regarding the Routine Immunization campaign in the state have been given below:

Key findings	Recommendations
➢ Health workers were the primary sources of information in rural areas ➢ Cards issued at the time of birth are the main sources of information in urban areas	➢ Ned to involve the grass root workers to spread the message in the interiors ➢ Need to involve the mothers at the initial stage itself to increase participation in the program
➢ The awareness about RI is relatively low (especially in the rural areas). ***For example, the coverage of BCG is 88% overall, it is only 58% in rural areas.***	➢ The campaign to create awareness about RI needs to be taken forward to reach out to more people ➢ To help people understand the relevance of vaccines ➢ ***Aim for an awareness generating campaign similar to that adopted for IPPI using same infrastructure and faclities.***
➢ The link between specific vaccines and specific diseases is missing	➢ The link between the diseases and the vaccines needs to be clarified ➢ Educate the parents on the vaccines, E.g. the child getting fever after vaccination is a positive symptoms
➢ The belief that vaccinations will keep the child healthy, helps to motivate people for compliance	➢ Build on this concern level and use other motivators to help further motivate the Beneficiaries
➢ ***In the rural areas the facilities for vaccination are not available, the beneficiaries have to travel long distances for the same.***	➢ Increase accessibility of these services with the help of grass root workers ➢ Tighten the accountability of health workers to prevent lapses in delivery
➢ The service providers feel the need for better education and training on the issue ➢ Training programs not uniform across all Service Providers within the state ➢ Doubts in the minds of Service Providers regarding Routine Immunization *"Would like to know if the child can be given vaccination even if he is sick"*	➢ Develop training courses based on the specific needs of the service providers ➢ Hold refresher courses for workers who have been involved in the activity for a long period of time ➢ Hold standardized training sessions at the district / state level to ensure uniformity in immunization program implementation and to boost the confidence of Service Providers
➢ Certain myths and misconceptions prevalent regarding Routine Immunization, like vaccines causing infertility, fever in child etc. ***"Medicine of sister didi leaves child sick, so afraid to take" (Rural Fathers)***	➢ Need to fight these psychological barriers by generating awareness about the program

Maternal Care

A number of interesting attitudes and practices in relation to maternal care surfaced during the study, these have been encapsulated below -

1 Ante Natal care

Ante-natal care begins with the realization of pregnancy, therefore, prior to understanding the active steps taken during pregnancy, the attitude and practices at the onset were explored.

➢ *Onset of pregnancy*	The most important cue for the onset of pregnancy was the stopping of the periods. In addition there were some other conditions that prevailed during pregnancy, which help women confirming the same: ➢ Giddiness ➢ Nausea ➢ Changes in appetite (more or less hunger) The women in both urban and rural areas are aware that it is beneficial to visit the doctor and get the urine test to confirm the pregnancy and those who can afford to undertake the visit, did so.
➢ *Age, when first pregnant*	In many areas it was found that young girls had become pregnant in their teens.
➢ *Sharing of the news*	The news or the hunch is usually shared with their husband. Mother-in-laws are not approached initially because of the following reasons: ➢ Feel shy in front of the mother-in-law ➢ ***Feel that it is the husband who will exhibit greater care and concern***
➢ *Reaction of family to pregnancy*	The news of the first child is always greeted with happiness and the gender of the child is not questioned at this stage. The gender of the child becomes important when the woman is delivering her second or third child and has up till now borne only daughters.
➢ *Preferred place to stay*	The care of the pregnant woman is entrusted to the women in the house (mother –in-law or the sister-in-law if the woman is at her in-laws). The mothers across the groups preferred to be present at their parent's home during the tenure of their pregnancy, some of the reasons cited for the same include –

	➢ Pressure to work in parent's house is less ➢ *"Feel a sense of responsibility to work in the in laws house. The mother-in-law may not say anything, but you still feel the pressure"* *"In the in-laws house you get only husband's care"* ***"At the in-laws place sense of responsibility of work is there"*** ➢ Mother's take special care **However, prefer company of husband if given a choice** Some of the practices undertaken at this stage during the first pregnancy include,
➢ *Practices undertaken*	URBAN ➢ Timely visit to the doctor for conformation ➢ Proper diet inclusive of milk, fish, vegetables, etc. and on right time ➢ Cleanliness and personal hygiene ➢ Taking adequate rest ➢ Avoidance of heavy work ➢ Regular exercise ➢ Routine check ups - here some of the activities undertaken by the doctor include, blood test, urine test, having vitamin tablets, checking the fetal position by touching the stomach, getting the injections, etc. ➢ *"The baby is growing inside me. I have to take care"* RURAL ➢ Proper diet ➢ More rest ➢ Health check ups (if the health center offers services)

Observation:
Willingness to go for health check ups during pregnancy, even among the rural women, given the facilities were made available to them and closer to the community.

It is important to note that the women in the urban areas are quite aware and undertake the required steps. On the other hand the women in the rural areas do not take many of the steps mentioned above. In practice their antenatal care is restricted to taking more rest. Basic precautions like visiting the hospitals for regular check ups also cannot be undertaken because:

- Private doctors are located very far and they do not have adequate resources to travel there
- ***The health centres nearby do not offer any services related to ante natal care***
- Most of the women are poor and have to work daily to earn their wages, visiting doctors or taking rest would deprive them of their wages, a trade off which many women cannot make

The respondents in both the urban and rural areas claimed that the care levels during subsequent pregnancies were similar to the first one. Some of the reasons given for non-differential behavior include:

> *"We feel we cannot depend only on one child, others also need to be there"*
>
> *"Everyone wants healthy children"*
>
> *"Earlier it was not possible to take so much care as there were so many children. Now it is possible to take care as there are not so many children now."*

Myths/ Misconceptions

There are few misconceptions among some of the women, in both urban and rural areas, on maternal care, like :

- Too much rest will hinder the delivery of the child.

  "Working during pregnancy will help normal delivery...caesarian is not needed"

- Some felt that too much food and nutrition will enlarge the baby, which will hinder the delivery of the child.
- Few expressed the belief that too much water is harmful for the growth of baby.

Observation:
Need to break these barriers to insure proper ante natal care among women.

Decision-making: The decision regarding care during Ante-natal period and also the decision regarding the place of delivery is usually taken by the husbands and in-laws. In rural areas, once the decision for delivery to take place at home is taken, then the advice of the Local Dai is given greater weightage.

Problems faced: the women faced certain problems during their pregnancies:

- Getting convulsions
- Change in position of baby
- Bursting out of fluid in uterus
- Non-movement of baby
- Feeling of nausea / weakness

Changes in need of Antenatal care

- The respondents felt that the awareness levels and the attitude towards antenatal care has shot up over the last few years. A number of precautions were now undertaken (which were not undertaken earlier) like blood & urine test, regular check ups, TT injections, iron tablets, rest, etc. Earlier the family members also did not consider it necessary to take special care during pregnancy. The rise in antenatal care activities is attributed to the increase in the number of diseases, making it mandatory to take necessary precautions.

Observation: The awareness levels about antenatal care and the changes in the same was much lower among the rural segments as compared to the urban segments.

2 Natal Care

There emerged a number of differences in the attitudes, influences and practices in natal care in the urban and rural segments. We shall discuss the two separately.

Urban segment

In the urban segment the expectant mothers received attention and care from their family members especially the mother in laws and husbands. Some of the advice given to them included:

"Not to work hard"

"Not to cry loudly as it is not good for the baby"

"Not to press the stomach if there was pain"

Observation: ***Support, care and protection are available from the family for the urban women.***

The delivery takes place mostly in the hospitals. Some level of preparation is made prior to the due date, such as,

"Expert doctors are available in case of need"

"The money is arranged in advance"

"The hospital card is filled up in advance"

Preparations for the delivery were not a hassle for the urban woman, the actual delivery occurred in the hospitals. The respondents had some idea about the DDK. Most of the women in the groups had not faced any problems or complications during delivery.

Rural segment

The level of involvement of the family members was not high in the rural segment. Usually the mother in law or any other female member of the family was available for help. Though the respondents mentioned that there was no one to advice them on natal care, many of them were aware of the DDK (Delivery Disposable Kits).

Most of the deliveries happened in the homes under the supervision of the local Dai who in most cases was not trained professionally. In case of any complications it was the responsibility of the male members of the family to arrange for suitable solutions. Visit to the doctor or the hospital was the last resort, as the costs involved were considered as too high. In most cases, it was the quack doctors who came to the rescue.

Preparations made: the preparations made for the time of delivery differed according to the place of delivery and also across the centres. As such, preparations for delivery at hospital were made more in case of the Urban households and preparations for delivery at home were made more in the rural areas. Most of the respondents across the centres mentioned the following types of preparations for their respective places of delivery:

Preparations for Hospitals	Preparations for Home Delivery
➢ Getting card issued from hospital ➢ Arrangement for transportation facilities ➢ Financial arrangements ➢ Arranging set of clean clothes for the woman	➢ Clean cloth ➢ Clean blade ➢ Clean thread and soap As advised by Dai *Sometimes a hospital card is made to take care of exigencies*

Problems faced / Complications: The women in the urban areas did not mention any problems faced at the time of delivery. However, there were certain problems mentioned in the rural areas:

- Blood pressure becoming too high
- Have to be rushed to hospitals in case of last minute emergencies
- Problems if delivery at a tender age

Breast Feeding Practices:

Across the segments mothers felt that Colustrum was not be given to the young infant. There was a belief that this milk is not safe for the child and can cause stomach upset. Breast milk was not given for two or three days.

"The first milk that comes is sticky, greasy. It can cause indigestion"

Even the elders in the family advised the mothers not to give the child Colustrum.

Other milk was also given to the child when the mothers did not lactate enough. Another prominent belief was that breast milk on it's own cannot provide sufficient nutrition to keep the child healthy.

Observation: ***It is important to communicate the beneficial qualities of Colustrum to the Beneficiaries.***

3 Post natal Care

There was once again a difference in the rural and urban segments:

Urban segment:The urban women took the following steps to ensure post natal care -

- The beneficiaries in the urban segment claimed that they had sufficient rest after childbirth, the rest days varied from 21 days to two months. The family members fully supported this rest taken by the new mother.
- Less work
- Proper diet

"If I do not care for myself, the child will be harmed because he is having my milk"

"More rest needed after child is born"

Rural segment:

Only two women in the rural segment claimed that they had the luxury of post delivery rest. The remaining mentioned that they got back to their daily tasks within two-three days itself. The mother in laws requested the mothers to return to work immediately.

> *"My mother in law has to work outside in the fields, I had to help her at home as soon as possible after my delivery."*

Problems faced / Complications: The mothers did not mention many problems faced during the post-natal period. In the urban areas the mothers felt that they were provided proper care in terms of rest and nutritional food post their delivery. However, in rural areas, it was mentioned that the mothers could not get adequate rest, as the mother-in-law worked outside home and they had to take care of household chores. This was more so in the case of the laborer class, who could not afford to take rest in order to earn their daily wages.

4 Maternal Death

There was mention of one maternal death over the recent years. In this case, some respondents mentioned the following reasons for the death:

> ***"The woman's chord was not cut and tied properly, which was the reason for her death within the next thirty minutes"***

They could not provide a specific reason for the reason of death and this points towards a lack of knowledge of what could be the possible reasons for such deaths.

The respondents stated some reasons as possible reasons for maternal deaths:

- Lack of proper nutrition
- Not taking the tetanus injection
- Lack of proper health check up (especially after a number of children)
- Malnutrition or some illness in the mothers
- Lack of proper medical treatment

5 Problems faced by the service providers in Maternal care

Though the ANM, AWW and the Local Dai mentioned that they received some basic level training. On the whole it was considered to be insufficient:

> *"It will be good if some training is given on how to tackle complications during pregnancy"*
>
> *"I need to know the effect of vaccines – the good and the bad"*

The service providers shared that they did not have basic amenities for providing maternal care services. They would have also liked to help out by doing small medical tasks like checking the blood pressure. However, none of these activities could be undertaken because of lack of sufficient training and equipment.

Certain **key findings and recommendations** on Maternal Care are given below:

Key findings	Recommendations
➢ The care extended to mothers is higher in the urban areas as compared to the rural. ***E.g. for ante natal contact, up to at least three times, in the urban areas it was 80%, while in the rural areas, it was only 54%.***	➢ ***The family members especially the mother-in-laws need to be sensitized to the delicate situation of the pregnant woman and need for care***. They would need to be made to feel responsible. ➢ The need for psychological as well physical attention needs to be communicated to the mothers as well as the key influencers in the family.
➢ Financial constraints & lack of adequate facilities make it difficult for the beneficiaries in the rural areas to avail the professional medical attention during pregnancy & childbirth	➢ ***Communicate that hospitals / Health Centres will help them in getting*** ➢ ***The adequate medical attention.*** ➢ ***At no cost***
➢ There are certain myths about maternal care, which can prove to be harmful, for example it is believed that working hard during pregnancy leads normal delivery, too much water is harmful for the baby, etc.	➢ ***The existing myths about maternal care need to be clarified by educating mothers about the practices to be followed and their relevance, like rest in the afternoon, good nutrition, etc.***
➢ The beneficiaries across the segment believe that Colustrum is not to be given as it can have an adverse effect on the health of the child.	➢ Communicate the benefits of Colustrum to the mothers.

Key findings	Recommendations
➢ There are significant gaps in knowledge on maternal care issues, complications during pregnancies etc (especially in the rural segment).	➢ ***There is a need to educate the woman on pregnancy, possible complications etc. need to lower the reliance on elder women of the family or the local Dai, who themselves may not have sufficient knowledge.***
➢ In some rural areas the women were very young (in their teens) when they became pregnant.	➢ ***To educate the family members regarding the ill effects of pregnancy at a tender age*** ➢ ***Providing pregnancy detection kits at the sub centre level for early detection of pregnancy*** ➢ ***Providing pregnancy termination facilities to avoid unwanted pregnancies***
➢ The health functionaries like AWW, ANM wanted more training on basic maternal care issues like checking Blood pressure, etc. They feel that beneficiaries would really benefit if they could provide basic care as it is difficult for the villagers to access medical help	➢ Train and equip the beneficiaries to deal with small maternal health related issues. ➢ Provide resources to the functionaries to help them to execute their tasks.

Polio Afflicted Families

1 Details of the families

Case 1

In the first case the family consisted of 2 children, the couple and parents-in-law. The youngest child, a daughter was suffering from polio. The child began to suffer from polio at the age of one year. This young girl had been immunized. Routine Immunization as well as polio drops were given to her twice. The onset of the disease was accompanied by fever followed by numbness in the hands. The child was taken to hospital when the fever did not recede and polio was confirmed after a stool test.

Observation: The surrounding conditions, where the children lived, were extremely unhygienic giving ample opportunity for the polio virus to breed. This cluster was also an area with a history of polio cases.

Case 2

The polio afflicted child in the second case was a young boy of around 2 years. The boy belonged to a joint family compromising of nine members. Beginning of polio was accompanied by fever and stomach upset after which the child had extreme difficulty in walking. The legs of the child suffered from numbness. When none of the above mentioned problems receded (i.e. fever, stomach upset and numbness in legs), the child was taken to the hospital. At the hospital, the stool test confirmed that the child was suffering from polio.

Observation: The mother of the polio afflicted child was illiterate and with very little awareness about health related matters. She had very little awareness about the disease; it's implication and its prevention.

Case 3

The child in this case belongs to a joint family of 8 members. The child was aged two years; he had been suffering from malnutrition right from birth. The child was not given any RI or polio vaccination. The symptoms at the onset of polio were the same as in the other children – fever, stomach upset and convulsions. When the symptoms refused to abate the child was taken to the hospital. At the hospital the child underwent physiotherapy and shock therapy for 1 ½ months before the stool test was conducted. The stool test confirmed the disease.

2 Attitude and perception towards Polio

In the first case the family was quite aware about the disease – its symptoms and prevention. They did have their child immunized four times during the IPPI program.

However, post the disease, the family is quite disillusioned with the vaccination process.

> *"There is a lack of faith now. Even after polio drops were given the child suffered from polio"*

In the second case, the family was totally uneducated with very low health consciousness. They had very vague notions about the disease prior to the diagnosis of the child. There was a conception that Pulse Polio would affect the fertility of the child in the future. Post diagnosis also the awareness and the alertness in the attitude was lacking.

> *"Do not know if we have to give the drops. If doctor advises then we will give the drops"*

In the 3rd case, the family was aware about the disease and had immunized the other children. However, the afflicted child was not immunized because he was considered very weak. The parents had observed the side effects of the drops on neighbors child (fever and stomach upset) and feared that their child would also suffer from the same. One of the local doctors had also advised the family not to take the polio drops for the same reason.

> *"My youngest child was weak since birth, and I thought the vaccine would make him more sick"*

Currently, there is a lot of repentance in the family about not giving the drops

> *"Will never make this mistake again"*

In fact the polio drops were given to the child even after the affliction because they felt that the growth of the disease would be halted.

> *"If the drops are given, the disease will not grow"*

3 Attitude and perception towards RI

Of the three families only one family in urban cluster adhered to the vaccination program and even they were unclear about the exact purpose of vaccination.

> *"Before the child got polio, we had given all vaccines after birth to prevent polio, measles, cold & cough.*

The other families with polio afflicted children displayed low awareness about RI. They did not understand the relevance of vaccines given under the RI program. At the same time the understanding about the disease (which could be prevented by vaccination) was also extremely low. Polio & measles were the only two diseases about which there was some awareness.

Annexures

1 CLUSTER DETAILS

State - WEST BENGAL

	GENERAL		HIGH-RISK		TOTAL
	Urban	Rural	Urban	Rural	
Beneficiaries	1	1	2	--	**4**
Mat. Care.	1	1	--	--	**2**
Influencer (Grand Parents	--	1	--	1	**2**
Service Providers	3	4	1	2	**10**
Influencers	1	2	2	1	**6**
Polio-Afflicted Families	--	--	1	2	**3**

Service Provider

OCCUPATION	ORGANISATION
URBAN	
AWW	ICDS
Teacher/Councilor	Municipal Council
CMC	Health Centre
CUDP	Health Centre
Medical Officer	Health Centre
RURAL	
Medical Officer	Health Centre
Supervisor	ICDS
AWW	ICDS
Teacher/Homeopathic Doctor	Private
ANM	Health Centre
Local Dai	Private practice

Influencers

OCCUPATION	ORGANISATION	EXPERIENCE
URBAN		
Secretary	Local Club	20 years
Govt. Service	West Bengal Govt.	5 years
RURAL		
Club Member	Local Body	10 years
Panchayat Member	Gram-Panchayat	6 years
Panchayat Member (CHG)	Gram-Panchayat	19 years
Panchayat Up-Pradhan	Gram-Panchayat	2 years

2 West Bengal – Cluster and Respondent details

Cluster	Description	FGDs	SEC
Urban			
Calcutta/ Raja Bazar (Ward 29)	In this area, both the religion Hindu and Muslims are in equal proportion. Most of the people are illiterate. Houses and environment are unhygenic and there is a lack of drinking water facility in this area. Other infrastructural facilities, like sanitation, hospitals, etc. are there. Due to religious restrictions, Muslims are less aware about health care facilities. People are very poor; most of the people are in the profession of making footwear. Political and religious leaders command a good influence over the people of this area.	1FGD **(Beneficiaries)**	Lower
Katwa (ward 1)	It is a Hindu dominated area with a Population is approximately 10,000. Most of the people are in service, few are laborers or involved in small business. Infrastructure facilities like drainage and sanitation system are well provided. People get drinking water by tube-wells. Health care facilities are also available, like government hospitals, BC Roy Polyclinic, Quacks and Private Doctors. Educational facilities like Primary Schools, High Schools and Colleges are there in the area. Buses ply in the area frequently.	1FGD **(Maternal Care)**	Lower
Ward 49/Calcutta	The ward has a population of nearly 18,000. The people of this area are involved in petty trade; some have their own shops or are employed as mechanics, drivers, peons etc. The population is mainly of Bengali Hindus. The houses are cluttered and only very basic sanitation and drainage facilities are available. For drinking water, urban water supply (tap water) is available. For education, schools and colleges are situated close, due to it being a metro. Regarding health facilities, PHC is situated close by, but a section of the population, especially the lower is indifferent to the facilities available. Other hospitals are close by.	1 FGD **Beneficiaries**	Lower
Rural			
Chorpahari/ Purulia	Most of the people in the area are Hindus and Tribals, with the total population approximately 5000. Literacy rate is also very low. Most of the people are daily wage workers. There is a lack of Infrastructural facilities, for e.g. there is no drainage and sanitation system, though people are aware of health care practices and the requirements for the same. Earlier, people had access to a health centre. However, the centre has presently been shifted to an area outside the village, where it is inaccessible to the people as it is also 7 km. away from the village. Due to inadequate financial resources people cannot afford education and health-care facilities. The area lacks proper communication facilities. For this reason, people are dependent on the village Dai and quacks for Maternal Care.	1FGD **(Beneficiaries)**	Lower

Rural			
/ Dakshin Chatter/ Maheshtola	This is a Muslim dominated village. Most of the people are businessmen and the economic condition of the village is somewhat better, although environmental conditions are unhygienic and dirty. People are not much aware of health care because of low literacy rate. There are no healthcare facilities. The sub-centre here has not started functioning properly and the hospital is also very far from here. The local people are dependent on RPM. There is lack of proper hospitals. Those belonging to better financial status and better awareness go to private doctors and hospitals. There is no proper drainage system in the village, but sanitation facilities are available in most houses. Drinking water is available through tube-wells. For education there is a primary school and high school close by. The condition of the houses in the area is semi pucca. It is a highly populated village with a population of approx. 10,000.	1 FGD **(Beneficiaries)**	Upper
Sonpur/Bhonger/24 parganas	This is a village with a majority of Muslim population with agriculture forming the base of the economy as it the main occupation. Some work as daily laborers also. The population of the village is about 300. The houses are mainly 'kuchha'. The drainage facilities are poor and sanitation facilities can be found only in half of the town. For drinking water 50% of the population depends on tube-wells, the rest on wells. There is a primary school in the village and a high-school, which is 15 km away. The health facilities of the area not very satisfactory. The sub centre covers 3-4 villages and the hospital is 60 km away. People depend on sub centre, quacks and private doctor for health care. For Maternal Care women are dependent on village Dai's and quacks. People prefer delivers at home as it costs less and also there are no transport facilities available to go to the hospital.	1FGD **Grand parents**	Upper
Narayandari/ Midnapur	This is a village with a population of about 3500 and the majority of the population is Hindu, though a sizeable proportion is Muslim. People here are mainly involved in agriculture, as they own small pieces of agricultural land. Some others are involved in some petty businesses. Muslims here are employed mainly as tailors with woman also joining them in this work. The houses are all kuchha houses and financial status of the villagers is low. There are no proper facilities for drainage and sanitation facilities. People depend on tube-wells for drinking water. For education only a primary school is available in the village. Health workers visit the area monthly for Routine Immunization.	1 FGD **Grand parents**	Lower

Rural			
Sherpur/Hemtabad/West Dinajpur	The village has a population of 2500 approx. Most of the village residents are Hindus. The financial status of the villages is very low, as mostly people here are daily laborers with very low literacy rates. The houses in the village are kuchcha and there is lack of proper drainage and sanitation facility. The village has a high school and there is also a health sub-centre in the village but the awareness regarding healthcare is very low among them. There is no facility for Maternal Care as the hospital is very far away. Women are dependent on Local Dais and Quacks. Routine Immunization is available at health sub-centres.	1FGD **(Maternal Care)**	Lower

It has been noted in the Sample design chapter in page 3 that 1200 households are to be surveyed in each ULB to get an estimate of various desired indicators etc. It is not clear whether ' HouseHolds' indicate Families or not. A HouseHold may consists of three or more families.

In order to get a list of Sample husehold in SSUs the term of using families may be relevant in case of Sampling procedure.

2) As regards assessment of Immunisation under 1 year Children, 1200 households will make an estimate of about 6000 population. Out of that population about 90-100 child birth will be achieved (Birth rate for Urban areas being 14.3 per mille but 20 per mille in our base line survey in project area.). In that case the number will be too small and inadequate before making any final result

3) In a house/ household there may be –

   (a) No occurrence of eligible couple

   (b) Occurrence of Eligible couple but no events

   (c) Occurrence of Eligible couple with events.

There is therefore, 1/3rd probabilty of getting the desired information which ultimately will get an information of about30-35 events instead of 90-100 events.

It is therefore, suggested that Eligible couple should be one of the sampling stage after selection of families or households .S R.S WR may be taken into consideration in regard to sampling unit.

Moreover, size of the sample should be determined on the basis of Eligible couple but not the households.

Measles vaccine will be the yardstick for assessment for complete immunisation coverage.

Women having T.T. (PW) has not been mentioned.

Permanent sterilisation amongst Eligible couple should be one of the items which may be considered in the survey.

UNIVERSAL IMMUNIZATION PROGRAMME

EVALUATE VACCINATION COVERAGE

Ministry of Health and Family Welfare
Government of India
New Delhi
1987

EVALUATE VACCINATION COVERAGE

Based on the WHO module for mid-level managers
- Evaluate vaccination coverage

EVALUATE VACCINATION COVERAGE

TABLE OF CONTENTS

EVALUATE VACCINATION COVERAGE

INTRODUCTION

Vaccination activity should not be an end in itself. Vaccinations should lead to immunity against the particular disease and reduction in morbidity and mortality.

Providing vaccination does not guarantee a reduction in disease morbidity and mortality. The FULL COURSE of the vaccines must be given at the RIGHT AGE and the vaccines used must be POTENT.

The accurate measurement of vaccination coverage is an essential step in determining expected reductions in morbidity and mortality from the vaccine preventable diseases. It is one of the ways to evaluate effective operation of your programme.

The vaccination coverage evaluation survey will help to:

1) give a true picture of the vaccination status of the target population.

2) cross check the results with your routine reporting system.

3) identify other agencies participating in the programme to improve coordination in the future.

4) identify the areas with good and poor coverage.

5) determine whether the vaccines are being given at the right age.

6) identify the the positive and negative factors affecting the programme.

As a programme manager, you will be interested in accurate information on vaccination coverage and also the reasons if coverage falls below your expectations. Low coverages are primarily due to:

* poor attendance
* high dropouts.

If there is poor attendance in the immunization centres or people do not return for the required subsequent doses, then you should know the reasons for this. Only then can you take corrective action. This supplementary information is also collected during the survey.

Additional information can be collected during the survey, which is not part of the vaccination coverage assessment, but still provides useful information for you as the manager of the immunization programme. In this module we have combined the lameness survey for children under 5 years and antenatal care for expectant mothers.

Without the use of surveys, you have to rely only on health centre records which may provide inaccurate or misleading information. For example, health centre records may indicate that 80% of the children in a community are being vaccinated. A coverage evaluation survey may show that 30% of these children have been vaccinated at the wrong ages. You must conduct a field survey to have an accurate idea of how many people you are vaccinating. This can be done in a systematic way so that only a sample of the population will need to be surveyed to obtain valid results.

Done on a periodic basis (for example, once a year) a coverage evaluation survey will provide you with reliable information which you can use to make changes, if necessary, in your vaccination activities. Specifically, it will tell you whether or not you are meeting your vaccination coverage objectives. These objectives state the percentage coverage of pregnant women and infants you are expected to vaccinate in a given year. It should, however, be remembered that vaccination activity is not an end in itself. **IT SHOULD LEAD TO IMMUNITY AGAINST THE DISEASE AND REDUCTION IN MORBIDITY AND MORTALITY.**

The steps for performing a coverage evaluation survey and for analyzing its results form the content of this module. The process is a relatively simple one.

STATEMENT OF PURPOSE

The purpose of this module is to provide you with the skills to conduct a coverage evaluation survey and to interpret its results as part of programme evaluation.

EXERCISES

The exercises in this module are organized differently from those you have done in other modules. Because the exercises are long and sometimes complicated, they have not been separated from the text of the module. In other words, you will sometimes be asked to read an explanation before you are asked to write down an answer. Sometimes the answers will be provided to save time in making calculations. All underlined/**bold lettered**/CAPITAL instructions indicate that you should calculate and record answers. Ask course manager for help whenever you are unsure about what you are supposed to do.

1.0 PRELIMINARY ACTIVITIES

1.1 IDENTIFY CLUSTERS

The first step for any evaluation process is the systematic collection of data. For an evaluation of vaccination coverage, data need to be systematically collected on the number of children and pregnant women vaccinated, by vaccine and by age. The assessment should be done by people who did not perform the vaccinations. The method used is the cluster sampling technique. **A cluster is a randomly-selected group.** In this case it is a group which contains at least 7 children in the age group 12 to 23 months. The minimum age of the children should not be less than one year.

The cluster sampling technique allows a small number of the target population to be sampled and provides data which are statistically valid.

A survey containing 30 clusters of 7 children will tell you approximately how many eligibles are being properly vaccinated. Statistically it will meet the following standards of reliability:

- The data which result from the survey will have a level of accuracy of plus or minus 10%. For example, if the survey shows a vaccination coverage of 70% in the sample, the coverage in the target population will be between 60% and 80%;
- Nineteen out of 20 times the data which result from the survey will be within the stated level of accuracy. The level of confidence is 95%, which means there is a 95% probability that the survey results will fall within the range listed above (plus or minus 10% of the coverage in the target population).
- The data will reflect coverage of the period about 1 year prior to the survey date.
- The results will reflect coverage in the area as a whole. Comparisons between clusters will not be valid.

Data will be valid only if the thirty groups are randomly selected. A randomly-selected group is one which is chosen by chance. This module will teach you how to choose such groups. To do this, you must know how to select a random number. A random number is a number chosen from many numbers, each of which has as much chance of being selected as the number finally chosen. Choosing numbers from memory is not a satisfactory method for selecting random numbers because unconscious biases occur. Certain numbers tend to be selected more frequently than others by certain individuals. If you do not have a table of random numbers to use for this purpose, another possible source of random numbers is the serial numbers on currency notes. To find a random number using a currency note, start with the last digit of the serial number.

Under the direction of a course manager, work through the following examples using the serial numbers on currency notes to select random numbers:

1. Choose a one-digit random number between 1 and 9 inclusive.

2. Choose a two digit random number between 01 and 87 inclusive.

3. Choose a three-digit random number between 001 and 345 inclusive.

4. Choose a four-digit random number between 0001 and 9,053 inclusive.

5. Choose a five-digit random number between 00001 and 48,321 inclusive.

If the random number you select from a currency note is larger than the highest acceptable number, you will need to select another number. You can do this by taking the next 3 digits from the right to left. For instance, in number 3, if you select a number which is more than 345, you will need to choose another random number. For example, if the currency note number was 5362515, the first random number would be 515. This number is higher than 345. So you select the next 3 digits - 251, which is within 1 and 345.

It is important to remember that the survey methods described in this module will only allow you to draw conclusions about the area surveyed as a whole. They will not permit you to make comparisons among different subsections of the total area. Therefore, if you want to compare, for example, urban with rural areas, or areas using one strategy with areas using some other strategy, you would have to do a separate survey in each area. For the evaluation of UIP the district is being taken as a whole including the urban and rural areas. While, each individual survey, irrespective of population has the same methodology, the minimum population of the area should be over 50,000. This will allow adequate sampling size and be cost-effective.

All the 30 clusters must be surveyed within a restricted period of time ideally within one week. This is necessary to ensure that they accurately represent the same population.

The theories behind cluster sampling are statistically valid but complex. What you will need to know is how to use the technique and the fact that statisticians agree it produces useful results.

Exercise A

The following guidelines describe the steps necessary to identify clusters. Refer to the example provided on pages 9 & 10 as you read. [You will note that some information is missing from this example (for example, the sampling interval number)]. In this exercise you will be asked to supply the missing information. Underlined instructions in this exercise and those that follow indicate actions you should perform. Most of the actions will require writing in the appropriate spaces on worksheets provided in the module. Using the instructions given below for completing a cluster identification form, you will identify clusters 1-5 (clusters 6-30 have already been identified).

1. List all villages and sectors/wards of cities and towns included in the area for which vaccination coverage is to be evaluated. This step has already been completed for you. In this exercise the area to be evaluated is a district "A" under UIP. All towns and villages of this district have been listed on Cluster identification form on pages 9 and 10.

2. Against the name of each village/ward write the individual population of this village/ward. This has been completed for you.

3. Calculate and write in the cumulative population of each village/ward. This is done in the serial order in which the village/wards are listed. This has already been completed. The total cumulative population of the district is 8,00,000.

4. Determine the sampling interval. Use the formula provided below. Round all decimals off to the nearest whole number.

$$\frac{\text{Total cumulative population}}{\text{30 clusters}} = \text{Sampling interval}$$

Using the above formula, calculate the sampling interval in District 'A': Enter the number in the space provided at (a) on the bottom of the Form on page 10.

5. Select a random number which is less than or equal to the sampling interval. The number you select must have the same number of digits as the sampling interval. As your sampling interval in the exercise turns out to be a five-digit number, the number selected must also be a five-digit number that is between 00001 and the sampling interval.

   For the purpose of this module, a random number, 12,762 has been pre-selected. Enter this number at (b) on the bottom of the Form on page 10.

6. Identify the community in which Cluster 1 is located. This is done by locating the first village on the Form at page 9 in which the cumulative popultion equals or exceeds the random number. Write "1" beside this village.

7. Identify the community in which Cluster 2 is located. Use the formula provided below. Note that the cumulative population listed for that village will equal or exceed the number you calculate.

   Random No. + Sampling Interval = _____

8. Identify Clusters 3, 4 and 5. (Clusters 6-30 are already identified). Use the formula provided below:

   Number which identified the location of the previous cluster + Sampling interval = _____

Using the data provided on Form 1 write the number of each cluster 1, 2, 3, 4, and 5 besides the appropriate villages on the Form at page 9. A single village/town may contain more than one cluster.

After you have completed step 8, discuss any difficulty you may have had in identifying Clusters 1-5 with a course manager.

CLUSTER IDENTIFICATION FORM

(SAMPLE FORMAT)

CITIES, TOWNS, AND VILLAGES OF DISTRICT "A"

No.	Name	Population	Cumulative Population	Location of Cluster
1	Kampur	12,888	12,888	
2	Bolama	3,489	16,377	
3	Talum	6,826	23,203	
4	Wara-Wali	4,339	27,542	
5	Caley	2,203	29,745	
6	Tarum	4,341	34,086	
7	Hamtaco	1,544	35,630	
8	Nayjaff	885	36,515	
9	Haripur	2,962	39,477	
10	Cattical	4,234	43,711	
11	Paralai	1,520	45,231	
12	Egala-Kuru	3,767	48,998	
13	Uwanarpol	3,053	52,051	
14	Lakesi	60,000	112,051	
15	Puratna	2,207	114,348	
16	Kegalni	1,355	115,703	
17	Hamali-Ura	833	116,536	
18	Kameni	4,118	120,654	
19	Kiroya	2,782	123,436	
20	Yamwela	3,285	126,721	
21	Bagvi	4,416	131,137	
22	Atota	3,188	134,325	
23	Kogouva	1,179	135,504	
24	Ahekpa	612	136,116	
25	Yondot	3,193	139,309	
26	Kozop	17,808	157,117	6
27	Mapasko	3,914	161,031	
28	Lotohah	15,006	176,037	7
29	Vonttigan	9,584	185,621	
30	Plitok	4,225	189,846	
31	Dopoltan	2,652	193,498	
32	Cocococpa	35,000	227,498	8, 9
33	Famegzi	3,954	231,452	
34	Jiggelay	2,115	233,567	
35	Nevoah	507	234,074	
36	Odigla	3,516	237,590	
37	Sanbati	14,402	251,992	
38	Andidva	2,575	254,567	10
39	Ore-Mikam	3,105	257,672	
40	Duno-Mikam	4,176	261,848	
41	Kudi-Sina	1,919	263,767	
42	Panbalok	3,261	267,028	
43	Rokini	4,270	271,298	
44	Talosso	3,301	274,599	
45	Djaragna	3,250	277,849	
46	Bibachi	4,670	282,519	11
47	Bilam	757	283,276	
48	Sisse	12,037	295,313	
49	Anda-Dalai	2,155	297,468	
50	Varok	3,702	301,170	
51	Boul	2,262	303,432	
52	Boul-Malai	791	304,223	
53	Dapnan	3,468	307,691	12
54	Umpybo	4,338	312,029	
55	Goumam	3,930	315,959	
56	Nzelji	2,112	318,071	
57	Wagasa	3,953	322,024	
58	Onam	2,198	324,222	
59	Koundo	9,891	334,113	13
60	Paona	3,154	337,267	
61	Nagbi	2,548	339,815	
62	Ponakpo	1,034	340,849	
63	Auguromi	2,415	343,264	
64	Pali	4,325	347,589	
65	Ngoi	13,233	360,822	14
66	Halagdi	511	361,333	
67	Yardi	2,313	363,646	
68	Chankam	3,108	366,754	
69	Livaspa	4,163	370,917	
70	Rhomastiput	4,250	375,167	
71	Anghor	784	375,951	
72	Ransiha	3,423	379,374	
73	Phajip	4,098	383,472	
74	Dumakpa	4,540	388,012	15
75	Baktari	2,322	390,334	
76	Wako	3,987	394,321	

Worksheet for Exercise A

(continued on next page)

CLUSTER IDENTIFICATION FORM

CITIES, TOWNS, AND VILLAGES OF COASTAL REGION

No.	Name	Population	Cumulative Population	Location of Cluster
77	Ganda	4,211	398,532	
78	Sapa-Barchit	2,541	401,073	
79	Nuwa	848	401,921	
80	Nangia	1,281	403,202	
81	Kuvassak	3,310	406,512	
82	Waniti	4,313	410,825	
83	Lukkumsa	4,762	415,587	16
84	Jopu	3,647	419,234	
85	Thynupa	2,530	421,764	
86	Yanlasui	16,983	438,747	
87	Mali-Ilo	2,730	441,477	17
88	Papalo	4,869	446,346	
89	Agrakhan	3,300	449,646	
90	Tido	4,150	453,796	
91	Jubara	3,760	457,556	
92	Pilasta	1,587	459,143	
93	Lejaple	16,699	475,842	18
94	Lahisa	2,703	478,545	
95	Chapmar	747	479,292	
96	Dhulisk	4,451	483,743	
97	Briko	4,425	488,168	
98	Hummu	3,860	492,028	
99	Baryidda	2,835	494,863	19
100	Lekdai	1,725	496,588	
101	Izigba	3,988	500,576	
102	Loaz	4,124	504,700	
103	Jikoud	4,389	509,089	
104	Gopouda	1,126	510,215	
105	Akafo	2,166	512,381	
106	Endera	3,393	515,774	
107	Seyou	4,787	520,561	20
108	Lallos	3,447	524,008	
109	Dobaba	3,689	527,697	
110	Somdi	4,696	532,393	
111	Granoli	60,000	592,393	21, 22
112	Nehoa	3,990	596,383	
113	Melo	4,754	601,137	23
114	Tabli	4,121	605,258	
115	Evot	3,214	608,472	
116	Pamtakapo	16,008	624,480	
117	Otoyang	4,732	629,212	24
118	Tosi	2,769	631,981	
119	Sarsabba	532	632,513	
120	Okode-Bua	3,394	635,907	
121	Toubussi	1,143	637,050	
122	Domno	8,147	645,197	
123	Sarip	4,555	649,752	
124	Rakachi	695	650,447	
125	Chelle	3,634	654,081	25
126	Kaitu	2,115	656,196	
127	Nobbay	4,507	660,703	
128	Baidu	3,516	664,219	
129	Herattan	2,402	666,621	
130	Thenu	3,575	670,196	
131	Comosdi	14,005	684,201	26
132	Churiz	676	684,877	
133	Cafecopa	45,000	729,877	27
134	Angko	4,261	734,138	28
135	Luru-Ala	4,919	739,057	
136	Kartaj	17,270	756,327	
137	Lemno	3,837	760,164	29
138	Deysibba	2,149	762,313	
139	Ongo-On	3,702	766,015	
140	Ullah	1,927	767,942	
141	Ukkaru	4,971	772,913	
142	Akla	2,468	775,381	
143	Tagalo	3,383	778,764	
144	Patto-In	3,930	782,694	
145	Pridasu	2,211	784,905	
146	Ollimi	3,585	788,490	30
147	Hakuda	1,355	789,845	
148	Limaki	4,285	794,130	
149	Rucadupi	3,177	797,307	
150	Alam-Neki	2,693	800,000	

(a) Sampling Interval = $\frac{\text{Total Cumulative Population}}{\text{30 Clusters}}$ = _____

1.2 ORGANISE TEAMS AND LOGISTICS

Once the clusters have been identified, it will now be necessary to take action for the field work. For this you will need to take the following steps:

1. Make a list of people who will help you in the survey. They should not be those who are directly involved in the immunization programme in the area under survey.

2. Explain carefully to this group exactly how the work is to be done in the field. (This is discussed in the next chapter). Make sure that each person has understood the directions. Each person should practice filling the household summary forms so that they understand exactly how it should be done.

3. If the distances of the clusters from the district headquarters and between the clusters is large (as it is likely to be in a district) make travel arrangements in time. The routes should be chalked out in advance, it may be possible for one vehicle to drop several teams to their clusters. Transport facilities are particularly important if each team is expected to do 2 clusters a day. The distances should be worked out so that there is no problem in finishing the survey.

4. Make sure that adequate copies of the printed forms for the survey are available.

5. Assign responsibility for checking individual household forms as soon as the team returns from the survey. Ideally, forms should be checked by an experienced supervisor at a location close enough to the cluster to allow for a return to the cluster to correct any errors.

6. Assign responsibility for compilation and analysis of the data and writing of the report. Analysis of the data should be done immediately on receipt of the data from all clusters. The formal report should be completed within a week to 10 days of the survey.

1.3.1 AGE GROUP OF CHILDREN TO BE EVALUATED

The survey is conducted for children between 12 to 23 months of age. To determine the earliest acceptable birthdate you need to subtract exactly 24 months from the date of interview. To determine the latest acceptable birthdate, you need to substract exactly 12 months from the date of interview. For example, if the survey is starting on 1 April 1987 then the earliest birthdate would be 1 April 1985 and the latest birthdate 1 April 1986.

1.3.2 Household

A household is defined as a group of peole sharing the same kitchen. You may find many households in a single building, specially in the urban areas.

Tenants and servants living in the same building but maintaining separate kitchens are counted as different households. On the other hand, families of say 2 brothers living in the same house and sharing the same kitchen are counted as one household.

1.3.3 Resident Child

The records of all children in the correct age group must be taken. If there is a child who is from outside but residing in the household for 6 months or more, his particulars should also be taken.

2.0 FIELD WORK

2.1 SELECTION OF THE FIRST HOUSEHOLD

When you reach the selected cluster, you should go to the village centre and then select the first house according to the following random selection procedure. Number the paths leading from the centre. Use a currency note and look at the last digit of the serial number. Select the path you will take. Next count or closely estimate the number of houses from the centre of the village to the boundary along that path. Then select a random number between 1 and the total number of houses. This number represents the first house from which you start the survey.

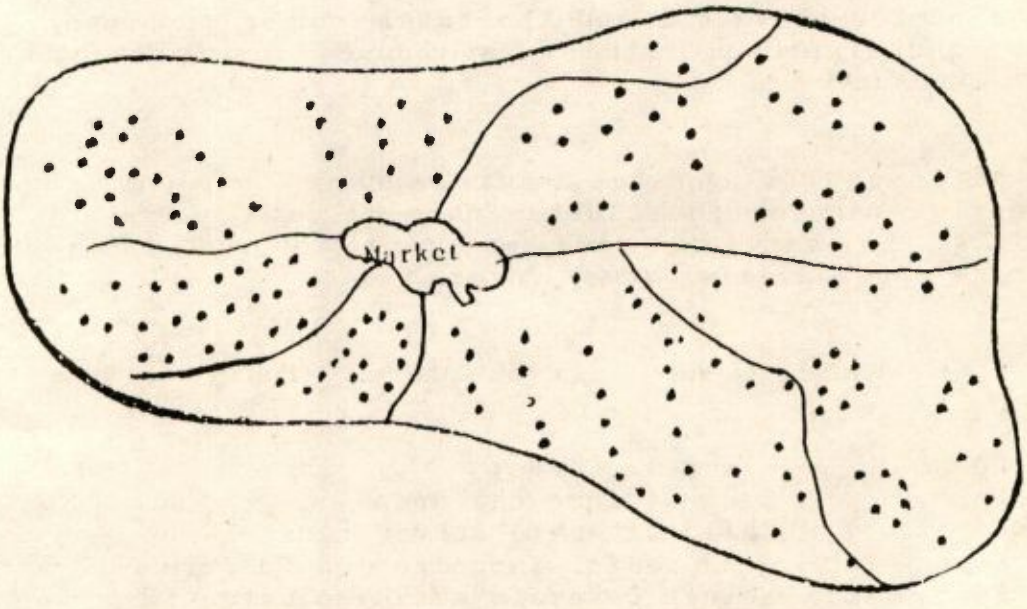
Before starting the actual survey complete the appropriate spaces for cluster number, date of survey, locality and surveyor name on both the vaccination coverage and lameness survey forms.

Check that you have all the forms with you. These are:

Form 1 - Lameness survey
Form 2 - List of lame children
Form 3 - Child coverage survey cluster
Form 4 - Reasons for Immunization Failure
Form 5 - Mother coverage survey cluster form
Form 6 - Additional Questions Form

Exercise B

You must select a starting household in this village which has about 150 households. A picture of the village is given below. Each dot represents a household. Select the starting household and describe in writing how you selected it. (Remember that in the real situation you would have no map.)



Check you answers with a course manager.

2.2 VISIT TO HOUSEHOLD

A household is defined as a group of people sharing the same kitchen. Since you are visiting only a small percentage of the households, to represent all households it is essential that each question is asked carefully and that the households are visited according to the procedures detailed below.

When you reach the first household enter the time started on Form 3 (Child Coverage Household Form on page 24).

Before you commence the interview, you should explain the purpose of the visit to the mother, family head, or other responsible member of the family. If there is no responsible member present who can answer the questions, and a vaccination card is also not available then skip the household and make no record on the form.

2.2.1 RECORDING ON THE LAMENESS SURVEY FORM

You should first ask if there are any children under 5 years of age (children who have not yet reached their 5th birthday) in the household. If there are no children under 5 years of age in the household, put a "0" in the appropriate space on the lameness form and then go to the next household. If there are children under 5 years of age, put the number of children in the appropriate space. (Form 1, page 22).

You can calculate the earliest acceptable birthdate by substracting exactly 5 years. For example, if the survey is being conducted in April 1987, the earliest acceptable birthdate would be April 1982. All children born after this date should be included in the survey. (Form 1).

You should then ask the responsible person if any children less than 5 years of age are lame. List the cases in the attached form. (Form 3, page 23).

Once the data regarding children under 5 years of age in the household have been entered on the lameness form, you should then determine if there are any children under 2 years of age in the household. Complete the household summary form for children 12-23 months (Forms 3,4 & 6) and TT immunization form for mothers of children under 12 months of age (Form 5).

2.2.2 RECORDING ON THE CHILD HOUSEHOLD SUMMARY FORM

The coverage evaluation is for children 12 to 23 months of age. The earliest and latest acceptable birthdates are calculated by subtracting exactly 24 months and 12 months from the date of interview. If the coverage is done on 15 April 1987, the birthdates of children to be surveyed must fall between

15 April 1985 to 15 April 1986

If there is no child 12-23 months, make no record on the coverage form.

The total number of households you visited during the survey can be calculated from the lameness survey form. If the lameness survey is not done, you must keep a tally of the households visits.

If there is a child of the right age, request the mother or responsible person to produce the following documents (if available):

1. Child's birth registration certificate (janam patri); and
2. Immunization card or record.

These documents should as far as possible be produced for each child. You should complete the survey form as follows:

Range of Birthdates	15 April 1985 to 15 April 1986 (12-23 months)
Time started:	Enter time when survey is commenced in the cluster.
Time finished:	Enter time when the survey form is completed in the cluster.
Name and Address:	Enter name of the child. Also enter name of child's father or mother and address.
Child Number:	The child's number ranges from 1 to 10. The child numbers 8,9 and 10 have been included to remind you that eligible children in excess of 7 should be included only if living in the same household as the 7th child.
Birth Date:	Enter birth date, e.g. 24/2/86 or 2/86. If possible verify with any available record produced by mother, whether the birth date falls within 15 April 1985 to 15 April 1986 (both dates inclusive).
Immunization Card:	If a card or any record is present, documenting the immunization, mark (✓) in "YES" box. If no record is available mark (✓) in "NO" box.

For boxes DPT 1, 2, 3; Polio 1, 2, 3; Measles and BCG:

Date: Write exact date of each immunization e.g. 18/8/85 or 8/85. Verify date with immunization card or record if available before entering date.

If the card is not available, enquire from mother if the child has been immunized. If the answer is Yes, put the month and year in the box for the relevant dose. If the month is not known put a "+" in the box for the relevant dose.

If a child has not received a dose put "0" in the box for the relevant dose.

BCG Scar: Examine child's upper arm and enter "+" if scar is present. If no scar is present enter "0". If the child is not present then enter "A" for absent.

Source: Fill in source of immunization. Put HOS for hospital, HC for health centre/subcentre and other fixed centres providing immunization services. OUT for outreach and PRV for non-governmental/private. The vaccination in anganwadi is given at AW.

2.2.3 REASONS FOR PARTIAL OR NO IMMUNIZATION

Once the Form 3 (Child coverage household form) is completed, then determine whether the child is fully immunized. The immunization status of the child is entered FULLY, PARTIALLY or NOT IMMUNIZED by placing a mark (✓) in the relevant box (Form 4).

FULLY	BCG (1), DPT (3), OPV (3), Measles (1).
PARTIALLY	Some immunizations have been administered but immunization not complete.
NOT IMMUNIZED	Not even a single dose of any vaccine has been administered.

For a PARTIALLY IMMUNIZED CHILD or a NOT IMMUNIZED CHILD, ask the responsible person to give the most important reason(s) why the immunizations were incomplete or not done. This is an open ended question. Wait till the respondent answers in their own words. Do not read the list of possible answers. Put a mark (✓) in the box(es) for the relevant reason(s). If a reason is given that is not on the list, use the blank space provided.

The answers should be ticked in the same column as the number of the child. For example, if children Nos. 3 and 5 were partially immunized, tick the given responses in columns 3 and 5 only. Other columns will be left blank.

2.2.4 TETANUS TOXOID (TT) FOR PREGNANT WOMEN

The information entered on the form (Form 5, page 26) should be for the mother of children who are less than 12 months. If the survey is conducted on 15 April 1987, all children born after 15 April 1986 would be included.

Range of birth dates	After 15 April 1986
Immunization card	Ask for immunization card or any other record of immunization of the mother. Determine if any dose of TT was given prior to the birth of the child. Put the date of the first or earliest dose of TT in the box for "TT1". Put the date of the second dose before the birth of the child in the box for "TT2" or "booster"

If there is a history of TT vaccination prior to the pregnancy and only one dose was given during the pregnancy, record the date of the vaccination in the box for "TT2" or "booster"

If an immunization record is not available, ask the mother if she has ever been immunized. Try to determine if the immunization was for tetanus. If you are convinced that the mother received TT put the month and year in the box for TT1. If the month and year is not known put "+" in the box. If the mother has received more than 1 dose of TT and the most recent dose was during the pregnancy of the listed child, put "+" in the box for TT2 or booster. If possible, try to verify the immunizations with records at the Health Centre.

If the mother has not been immunized for TT, put "0" in the appropriate box for the relevant dose.

Antenatal — If the mother has received even one antenatal visit during the pregnancy with this child, mark (✓) in the YES box. Otherwise, mark (✓) in the NO box.

Delivery — Put a mark (✓) in the relevant box for place of delivery for the child.

Attended by — Put a mark (✓) in the relevant box for who attended the delivery for this child.

If the mother is not present, enter "A" in the boxes.

Tally of Households Visited — Leave blank because the lameness form will serve as a tally of all households visited.

2.2.5 ADDITIONAL QUESTIONS FOR THE CLUSTER SURVEY

As a Programme Manager, you would be interested to know the degree of awareness about the vaccine preventable diseases and the immunization schedule. The relevant answers to the questions given in Form 6 (page 27) may be ticked in appropriate boxes. It will help you to strengthen your health education and publicity activities if you know the sources of information which are popular with the community.

Form 1

FORM FOR THE LAMENESS SURVEY

Page No. ____

Surveyor: _____ Cluster No. _____ Date: _____ Locality: _____

Household number in cluster	1	2	3	4	5	6	7	8	9	10	11	12		Total
1. How many children are below 5 years of age in this household? If no children, put "0" and go to the next household														
2. Is there any child who is lame? If yes, put how many children and line list these in the attached form. If none, put "0" and go to the coverage form.														

Household number in cluster	13	14	15	16	17	18	19	20	21	22	23	24	Total
1. How many children are below 5 years of age in this household? If no children, put "0" and go to the next household													
2. Is there any child who is lame? If yes, put how many children and line list these in the attached form. If none, put "0" and go to the coverage form.													

LIST OF LAME CHILDREN (UNDER 5 YEARS)

Surveyor: _____ Cluster No._____ Date:_____Locality:_____

Sr.No.	Name of Child	Address	Age/ date of birth	Year of onset	Immuni. Status	Probable/ polio	Other
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							

PROBABLE POLIOMYELITIS: History of Acute febrile illness
History of abrupt onset of weakness or paralysis of the leg(s), and/or arm(s) following fever; no progression of paralysis after the first 3 days and that without known trauma; paralysis was not present at birth or associated with various injuries or mental retardation.

Form 3

DISTRICT:_____

UNIVERSAL IMMUNIZATION PROGRAMME
COVERAGE SURVEY HOUSEHOLD FORM

Cluster No:_____
Date:_____
Locality:_____
Range of Birthdates:
From:
Till:

CHILD NUMBER IN CLUSTER		1	2	3	4	5	6	7	8	9	10	TOTAL
BIRTH DATE												
IMMUNIZATION CARD	Yes											
	No											
DPT 1	Date											
	Source											
DPT 2	Date											
	Source											
DPT 3	Date											
	Source											
POLIO 1	Date											
	Source											
POLIO 2	Date											
	Source											
POLIO 3	Date											
	Source											
MEASLES	Date											
	Source											
B C G	Date											
	Scar + or D											
	Source											

TALLY OF HOUSEHOLD VISITED:

SOURCE (PLACE OF IMMUNIZATION): Hospital - HOS Health Centre - HC Anganwadi - AW
Outreach - OUT Non-Governmental/private PRV

Time started:_____ Evaluator name :_____
Time finished:_____ Signature:_____

Form 4

REASONS FOR IMMUNIZATION FAILURE (to be used with cluster sampling)

CHILD NUMBER OF CLUSTER		1	2	3	4	5	6	7	8	9	10	Total
Immunization status	Fully immunized											
	Partially immunized											
	Not immunized											
Lack of information	1. Unaware of need for immunization											
	2. Unaware of need to return 2nd or 3rd dose											
	3. Place and/or time of immunization unknown											
	4. Fear of side reactions											
	5. Wrong ideas about contra-indications											
	6.											
Lack of Motivation	1. Postponed till another time											
	2. No faith in immunization											
	3. Rumours											
	4.											
Obstacles	1. Place of immunization too far to go											
	2. Time of immunization inconvenient											
	3 Vaccinator absent											
	4 Vaccine not available											
	5. Mother too busy											
	6. Family problem, including illness of mother											
	7. Child ill - not brought											
	8. Child ill, brought but not given											
	9. Long waiting time											
	10.											
	11.											

Note: Ask only one question: i.e. "Why was the child not immunized?" or "Why was the child not fully immunized?"

- Mark (✓) the reason(s)

Form =5

MOTHER COVERAGE FORM

Cluster No. _____

Date: _____

Locality: _____

Range of birth dates:

From: _____

Till: _____

MOTHER NUMBER IN CLUSTER	1	2	3	4	5	6	7	Total
BIRTH DATE OF CHILD								

MOTHER	IMMUNIZATION CARD	Yes							
		No							
	TT 1	Date							
		Source							
	TT	Date							
		Source							
	ANTENATAL CARE	Yes							
		No							
	PLACE OF DELIVERY	Home							
		H.C. / HOSPITAL							
		Other							
	ATTENDED BY	Untrained TBA							
		Trained TBA							
		Health Staff							
		Other							

Source (Place of Immunization): Hospital = HOS Health Centre = HC
Outreach = OUT Non Government/Private = PRV

LUSTER No. _____

ADDITIONAL QUESTIONS FOR THE CLUSTER SURVEY

CHILD NUMBER OF CLUSTER	1	2	3	4	5	6	7	8	9	10	Total
1. Does] know the names of diseases ' prevented by immunization ?											
None known											
Diphtheria											
Pertussis											
Tetanus											
Poliomyelitis											
Measles											
Tuberculosis											
2 Does know that 3 doses of DPT. vaccine is required ?											
Yes											
No											
3. Where did they receive most of their information about immunization ?											
Health staff											
Volunteer											
Relatives											
Neighbour											
Radio/Television											
Newspapers/posters											
Others											
Did not receive											
Do not know											

2.3 NEXT HOUSEHOLD

After completing the first household, move to the next household. This is one, whose front door is nearest to the front door of the household just visited by you. Keep moving to the next nearest household till you have completed survey of 7 children. Only if there is more than one child of the right age group in the last household record the particulars of all the children.

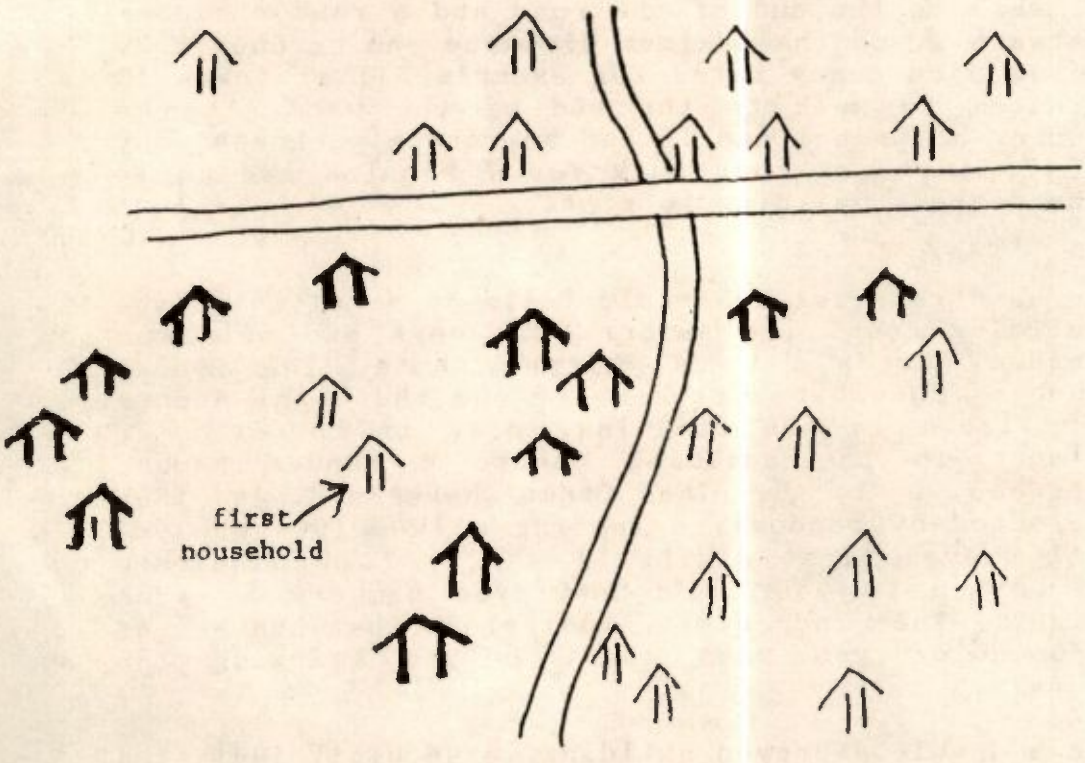
Excluded from the survey are (i) households already visited; (ii) households outside the survey area; (iii) households that are locked; and (iv) military establishments, hostels, schools, mosques, temples, etc.

2.4 OTHER CLUSTERS

The survey would be completed by using the same process for the remaining 29 clusters.

Exercise C

In the diagram below, the first household has been selected for you. Assume that you must visit 10 houses in order to find the seven children needed for the cluster. Number the houses in the order in which you would visit them.



Check your answers with a course manager.

2.5 SELECTION OF HOUSEHOLDS IN DENSELY POPULATED URBAN AREAS & IN MULTI-STOREYED BUILDINGS.

Urban areas are divided into wards and sub-divisions of wards. After selection of a cluster in a particular ward go to a central place of the ward and select the direction as given at page 13. Select the first household in the same manner as for villages as detailed on page 13. If it is not possible to count or to estimate the number of buildings along a particular road, then it may be necessary to find the starting household in another manner. It is suggested that the distance may be measured or estimated, for example, in time taken to walk to the end of the road and a random number between 1 and the maximum distance can be chosen by using a currency note. For example, if it takes 15 minutes to walk to the end of the ward, then a number between 1 and 15 can be randomly chosen. Say if 7 is chosen then walk for 7 minutes and go to the nearest building to start.

In case your 1st household falls in a multistoreyed building count the number of floors and select a random number with a currency note. The random numbers should be between one and the total number of floors in the building, e.g. if there are 8 floors in the building choose a random number between 1 to 8. The first household is then selected by randomly selecting a two-digit number All uneven first digits (1, 3, 5, 7, 9) indicate direction to your left and even numbers to your right. The 2nd digit indicates the number of households you must count before starting the survey.

In a double storeyed building, even digit indicates the ground floor and the uneven first floor.

Exercise D

Complete the Child Coverage Household Form (Form No.3)

1. Record the name of the district .

2. Identify the cluster Number. For this exercise you may assume you are doing your survey in District "A". Record the correct cluster number on the Child Coverage Household Form. Refer to Form on page 9 to identify the number of the cluster in District A.

3. Record the date of interview. For this exercise record 7 March 1987 as the date of evaluation.

4. Identify the age group to be evaluated. The age group to be evaluated consists of children who are 12-23 months of age at the time of the evaluation.

5. Identify the birthdates of children in the age group to be evaluated. These dates will be based on the date of interview.

To determine the earliest acceptable birthdate, you will need to subtract exactly 24 months from the date of the interview. (You subtract 24 months instead of 23 months because you wish to include all children who are even one day less than 24 months of age. By subtracting 24 months, you will also include children who are exactly 24 months of age. This is an acceptable error.) To determine the latest acceptable birthdate, you will need to subtract exactly 12 months from the date of interview.

Example:

1. Assume an interview date of 28 May 1987.

2. Count back from the interview date exactly 24 months to determine the earliest acceptable birthdate.

3. Count back from the interview date exactly 12 months to determine the latest acceptable birthdate.

Using the interview date of 7 March 1987, calculate and record the birthdates of children in the age group to be evaluated.

Note: If no vaccination cards or birth records are available, you may need to use months of birth instead of specific dates.

6. Identify the city, town, village of the cluster by referring to the Cluster Identification Form, page 9).

7. ~~Print~~ Write your name as the interviewer.

NOTE: In order to identify age errors on the vaccination record(s), it is best if the child whose record(s) is being reviewed is physically present at the time of the review. If there appears to be an age discrepancy, you should attempt to verify the listed birthdate by asking to see the child's birth certificate (if available) or through questioning. If a vaccination card is presented for a child who is not present, but who falls in the age range to be evaluated, record the information on the form.

Use the information on the sample vaccination cards on page 35 to complete the Child Coverage Household Form on page 34 for the first household.

- After listing information on all the children in the household whose ages fall in the age range to be evaluated, check the data recorded for any obvious errors. (Are there blank spaces? Are there vaccination dates which occurred prior to the date of the child's birth? Are there children with the same birthdate who are in the same family and not twins?). Then proceed to the next household, which will be the one nearest to the initial household.

Use the information on the sample vaccination card on page 36, to complete the same Child Coverage Household Form for the second household. When you have recorded all relevant information for the second household, review your form with a course manager.

In a real survey situation you would continue the process until the seventh child in the age range to be evaluated has been located. Other children in this age range who are residents in the household where the seventh child is identified should also be listed.

DISTRICT:_____

UNIVERSAL IMMUNIZATION PROGRAMME
COVERAGE SURVEY HOUSEHOLD FORM

Cluster No:_____
Date:_____
Locality:_____
Range of birthdates:
From:
Till:

CHILD NUMBER IN CLUSTER		1	2	3	4	5	6	7	8	9	10	TOTAL
BIRTH DATE												
IMMUNIZATION CARD	Yes											
	No											
DPT 1	Date											
	Source											
DPT 2	Date											
	Source											
DPT 3	Date											
	Source											
POLIO 1	Date											
	Source											
POLIO 2	Date											
	Source											
POLIO 3	Date											
	Source											
MEASLES	Date											
	Source											
B C G	Date											
	Scar + or -											
	Source											

TALLY OF HOUSEHOLD VISITED:

SOURCE (PLACE OF IMMUNIZATION): Hospital - HOS Health Centre - HC
Outreach - OUT Non Governmental/private - PRV

Time started:_____ Evaluator _____
Time finished:_____ Signature:_____

VACCINATION CARD			
Name	UMA		
Name of Mother	LEELA		
Name of Father	RAMU		
Male or Female	F		
Birthdate	13.12.85		
Name of Village	RAMPUR		
VACCINES	DATE GIVEN day	month	Year
BCG	15	12	85
DPT I	16	3	86
DPT II	14	5	86
DPT III	30	6	86
Polio I	16	3	86
Polio II	17	5	86
Polio III	30	6	86
Measles	30	8	86

Form. Household Number 1.

VACCINATION CARD			
Name	KUMAR		
Name of Mother	SUMAN		
Name of Father	SOMU		
Male or Female	M		
Birthdate	6.11.85		
Name of Village	RAMPUR		
VACCINES	DATE GIVEN day	month	Year
BCG	8	11	85
DPT I	5	3	86
DPT II			
DPT III			
Polio I	5	3	86
Polio II			
Polio III			
Measles			
Tetanus I			
Tetanus II			
Other			

Household Number 2

2.6 CHECK DATA COLLECTED

The information collected from the assessment teams must be checked to ensure that the survey contains the correct number and locations of clusters and the correct number of children in each cluster.

You will need to ensure that:

30 clusters have been surveyed. To do this, you must look through the Forms submitted by each team to see if there are forms for 30 clusters. When fewer than 30 clusters have been surveyed, the missing cluster(s) will need to be identified and surveyed.

seven children in the age range to be evaluated have been listed for each cluster. To do this, you must review each Household Summary Form to determine if at least seven children in the age range to be evaluated have been listed for each cluster.

If a Household Summary Form is missing or incomplete, the cluster must be resurveyed. If any discrepancies are noted in the information, the child must be revisited.

Exercise E

As mentioned earlier, recording errors may occur and need to be checked and corrected before leaving each household. On page 39 is a Child Coverage Household Form which was not carefully reviewed. Review this form and circle all obvious errors and/or omissions. Review your work with a course manager and correct the form according to the information provided by the course manager.

DISTRICT: A

UNIVERSAL IMMUNIZATION PROGRAMME
COVERAGE SURVEY HOUSEHOLD FORM

Cluster No: 14
Date: 15.4.87
Locality:
Range of birthdates:
From: 15.2.85
Till: 7.3.86

		1	2	3	4	5	6	7	8	9	10	TOTAL
(Name / address)		Suyana 172 Mod Road	Radha 16B Model Town	Srinivasan 85C Model Town	Mohan 82C Model Town	Geeta 145 Model Town	Rajan	Sudha 232 Model Town	6/1a Rajpath 236 Model Town			
CHILD NUMBER IN CLUSTER		1	2	3	4	5	6	7	8	9	10	TOTAL
BIRTH DATE		17.12.86	8.10.85	13.4.86	2.2.86		5.3.86	29.11.85	15.1.86			
IMMUNIZATION CARD	Yes	+	+		✓		✓	✓	✓			
	No			✓								
DPT 1	Date	17.4.86	17.4.86	20.5.86	17.4.86		6.6.86	16.1.86	2.4.86			
	Source											
DPT 2	Date	86.86	8.6.86	20.12.86			2.10.86	6.6.86	5.5.86			
	Source											
DPT 3	Date	0	3.5.86	3.3.86			14.10.86	0	15.9.86			
	Source			+								
POLIO 1	Date	17.4.86	17.4.86	20.5.86	17.4.86		6.6.86	16.1.86	2.4.86			
	Source											
POLIO 2	Date	8.6.86	8.6.86	20.12.86			2.10.86	8.6.86	5.6.86			
	Source											
POLIO 3	Date	0	3.8.86	3.3.87			10.11.86	0	19.5.86			
	Source											
MEASLES	Date	0	3.5.86	0	2.12.86		14.4.86	0	3.8.86			
	Source											
BCG	Date	19.12.86	11.12.85	14.7.86	7.2.86		1.3.86	16.1.86	16.1.86			
	Scar + or 0											
	Source											

TALLY OF HOUSEHOLD VISITED:

SOURCE (PLACE OF IMMUNIZATION): Hospital - HOS Health Centre - HC
Outreach - OUT Non Governmental/private - PRV

Time started: Evaluator :
Time finished: Signature:

3.0 TABULATE DATA

Collected data of any type are useless unless and until they are analyzed. Coverage evaluation information must not only be analysed, but it must be analyzed quickly in order to serve a useful purpose. When a coverage evaluation team has finished collecting data from its 30 assigned clusters, the Household Summary Forms should be handed over immediately to the supervisor of the coverage evaluation. He will check to see that the forms are complete and accurate, and he will review the forms to determine which immunizations are valid (given at the correct age and at the correct interval). He will then complete the "Fully Vaccinated" section of the form. The information should then be transferred to the Cluster Summary Forms (pages 47-52). The calculations of sub-totals and totals on the cluster Summary Form are a basic part of the analysis of the collected data.

He will check that all the other information has been noted including the reasons for partial or no immunization.

Exercise F

Complete the Household Summary Form

The fact that a vaccination was given does not ensure that it was valid. To be effective, vaccines must be given at appropriate ages and, if the vaccination is one of the series, it must be given after an appropriate interval.

Measles - as soon after 9 months as possible (9 months completed).

BCG - any time after birth

Polio/DPT - first dose any time after 6 weeks of birth. Subsequent doses spaced at least one month or 28 days apart.

A person vaccinated at the wrong age should be considered not vaccinated. A second or third DPT or Polio vaccination which is given less than one month after the preceding vaccination should be considered invalid. There is no limit for maximum interval between first and second dose and second and the third dose. You would, however, check to see that the vaccinations were completed before 12 months of age. Measles vaccine given before 9 months of age (270 days) is not valid.

1. Using the corrected Household Summary Form on page 39 which you completed in Exercise E, circle all shots which are not valid according to the schedule listed above.

2. If a child has received a full series of vaccinations (there are no blank spaces and no circled vaccinations), record a "+" in the column titled "Fully Vaccinated".

3. If a child has not received a full series of vaccinations (there are blank spaces or circled vaccinations) record a "-" in the column titled "Fully Vaccinated".

4. After you have reviewed all vaccinations on the Household Summary Form, add the number of "+'s" recorded in the "Fully Vaccinated" column and record the number in the space "Total Fully Vaccinated".

5. Check your answers and discuss any differences you have with a course manager.

Exercise G

Complete the Cluster Summary Forms

To determine the number of children receiving valid vaccine in your survey of 30 clusters, you will need to transfer information from the Household Summary Forms to a Cluster Summary Form.

In this exercise, you will record information on the partially-completed Cluster Summary Form on page 47. You will obtain this information from the Household Summary Forms provided on pages 44-46 and use it to complete the following substeps:

1. Fill in the introductory data on the Cluster Summary Form. (This has been done for you.)

2. The next step is to correct the Household Summary Forms. In Exercise F you circled all of the vaccinations which were not given at the correct time. In some instances a child may have received 2 or 3 doses of DPT and Polio and one or more of them were not valid.

Forms on pages 44 to 46 are corrected Household Summary Forms.

3. On page 44, count the number of valid vaccinations given for each vaccine. These will be uncircled dates. Count each dose separately (DPT 1, DPT 2, DPT 3). On the Cluster Summary Form (page 47) record the total number of valid shots in the "+" columns provided for each vaccine beside Cluster 1. You may assume that all uncircled dates are valid. Next count the number of circled dates (showing invalid shots) and "0's". Record these totals in the " 0 " columns under each vaccine.

Count the number of vaccination cards available. Transfer this number to the column titled "Vaccination Cards" on the Cluster Summary Form.

Check the total number recorded for "Fully Vaccinated" and record the number in the last column of the Cluster Summary Form.

Repeat this process for Household Summary Forms on pages 45 and 46.

4. Determine the subtotals and totals for the Cluster Summary Form. (This has been done for you).

When you have completed this exercise, check your answers and discuss any differences you have with a course manager.

DISTRICT: A

UNIVERSAL IMMUNIZATION PROGRAMME
COVERAGE SURVEY HOUSEHOLD FORM

Cluster No: 1
Date: 7.3.87
Locality: Rampur
Range of birthdates:
From: 7.3.85
Till: 7.3.86

		Ramu 5 KG marg	Sita KG marg	Govind 12 KG marg	Rafu 25 KG marg	Uma 27 KG marg	Suresh 33 KG marg	Rupa 47 KG marg			
CHILD NUMBER IN CLUSTER		1	2	3	4	5	6	7	8	9	10	TOTAL
BIRTH DATE		13.12.85	18.2.86	6.11.85	8.11.85	12.12.85	14.1.86	1.1.86				
IMMUNIZATION CARD	Yes	✓		✓	✓	✓	✓					
	No		✓					✓				
DPT 1	Date	16.3.86	0	5.3.86	9.3.86	21.3.86	1.9.86	0				
	Source	HC		HC	OUT	HC	PRV					
DPT 2	Date	14.5.86	0	0	4.4.86	0	3.10.86	0				
	Source	HC			OUT		PRV					
DPT 3	Date	30.6.86	0	0	2.6.86	0	12.11.86	0				
	Source	HC			OUT		PRV					
POLIO 1	Date	16.3.86	0	5.3.86	9.3.86	21.3.86	1.9.86	0				
	Source	HC		HC	OUT	HC	PRV					
POLIO 2	Date	14.5.86	0	0	12.4.86	0	3.10.86	0				
	Source	HC			OUT		PRV					
POLIO 3	Date	30.6.86	0	0	2.6.86	0	12.11.86	0				
	Source	HC			OUT		PRV					
MEASLES	Date	30.8.86	0	0	0	2.1.87	1.5.87	0				
	Source	HC				HC	PRV					
B C G	Date	15.12.86	0	18.3.86	10.11.85	2.3.85	15.4.86	0				
	Scar + or 0	+		+	0	+	+					
	Source	HOS		OUT	HOS	OUT	OUT					

TALLY OF HOUSEHOLD VISITED:

SOURCE (PLACE OF IMMUNIZATION): Hospital - HOS Health Centre - HC
Outreach - OUT Non Governmental/private - PRV

Time started: ____________ Evaluator: ____________
Time finished: ____________ Signature: ____________

DISTRICT: A

UNIVERSAL IMMUNIZATION PROGRAMME
COVERAGE SURVEY HOUSEHOLD FORM

Cluster No: 2
Date: 7.3.87
Locality: Haripur
Range of birthdates:
From: 7.3.85
Till: 7.3.86

		Heena 18 BR colony	Bablu 18 BR colony	Rahima 37 BR colony	Bandi 75 BR colony	Rowna 48 BR colony	Lalleman 55 BR colony	Rani 57 BR colony					
CHILD NUMBER IN CLUSTER		1	2	3	4	5	6	7	8	9	10	TOTAL	
* BIRTH DATE		2.12.85	2.12.85	1.3.86	4.2.86	1.12.85	14.2.86	6.3.86					
IMMUNIZATION CARD	Yes	✓	✓	✓	✓	✓	✓						
	No							✓					
DPT 1	Date	4.3.86	4.3.86	10.6.86	6.6.86	7.4.86	19.6.86	0					
	Source	HOS	HOS	HC	HC	PRV	HC						
DPT 2	Date	1.5.86	15.5.86	10.8.86	17.7.86	19.5.86	20.7.86	0					
	Source	HOS	HOS	HC	HC	PRV	HC						
DPT 3	Date	7.7.86	7.7.86	0	0	17.86	15.2.86	0					
	Source	HOS	HOS			PRV	HC						
POLIO 1	Date	4.5.86	4.3.86	10.6.86	6.6.86	15.5.86	20.6.86	0					
	Source	HOS	HOS	HC	HC	PRV	HC						
POLIO 2	Date	1.5.86	1.5.86	10.8.86	17.7.86	0	20.7.86	0					
	Source	HOS	HOS	HC	HC		HC						
POLIO 3	Date	7.7.86	7.7.86	0	0		19.2.87	0					
	Source	HOS	HOS				HC						
MEASLES	Date	13.3.87	13.3.87	0	0		19.2.87	0					
	Source	PRV	PRV				HC						
B C G	Date	3.12.85	3.12.85	2.3.86	5.2.86	2.3.86	15.5.86	0					
	Scar + or 0	+	+	0	+	+	0						
	Source	HOS	HOS	OUT	HC	OUT	OUT						

TALLY OF HOUSEHOLD VISITED:

SOURCE (PLACE OF IMMUNIZATION): Hospital - HOS Health Centre - HC
Outreach - OUT Non Governmental/private - PRV

Time started: _____ Evaluator: _____
Time finished: _____ Signature: _____

DISTRICT: A

UNIVERSAL IMMUNIZATION PROGRAMME
COVERAGE SURVEY HOUSEHOLD FORM

Cluster No: 3
Date: 7.3.87
Locality: Takeri
Range of birthdates:
From: 7.3.85
Till: 7.3.86

		Rahul S/o Mohan Kumar	Babu S/o Srinivasan	Babli D/o Sat Singh	Kumar S/o A Reddy	Sonia D/o S Gopal	Karuna D/o R Singh	Akram S/o Ram Parshad				
CHILD NUMBER IN CLUSTER		1	2	3	4	5	6	7	8	9	10	TOTAL
BIRTH DATE		2.1.86	7.3.86	10.2.86	15.11.85	12.12.85	14.2.86	1.1.86				
IMMUNIZATION CARD	Yes	✓	✓	✓	✓	✓	✓	✓				
	No											
DPT 1	Date	21.4.86	1.7.86	13.5.86	9.3.86	0	1.7.86	4.4.86				
	Source	HC	HC	Out	Out		Out	HC				
DPT 2	Date	20.5.86	9.8.86	15.6.86	12.4.86	0	3.8.86	1.6.86				
	Source	HC	HC	Out	Out		Out	HC				
DPT 3	Date	0	2.10.86	2.8.86	2.6.86	0	12.5.86	9.7.86				
	Source		HC	Out	Out		Out	HC				
POLIO 1	Date	21.4.86	1.7.86	13.5.86	9.3.86	0	1.7.86	4.4.86				
	Source	HC	HC	Out	Out		Out	HC				
POLIO 2	Date	20.5.86	9.8.86	15.6.86	12.4.86	0	3.8.86	1.6.86				
	Source	HC	HC	Out	Out		Out	HC				
POLIO 3	Date	0	2.10.86	2.8.86	2.6.86	0	12.5.86	9.7.86				
	Source		HC	Out	Out		Out	HC				
MEASLES	Date	1.2.87	0	1.12.86	0	2.1.87	1.3.87	5.10.86				
	Source	Out		Out		PRV	Out	HC				
B C G	Date	0	0	1.2.86	10.11.85	13.2.86	15.4.86	2.3.86				
	Scar + or 0			0	+	+	+	+				
	Source			Out	Out	Out	Out	Out				

TALLY OF HOUSEHOLD VISITED:

SOURCE (PLACE OF IMMUNIZATION): Hospital - HOS Health Centre - HC
Outreach - OUT Non Governmental/private - PRV

Time started: ______________ Evaluator: ______________
Time finished: ______________ Signature: ______________

CHILD IMMUNIZATION COVERAGE

PROVINCE: District A
Period:

CLUSTER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	
No. in Cluster																														121		
Card Yes				6	6	7	6	6	5	6	6	5	7	6	7	7	4	6	5	4	6	6	7	6	5	7	7	5	7	6	119	1
DPT1 Card				5	5	6	4	5	6	6	5	5	3	5	6	5	4	6	5	3	5	3	6	4	4	6	5	4	6	4	148	1
Card + History																																1
DPT2 card				4	5	4	3	3	5	6	4	3	2	5	6	4	3	3	5	2	4	2	4	4	3	5	5	3	6	4	122	1
card + history																																1
DPT3 card				3	3	4	2	3	3	5	3	3	1	5	5	3	1	3	4	0	4	1	3	3	3	4	3	3	5	4	96	1
card + history																																1
Source : Eca																																1
EC/Ang																																1
Out																																1
Priv.																																1
OPV1 card				5	5	6	4	5	5	6	5	5	4	5	6	5	5	5	5	3	5	4	6	4	4	6	5	4	6	5	150	1
card + history																																1
OPV2 card				4	4	5	7	5	3	4	5	4	3	5	6	4	4	4	5	3	4	3	5	3	4	4	4	4	4	4	126	1
card + history																																1
OPV3 card				4	4	4	2	5	2	2	4	4	2	3	5	3	3	4	4	2	4	3	4	2	3	4	3	4	3	3	101	1
card + history																																1
Source: Box																																1
EC																																1
Out																																1
Priv																																1
Measles card				5	5	6	4	4	5	6	5	5	4	4	6	5	4	5	4	4	5	3	5	4	5	6	4	5	5	5	139	1
card + history																																1

CHILD IMMUNIZATION COVERAGE

PROVINCE: DISTRICT-A.
Period:

CLUSTER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	
Source: Hos																																%
SC																																%
Out																																%
Priv.																																%
BCG card				5	6	6	5	6	5	6	6	5	6	6	6	7	4	6	5	4	6	5	7	5	5	6	6	5	7	5	167	%
card + history																																%
scar																																%
Source : Hos																																%
SC																																%
Out																																%
Priv.																																%
Fully Immunized																																%
Part. Immunized																																%
Not Immunized																																%
No. of Households																																/cluster
Time (minutes)																																/cluster

REASONS FOR IMMUNIZATION FAILURE

District

Period: _____

Total number of partially or not immunized children : _____
(use this as denominator for determining percentage)

	CLUSTER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	PERCENTAGE
Lack of information	1. Unaware of need for immunization																															✓	%
	2. Unaware of need to return for 2nd or 3rd dose																																%
	3. Place and/or time of immunization unknown																																%
	4. Fear of side reactions																																%
	5. Wrong ideas about contraindications																																%
	6. Other																																%
	SUB TOTAL																																%
Lack of motivation	1. Postponed till another time																																%
	2. No faith in immunization																																%
	3. Rumours																																%
	4. Other																																%
	SUB-TOTAL																																%
Obstacles	1. Place of immunization too far to go																																%
	2. Time of immunization inconvenient																																%
	3. Vaccinator absent																																%
	4. Vaccine not available																																%
	5. Mother too busy																															—	%

REASONS FOR IMMUNIZATION FAILURE

Period: _____

Total number of partially or not immunized children : _____
(use this as denominator for determining percentage)

	CLUSTER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	PERCENTAGE
Obstacles	6. Family problem, including illness of mother																																%
	7. Child ill not brought																																%
	8. Child ill, brought but not given																																%
	9. Long waiting time																																%
	10. Other																																%
	SUB-TOTAL																																%
	TOTAL																																%
																																	100 %

MOTHER IMMUNIZATION COVERAGE

District

Period:

CLUSTER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	PERCENTAGE
No. in Cluster																																
Card Tes																																%
TT1 Card																																%
Card + history																																%
TT2 card																																%
card + history																																%
Source : Hos																																%
HC																																%
Gut																																%
Priv.																																%
ANC Tes																																%
Delivery : Hosp																																%
HC																																%
Other																																%
Untrained TBA																																%
Trained TBA																																%
Health Staff																																%
Other																																%

ADDITIONAL QUESTIONS

Period:

CLUSTER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	PERCENTAGE
EPI Diseases																																
1+ known																																%
1+ known																																%
Nose known																																%
2 doses of DPT																																
Yes																																%
No																																%
Infor. Source																																
Health Staff																																%
Volunteer																																%
Relative																																%
Neighbour																																%
Radio/TV																																%
Newspaper/poster																																%
Others																																%
Did not receive																																%
Do not know																																%

4.0 EVALUATE PROGRAMME

The purpose of collecting and analyzing vaccination coverage data is to make possible an evaluation of the extent to which vaccination programme coverage objectives are being achieved.

(*) Is the target age group being reached?
(*) What is the vaccination coverage of the target age group?
(*) Are people outside the target age group being vaccinated?
(*) Which are the main agencies of coverage?
(*) What are the reasons for poor attendance?
(*) What are the reasons for high dropouts?
(*) What is the coverage of pregnant women with TT2?
(*) Are women receiving antenatal care?
(*) What are the delivery practices?

These are some of the questions that any vaccination programme must be able to answer. A coverage evaluation provides a means of answering these questions.

Exercise H

Evaluate the Extent of Achievement of Programme Vaccination Objectives

List all the parameters and write a brief para on each.

Completion of the Programme Coverage Evaluation Form on page 56 will provide an evaluation of the extent to which the vaccination target age group for a specified geographical area has been fully vaccinated according to age. Read the guidelines below and complete the practice exercise.

Evaluate the extent of achievement of programme vaccination activities by transferring the completed data from cluster summary form to the appropriate space.

1. Complete the introductory data on the form at page 56.

2. List on each vaccine for which Programme coverage is being evaluated. This has been done.

3. For each vaccine listed under Column 1, list under column 2 ("Objective for Percent Vaccination Coverage") the percent vaccination coverage that was expected according to the programme objective. This has been done.

4. For each vaccine listed under Column (1), utilize the subtotals ("+" and "0") from the Cluster Summary Form to determine the percent vaccination coverage achieved, and enter these percents under column (3), "Percent Vaccination Coverage Achieved." This determination can be made by using the formula below:

$$\frac{\text{Subtotal "+"} \times 100}{\text{Total of "+" and "0"}} = \text{Percent Vaccination coverage for the vaccine.}$$

For example, if the subtotal "+" for Measles vaccine = 160 and the total of "+" and "0" for Measles vaccine = 210

$$\frac{160}{210} = .76 \text{ or } 76\% \text{ Vaccination Coverage for Measles vaccine.}$$

Use the subtotal for the 3rd dose for DPT & OPV.

The coverage for "Fully Vaccinated" is simply the number of children fully vaccinated divided by the number of children surveyed. Remember that for this exercise 30 clusters each containing at least seven children were surveyed. In this example 214 children were surveyed.

5. For each of the vaccines listed under column (1), write in the "Difference" between the vaccination objective, colum (2) and the vaccination coverage column (3).

Vaccination Objective	-	Vaccination Coverage	=	Vaccination Difference

You should also use the data to find out the difference between the coverage according to your health centre reports and survey data.

Vaccination coverage by reports	-	Vaccination coverage by survey	=	Difference

You can use the data to compare results with previous surveys.

PERCENTAGE COVERAGE

District _____
State _____
Survey date _____

Vaccine	Objective	Achieved	Difference
TT 2/B	100		
BCG	85		
DPT 3	85		
OPV 3	85		
Measles	85		

COMPLETENESS OF REPORTING

Vaccine	Reported	Confirmed by survey	Difference
TT 2/B			
BCG			
DPT 3			
OPV 3			
Measles			

COMPARISON WITH SURVEY RESULTS OF PREVIOUS YEARS

Vaccine	Survey in 198	Survey in 198	Difference
TT 2/B			
BCG			
DPT 3			
OPV 3			
Measles			

Dropout Rates

A major reason for low coverage is the high dropout for the second and third doses. You can calculate these from the data of the cluster summary form by using the following formula:

$$\frac{\text{DPT 1} - \text{DPT 3}}{\text{DPT 1}} \times 100$$

DPT 1 are the number of children who received the first dose of DPT and DPT 3, the number of children who received all 3 doses. Dropout rates for OPV are calculated similarly.

Reasons for partial immunization

Study the reasons for incomplete immunizations carefully. These will reveal the weaknesses in your programme on which you could take practical measures for improvement. You use the data from the cluster summary form (Page 49-50).

Source of vaccinations

Use the household forms to analyse the source of vaccinations. Are the vaccinations being provided through the PHCs and the subcentres or largely through outreach operations. Are private hospitals and voluntary organizations actively participating in the programme in your area. A Cluster Summary Form has been provided at pages 47-48 to make it easy for you to tabulate data.

Awareness about the Immunization Programme

Use Cluster Summary Form at page 52 to tabulate results.

Coverage of Pregnant Women with TT2 and antenatal care

Use Cluster Summary Forms at page 51. Analyse data as for the children.

5. LAMENESS SURVEY

Your main aim in providing immunization coverage is to reduce the incidence of the vaccine preventable diseases. You can collect information on the number of cases of these diseases by using different methods. These are discussed in the module on "Disease Surveillance".

One of the vaccine preventable diseases which leaves a sequelae which is easily identifiable even by lay people, is poliomyelitis. By collecting information on the lame children over the years you can get useful material to evaluate your programme. You already have baseline information on the incidence rate of poliomyelitis in your State prior to the polio vaccination services based on the large scale surveys on poliomyelitis conducted in 1981 and 1982.

On an average 20 to 25 children in a population of a 100 000 would develop paralytic poliomyelitis every year if there was no polio vaccination programme. In other words, for every 1000 children you would expect to find 7 lame children if the immunization coverage in your area was low. In the survey you have just conducted the number would be slightly less as you have included children under one year who are still at high risk.

While analysing the results of the lameness survey you would therefore be interested in the total number of lame children detected by you. Check the year when the children developed paralysis. If more than 2 children are found who developed poliomyelitis in the last two years, this should be a warning. You must carry out a more detailed epidemiological investigation. You should carry out a similar investigation if you find any lame child with a history of OPV3 received within the preceeding 12 months.

The numbers you have surveyed is, however, too small to give statistically valid rates of incidence. Repeated on a periodic basis this should, however, provide useful information to you.

Using the same methodology and forms you can carry out an independant lameness survey with a larger sample size. The total number of children under 5 years surveyed should be at least 10 000.

You must also share your records with the State and National officers. The data from a number of surveys could be pooled and analysed in greater details.

Cluster Summary Form for Lame Children

Cluster No.	No. 5 years	No. of Lame	No. due to polio	Year of onset	Vaccination status
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					

...62

Cluster No.	No. 5 years	No. of Lame	No. due to polio	Year of onset	Vaccination status
26.					
27.					
28.					
29.					
30.					
Total					

6. PLAN REVISIONS IN VACCINATION ACTIVITIES

Knowledge gained from programme evaluation should be used when engaging in further planning of vaccination activities. Evaluation will help identify problems which should be corrected through carefully planned revisions in the vaccination activities. Planning should be a continual process and should be based on (1) the extent to which objectives are not being achieved and an analysis of the underlying reasons for this, (2) the extent to which objectives are being achieved and an analysis of the underlying reasons for this, and (3) the extent to which programme data are not complete, accurate, timely, or utilized.

For example, if a coverage objective of 85% was established and evaluation showed 80% coverage, we could conclude that no major modifications were needed and that a slightly greater effort might well bring the programme to its goal. If evaluation showed only 60% coverage some major changes would have to be made in activities to improve performance and step up vaccination coverage.

Coverage evaluation should be reported to higher levels so that staff at those levels can help in developing improved plans.

7. PROVIDE FEEDBACK

Staff responsible for vaccination activities should be provided with feedback as existing plans are revised or new plans are developed. Feedback should be presented together with programme evaluation results. Such feedback should be provided during the next regular meeting. Adequate time should however be allotted to discussing the results of the survey.

Meetings should not be held only for the benefit of senior or mid-level staff. In vaccination programmes particularly, it is the basic level workers who are most often asked to work the hardest and who are most affected by programme changes. These staff in particular must be made to feel that they are an important part of the programme. Special efforts by senior programme staff to meet with basic level workers will do much to serve this purpose. Also, a meeting would not be useful if the communication is only one way. Facts and reasoning presented must also be discussed with those attending the meeting. Questions should be invited, and those in attendance should be allowed to have their say.

Finally, at the end of the meeting, those in attendance should be provided with a written copy of the points presented during the meeting.

Notes