



**IOCH**

**Immunization and Other Child Health Project**

**Vaccination Coverage Survey of the  
Border Areas of Kurigram, Jamalpur and  
Sherpur Districts**

**July 2003**

**Survey Report No. 120**

**This survey was conducted by IOCH, a project of Management Sciences for Health,  
funded by USAID under AID contract No. HRN-I-01-98-00033-00, Task Order No. 01**

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**September 2003**

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## **Acronyms**

<b>BCC</b>	<b>Behavior Change Communication</b>
<b>BCG</b>	<b>Bacillus of Calmette and Guerin</b>
<b>CES</b>	<b>Coverage Evaluation Survey</b>
<b>COSAS</b>	<b>Coverage Survey Analysis System</b>
<b>DPT</b>	<b>Diphtheria, Pertussis and Tetanus</b>
<b>EPI</b>	<b>Expanded Program on Immunization</b>
<b>FWC</b>	<b>Family Welfare Center</b>
<b>IOCH</b>	<b>Immunization and Other Child Health</b>
<b>Mahallah</b>	<b>Smaller localities (such as a rural village or para) in urban areas</b>
<b>MOHFW</b>	<b>Ministry of Health and Family Welfare</b>
<b>Mouza</b>	<b>Smallest administrative locality in an Upazila</b>
<b>MSH</b>	<b>Management Sciences for Health</b>
<b>NGO</b>	<b>Non Governmental Organization</b>
<b>NID</b>	<b>National Immunization Day</b>
<b>OPV</b>	<b>Oral Polio Vaccine</b>
<b>SNID</b>	<b>Sub-national Immunization Day</b>
<b>TT</b>	<b>Tetanus Toxoid</b>
<b>WHO</b>	<b>World Health Organization</b>

## Terminology

This provides the meaning of some of the more technical terms used in this report and a brief explanation of their use.

**By card:** An immunization given to a child is termed as by card if the date of the dose is entered on an immunization card. Only doses recorded by card are treated as valid data in this survey.

**By history:** Immunization history collected from a parent's recall is termed as by history. Often no date will be mentioned. This information is only included in crude data.

**Crude coverage** rate is calculated from the doses recorded by card and/or by history. It is not ascertained whether the doses were given at the correct age and/or following the correct interval (where applicable). Crude data however, helps us to understand how much additional coverage could be achieved if all vaccines were given at the optimum age for the child and following the optimum interval. It also provides useful information on access to the EPI program and on the operational aspects of the provision of health services.

**Valid coverage** rate is calculated from the vaccinations recorded by card plus history. In the calculation process, first the rate of validity is calculated based on cards only, then this rate is applied to history cases too. Valid data includes only the doses of vaccines that were given after the minimum date of eligibility and/or after the minimum interval necessary to be effective and to protect the child. There is no maximum interval for a dose and therefore a dose administered after 52 weeks is still regarded as valid. By comparing crude coverage with valid coverage data of any particular antigen, one can determine how much coverage was lost due to the inability to give vaccine at the appropriate time.

**Invalid doses** are those administered at the wrong age and/or at the wrong interval. Doses administered before the minimum age in the case of DPT/Polio 1<sup>st</sup> doses and Measles vaccine or with less than four weeks interval in the case of DPT or Polio vaccines are classified as "invalid" doses.

The **criteria for a valid dose** used in this survey is the criteria recognized by the Bangladesh EPI program: minimum age for DPT/Polio 1<sup>st</sup> dose - 6 weeks old; minimum DPT/Polio interval - 4 weeks; minimum age for Measles vaccine - 38 weeks old.

**Dropout** cases refer to the children/women who have initially received at least one dose of any antigen and then failed to receive the subsequent doses to get fully immunized. Dropout rate implies the inability of the EPI to follow-up and protect the cohort of children initially reached out.

**Program access** is measured by the percentage of children surveyed who received DPT 1<sup>st</sup> dose (crude data – by card and history) in the routine immunization session.

**Fully immunized** means the child has received all the doses it requires (BCG, OPV 1-3, DPT 1-3 and measles).

**Missed opportunity** refers to a visit of a child to a vaccination center for a dose that he received. However at that time he was also eligible for another dose of antigen that he did not receive. If the missed dose was provided at a later date, it is a *corrected missed opportunity*. If not, it is an *uncorrected missed opportunity*.

## SUMMARY RESULTS

### Background

The border areas of Bangladesh (bordering India) are considered high-risk areas in terms of providing routine immunization services and implementing NIDs, as well as risk of transmission of wild polio viruses from India because of a number of new polio cases reported in West Bengal and Assam in this year. However, the immunization status of children and NID coverage in border areas are not known. In view of this situation, IOCH conducted a 30-clusters immunization coverage evaluation survey in the border areas of Kurigram, Jamalpur and Sherpur districts in July 2003.

### Objectives

The overall objective of the survey was to assess the level of immunization coverage in the border areas of Kurigram, Jamalpur and Sherpur districts. The specific objectives were to:

- a) assess the level of routine immunization coverage of the children (12-23 months) and find out the reasons for non-immunization and partial immunization;
- b) assess the level of TT immunization coverage among women of 15-49 years of age, irrespective of their marital status, and find out the reasons for non-immunization and partial immunization; and
- c) assess the coverage levels of OPV and Vitamin A administered during the 11<sup>th</sup> NIDs.

### Methodology

The survey employed the WHO recommended 30-cluster survey methodology that has been widely used in many developing countries to assess immunization coverage. In all, 30 clusters were randomly selected from the border unions (that border India) of Kurigram, Jamalpur and Sherpur districts following PPS sampling procedures. A list of the selected clusters is provided in Annex- A and their locations are shown on the maps in page 12. From each cluster, 7 children 12 – 23 months and 7 women of reproductive age (15 – 49 years) irrespective of their marital status were selected following 30 cluster survey methodology to ascertain their routine immunization coverage. Also, 7 children < 5 years (0 – 59 months) were selected to assess the immunization coverage of the 1<sup>st</sup> round of the 11<sup>th</sup> NIDs.

The WHO standard questionnaires were used for documenting the routine immunization status of the children and women. Also, separate questionnaires were used to collect data on NIDs and reasons for non-immunization and dropouts. The data were collected by the experienced Field Investigators of the Survey Team of the IOCH. Data processing and analysis were done by the Monitoring & Evaluation Unit of the IOCH using COSAS 4.41<sup>1</sup> and EpiInfo.

### Coverage levels for the routine immunization of children

**Access to child immunization:** Based on crude data (card plus history), 95% children received at least one dose of antigen (DPT 1<sup>st</sup> dose in this case) from routine immunization sessions. 5% children did not receive a dose of any antigen.

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<sup>1</sup> COSAS (Coverage Survey Analysis System) is a dedicated software for analyzing coverage evaluation survey data.

**Crude coverage of 12-23 months age group:** 95% children received BCG, 77% children received three doses of OPV, 76% received three doses of DPT and 59% received measles vaccine. 58% children were fully immunized.

**Valid coverage of 12-23 months age group:** 95% children received BCG, 61% children received three doses of OPV, 67% received three doses of DPT and 57% received measles vaccine. 46% children were fully immunized.

**Valid coverage by 12 months:** 95% children received BCG, 60% children received three doses of OPV, 66% received three doses of DPT and 52% received measles vaccine. 42% children were fully immunized.

**Routine immunization coverage by gender:** There was considerable gender difference in accessing routine child immunization services. Boys' access to immunization, as measured by the crude coverage of DPT1, was 6 percentage points higher than that of the girls (98% for boys vs. 92% for girls). Coverage of measles for the boys was 13 percentage points higher than that for the girls, resulting in 13 percentage points higher crude FIC (Fully Immunized Children) for boys than that for girls (64% crude FIC for boys vs. 51% crude FIC for girls). A similar trend was also observed for valid data (54% valid FIC for boys vs. 39% valid FIC for girls).

**Dropout rates:** Although access to child immunization was quite good (95% for DPT1), the dropout rates for different antigens were high too. There were 21% dropouts from DPT1 to DPT3 and 39% from DPT1 to measles.

**Invalid doses:** 7% of the DPT1 doses were administered before 6 weeks of age of the children, and 3% of the measles doses were given before 38 weeks of age of the children.

**Missed opportunities:** Total missed opportunities (uncorrected plus corrected) for different antigens ranged from 1% to 6%. The prevalence of uncorrected missed opportunities for different antigens ranged 1% - 3%. The composite index for total missed opportunities was 80, reflecting the need for improving the quality of screening during vaccination sessions.

**EPI card retention:** 95% of the children interviewed were ever given EPI cards; however, EPI cards were available with 46% of the respondents at the time of interview. EPI card retention rate was 49% only, as 51% of the EPI cards were lost.

**Knowledge about required visit to immunization center for full immunization:** 51% of the mothers interviewed did not have any idea about how many times a child was required to be taken to an immunization center to get fully immunized; while 40% had wrong idea about it. Only 9% of the mothers could mention correctly the number of times (i.e. 4 times) a child is required to visit immunization center to get fully immunized.

**Sources of immunization services and distance of vaccination centers:** Childhood immunization in this area was provided mostly by the GOB EPI outreach centers (75%), followed by the NGO clinics (12%). GOB hospitals and clinics provided EPI services to 11% and 2% of the cases respectively. About two-third of the EPI outreach centers (66%) were located within 10 minutes travel time from the homes of the children. It took more than 20 minutes to reach to the EPI outreach center for 6% of the cases only.

**Reasons for non-immunization and partial immunization or dropout of children:** The primary reasons for non-immunization of children were lack of awareness of the parents about the need and importance of immunization (50%) and sickness of children (20%). The primary reasons for partial immunization or dropout included: parents' lack of knowledge about the need of subsequent doses to get their children fully immunized (16%), parents did not when to return for measles dose (22%), and sickness of the children (16%).

### **Coverage levels for the routine TT immunization of women**

**TT immunization coverage:** Access to TT immunization for the women 15 – 49 years was fairly good. 91% of the women received TT1. The corresponding figures for TT2, TT3 and TT4 were 86%, 59% and 41% respectively. Only 23% of the women received TT5, which provide lifelong protection against tetanus. 9% of the women never received any TT vaccine.

**Age distribution of women never receiving TT immunization:** The older women are less likely to receive TT vaccine. 47% of the women over 35 years of age had never received any dose of TT vaccine; while the corresponding figures ranged from 3% to 13% for the women below 36 years.

**Invalid TT doses:** A significant proportion of TT doses were invalid as they were administered before the minimum required interval between the doses. 21% of the TT3 doses were given before 6 months interval between TT2 and TT3, and as such were invalid. 56% of the TT4 doses were invalid, since they were given before one year interval between TT3 and TT4; similarly, 17% of the TT5 doses were invalid for the same reason.

**Knowledge about full TT immunization:** 84% of the women did not have correct knowledge about the number of TT doses required for a woman for full immunization. Only 16% women could correctly mention that a woman was required to receive 5 doses of TT vaccine for full immunization for lifelong protection against tetanus.

**TT card retention:** 83% of the women were ever given TT cards; however, TT cards were available with 32% of the women only at the time of interview. TT card retention rate was 39% only, as 61% of the TT cards were lost.

**Sources of TT immunization:** Majority of the women received TT vaccine from the GOB EPI outreach centers (74%), followed by the hospitals (11%). NGO clinics provided TT immunization to 11% the cases.

**Reasons for non-immunization and partial immunization of women:** The primary reasons for non-immunization of TT cited by majority of the women were lack of awareness of need and importance of TT immunization (21%) and fear of injection (26%); while 32% women reported that TT immunization was not available when they had their pregnancies. The primary reasons for partial TT immunization or dropout were that the women were not aware of the need of subsequent doses to get fully immunized against tetanus (41%), the health workers did not specify the next dose (24%) or did not advise for 5 dose TT schedule for full immunization (15%).

## **Coverage levels for the 1<sup>st</sup> Round of the 11<sup>th</sup> NIDs**

**OPV and Vitamin A coverage:** 96% of the children <5 years received OPV in both rounds of the 11<sup>th</sup> NIDs. OPV coverage in the 1<sup>st</sup> round was 100%; while it was 96% in the 2<sup>nd</sup> round. Vitamin A capsules were given to 96% of the eligible children (12 – 59 months of age). Besides, 9 ineligible children (out of 210) were wrongly administered Vitamin A, as they were under 1 year on the 1<sup>st</sup> round NID day.

**Sources of OPV during the 1<sup>st</sup> round of the NIDs:** 99% of the children in the 1<sup>st</sup> round and 94% in the 2<sup>nd</sup> round received OPV from the SNID sites. 1% of the children in the 1<sup>st</sup> round and 2% in the 2<sup>nd</sup> round received OPV during child-to-child search.

**Distance of NID sites and mode of transportation used:** Most of the SNID sites (93%) were located within 10 minutes walking distance from the homes of the children.

**Households visited during child-to-child search:** 78% of the households were visited by the health workers/volunteers during child-to-child search in the 2<sup>nd</sup> round of the 11<sup>th</sup> NIDs, as reported by the parents/respondents. However, 32% of the households were found with date of visitation (by the workers/volunteers during child-to-child search) written on the door or wall, and the family members of 1% of those households did not know that their households were actually visited by the health workers/volunteers during child-to-child search.

**Sources of information of the 1<sup>st</sup> round of the NIDs:** Majority of the parents learned about the 11<sup>th</sup> NIDs from the GOB field workers (70%), followed by miking (27%). About 26% of the parents came to know about the NIDs from their relatives and neighbors. NGO workers as a source of information of the NIDs was mentioned by 9% of the parents.

**Reasons for not receiving vaccines from the NID sites:** The primary reason for not receiving OPV from the NID sites of the 11<sup>th</sup> NIDs included: a) parents' preoccupation on NID day (50% in the 1<sup>st</sup> round and 17% in the 2<sup>nd</sup> round); b) Child was traveling on NID day (25% in the 1<sup>st</sup> round); and c) parents were not informed of NID day (17%).

## **Conclusions and recommendations**

Access to child immunization was quite good (95% for DPT1); but this high access dropped to 58% for fully immunized children because of dropouts of different antigens. (Dropout rate for DPT1 to DPT3 was 21% and DPT1 to measles was 39%). Similarly, access to TT immunization for the women 15 – 49 years (irrespective of their marital status) was fairly good. 91% of the women received the first dose of TT; but TT5 coverage, which provides lifelong protection against tetanus, was as low as 23% only, indicating very high dropout rate for TT immunization.. Such high dropout rates imply inability of the EPI program to follow-up and protect the cohort of children and women initially reached out.

- *Programmatic strategies must be undertaken to reduce the existing high dropout rates in both child immunization and TT immunization. The program should focus on quality of counseling of mothers/women (on immunization) by the health workers. The health worker at the first contact must counsel the mother/woman properly to motivate her to return and to get herself and/or her child fully immunized. He/she must:*

- *explain to mother/woman the importance of full immunization, and concept of 8 doses and 4 visits required for full immunization of a child;*
  - *tell mother/woman of reproductive age the benefit and importance of full TT immunization and the concept of 5 dose TT schedule for lifelong protection against tetanus;*
  - *issue an EPI card/TT card dully filled out and explain the mother/woman the importance of keeping the EPI card/TT card in safe and bringing it on the next due date;*
  - *tell the mother/woman clearly when she should come back for next doses, and inform her that the date is written in the EPI card/ TT card so that she can check it if forgets the date;*
  - *inform the mother/woman of possible side effects of injection and how it should be handled;*
  - *pay attention to the hospitality at the clinic/EPI center, and to supportive environment.*
- *Program managers and field supervisors should ensure that EPI sessions are held as per plan, and at a regular and adequate interval*
  - *The service providers should be given refresher training to improve their technical skills on counseling of mothers/women on immunization*

There were also many invalid doses in child immunization (7% for DPT1 and 3% for measles), which further reduced the crude full immunization coverage of 58% to 46% when validity of doses was taken into account. Total missed opportunities for different antigens ranged 1% - 6%. As regards TT immunization, a very high proportion of TT doses were invalid (21% for TT3, 56% for TT4 and 17% for TT5). These high rates of invalid doses and missed opportunities reflect service providers' inability to screen the clients properly.

- *Emphasis should be given on screening of clients for immunization to avoid or reduce invalid doses and missed opportunities. The service providers must:*
  - *screen properly each and every child/ woman to decide his/her eligibility for a specific dose of specific antigen;*
  - *check EPI card/ EPI register/ TT card or any other record to decide on the eligibility of a particular dose of specific antigen(s);*
  - *if a child/woman is found not eligible for a dose today, ask him/her to return at a specified date and explain the reason to her/mother clearly and patiently.*
  - *check if there is any missed opportunity for other antigens.*
- *The service providers should be given refresher training to improve their technical skills on screening of clients for immunization.*

EPI card (child immunization card) and TT card play an important role in ensuring good quality of immunization services. It helps the mothers to adhere to immunization schedule, as well as assists the service providers to screen the children for specific doses of specific antigens. Unfortunately, the retention rates of both the EPI card and TT card were very low, 49% and 39% respectively.

- *Mothers/women should be explained the benefits and importance of EPI cards/ TT cards for immunization of themselves and their children.*
- *Mothers should be asked to preserve the EPI card safely until the child is 5 years old, and to bring the card with them whenever they come to the clinic/ EPI center for immunization.*

- *Women should also be asked to carefully preserve their TT cards, and to bring their TT cards with them whenever they come to clinic/ EPI center for TT immunization.*
- *In the case of loss of EPI card/TT card, it should be provided over and over, and the history of the earlier vaccinations accurately recorded again and again, if necessary.*

Mothers have a poor understanding of full immunization. 91% of the mothers could not mention how many times a child was required to be taken to EPI center to get fully immunized. Similarly, 84% of the women 15 – 49 years did not know how many TT doses were required for a woman for lifelong protection against tetanus.

- *During IPC between the mother/woman and the service provider and/or at the first contact, the mother/woman should be clearly explained the importance of full immunization of children and women, and of the immunization schedule of full immunization for both children and women.*

Lack of awareness of need and importance of immunization was cited as primary reason for non-immunization of children; while lack of knowledge as to when to return for subsequent doses to get fully immunized resulted in high drop out rates for child and TT immunization.

- *The program should strengthen BCC activities to inform the community of importance and benefits of immunization in general, and to motivate the mothers/women to get themselves and their children fully immunized in particular. Very selective and focused mass media campaign, in addition to IPC by health workers, may also be conducted to achieve this end.*

4% of the children 0 –59 months did not receive OPV in both rounds of the 11<sup>th</sup> NIDs. 22% of the households were not visited by the health workers/volunteers during child-to-child search in the 2<sup>nd</sup> round of the 11<sup>th</sup> NIDs, and 68% households were found not marked with visitation date of the workers during child-to-child search on the door or wall of the house.

- *Area specific innovative strategies suitable to local situation have to be undertaken during the next SNIDs/NIDs to reach to the left out children. These may include, but not limited to, the following:*
  - *detailed microplanning for each activity;*
  - *use of updated map in microplanning and child-to-child search;*
  - *adequate orientation training of volunteers and workers;*
  - *adequate number of SNID/NID sites with required number of health workers and volunteers;*
  - *using masque miking, as well as Imam of the masque during Jumma Pray;*
  - *special team at railway station, bus stand, ferry-ghat etc. for traveling children*
  - *evening NID/SNID sites for working mothers; and*
  - *special mobile teams at night to vaccinate homeless and floating children.*
- *Supervision of field workers during child-to-child search needs to be further strengthened to ensure that each and every household is visited and properly marked by the workers*
- *More attention should be given to high risk areas and traveling/homeless/floating population*

4% of the eligible children (12 – 59 months) did not receive Vitamin A during the 1<sup>st</sup> round of the 11<sup>th</sup> NIDs. Besides, 9 ineligible children (out of 210) were wrongly administered Vitamin A, as they were under 1 year on the 1<sup>st</sup> round NID day.

○ *Special attention should be given to:*

- *ensure that each and every eligible child 12–59 months receives Vitamin A;*
- *Prevent administration of Vit. A to children under one year. There should be a better screening for age; and*
- *no Vitamin A capsules should be given to the parents to administer them to their children either at NID site or in their homes.*

VACCINATION COVERAGE SURVEY AREAS, JULY 2003  
 SELECTED UNIONS OF NORTH EAST BORDER (SURVEY-1)  
 KURIGRAM, SHERPUR AND JAMALPUR DISTRICT

Legend	
●	Sample cluster
■	District HQ.
■	Upazila HQ.
○	Union HQ.
—	International boundary
—	District boundary
—	Upazila boundary
—	Union boundary
■	Charland
■	River
■	Survey area
■	Non-survey area



Prepared by: IOCH/MSH

## TABLES AND FIGURES

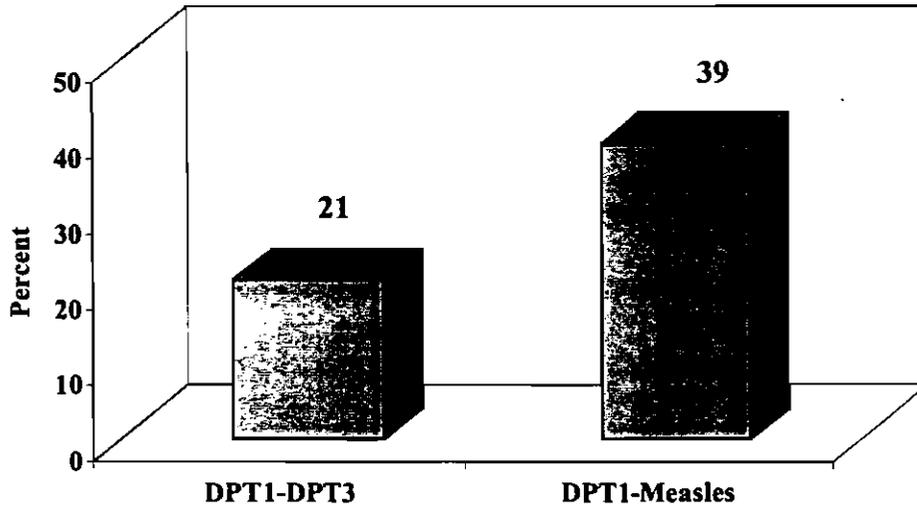
**Table 1: Routine immunization coverage levels of the children**

Name of the Vaccine	Coverage (%) Immunization of 12-23 months age group		Coverage (%) Immunized by 12 months of age
	Crude data (Access)	Valid data	Valid data
BCG	95	95	95
OPV1	95	82	82
OPV2	87	72	72
OPV3	77	61	60
DPT1	95	88	88
DPT2	87	78	78
DPT3	76	67	66
Measles	59	57	52
Fully immunized	58	46	42
Zero Dose	5	-	-

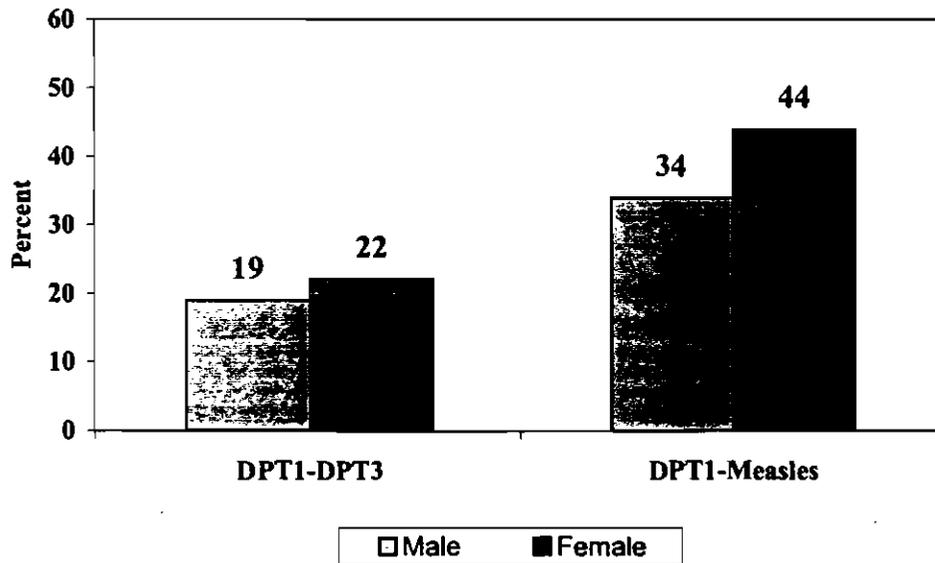
**Table 2: Routine immunization coverage levels by gender**

Name of the vaccine	Coverage % Immunization of 12-23 months age group				Coverage % Immunized by 12 months	
	Crude data (Access)		Valid data		Valid data	
	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
BCG	98	92	98	92	98	92
OPV1	98	92	85	79	85	79
OPV2	93	81	76	68	76	68
OPV3	81	73	63	59	63	57
DPT1	98	92	92	85	92	85
DPT2	92	81	81	74	81	74
DPT3	80	72	71	64	71	62
Measles	65	52	63	50	57	47
Fully immunized	64	51	54	39	47	37
Zero dose	2	8	-	-	-	-

**Figure 1: Drop-out rate for child immunization**



**Figure 2: Drop-out rate for child immunization by gender**



**Table 3: Invalid doses of immunization provided to the children**

Antigens	Percents
DPT1	7
DPT2	1
DPT3	-
Measles	3

**Table 4: Missed opportunities by antigens**

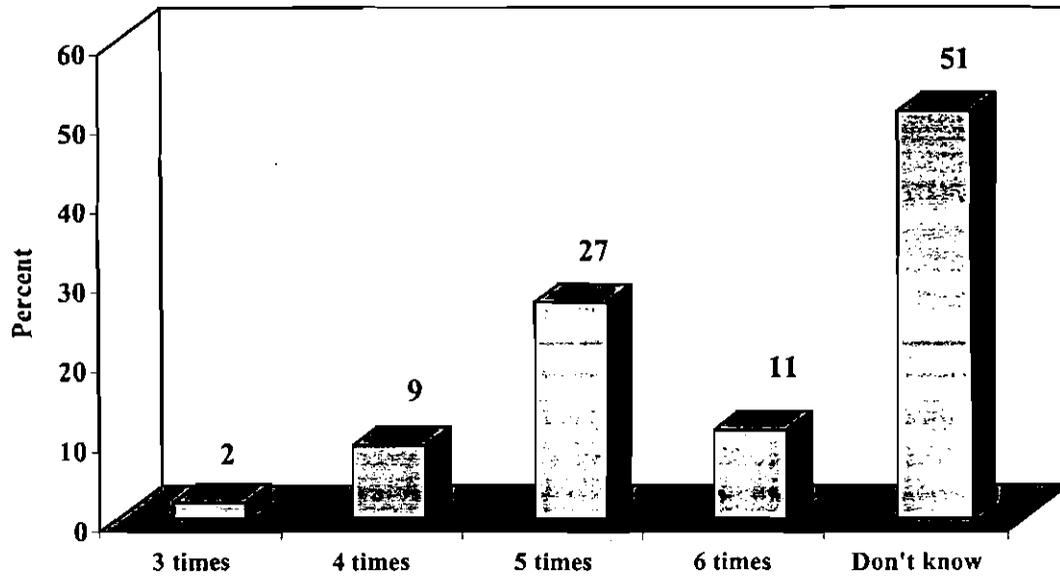
Name of the vaccine	Uncorrected		Corrected		Total		
	Number	Percent	Number	Percent	Number	Percent	
BCG	2	1	-	-	2	1	
DPT1	2	1	11	5	13	6	
DTP2	1	1	10	5	11	5	
DPT3	6	3	6	3	12	6	
OPV1	2	1	11	5	13	6	
OPV2	1	1	10	5	11	5	
OPV3	5	2	6	3	11	5	
Measles	6	3	1	1	7	3	
*Index						80	

*\* The idea is to propose one composite index reflecting the quality of screening during vaccination sessions.*

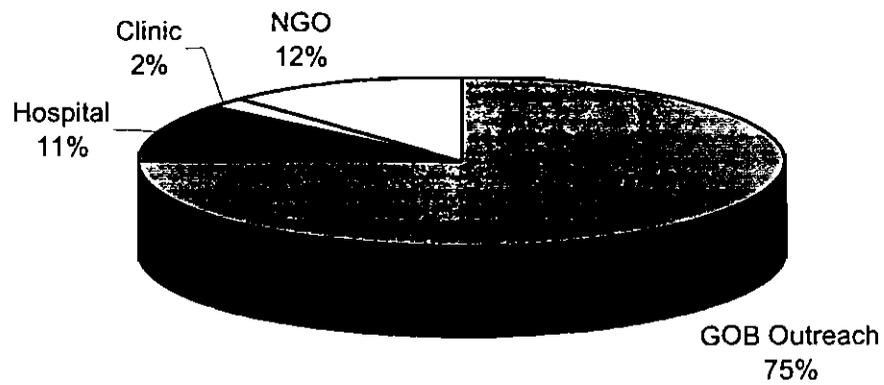
**Table 5: EPI cards availability and retention**

Card Status	Number	Percentage
EPI card available	97	46
EPI card ever given	200	95
EPI card retention	97	49

**Figure 3: Knowledge about required visits to immunization centers for full immunization**



**Figure 4: Sources of child immunization services**



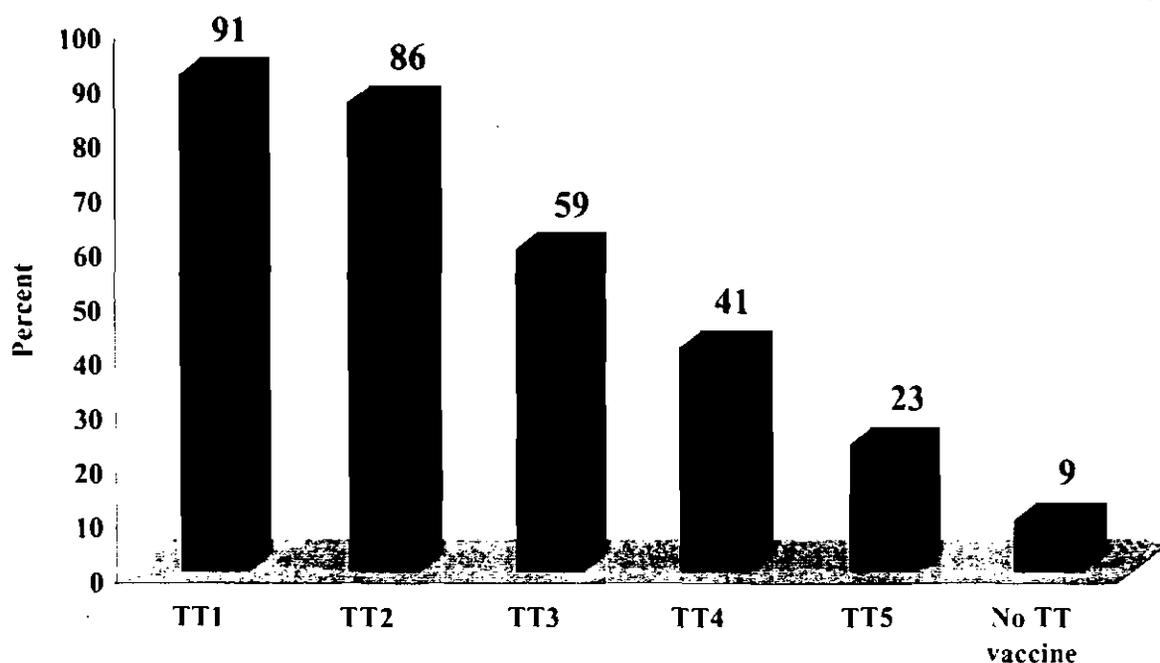
**Table 6: Time required to reach the EPI center by mode of transportation**

Time required	Mode of transport					
	Walking		Rickshaw		Total	
	#	%	#	%	#	%
1-5 Min.	57	29	1	8	58	28
6-10 Min.	99	50	3	25	102	48
11-15 Min.	23	11	-	-	23	11
16-20 Min.	13	7	1	8	14	7
21+ Min.	6	3	7	59	13	6
Total	198	100	12	100	210	100

**Table 7: Reasons for non-immunization and partial immunization of the children**

Reasons for non-immunization or partial immunization	Non-immunized (%) (N=10)	Partially immunized (%) (N=79)
Did not know about need of immunization	50	-
Did not know about need of next dose	-	16
Did not know when to return for 2 <sup>nd</sup> /3 <sup>rd</sup> dose	-	9
Did not know about importance of measles vaccine	-	10
Did not know when to return for Measles.	-	22
Did not know about place and time of immunization	-	-
Fear of adverse reaction	10	4
Planning to vaccinate in future	-	4
Mother was busy with other works	-	1
Child was sick, not taken to the site	20	16
Child was sick, was taken but not given	-	3
Vaccinator was not available at the site	10	1
Vaccine was not available at the site	-	3
Vaccinator not friendly	-	-
Family problem/mother sick	-	3
Painful for the children	-	1
Abscess after previous vaccination	-	-
Child was not at home	-	1
Thought vaccinator will come to house	-	4
Others	10	2

**Figure 5: Routine immunization coverage levels for TT among women 15-49 years**



**Table 8: Age distribution of women who never received TT vaccine**

Age group	Received		Not received		Total	
	#	%	#	%	#	%
15-19	17	89	2	11	19	100
20-25	73	95	4	5	77	100
26-30	72	97	2	3	74	100
31-35	20	87	3	13	23	100
36-49	9	53	8	47	17	100
Total	191	91	19	9	210	100

**Table 9: Interval between TT1 and TT2, TT2 and TT3, TT3 and TT4, TT4 and TT5 doses**

Interval between dose	<1 months		1 months+		<6 months		6 months+		<1 year		1 year +		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
TT1-TT2	9	5	170	95	-	-	-	-	-	-	-	-	179	100
TT2-TT3	-	-	-	-	26	21	96	79	-	-	-	-	122	100
TT3-TT4	-	-	-	-	-	-	-	-	48	56	38	44	86	100
TT4-TT5	-	-	-	-	-	-	-	-	8	17	40	83	48	100

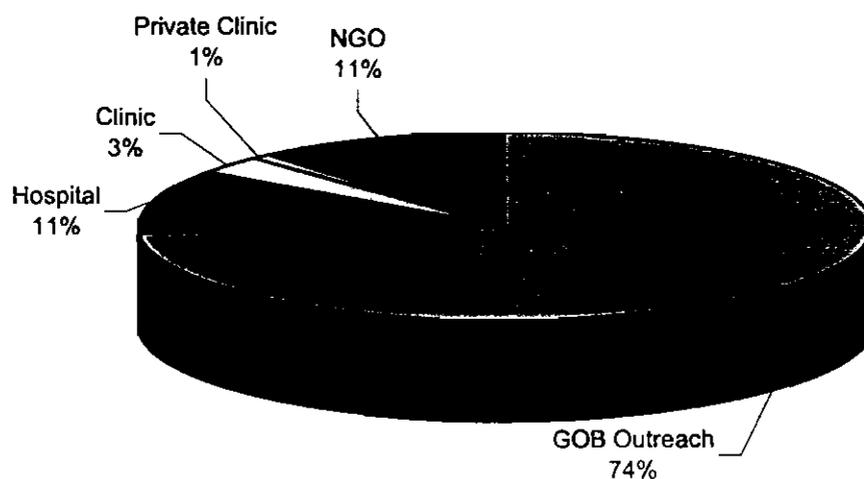
**Table 10: Knowledge about number of TT doses required for life time protection against tetanus**

Answers	Number	Percentage
2 doses	2	1
3 doses	2	1
5 doses	34	16
Don't know/no idea	172	82

**Table 11: TT cards availability and retention**

Card Status	Number	Percentage
TT card available	67	32
TT card ever given	174	83
TT card retention	67	39

**Figure 6: Providers of TT immunization**



**Table 12: Reasons for non-immunization and partial immunization for TT of the women**

Reasons	Non-immunization (%) (N=19)	Partially immunization (%) (N=143)
Next dose is not yet due		6
Don't feel need for immunization	21	4
Health worker did not specify the next dose		24
As per HW advice 2/3 TT is enough during the pregnancy		15
Unaware of need of next dose		41
Did not know about place and time of immunization	11	1
In our times TT immunization was not in practice	32	1
Postponed until another time		
Fear of injection	26	4
Busy with homework	5	2
Others	5	2

**Table 13: OPV and Vitamin A Coverage during the 11th NIDs 2003**

**N=210**

Round	OPV (%)	Vitamin A (%)
1 <sup>st</sup> round	100	96
2 <sup>nd</sup> round	96	-
Both rounds	96	-
Any round	100	-

**Table 14: Sources of OPV during the 11th NIDs 2003**

Sources of OPV	1 <sup>st</sup> Round		2 <sup>nd</sup> Round	
	#	%	#	%
NID site	208	99	198	94
Child to child search	2	1	3	2
Not received	-	-	9	4
Total	210	100	210	100

**Table 15: Time required to reach the NID sites by mode of transportation**

Time required	Mode of transport			
	Walking		Total	
	#	%	#	%
1-5 Min.	106	51	106	51
6-10 Min.	89	42	89	42
11-20 Min.	15	7	15	7
Total	210	100	210	100

**Table 16: Households visited during the child-to-child search of the 2<sup>nd</sup> round of the 11th NIDs-2003**

Variable	Number	Percents
Households visited	164	78
Households not visited	46	22
Total	210	100

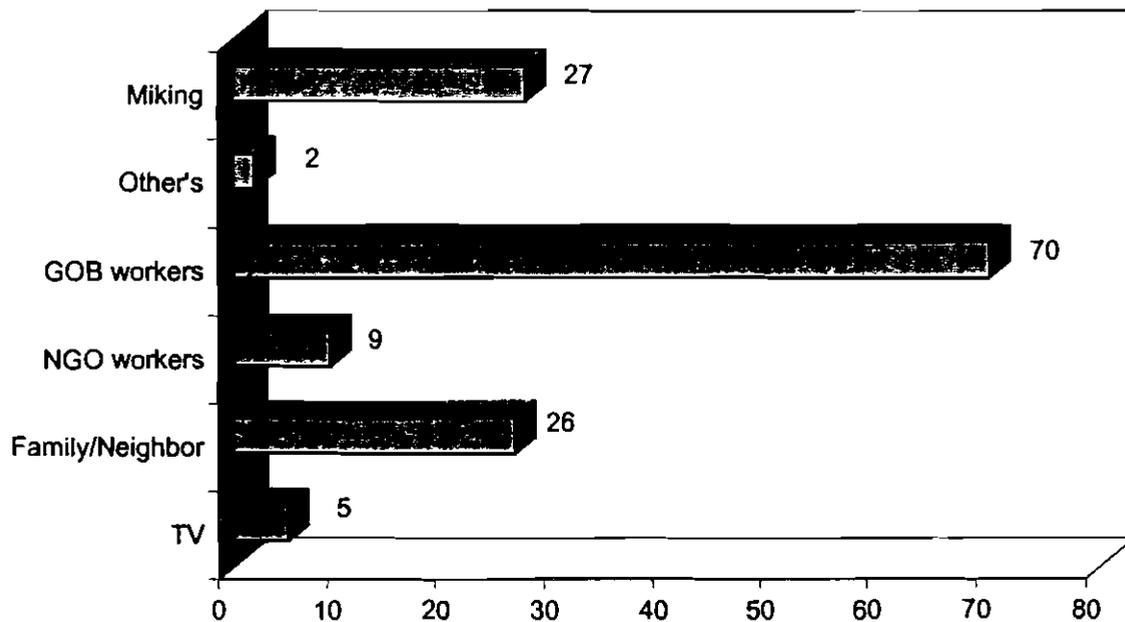
**Table 17: Date of child-to-child search for 2<sup>nd</sup> round was written on the door or wall of the house**

Status	Number	Percents
Written	68	32
Not written	142	68
Total	210	100

**Table 18: Actual visitation status of the households with the date of child-to-child search written on the door or wall of the house**

Actual Visitation-status	Number	Percents
Visited	67	99
Not visited	1	1
Total	68	100

**Figure 7: Sources of information about the NID campaign**



**Table 19: Reasons for not receiving of OPV from NID sites**

<b>Reasons</b>	<b>1<sup>st</sup> Round (%) (N=2)</b>	<b>2<sup>nd</sup> Round (%) (N=12)</b>
Did not know about NID	-	17
Traveling	-	25
Too busy	50	17
Waited for house visit	-	8
Child/Mother sick, not taken	-	8
Vaccine was not available	-	17
Vaccinator was not available	-	8
Child was 5 days old	50	-

## List of Selected Clusters for the Survey

District	Upazila	Union	Mouza	Village	TotalP op.	Cluster No.			
Kurigram	Roumari	Dantbhanga	Jhagrar Char	Takani Jhagrar Char	992	1			
			Kazaikata	Uttar Para Kazaikata	1035	2			
			Jadur Char	Dhanar Char	Charergram	1098	3		
				Komar bhang	Komarbhangi Uttar Para	450	4		
			Roumari	Chuliar Char	Mirza Para Balair Para	897	5		
				Roumari	Majhi Para	417	6		
				Roumari Alga	Dakshin Fulbari	718	7		
				Saulmari	Saulmari	Charargram	411	8	
	Rajibpur	Char Rajibpur	Baliamary	Baliamary Noya Para	364	9			
			Jauniar Char	Karaidangi	443	10			
			Baghar Char	Goalkanda	995	11			
			Karkhana	Karkhana	1057	12			
Jamalpur	Dewangonj	Dangdhara	Par Ramrampur	Digrir Char	2090	13			
				Kala kanda	603	14			
				Balujuri	616	15			
				Damurtola	Balujuri	616	15		
Sherpur	Sreebordi	Rani Shimul	Bagh Hata	Uttar Bagh Hata	1074	16			
			Chakra Pur	Chakra Pur	587	17			
			Singa Baruna	Baraikuchi	Baraikuchi	2933	18		
				Saguna	Saguna	983	19		
				Dariarpar	Dariarpar	3142	20		
	Jhinaigati	Kangsha Dhanshail	Gazni	Gazni	412	21			
			Nachan Mahari	Nachan Mahari	2076	22			
			Nalkura Gouripur	Bangaon	Bangaon	8141	23		
				Fakrabad	Fakrabad	1124	24		
				Phulari	Phulari	926	25		
			Nalita Bari	Nunni Poragaon	Bankura	Bankura	2197	26	
					Nunni	Nunni	6364	27	
					Tajurabad	Tajurabad	282	28	
					Ramchandrakura Mandalia	Hatipagar	Hatipagar	1584	29
					Phulpur	Phulpur	1095	30	

**Annex- B****List of Never Vaccinated Children Identified by Clusters**

District	Upazila	Union	Mouza	Village	Total Pop.	Cluster No.	Child No.
Kurigram	Roumari	Dantbhanga	Jhagrar Char	Takani Jhagrar Char	992	1	4*
		Roumari	Chuliar Char	Mirza Para Balair Para	897	5	3*
	Rajibpur	Char Rajibpur	Jauniar Char	Karaidangi	443	10	2*
Jamalpur	Dewanganj	Dangdhara	Baghar Char	Goalkanda	995	11	7*
		Par Ramrampur	Par Ramrampur	Kala kanda	603	14	4*
Sherpur	Jhinaigati	Kangsha Dhansbail	Dariarpar	Dariarpar	3142	20	2*,4*,6*,7*
		Nalkura Gouripur	Phulari	Phulari	926	25	7*

## **Acknowledgements**

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## List of IOCH Survey/Research/Technical Reports

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1. Vaccination Coverage Survey of the Slums of Rajshahi City Corporation - January 2000. Survey Report No. 1, May 2000
2. Vaccination Coverage Survey of the Selected Unions along the North-western Border of Bangladesh - February 2000. Survey Report No. 2, June 2000
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2. Joint Review of the Expanded Program on Immunization (EPI) in the Areas of Rural service Delivery Partnership (RSDP), April 2001. Technical Report No. 2, May 2002

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