



# IOCH

## Immunization and Other Child Health Project

### Vaccination Coverage Survey of the Cox's Bazar Municipality

June 2002

Survey Report No. 71

**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 2002**

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## Acronyms

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

## 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 routine EPI program in the municipalities is carried out by a variety of private and public providers at fixed (hospitals, clinics, dispensaries, etc.) and at outreach sites. NGOs and private practitioners also provide immunization services in many places. The municipal authorities are primarily responsible for providing and/or coordinating primary health care including routine EPI services in municipal areas. However, in the absence of an effective management information system and reliable service statistics at municipal level, it is often difficult to assess the level of immunization coverage of the municipalities. In view of this situation, the IOCH decided to conduct a series of coverage evaluation surveys in the selected municipal areas to assess the level of immunization coverage in these municipal areas. As a part of this effort, the IOCH conducted a coverage evaluation survey in the Cox's Bazar Municipality in June 2002.

### Objectives

The overall objective of the survey was to assess the level of immunization coverage in the Cox's Bazar Municipality. 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 10<sup>th</sup> NID campaign.

### 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 Cox's Bazar Municipality 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 10. 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 10<sup>th</sup> National Immunization Campaign.

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.

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

## **Coverage levels for the routine immunization of children**

**Access to child immunization:** Based on crude data (card plus history), 97% children received at least one dose of antigen (DPT 1<sup>st</sup> dose in this case) from routine immunization sessions. 3% children did not receive a dose of any antigen.

**Crude coverage between 12-23 months:** 97% children received BCG, 89% children received three doses of OPV, 89% received three doses of DPT and 78% received measles vaccine. 78% children were fully immunized.

**Valid coverage between 12-23 months:** 97% children received BCG, 81% children received three doses of OPV, 81% received three doses of DPT and 75% received measles vaccine. 72% children were fully immunized.

**Valid coverage by 12 months:** 97% children received BCG, 79% children received three doses of OPV, 79% received three doses of DPT and 67% received measles vaccine. 64% children were fully immunized.

**Routine immunization coverage by sex:** There was no sex differential in terms of access to immunization services. Boys' access to immunization, as measured by the crude coverage of DPT1, was similar to that of the girls (96% for boys vs. 97% for girls). However, the proportions of invalid doses of different antigens were higher for boys than for girls, resulting in lower valid FIC (fully immunized children) for the boys than that for the girls (71% valid FIC for boys vs. 74% valid FIC for girls).

**Dropout rates:** Although access to child immunization was high (97% for DPT1), the dropout rates for different antigens were high too. There was 8% dropout from DPT1 to DPT2 and 20% from DPT1 to measles.

**Invalid doses:** There were a number of invalid doses due to early immunization and/or inadequate interval between the doses. 5% of the DPT1 doses were administered before 6 weeks, and 4% measles doses before 38 weeks of age of the children. In addition, 1% of the DPT2 doses and 2% of the DPT3 doses were invalid as they were given before the 4 weeks interval between the doses.

**Missed opportunities:** Total missed opportunities (uncorrected plus corrected) for different antigens ranged from 2% to 5%. However, the prevalence of uncorrected missed opportunities for different antigens was low, ranging from 0 to 2%. The composite index for total missed opportunities was as high as 52, reflecting poor quality of screening during vaccination sessions.

**EPI card retention:** 97% of the children interviewed were ever given EPI cards; however, EPI cards were available with 56% of the respondents at the time of interview. EPI card retention rate was 57% only, which means that 43% of the EPI cards were lost.

**Knowledge about required visit to immunization center for full immunization:** 15% of women did not have any idea about how many times a child is required to be taken to an immunization center to get fully immunized; while 28% had wrong idea about it. Over half of the women

(57%) could mention correctly the number of times (i.e. 4 times) a child is required to visit immunization center to get fully immunized.

**Source of immunization services and distance of vaccination centers:** Childhood immunization in this area was provided mostly by the GOB clinics (36%), followed by the hospitals (27%) and NGO clinics (17%). Municipal outreach and GOB outreach centers provided EPI services to 10% and 7% cases respectively. Only 3% children received immunization services from private clinics. All the EPI outreach centers were located within half an hour walking distance from homes of the children.

**Reasons for non-immunization and partial immunization or dropout of children:** The primary reasons for non-immunization of children cited by the parents were lack of awareness of need and importance of immunization (33%), lack of knowledge about place and time of vaccination session (16%) and fear of adverse reaction (17%). The reasons for partial immunization or dropout included: sickness of the child (24%), lack of knowledge about the need of subsequent doses to get fully immunized (17%) and lack of awareness about the importance of measles vaccine (15%).

#### **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. 90% of the women received TT1. The corresponding figures for TT2, TT3 and TT4 were 87%, 69% and 51% respectively. Only 41% of the mothers received TT5, which provide lifelong protection against tetanus. About 10% of the mothers never received any TT vaccine.

**TT immunization dropout rates:** TT immunization dropout rates were high. The dropout rate for TT2 to TT3 was 21%. The corresponding rates for TT3 to TT4 and TT4 to TT5 were 26% and 20% respectively. The dropout rate for TT1 to TT5 was as high as 55%, indicating that 55% of the mothers who received first dose of TT did not complete 5 doses TT immunization schedule.

**Invalid TT doses:** A very high proportion of TT doses were invalid as they were administered before the minimum required interval between the doses. 48% of the TT3 doses were given before 6 months interval between TT2 and TT3, and as such were invalid. 22% of the TT4 doses were invalid, since they were given before one year interval between TT3 and TT4; similarly 70% of the TT5 doses were invalid for the same reason.

**Protection against tetanus at birth:** 95% of the newborn babies were found protected against tetanus, indicating that 5% newborn babies were still not protected against tetanus at birth.

**TT card retention:** 81% of the women were ever given TT cards; however, TT cards were available with 12% of the women only at the time of interview. TT card retention rate was 15% only, which means that 85% of the TT cards were lost.

**Knowledge about full TT immunization:** 92% of the women did not have correct knowledge about the number of TT doses required for a woman for full immunization. Only 8% women could correctly mention that a woman was required to receive 5 doses of TT vaccine for full immunization for lifelong protection against tetanus.

**Sources of TT immunization:** Majority of the women received TT vaccine from the hospitals (36%), followed by the GOB clinics (21%) and GOB outreach centers (15%). Municipal outreach centers and NGO clinics provided TT immunization to 13% and 10% cases respectively.

**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 (76%) and fear of injection (14%); while 10% reported that the TT immunization was not introduced when they had their pregnancies. The primary reasons for partial immunization or dropout were that the women were not aware of the need of subsequent doses to get fully immunized against tetanus (39%) or they were told by the health workers that 2 or 3 doses of TT were enough for them for their pregnancies, and they were not advised (by health worker) for full immunization (26%).

### **Coverage levels for the 10<sup>th</sup> NID Campaign**

**OPV and Vitamin A coverage:** 94% of the children <5 years received OPV in both the rounds of the 10<sup>th</sup> NIDs. The coverage for OPV was 98% in the 1<sup>st</sup> round; while it was 96% in the 2<sup>nd</sup> round. Vitamin A capsules were given to 94% of the eligible children (12 months – 59 months of age). Almost all the children received OPV from the NID sites (99% in 1<sup>st</sup> round and 97% in 2<sup>nd</sup> round).

**Sources of information of the 10<sup>th</sup> NIDs:** Majority of the parents learned about the 10<sup>th</sup> NID campaign from miking (80%), followed by television (38%). Relatives and neighbors as sources of information were cited by 20% of the parents; while 15% came to know about the NIDs from the IPC during home visits by the municipal field workers.

**Reasons for not receiving vaccines from the NID sites:** The primary reasons for not receiving OPV from the NID sites of the 10<sup>th</sup> NIDs were: lack of information about NID campaign (14% in 1<sup>st</sup> round and 21% in the 2<sup>nd</sup> round), parents were too busy to take their children to NID sites (22% in 2<sup>nd</sup> round), and child was away from home (14% in 1<sup>st</sup> round and 29% in 2<sup>nd</sup> round).

### **Problems detected**

Access to child immunization was good (97% for crude DPT1); but this high access dropped to 78% for fully immunized children because of high dropout rates of different antigens. (Dropout rate for DPT1 to DPT3 was 8% and DPT1 to measles was 20%). Similarly, access to TT immunization for the women 15 – 49 years was also good. 90% of the women interviewed received the first dose of TT; but TT dropout rate was very high (55% for TT1 to TT5), resulting in very low coverage of TT5 (41%), which provides lifelong protection against tetanus. Such high dropout rates imply inability of the EPI program to follow-up and protect the cohort of children/women initially reached out.

There were also too many invalid doses in child immunization (5% for DPT1 and 4% for measles), which further reduced the crude full immunization coverage of 78% to 72% when validity of doses was taken into account. Total missed opportunities for different antigens were also high (5% for BCG, and 4% for measles). These high rates of invalid doses and missed opportunities reflect service providers' inability to screen the clients properly.

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 properly the children for specific doses of specific antigens. Unfortunately, the retention rates of both the EPI cards and TT cards were very low, 57% and 15% respectively.

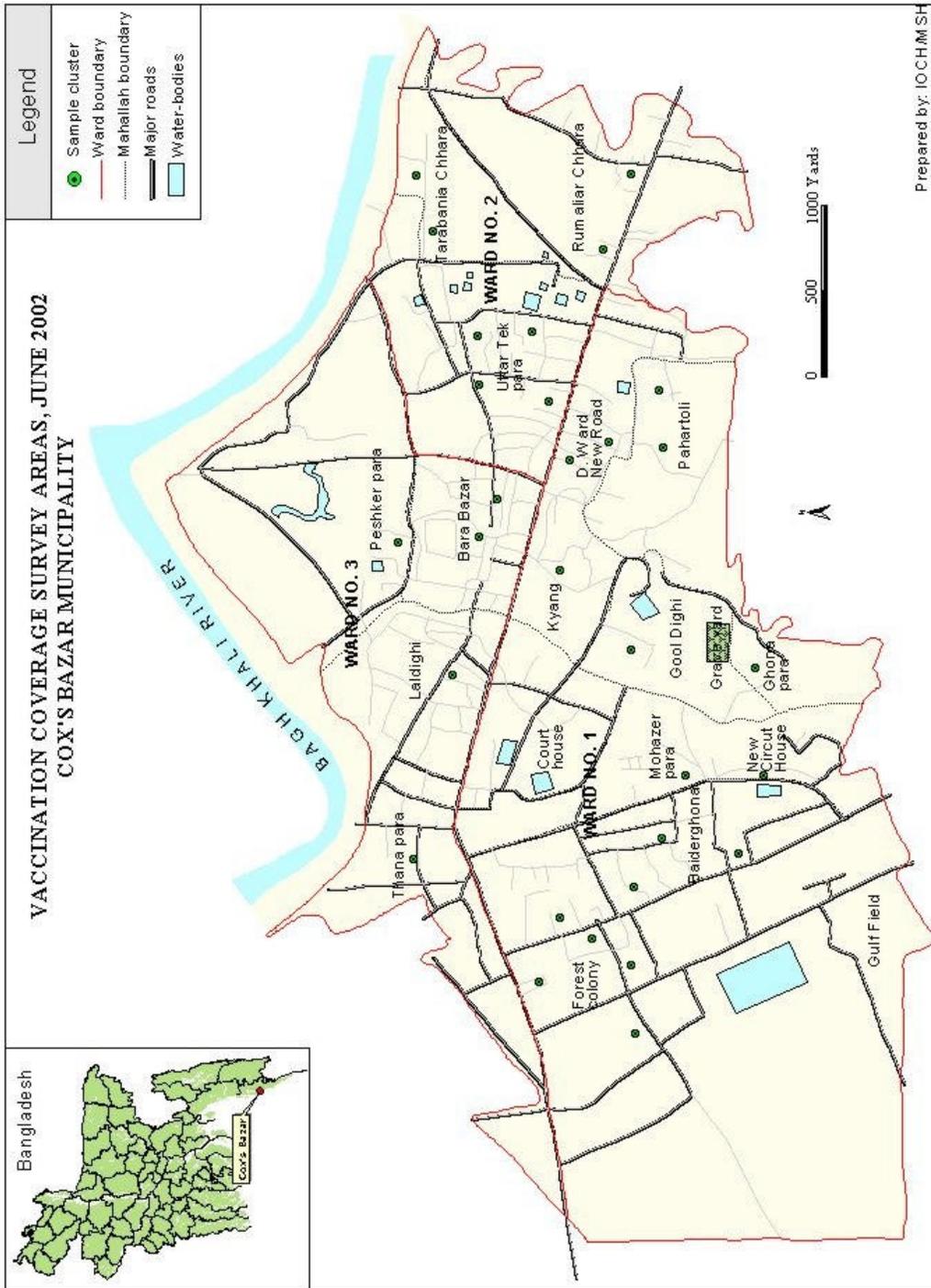
Women/mothers have a poor understanding of full immunization. 43% of the women could not mention how many times a child was required to be taken to EPI center to get fully immunized. Similarly, 92% of the women interviewed did not know how many TT doses were required for a woman for lifelong protection against tetanus.

6% of the children <5 years did not receive two doses of OPV during the 10<sup>th</sup> NIDs. Also, 6% of the children 12 – 59 months did not receive Vitamin A. In spite of intensive communication activities during NIDs, lack of information of NID campaign as a reason for not receiving OPV from NID site was still reported by 14% in the 1<sup>st</sup> round and 21% in the 2<sup>nd</sup> round.

### **Suggested solutions**

1. 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 service providers. The service providers at the first contact must counsel the mothers/women properly to motivate her to return and to get herself and/or her child fully immunized.
2. Program managers and field supervisors should ensure that EPI sessions are held as per plan, and at a regular and adequate interval (more than 28 days).
3. The service providers should be given refresher training to improve their technical skills on counseling of mother/women on immunization.
4. In order to reduce existing high rate of invalid doses and missed opportunities, emphasis should be given on screening of clients for both child and TT immunization. The service providers should be given refresher training to improve their technical skills on screening of clients for immunization
5. The pregnant mothers should be motivated (by the service providers and/or by the BCC activities through mass media) to receive the required number of TT doses necessary to protect their newborn babies.
6. Mothers should be explained (by the service providers) the benefits and importance of EPI cards/ TT cards for immunization of themselves and their children.
7. Mothers should be asked to preserve the EPI card safely until their children are 5 years old, and to bring the cards with them whenever they comes to the clinic/ EPI center for immunization of their children. They should also be asked to carefully preserve their TT cards, and to bring the cards with them whenever they come to clinic/ EPI center for TT immunization.
8. 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.
9. During IPC between the mothers and the service providers and/or at the first contact, the mothers should be clearly explained the importance of full immunization of children and women, and of the immunization schedule for full immunization for both children and women.

10. The program should strengthen BCC activities to inform the community of importance of immunization in general, and to motivate the mothers to get themselves and their children fully immunized. Very selective and focused mass media campaign may also be conducted to achieve this end.
11. Area specific innovative strategies suitable to local situation have to be undertaken during the next NIDs to reach to the left out children.
12. More attention should be given to high risk areas and traveling population during next NIDs.
13. Communication activities need to be strengthened through mass media, such as television, as well as through IPC by the health workers, to inform the communities of the next NID campaign.
14. Parents should be encouraged to attend the fixed NID sites/centers and discouraged to wait for home visits by the service providers during child-to-child search.
15. For distribution of Vitamin A capsules during NID, special attention should be given to the exact age group to limit shortage (through better screening for age) and no Vitamin A capsule should be given to the parents to administer them to their children either at NID site or in their homes.



## TABLES AND CHARTS

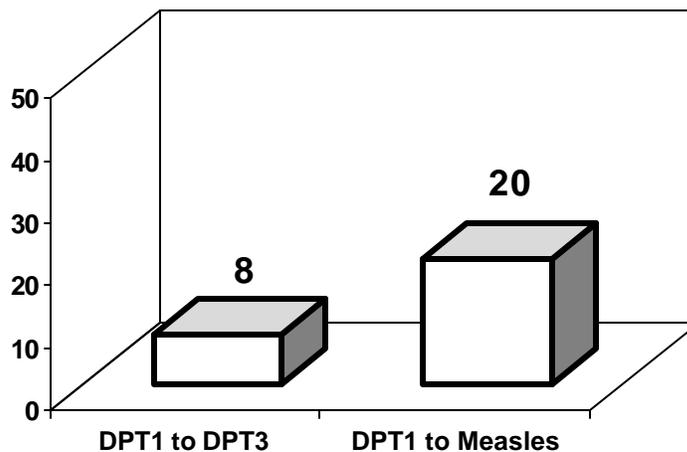
**Table 1: Routine immunization coverage levels of the children**

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	97	97	97
OPV1	97	92	92
OPV2	95	87	87
OPV3	89	81	79
DPT1	97	92	92
DPT2	95	87	87
DPT3	89	81	79
Measles	78	75	67
Fully immunized	78	72	64
Zero Dose	3	-	-

**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	96	98	96	98	96	97
OPV1	96	97	88	95	88	95
OPV2	95	95	83	92	83	92
OPV3	88	90	76	85	73	85
DPT1	96	97	88	95	88	95
DPT2	95	95	83	92	83	92
DPT3	88	90	76	85	73	85
Measles	78	77	74	76	64	70
Fully immunized	78	77	71	74	59	68
Zero dose	4	2	-	-	-	-

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



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

Antigens	Percentage
DPT1	5
DPT2	1
DPT3	2
Measles	4

**Table 4: Missed opportunities by antigens**

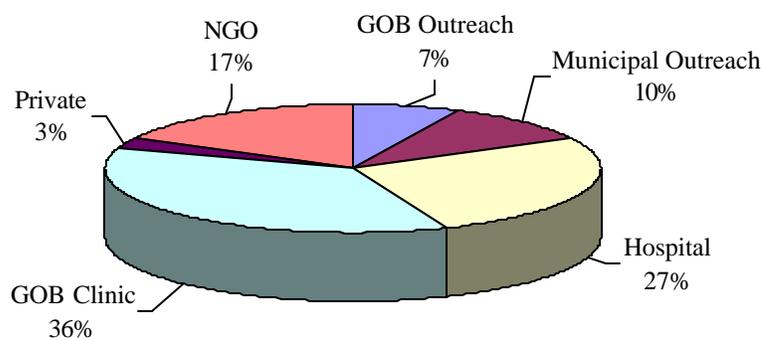
Name of the vaccine	Uncorrected		Corrected		Total		
	Number	Percent	Number	Percent	Number	Percent	
BCG	1	1	8	4	9	5	
DPT1	3	1	6	3	9	4	
DTP2	0	0	4	2	4	2	
DPT3	0	0	4	2	4	2	
OPV1	3	1	6	3	9	4	
OPV2	0	0	4	2	4	2	
OPV3	0	0	4	2	4	2	
Measles	5	2	4	2	9	4	
*Index						52	

*\* 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	117	56
EPI card ever given	204	97
EPI card retention	117	57

**Chart-2: Sources of child immunization services**



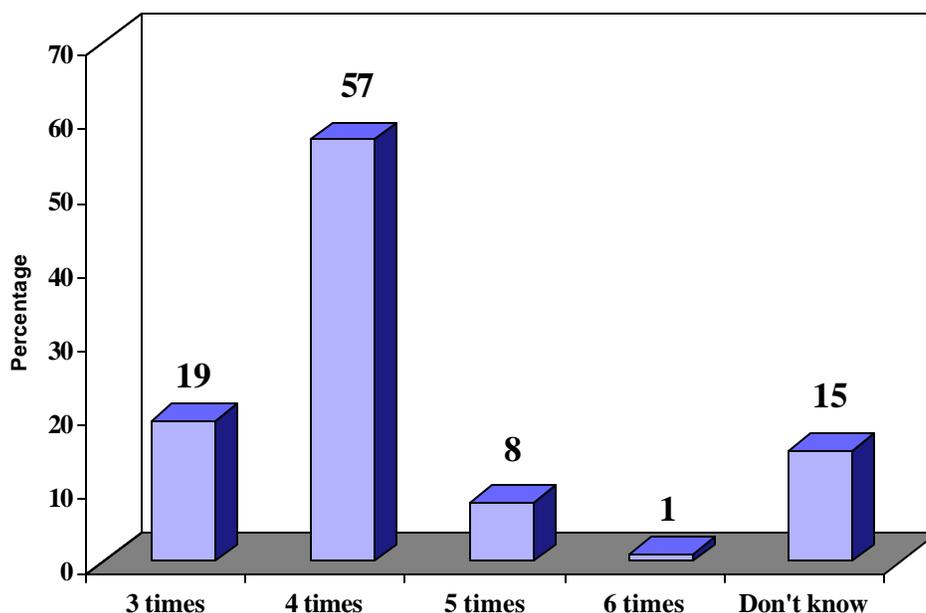
**Table 6: Distance between the child's home and the vaccination site**

Time (Minutes)	Number	Percentage
1-5 Min.	85	40
6-10 Min.	116	55
11-30 Min.	9	4

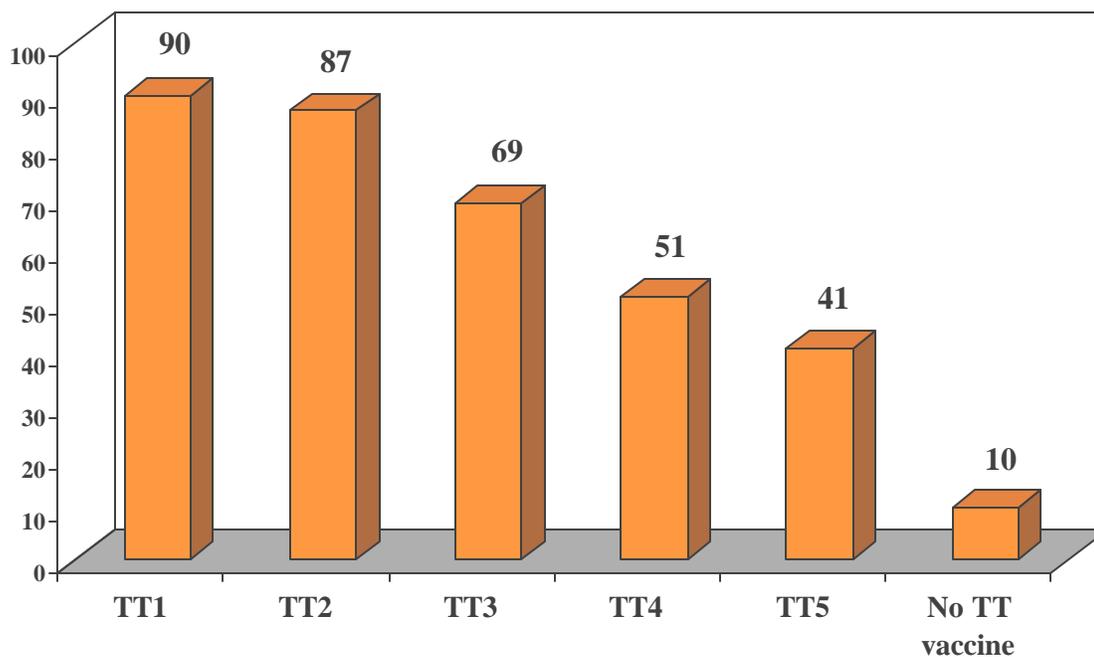
**Table 7: Reasons for non-immunization and partial immunization of the children**

Reasons for non-immunization or partial immunization	Non-immunized (%) (N=6)	Partially immunized (%) (N=41)
Did not know about need of immunization	33	-
Did not know about need of second dose	-	17
Did not know when to return for 2 <sup>nd</sup> /3 <sup>rd</sup> dose	-	5
Did not know about importance of measles vaccine	-	15
Did not know about place and time of immunization	16	2
Family problem/mother was sick	-	10
Child was sick and not taken to immunization center	-	24
Fear of adverse reaction	17	2
Mother was busy with other work	-	2
Future plan to vaccinate the child	-	5
Vaccinator was not available at the immunization center	-	5
Vaccinator not friendly	-	5
Child was away from home	17	3
Painful for the children	-	5
Others	17	-

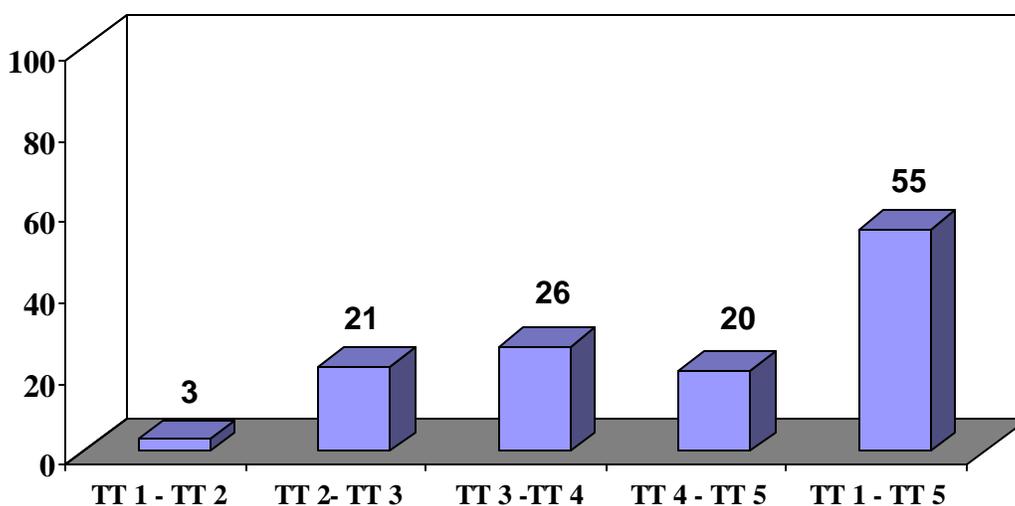
**Chart 3: Knowledge about required visits to immunization centers for full immunization**



**Chart 4: Routine immunization coverage levels for TT among women 15-49 years**



**Chart 5: TT Immunization drop-out rate among women 15-49 years**



**Table 8: 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	2	1	160	99	-	-	-	-	-	-	-	-	162	100
TT2-TT3	-	-	-	-	57	48	63	52	-	-	-	-	120	100
TT3-TT4	-	-	-	-	-	-	-	-	20	22	69	78	89	100
TT4-TT5	-	-	-	-	-	-	-	-	49	70	21	30	70	100

**Table 9: Children born protected against tetanus**

Status of children born protected	Number	Percentage
Protected	119	95
Not Protected	11	5

**Table 9: Age distribution of women who never received any dose of TT vaccine**

Age group	Received		Never received		Total	
	#	%	#	%	#	%
15-19	18	82	4	18	22	100
20-25	74	90	8	10	82	100
26-30	58	98	1	2	59	100
31-35	24	86	4	14	28	100
36-45	15	79	4	21	19	100
Total	189	90	21	10	210	100

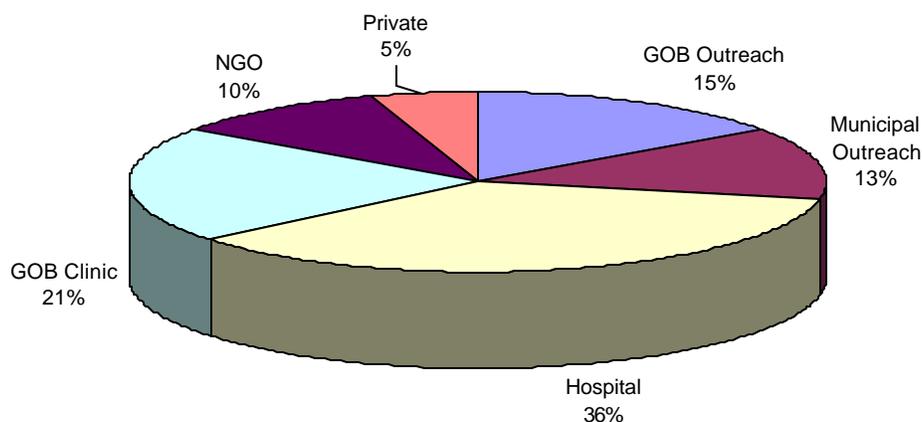
**Table 10: Knowledge about number of TT doses required for full immunization**

Number of TT doses	Number	Percentage
5 doses	16	8
Don't know/no idea	194	92

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

Card Status	Number	Percentage
TT card available	25	12
TT card ever given	171	81
TT card retention	25	15

**Chart 6: Providers of TT immunization**



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

Reasons	Non-immunized (%) (N=21)	Partially immunized (%) (N=104)
Next dose is not yet due	-	16
Don't feel need for immunization	76	-
Health worker did not specify the next dose	-	11
As per HW advice, 2/3 doses of TT are enough during the pregnancy	-	26
Unaware of need of next dose	-	39
In our times, TT immunization was not in practice	10	-
Fear of injection	14	6
Busy with household work	-	2

**Table 13: Coverage of the 10<sup>th</sup> NID Campaign**

Round	OPV (%)	Vit. A (%)
1 <sup>st</sup> round	98	94
2 <sup>nd</sup> round	96	-
Both rounds	94	-
Any round	99	-

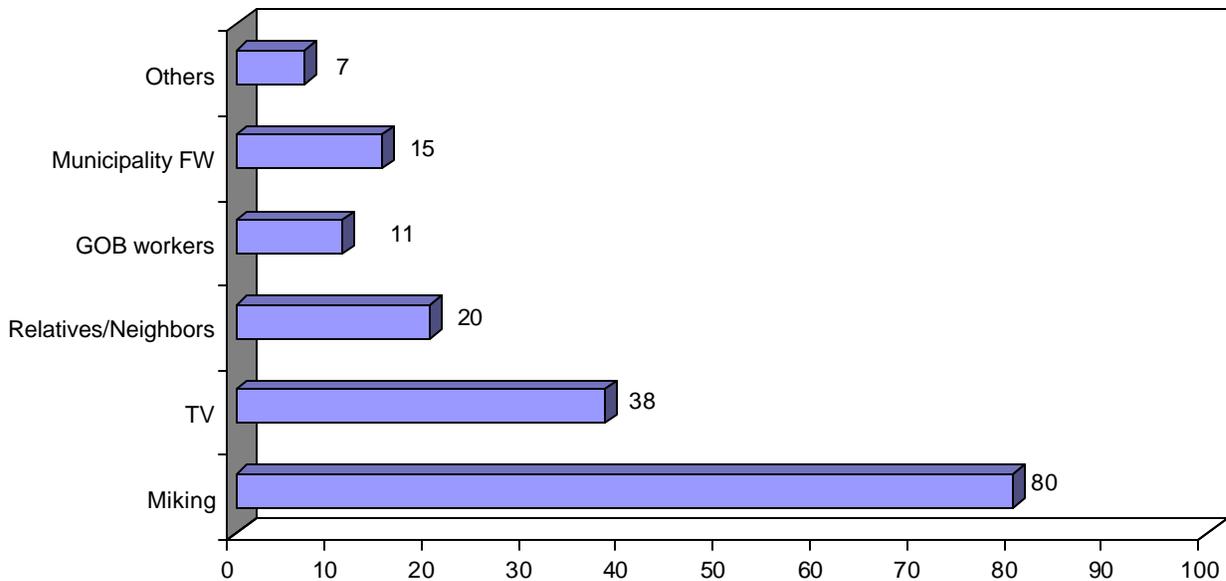
**Table 14: Sources of OPV during the 10<sup>th</sup> NIDs**

Sources of OPV	1 <sup>st</sup> Round		2 <sup>nd</sup> Round	
	#	%	#	%
NID site	203	99	196	97
Child to child search	2	1	5	2
Mobile Team	-	-	1	1
Total	205	100	202	100

**Table 15: Reasons for not receiving OPV from NID sites during the 10<sup>th</sup> NIDs**

Reasons	1 <sup>st</sup> Round (%) (N=7)	2 <sup>nd</sup> Round (%) (N=14)
Did not know about NID	14	21
Forgot the date	14	-
Too busy	-	22
Traveling	-	7
Child already vaccinated	14	-
Religious/social barrier	30	-
Child/Mother was sick, not taken	14	-
Waited for house visit	-	14
Child was away from home	14	29
Others	-	7

**Chart 7: Sources of information about the 10<sup>th</sup> NID campaign**



**Annex- A****List of Selected Clusters for the Survey**

Ward	Mouza name	Mahalla name	Total HH	Total Population	Cluster No.
1	Baiderghona	Baiderghona	646	3800	1,2,3
	D.Ward New Road	D. Ward New Road	333	1911	4,5
	Baharchara Forest Colony	Baharchar Forest Colony	1155	7698	6,7,8,9,10
	Ghona Para	Ghona Para	418	2338	11
	Goldighi Road	Goldighi Road	369	2206	12
	Kyang Road	Kyang Road	349	1860	13
	Mohazer Para	Mohazer Para	269	1493	14
	New Circuit House Road	New Circuit House Road	135	1404	15
2	Pahartoli	Pahartoli	437	2593	16,17
	Tarabania Chara	Tarabania Chara	360	2147	18,19
	Uttar Tek Para	Uttar Tek Para	924	6207	20,21,22,23
	Rumaliar Chara	Rumaliar Chara	209	1096	24,25
3	Bara Bazar	Bara Bazar	410	1817	26,27
	Laldighi Road	Laldighi Road	492	2583	28
	Peshkar Para	Peshkar Para	170	1082	29
	Thana Road	Thana Road	231	1951	30

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

Ward no.	Mouza name	Mahalla name	Total Population	Cluster No.	Never Vaccinated Children
1	D. Ward New Road	D. Ward New Road	1911	4, 5*	1*
	Baharchara Forest Colony	Baharchara Forest Colony	7698	6, 7, 8, 9, 10*	1
	Mohazer Para	Mohazer para	1493	14	1
	New Circuit House Road	New Circuit House Road	1404	15	1
2	Pahartoli	Pahartoli	2593	16, 17*	1*
	Uttar Tek Para	Uttar Tek Para	6207	20*, 21, 22, 23	1*

## **Acknowledgements**

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### Survey Reports

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2. Vaccination Coverage Survey of the Selected Unions along the North-western Border of Bangladesh - February 2000. Survey Report No. 2, June 2000
3. Vaccination Coverage Survey of the Selected Unions along the South-west Border of Bangladesh - February 2000. Survey Report No. 3, July 2000
4. Vaccination Coverage Survey of the Slums of Khulna City Corporation - January 2000. Survey Report No. 4, July 2000
5. Vaccination Coverage Survey of the Slums of Chittagong City Corporation - January 2000. Ward Number 1 to 18. Survey Report No. 5, July 2000
6. Vaccination Coverage Survey of the Slums of Chittagong City Corporation - January 2000. Ward Number 19 to 41. Survey Report No. 6, July 2000
7. Vaccination Coverage Survey of the Dinajpur Municipality - January 2000. Survey Report No. 7, July 2000
8. Vaccination Coverage Survey of the Noakhali Municipality - January 2000. Survey Report No. 8, July 2000
9. Vaccination Coverage Survey of the Slums of Dhaka City Corporation - January 2000. Dhaka Slums of Zones 1, 2 & 4. Survey Report No. 9, July 2000
10. Vaccination Coverage Survey of the Slums of Dhaka City Corporation - January 2000. Dhaka Slums of Zones 5, 6 & 7. Survey Report No. 10, July 2000
11. Vaccination Coverage Survey of the Slums of Dhaka City Corporation - January 2000. Dhaka Slums of Zones 3, 8, 9 & 10. Survey Report No. 11, July 2000
12. Vaccination Coverage Survey of the Tribal and Non-tribal Populations in the North-east Border Areas of Bangladesh. Survey Report No. 12, August 2000
13. Vaccination Coverage Survey of the Sylhet Municipality - January 2000. Survey Report No. 13, August 2000
14. Vaccination Coverage Survey of the Kishoreganj Municipality - April 2000. Survey Report No. 14, September 2000
15. Vaccination Coverage Survey of the Rangpur Municipality - May 2000. Survey Report No. 15, September 2000
16. Vaccination Coverage Survey of the Greater Faridpur Municipalities - June 2000. Survey Report No. 16, September 2000
17. Results of Coverage Evaluation Survey of Routine EPI and August 2000 OPV + TT (NNT) Campaign, Chittagong, Khulna and Rajshahi City Corporation Slums - September 2000. Survey Report No. 17, November 2000
18. Results of Coverage Evaluation Survey of Routine EPI and August 2000 OPV + TT (NNT) Campaign, Dhaka City Corporation Slums - September 2000. Survey Report No. 18, November 2000
19. Results of Coverage Evaluation Survey of Routine EPI and August 2000 OPV + TT (NNT) Campaign, Slums of selected 27 Municipalities - September 2000. Survey Report No. 19, November 2000
20. Results of Coverage Evaluation Survey of Routine EPI and August 2000 OPV + TT (NNT) Campaign, Hard-to-reach and High-risk rural areas - September 2000. Survey Report No. 20, November 2000
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24. Vaccination Coverage Survey of the Comilla Municipality - October 1 - 9, 2000. Survey Report No. 24, February 2001
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28. Vaccination Coverage Survey of the Peri-urban Areas of DCC - November 2000 (Peri-urban Area Survey-1). Survey Report No. 28, July 2001
29. Vaccination Coverage Survey of the Peri-urban Areas of DCC - November 2000 (Peri-urban Area Survey-2). Survey Report No. 29, July 2001
30. Vaccination Coverage Survey of the Patuakhali, Jhalokathi and Pirojpur Municipalities - August 2000. Survey Report No. 30, July 2001
31. Vaccination Coverage Survey of the Bandarban, Rangamati and Khagrachari Municipalities - January 2001. Survey Report No. 31, July 2001
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38. Vaccination Coverage Survey of the Expanded Areas of the Proposed Barisal City Corporation - June 2001. Survey Report No. 38, July 2001

39. Vaccination Coverage Survey of the Barisal Municipality - June 2001. Survey Report No. 39, July 2001
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55. Vaccination Coverage Survey of the Mongla Municipality - December 2001. Survey Report No. 55, January 2002
56. Vaccination Coverage Survey of the Ishwardi Municipality - January 2002. Survey Report No. 56, March 2002
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66. Vaccination Coverage Survey in the Peri-urban Areas of Dhaka City Corporation (Sultanganj and Harirampur Unions) - April 2002. Survey Report No. 66, August 2002
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70. Vaccination Coverage Survey of the Narayanganj Municipality - June 2002. Survey Report No. 70, September 2002

#### **MNT - 2001 Survey Reports**

1. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Slums of Dhaka City Corporation. MNT Survey Report No. 1, March 2002
2. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Slums of Chittagong, Khulna and Rajshahi City Corporations. MNT Survey Report No. 2, March 2002
3. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Selected 27 Municipalities. MNT Survey Report No. 3, March 2002
4. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Rural Areas of Chittagong, Khulna and Barisal Divisions. MNT Survey Report No. 4, March 2002
5. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Rural Areas of Dhaka, Rajshahi and Sylhet Divisions. MNT Survey Report No. 5, March 2002
6. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Brahmanbaria District. MNT Survey Report No. 6, March 2002
7. Vaccination Coverage Survey of Routine EPI and 2001 MNT Campaign in the Kishoreganj District. MNT Survey Report No. 7, March 2002

### **Unicef & IOCH Survey Reports**

1. Vaccination Coverage Survey of the Teknaf and Ukhaia Upazilas - February 2000. Survey Report No. 1, August 2000
2. Vaccination Coverage Survey of the Brahmanbaria Sadar Upazila - February 2000. Survey Report No. 2, August 2000
3. Vaccination Coverage Survey of the Debidwar Upazila - February 2000. Survey Report No. 3, August 2000
4. Vaccination Coverage Survey of the Madaripur Upazila - February 2000. Survey Report No. 4, August 2000
5. Vaccination Coverage Survey of the Maulvi Bazar District - February 2000. Survey Report No. 5, August 2000
6. Vaccination Coverage Survey of the Raumari Upazila - February 2000. Survey Report No. 6, August 2000
7. Vaccination Coverage Survey of the Gangachara Upazila - February 2000. Survey Report No. 7, August 2000
8. Vaccination Coverage Survey of Chittagong Hill Tracts - February 2000. Survey Report No. 8, October 2000

### **Technical Report**

1. Joint National/International Review of EPI Program in Urban Areas of Bangladesh - 23 January - 3 February 2000. Technical Report No. 1, July 2000
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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