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IOCH

Immunization and Other Child Health Project

Vaccination Coverage Survey of the Peri-urban Areas of DCC

(Demra, Matuail, Shyampur, Beraid, Satarkul, Uttar Khan and Dakshin Khan Unions)

June 2003

Survey Report No. 119

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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 (like a village or para) in urban areas
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
SNID	Sub-national Immunization Day
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 1st 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 are the criteria recognized by the Bangladesh EPI program: minimum age for DPT/Polio 1st 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 1st 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

Following the 11th National Immunization Campaign, a national coverage evaluation survey was conducted under the auspices of the Expanded Program on Immunization (EPI), Directorate General of Health Services (DGHS), Government of Bangladesh, with technical assistance from WHO and IOCH in May-June 2003. As a part of this initiative, IOCH conducted a 30-cluster coverage evaluation survey in Demra, Matuail, Shyampur, Beraid, Satarkul, Uttar Khan and Dakshin Khan Unions of the peri-urban areas of DCC in June 2003.

Objectives

The overall objective of the survey was to assess the level of immunization coverage in Demra, Matuail, Shyampur, Beraid, Satarkul, Uttar Khan and Dakshin Khan Unions of the peri-urban areas of DCC. 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 who had given birth during one year prior to the survey, 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 11th 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 Demra, Matuail, Shyampur, Beraid, Satarkul, Uttar Khan and Dakshin Khan Unions of the peri-urban areas of DCC following PPS sampling procedures. A list of the selected clusters is provided in Annex- A and their locations are shown on the maps in page12. From each cluster, 7 children 12 – 23 months and 7 women who gave birth during last 12 months 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 11th 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[1] and EpiInfo.

Coverage levels for the routine immunization of children

Access to child immunization: Based on crude data (card plus history), 98% children received at least one dose of antigen (DPT 1st dose in this case) from routine immunization sessions. 2% children did not receive a dose of any antigen.

[1] COSAS (Coverage Survey Analysis System) is a dedicated software for analyzing coverage evaluation survey data.

Crude coverage of 12-23 months age group: 98% children received BCG, 90% children received three doses of OPV, 90% received three doses of DPT and 75% received measles vaccine. 74% children were fully immunized.

Valid coverage of 12-23 months age group: 98% children received BCG, 70% children received three doses of OPV, 70% received three doses of DPT and 70% received measles vaccine. 57% children were fully immunized.

Valid coverage by 12 months: 98% children received BCG, 66% children received three doses of OPV, 66% received three doses of DPT and 64% received measles vaccine. 51% children were fully immunized.

Routine immunization coverage by Gender: There was no gender difference in accessing immunization services. Boys' access to immunization services, as measured by the crude coverage of DPT1, was the same as that of the girls (98% for both the boys and the girls). However, the DPT3 coverage and measles coverage for the boys were lower than those for the girls, resulting in 5 percentage point higher crude FIC for girls than that for the boys (72% crude FIC for boys vs. 77% crude FIC for girls). Invalid doses of DPT and OPV for the girls were higher than those for the boys, resulting in two percentage points higher valid FIC for boys than the girls (58% valid FIC for boys vs. 56% valid FIC for girls).

Child immunization coverage trend: Child immunization coverage has increased steadily over the past 4 years. Access to immunization services (as measured by DPT1) has increased from 87% in 2000 to 98% in 2003. Crude FIC (Fully Immunized Children) has increased from 65% in 2000 to 74% in 2003. Valid FIC by 12 months has increased from 45% in 2000 to 51% in 2003.

Dropout rates: Although access to child immunization was quite high (98% for DPT1), the dropout rates for different antigens were high too. There were 8% dropouts from DPT1 to DPT3 and 24% from DPT1 to measles.

Dropout trend: The dropout rate from DPT1 to DPT3 has reduced from 19% in 2000 to 8% in 2003. However, the dropout rate from DPT1 to Measles has remained almost constant over the period.

Invalid doses: 8% of the DPT1 doses were administered before 6 weeks of age of the children, and 6% of the measles doses were given before 38 weeks of age of the children. Besides, 3% of the DPT1 doses and 4% of the DPT2 doses were given before 4 weeks interval between the doses.

Trend in invalid doses: Invalid doses of DPT1 have increased over the past four years (from 4% in 2000 to 8% in 2003). However, percentage of invalid measles doses has decreased from 7% in 2000 to 6% in 2003.

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 from 2% to 4%. The composite index for total missed opportunities was 57, reflecting the need for further improving the quality of screening during vaccination sessions.

EPI card retention: 98% of the children interviewed were ever given EPI cards; however, EPI cards were available with 42% of the respondents at the time of interview. EPI card retention rate was 43% only, as 57% of the EPI cards were lost.

Knowledge about required visit to immunization center for full immunization: 24% 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 34% had wrong idea about it. Only 42% 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: Childhood immunization in this area was provided mostly by the GBO EPI outreach centers (41%) and the NGO clinics (41%). GOB hospitals and clinics provided EPI services to 10% and 4% of the cases respectively. Private clinics provided immunization services to another 4% of the cases only.

Adverse reaction following vaccination: None of the children (who had ever received any vaccine) were reported to have abscess or any other adverse reaction after receiving vaccine.

Charges for immunization: Majority of the parents (56%), whose children had ever vaccinated, reported to have paid money for vaccinating their children, and 76% of them paid Tk 10.00 or less per contact for vaccination. Another 14% paid an amount between Tk. 11.00 and Tk. 20.00 per contact for vaccination. Only 3% paid more than Tk. 30.00 per contact for vaccination.

Reasons for non-immunization and partial immunization or dropout of children: 4 children (out of 210) never received any vaccine and the reasons for their non-immunization included: fear of adverse reaction (50%), parents were too busy to take their children to EPI center (25%) or sickness of children (10%). The primary reasons for partial immunization or dropout included: sickness of the children (38%), fear of adverse reaction (10%) and fear that baby would cry of pain (10%).

Coverage levels for the routine TT immunization of women who gave birth in last one year

TT immunization coverage: Access to TT immunization for the women who gave birth in last one year was quite good. 98% of the women received TT1. The corresponding figures for TT2, TT3 and TT4 were 97%, 66% and 51% respectively. Only 33% of the women received TT5, which provide lifelong protection against tetanus. 2% of the women never received any TT vaccine.

Trend in TT immunization coverage: An up-ward trend in TT immunization was observed over the past 4 years. Coverage of TT1 increased from 94% in 2000 to 98% in 2003 and coverage of TT5 increased from 17% in 2000 to 33% in 2003.

Age distribution of women never receiving TT immunization: The data suggest that younger women below 20 years are relatively less likely to receive TT vaccine than the women over 25 years. About 6% of the women below 20 years never received TT vaccine; while this figure for the women over 25 years was one percent only.

Invalid TT doses: A significant proportion of TT doses were invalid as they were administered before the minimum required interval between the doses. 30% 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, 52% of the TT5 doses were invalid for the same reason.

Protection against tetanus at birth: 94% of the newborn babies were found protected against tetanus, indicating that 6% newborn babies were still not protected against tetanus at birth.

Knowledge about full TT immunization: 88% of the women did not have correct knowledge about the number of TT doses required for a woman for full immunization. Only 12% 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: 95% of the women were ever given TT cards; however, TT cards were available with 18% of the women only at the time of interview. TT card retention rate was 19% only, as 81% of the TT cards were lost.

Sources of TT immunization: Majority of the women received TT vaccine from the GOB EPI outreach centers (45%), followed by the NGO clinics (30%). GOB hospitals and clinics provided TT immunization to 12% and 6% of the cases respectively. 7% women received TT vaccine from the private clinics.

Adverse reaction following immunization: None of the woman (out of 201 women who had ever received any TT vaccine) was reported to have abscess or any other adverse reaction after receiving TT vaccine.

Coverage levels for the 11th NIDs

OPV and Vitamin A coverage: 95% of the children <5 years received OPV in both rounds of the 11th NIDs. OPV coverage in the 1st round was 98%; while it was 96% in the 2nd round. Vitamin A capsules were given to 95% of the eligible children (12 – 59 months of age). Besides, 2 ineligible children (out of 210) were wrongly administered Vitamin A, as they were under 1 year on the 1st round NID day.

NID coverage trend: The coverage of OPV in both rounds has remained static at 95% over the past two years. But the coverage of Vitamin A has steadily increased over the past 4 years (from 79% in 2000 to 95% in 2003).

Sources of OPV during the11th NIDs: Most of the children received OPV from the NID sites (98% in the 1st round and 94% in the 2nd round). 3% percent children received OPV during child-to-child search (1% in the 1st round and 2% in the 2nd round).

Household visitation during child-to-child search: While visiting each and every household during child-to-child search to identify the left out children, the health workers/volunteers were supposed to write the date of their visitation on the door or wall of the house. However, no such

visitation date was found written on door or wall of majority of the households. Only 21% households in the 1st round and 25% households in the 2nd round were found with date of visitation (by the workers/volunteers during child-to-child search) written on the door or wall of the houses.

Sources of information of the 2nd round of the 11th NIDs: Majority of the parents learned about the 2nd round of the 11th NIDs from television (66%), followed by family members and neighbors (45%). About 41% of the parents came to know about the NIDs from GOB workers. Mosque miking as a source of information of the NIDs were mentioned by 40% of the parents.

Reasons for not receiving vaccines from the NID sites: The primary reasons for not receiving OPV from the NID sites included: a) lack of information about the NIDs (40% in the 1st round and 50% in the 2nd round); b) parents were busy on NID day (20% in the 1st round and 8% in the 2nd round); and c) Children were away from home (20% in the 1st round and 8% in the 2nd round).

Conclusions and recommendations

Access to child immunization was quite high (98% for DPT1); but this high access dropped to 57% for valid fully immunized children because of dropouts and invalid doses. Although there has been some improvement in reducing the dropout rates from DPT1 to DPT3 over the past 4 years, no tangible reduction in dropout rate for DPT1 to measles has taken place during the period. Too many invalid doses are provided to the children before the minimum required age or before the minimum required interval between the doses. Similarly, access to TT immunization for the women (who gave birth during last one year) was very good. 98% of the women received the first dose of TT, which reduced to 33% for TT5 that provides lifelong protection against tetanus. 30% of TT3 doses, 56% of the TT4 and 52% of the TT5 doses were invalid. To further improve the valid coverage of fully immunized children and women, the current dropout rates and invalid doses need to be further reduced.

- *Vaccination providers should focus on quality of services, such as counseling and screening of children/ mothers/women (for 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. Emphasis should also 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.*
- *The service providers should be given refresher training to improve their technical skills on organizing good vaccination sessions: counseling of mothers/women and screening of clients for immunization.*

The national EPI program emphasizes that all children should get fully immunized before their 1st birthdays (i.e., by 12 months). However, the coverage of fully immunized children (FIC) by 12 months was 51% (which was 6 percentage points less than the coverage of FIC by 23 months).

- *During IPC by the health worker and/or during counseling at first contact, mothers should be clearly informed that only 8 doses will protect their children and that it must happen before 12 months of age. The mass media, such as television, radio and newspapers can play a vital role in educating the parents in this regard.*

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, 43% and 19% respectively.

- *Vaccination cards (EPI card/TT card) should be given special attention. Vaccination cards must be issued to each and every child/woman vaccinated, properly filled out and screened, and they should be replaced, if lost, whenever needed. During counseling at the first contact and/or IPC by the health worker, mothers/women should be explained the benefits and importance of EPI cards/ TT cards for immunization of themselves and their children. They should be asked to preserve the EPI card and TT card safely, and to bring the cards with them whenever they come to the clinic/ EPI center for immunization of themselves and their children. 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.*

Although 98% of the women who gave birth in the past one year received at least two doses of TT, many newborn babies (6% of the total newborn babies) were found unprotected against tetanus at birth.

- *The pregnant mothers should be motivated to receive the required number of valid TT doses necessary to protect their newborn babies against tetanus.*

The understanding of mothers' about the number of doses required for fully immunization of themselves and of their children is very critical. It was found that the mothers had a poor understanding of full immunization. Over half of the mothers (58%) could not mention how many times a child was required to be taken to EPI center to get fully immunized. Similarly, 88% of the women (who gave birth in past one year) 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.*

Fear of adverse reaction was cited as primary reason for non-immunization of children by majority of parents (50%). It appears that the parents may have wrong impressions about adverse reaction of vaccination.

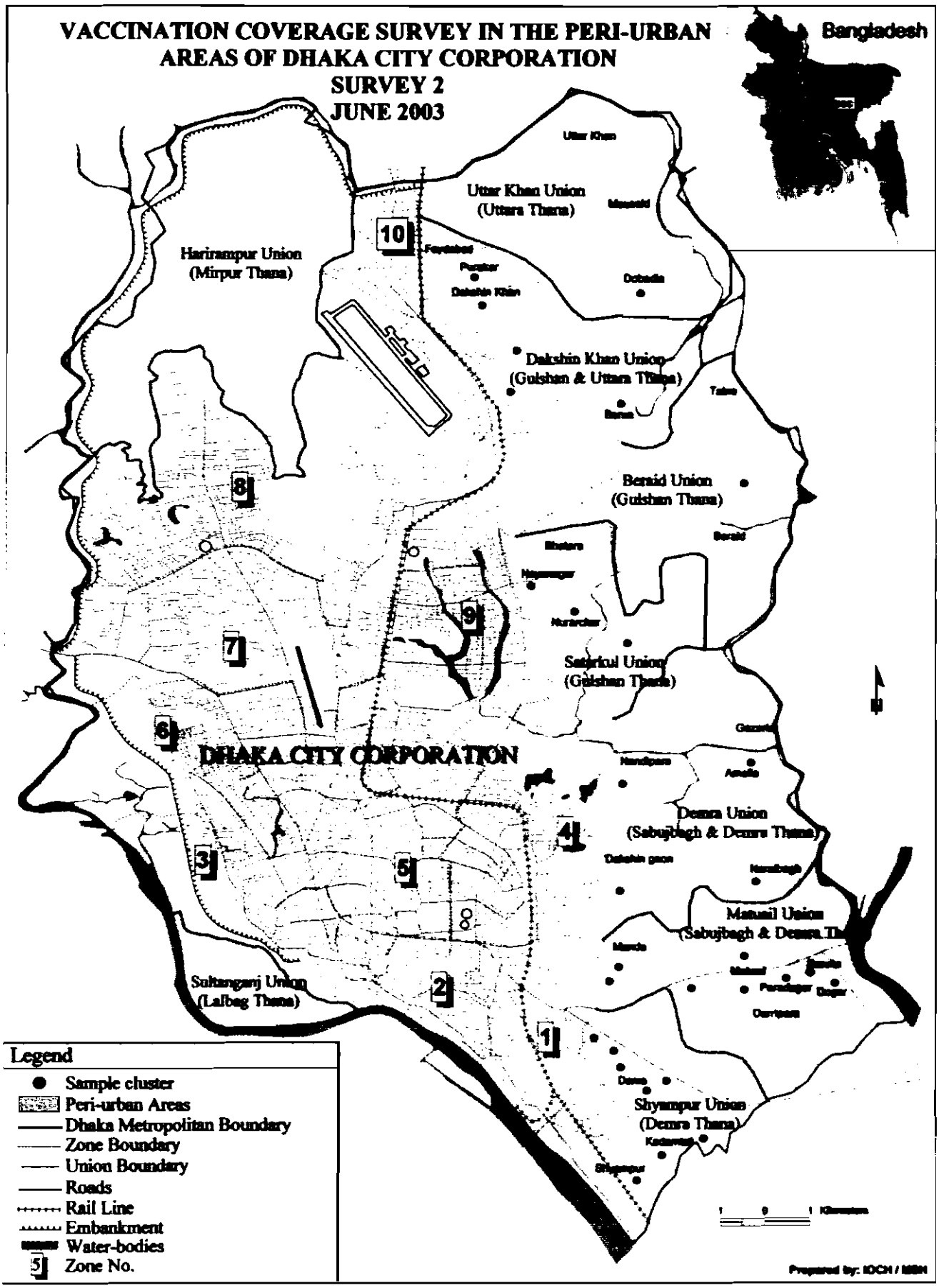
- *Appropriate BCC activities by the health workers during IPC and counseling at the first contact may remove the fear of adverse reaction of vaccination from the minds of the parents. Very selective and focused mass media campaign, in addition to IPC by health workers, may also be conducted to achieve this end.*

5% of the children 0 –59 months did not receive OPV in the both rounds of the 11th NIDs. 79% households in the 1st round and 75% in the 2nd round 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 NIDs to reach to the left out children. These may include, but not limited to, the following:*
  - *using mosque miking, as well as Imam of the mosque during Jumma Pray;*
  - *special team at railway station, bus stand, ferry-ghat etc. for traveling children*
  - *evening NID sites for working mothers;*
  - *special mobile teams at night to vaccinate homeless and floating children; and*
  - *strengthening supervision of field workers during child-to-child search to ensure that each and every household is visited and properly marked by the workers*

5% of the eligible children (12 – 59 months) did not receive Vitamin A during the 1st round of the 11th NIDs. Besides, 2 ineligible children out of 210 were wrongly administered Vitamin A, as they were under 1 year on the 1st 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 IN THE PERI-URBAN AREAS OF DHAKA CITY CORPORATION
SURVEY 2
JUNE 2003
Bangladesh
Uttar Khan Union (Uttara Thana)
Harirampur Union (Mirpur Thana)
Dakshin Khan Union (Gulshan & Uttara Thana)
Bonaid Union (Gulshan Thana)
Satarkul Union (Gulshan Thana)
DHAKA CITY CORPORATION
Demra Union (Sabujbagh & Demra Thana)
Matuail Union (Sabujbagh & Demra Thana)
Sultangonj Union (Lalbag Thana)
Shyampur Union (Demra Thana)
10
9
8
7
6
5
4
3
2
1
Legend
Sample cluster
Peri-urban Areas
Dhaka Metropolitan Boundary
Zone Boundary
Union Boundary
Roads
Rail Line
Embankment
Water-bodies
Zone No.

TABLES AND FIGURES

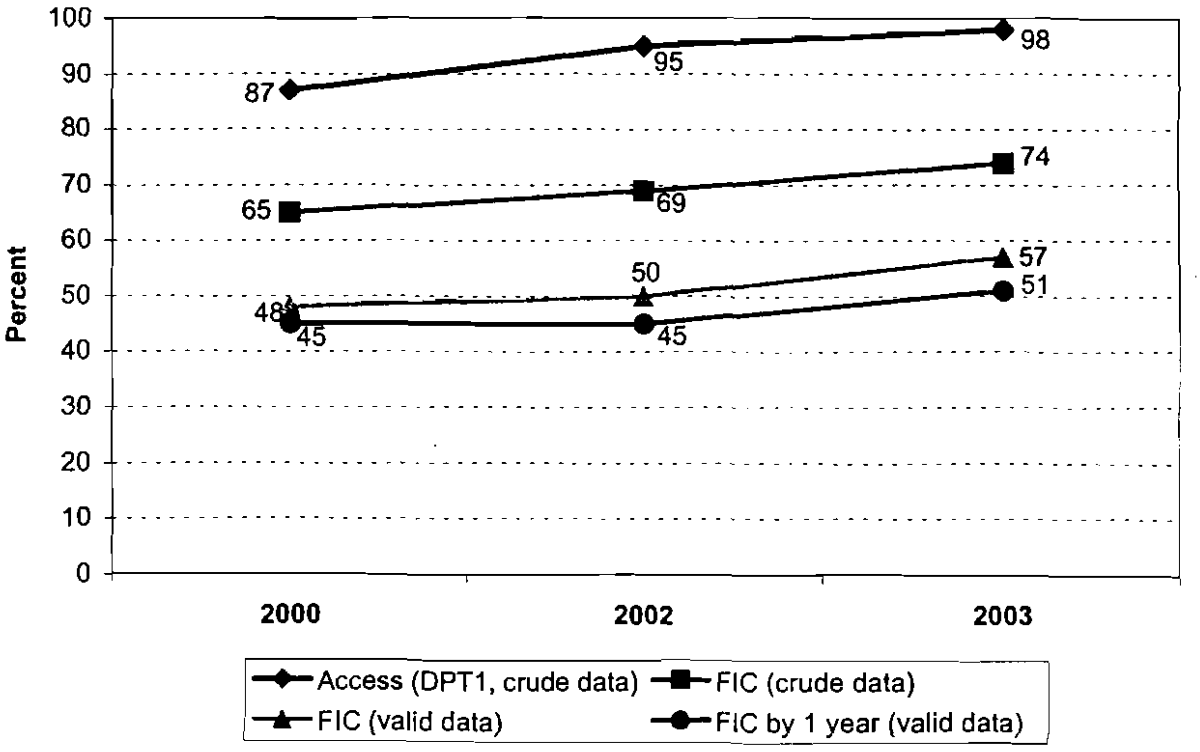
Table 1: Routine immunization coverage levels of the children

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	98	98	98
OPV1	98	91	91
OPV2	97	82	81
OPV3	90	70	66
DPT1	98	91	91
DPT2	97	82	81
DPT3	90	70	66
Measles	75	70	64
Fully immunized	74	57	51
Zero Dose	2	-	-

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	98	98	98	98	98
OPV1	98	98	93	88	93	88
OPV2	97	97	85	79	83	79
OPV3	87	94	71	69	64	69
DPT1	98	98	93	88	93	88
DPT2	97	97	85	79	83	79
DPT3	87	94	71	69	64	69
Measles	73	77	70	71	63	66
Fully immunized	72	77	58	56	52	51
Zero dose	2	2	-	-	-	-

Figure 1: Child immunization coverage trend



Source: IOCH Vaccination Coverage Survey - 2000, 2002 and 2003

Figure 2: Drop-out rate for child immunization

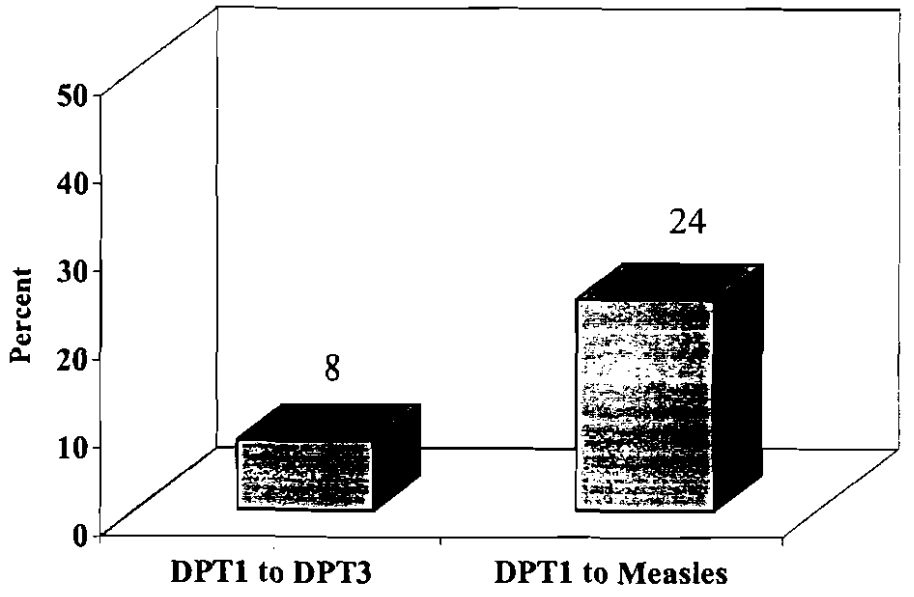
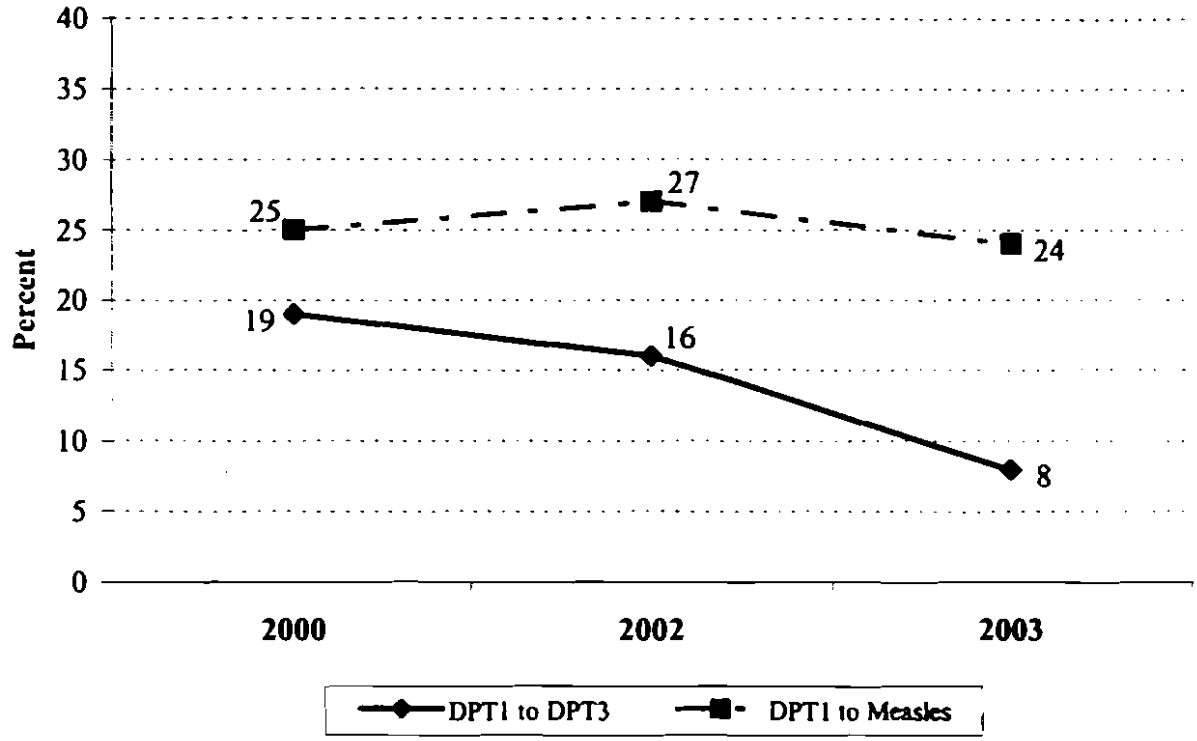


Figure 3: Child immunization dropout trend

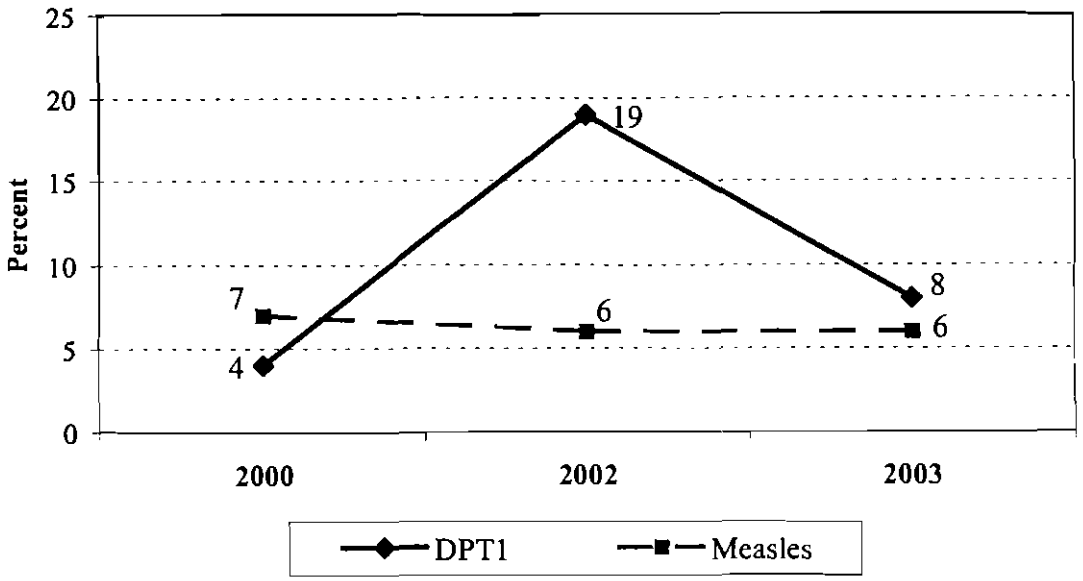


Source: IOCH Vaccination Coverage Survey - 2000, 2002 and 2003

Table 3: Invalid doses of immunization provided to the children

Antigens	Percents
DPT1	8
DPT2	3
DPT3	4
Measles	6

Figure 4: Trend in invalid doses of child immunization



Source: IOCH Vaccination Coverage Survey - 2000, 2002 and 2003

Table 4: Missed opportunities by antigens

Name of the vaccine	Uncorrected		Corrected		Total	
	Number	Percent	Number	Percent	Number	Percent
BCG	8	4	5	2	13	6
DPT1	9	4	3	1	12	6
DTP2	4	2	1	0	5	2
DPT3	1	0	1	0	2	1
OPV1	9	4	3	1	12	6
OPV2	4	2	1	0	5	2
OPV3	1	0	1	0	2	1
Measles	4	2	2	1	6	3
*Index					57	

* *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	89	42
EPI card ever given	206	98
EPI card retention	89	43

Figure 5: Knowledge about required visits to immunization centers for full immunization

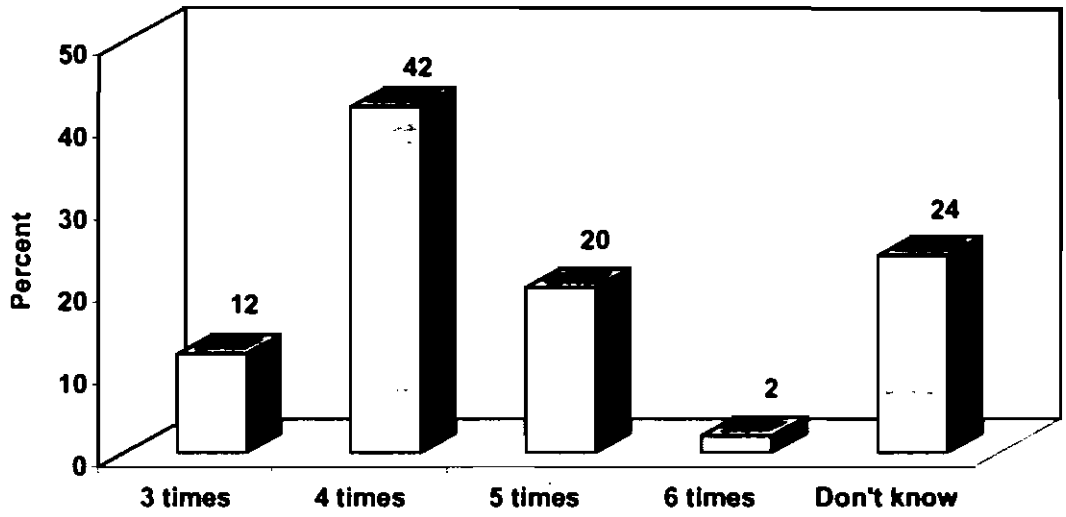


Figure 6: Sources of child immunization services

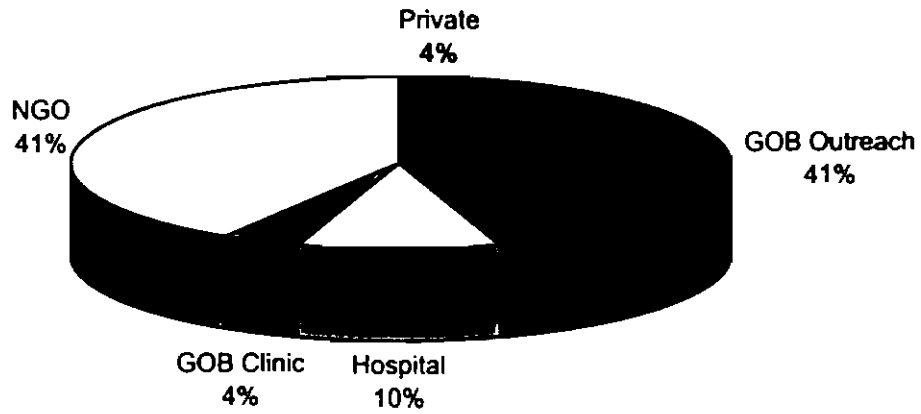


Table 6: Children who had an abscess after receiving vaccine

Status of children abscess	Number	Percentage
Abscess	0	0
No abscess	206	100
Total	206	100

Table 7: Children who had any other adverse reaction after receiving vaccine

Status of other adverse reaction	Number	Percentage
Other adverse reaction	0	0
No other adverse reaction	206	100
Total	206	100

Table 8: Parents of the children who paid money for receiving vaccine by amount of money paid per contract

Amount of money (in Taka)	Number	Percentage
1-10 Taka	87	42
11-20 Taka	16	8
21-30 Taka	8	4
>30 Taka	4	2
No money was paid	91	44
Total	206	100

Table 9: Reasons for non-immunization and partial immunization of the children

Reasons for non-immunization or partial immunization	Non-immunized (%) (N=4)	Partially immunized (%) (N=50)
Did not know when to return for 2nd/3rd dose	-	2
Did not know when to return for measles vaccine	-	2
Did not know where to go for vaccination	-	2
Fear of adverse reaction	50	10
Does not believe in vaccination	-	-
Planning to vaccinate in future	-	6
Too busy to take the child to EPI center	25	6
Vaccine was not available at the site	-	2
Mother was sick	-	2
Child was sick, not taken to vaccination center	-	30
Child was sick, taken but not given	25	8
Had to pay money for vaccination	-	4
Did not know the need and importance of next dose	-	8
Fear of pain	-	2
Baby cries	-	10
Did not remember	-	4
Card was lost, not given by vaccinator	-	2

Figure 7: TT immunization coverage levels of the women who gave birth in last one year

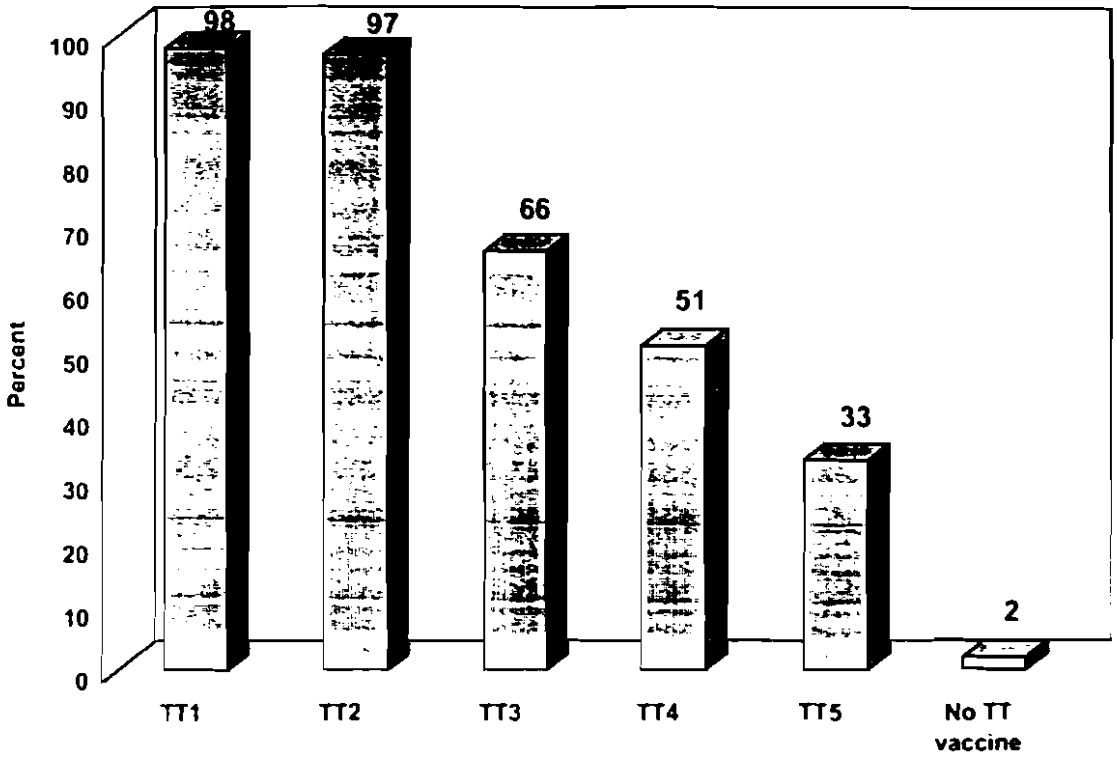
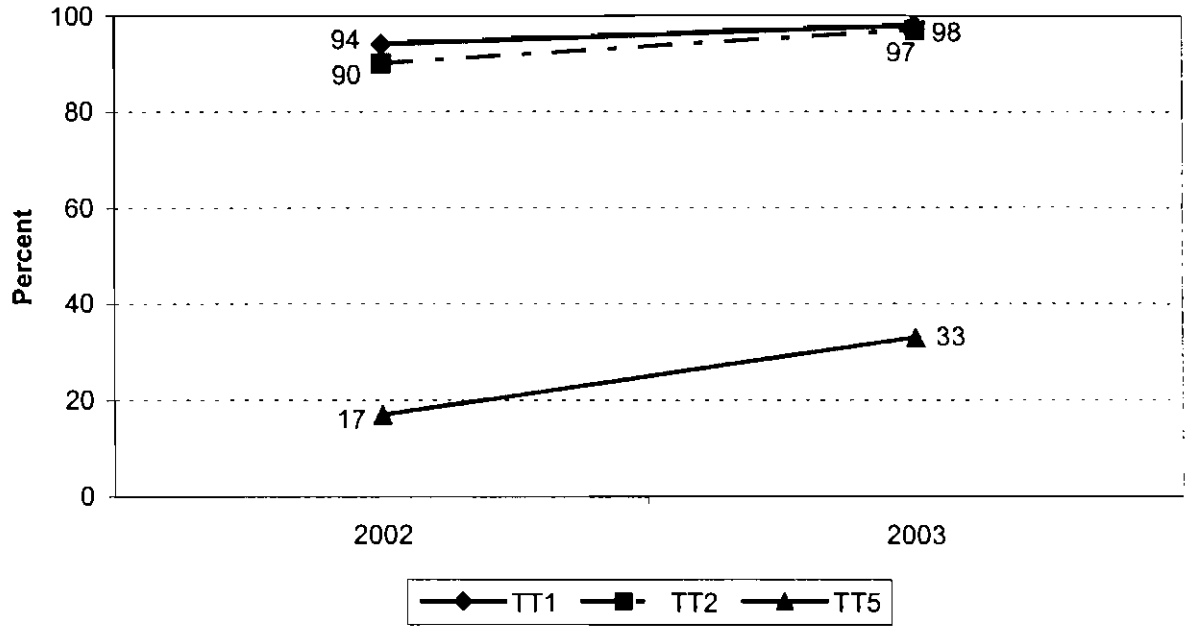


Table 10: Age distribution of women who never received TT vaccine (among those who gave birth in last year)

Age group	# of women	Never received TT	
		#	%
<20 years	18	1	6
20-25 years	87	3	3
26-30 years	80	1	1
31-35 years	22	-	-
>35 years	3	-	-
Total	210	5	2

Figure 8: TT immunization trend among the women giving birth in last one year



Source: IOCH Vaccination Coverage Survey - 2002 and 2003

Table 11: 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	1	1	192	99	-	-	-	-	-	-	-	-	193	100
TT2-TT3	-	-	-	-	37	30	88	70	-	-	-	-	125	100
TT3-TT4	-	-	-	-	-	-	-	-	52	56	41	44	93	100
TT4-TT5	-	-	-	-	-	-	-	-	30	52	28	48	58	100

Table 12: Children born protected against tetanus

Status of children born protected	Number	Percentage
Protected	197	94
Not Protected	13	6

Table 13: Knowledge about number of TT doses required for life time protection against tetanus

Answers	Number	Percentage
2 doses	2	1
5 doses	25	12
Don't know/ no idea	183	87

Table 14: TT cards availability and retention

Card Status	Number	Percentage
TT card available	38	18
TT card ever given	199	95
TT card retention	38	19

Figure 9: Providers of TT immunization

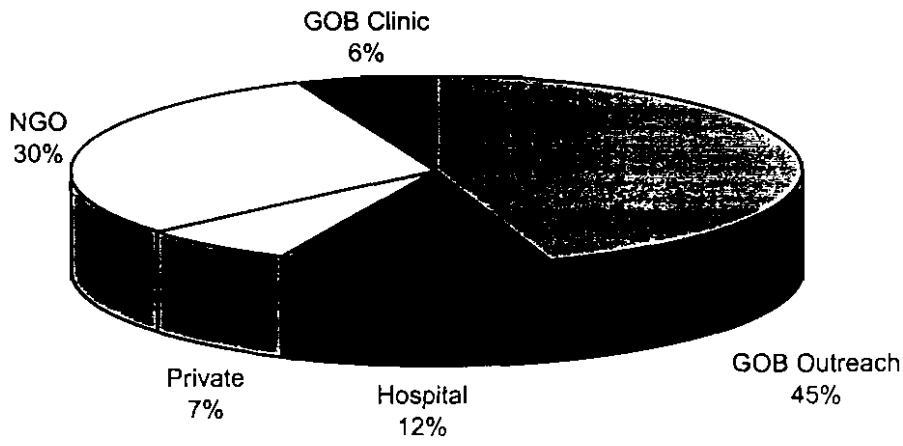


Table 15: Women who had an abscess after receiving TT

Status of women abscess	Number	Percentage
Abscess	0	0
Not abscess	205	100
Total	205	100

Table 16: Women who had any other adverse reaction after receiving TT

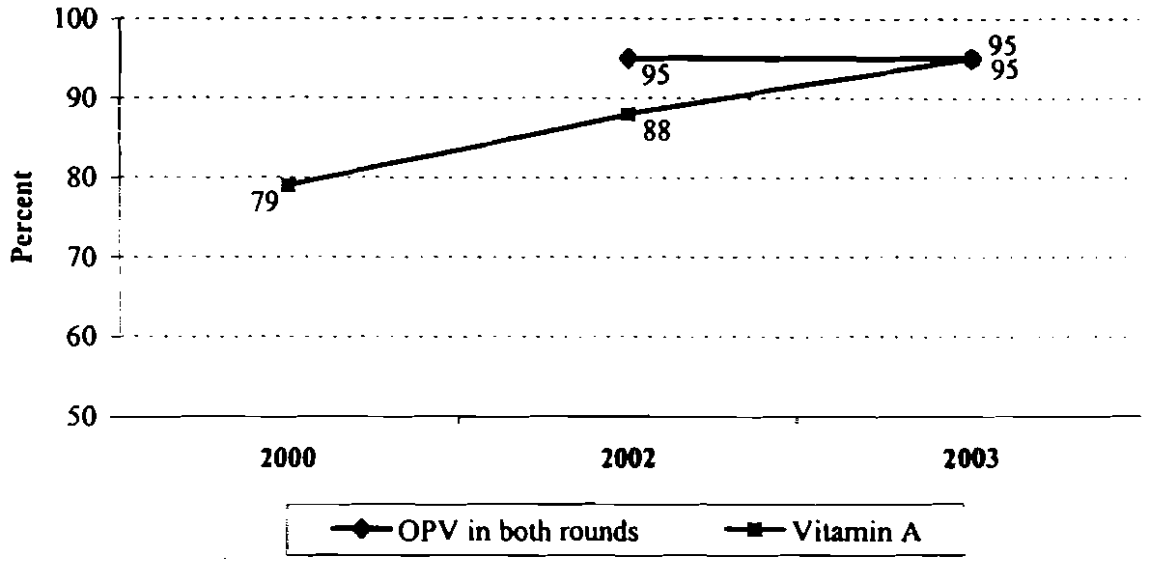
Status of other adverse reaction	Number	Percentage
Other adverse reaction	0	0
No other adverse reaction	205	100
Total	205	100

Table 17: OPV and Vitamin A Coverage during the 11th NIDs

N=210

Round	OPV (%)	Vitamin A (%)
1st round	98	95
2nd round	96	-
Both round	95	-
Any round	99	-

Figure 10: NID coverage trend



Source: IOCH Vaccination Coverage Survey - 2000, 2002 and 2003

Table 18: Sources of OPV during the 11th NIDs

Sources of OPV	1st Round		2nd Round	
	#	%	#	%
NID site	205	98	198	94
Mobile on NID	-	-	-	-
Mobile after NID	-	-	-	-
Child to child search	1	0	4	2
Not received	4	2	8	4
Total	210	100	210	100

Table 19: Date of child-to-child search of the 11 NIDs were written on the door of the house

Variable	1st Round		2nd Round	
	#	%	#	%
Written	45	21	52	25
Not written	165	79	158	75
Total	210	100	210	100

Figure 11: Sources of information of the 2nd round of the 11th NID campaign

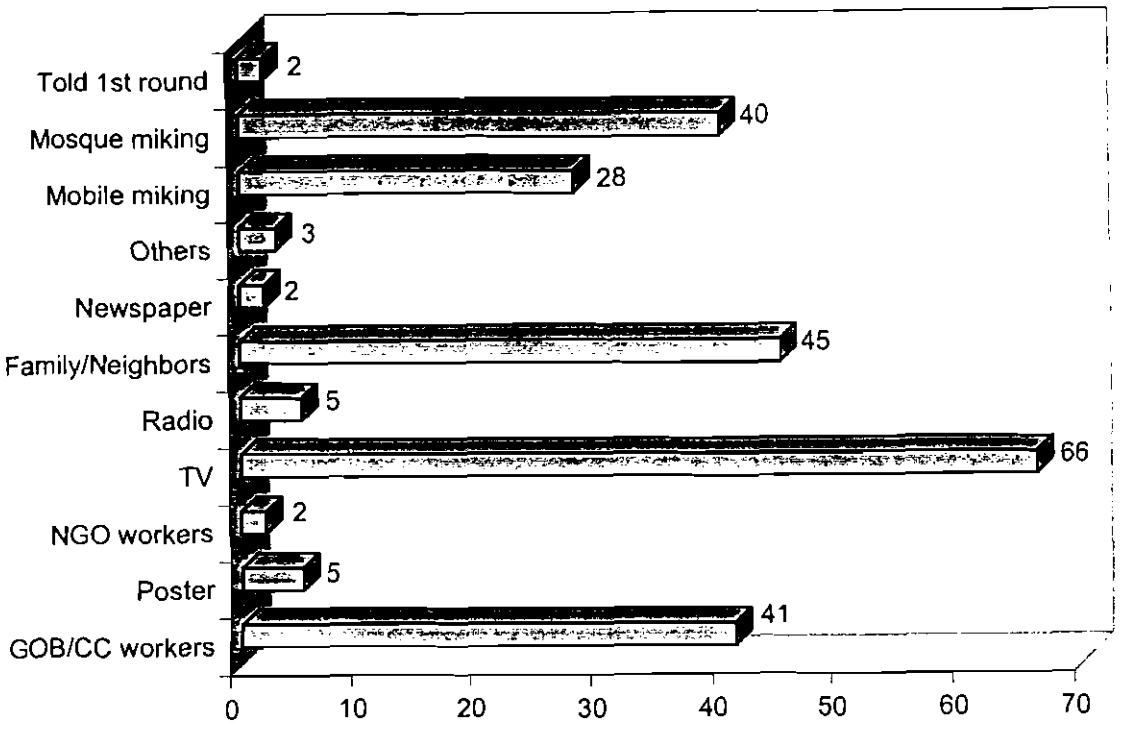


Table 20: Reasons for not receiving of OPV from NID sites of the 11th NIDs

Reasons	1st Round (%) (N=5)	2nd Round (%) (N=12)
Did not know about NID	40	50
Too busy	20	8
Mother did not know the importance	-	9
Vaccine was not available	-	8
Child was not at home	20	8
Child sick, not taken	-	8
Mother was sick	-	9
Received OPV before 11 NID	20	-

Annex- A

List of Selected Clusters for the Survey

Union	Mouza name	Mahalla name	Total HH	Total Pop.	Cluster No.
Demra	Amalia	Amalia	341	1837	1
	Narai bagh	Narai bagh	764	4272	2
	Dakshin gaon	Manikdi	335	2167	3
	Nandi para	Paschim nandi para	626	3220	4
Matuail	Dogar	Dogar	2493	11759	5
	Jokka	Purba box nagar	201	915	6
	Matuail	Matuail	3978	22234	7,8
	Para dagar	Para dagar	2358	12367	9
	Sarulia	Tengra	3609	14924	10
	Manda	Manda	4644	21570	11,12
Shyam pur	Dhania	Dhania	8803	45853	13,14,15
		Kutub khali	2428	12364	16
		Kabiraj bagh	335	1951	17
	Kadam tali	Bak char	1131	5275	18
		Purba kadamtali	298	1538	19
	Shyampur	Shyampur pal para	2605	12738	20
Beraid	Chhoto Beraid	Chhoto Beraid	102	502	21
Dakshin khan	Barua	Barua	1121	6442	22
	Dakshin Khan	Halan	168	888	23
		Irshal	465	1858	24
		Dakshin khan	1649	9138	25
	Purakar	Purakar	2143	9862	26
Satarkhul	Bhatara	Naya nagar	1820	8719	27
		Nurer chala	2302	11165	28
	Satar kul	Pach khola	83	530	29
Uttar khan	Uttar Khan	Dobadia	201	970	30

Annex-B

List of Never Vaccinated Children Identified by Clusters

Union	Mouza name	Mahalla name	Total HH	Total Pop.	Cluster No.	Child No.
Demra	Dakshin gaon	Manikdi	335	2167	3*	2*
	Nandi para	Paschim nandi para	626	3220	4*	3*
Matuail	Manda	Manda	4644	21570	11,12*	2*
Shyam pur	Dhania	Dhania	8803	45853	13, 4*, 15	7*

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3. Vaccination Coverage Survey of the Selected Unions along the South-west Border of Bangladesh - February 2000. Survey Report No. 3, July 2000
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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
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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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