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IOCH

Immunization and Other Child Health Project

Vaccination Coverage Survey of the Chitagong City Corporation

May 2003

Survey Report No. 116

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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 Govemmental 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 the Chittagong City Corporation (RCC) on 20 - 26 May 2003.

Objectives

The overall objective of the survey was to assess the level of immunization coverage in the Chittagong City Corporation. 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 Chittagong City Corporation 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), 97% children received at least one dose of antigen (DPT 1st dose in this case) from routine immunization sessions. 3% children did not receive a dose of any antigen.

Crude coverage of 12-23 months age group: 96% children received BCG, 87% children received three doses of OPV, 87% received three doses of DPT and 80% received measles vaccine. 80% children were fully immunized.

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

Valid coverage of 12-23 months age group: 96% children received BCG, 78% children received three doses of OPV, 78% received three doses of DPT and 75% received measles vaccine. 69% children were fully immunized.

Valid coverage by 12 months: 95% children received BCG, 77% children received three doses of OPV, 77% received three doses of DPT and 70% received measles vaccine. 63% children were fully immunized.

Routine immunization coverage by Gender: Boys' access to immunization services, as measured by the crude coverage of DPT1, was slightly higher than that of the girls (98% for boys vs. 96% for girls). Proportions of fully immunized children (FIC), both crude and valid data, for boys were also higher than those for girls (82% crude FIC for boys vs. 77% crude FIC for girls, and 71% valid FIC for boys vs. 66% valid FIC for girls).

Child immunization coverage trend: Routine child immunization coverage, particularly DPT1 coverage (i.e., access to immunization services) and crude FIC (fully immunized children), has considerably increased over the past 4 years. Access to child immunization (as measured by DPT1) has increased from 92% in 2000 to 97% in 2003. Crude FIC (Fully Immunized Children) has increased from 76% in 2000 to 80% in 2003. However, there has been no improvement in the coverage of valid FIC by 12 months over the last 4 years.

Dropout rates: Although access to child immunization was quite high (97% for DPT1), the dropout rates for different antigens were 10% from DPT1 to DPT3 and 17% from DPT1 to measles.

Dropout trend: No particular trend in dropout was observed during the past 4 years. The dropout rate from DPT1 to DPT3 reduced from 11% in 2000 to 5% in 2002 and then again increased to 10% in 2003. Similarly, the dropout rate from DPT1 to Measles reduced from 14% in 2000 to 4% in 2002 and then again increased to 17% in 2003.

Invalid doses: 9% 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, 1% of the DPT2 doses were given before 4 weeks interval between the doses.

Trend in invalid doses: Invalid doses of DPT1 and measles have increased over the period. Invalid DPT1 doses reduced from 6% in 2000 to 1% in 2002 and then increased to 9% in 2003. Invalid measles doses increased form 3% in 2000 to 6% in 2003.

Missed opportunities: Total missed opportunities (uncorrected plus corrected) for different antigens ranged from 0.5% to 7%. The prevalence of uncorrected missed opportunities for different antigens ranged from 0.5% to 1%. The composite index for total missed opportunities was 28, reflecting the need for further improving the quality of screening during vaccination sessions.

EPI card retention: 92% of the children interviewed were ever given EPI cards; however, EPI cards were available with 60% of the respondents at the time of interview. EPI card retention rate was 64% only, as 36% of the EPI cards were lost.

Knowledge about required visit to immunization center for full immunization: 19% 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 21% had wrong idea about it. Only 60% 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 NGO clinics (42%), followed by the city corporation outreach centers (30%). GOB clinics and hospitals provided EPI services to 12% and 10% of the cases respectively. Private clinics provided immunization services to another 6% of the cases only.

Adverse reaction following vaccination: 1% of the children (who had ever received any vaccine) were reported to have abscesses after receiving vaccine, and 50% of them had their abscesses at their arms; while the rest (50%) had it at their thighs. About 6% of the ever immunized children experienced other adverse reaction following immunization, such as fever and swollen thigh, and three-fourth of them suffered from fever after receiving vaccine

Charges for immunization: Majority of the parents (88%), whose children had ever vaccinated, reported to have paid money for vaccinating their children, and over two-thirds of them paid Tk 10.00 or less per contact for vaccination. Another 14% paid an amount between Tk. 11.00 and Tk. 30.00 per contact for vaccination. Only 5% paid more than Tk. 30.00 per contact for vaccination.

Reasons for non-immunization and partial immunization or dropout of children: 6 children (out of 210) never received any vaccine and each of them for different reason which included: fear of adverse reaction, parents were too busy to take their child to vaccination center, parents did not believe in the benefits of vaccination or sickness of child. The primary reasons for partial immunization or dropout included: parents did not know when to return for subsequent doses/ measles vaccine to get fully immunized (24%), fear of adverse reaction (19%), and parents could not take their children to the vaccination center on scheduled day due to preoccupation with other work (17%).

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. 95% of the women received TT1. The corresponding figures for TT2, TT3 and TT4 were 95%, 72% and 52% respectively. Only 40% of the women received TT5, which provide lifelong protection against tetanus. 5% 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 81% in 2000 to 95% in 2003 and coverage of TT5 increased from 30% in 2000 to 40% in 2003.

Age distribution of women never receiving TT immunization: There was no apparent association between age of the women and their immunization status.

Invalid TT doses: A significant proportion of TT doses were invalid as they were administered before the minimum required interval between the doses. 32% of the TT3 doses were given before 6 months interval between TT2 and TT3, and as such were invalid. 39% of the TT4 doses were invalid, since they were given before one year interval between TT3 and TT4; similarly, 42% of the TT5 doses were invalid for the same reason.

Protection against tetanus at birth: 93% of the newborn babies were found protected against tetanus, indicating that 7% newborn babies were still not protected against tetanus at birth.

Knowledge about full TT immunization: 75% of the women did not have correct knowledge about the number of TT doses required for a woman for full immunization. Only 25% 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: 81% of the women were ever given TT cards; however, TT cards were available with 36% of the women only at the time of interview. TT card retention rate was 44% only, as 56% of the TT cards were lost.

Sources of TT immunization: Majority of the women received TT vaccine from the NGO clinics (46%), followed by the city corporation EPI outreach centers (31%). GOB hospitals and clinics provided TT immunization to 9% and 6% of the cases respectively. 8% women received TT vaccine from the private clinics.

Adverse reaction following immunization: Only one woman (out of 200 women who had ever received any TT vaccine) was reported to have abscess at her arm after receiving TT vaccine. Besides, 3 women experienced other adverse reaction such as fever, bleeding etc. after receiving TT vaccine.

Coverage levels for the 11th NIDs

OPV and Vitamin A coverage: 97% of the children <5 years received OPV in both rounds of the 11th NIDs. OPV coverage in the 1st round was 99%; while it was 98% in the 2nd round. Vitamin A capsules were given to 95% of the eligible children (12 – 59 months of age). Besides, 5 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 during the NIDs has steadily increased over the past 4 years (from 91% in 2000 to 97% in 2003). Vitamin A coverage has also improved over the same period (from 81% in 2000 to 95% in 2003).

Sources of OPV during the11th NIDs: Most of the children received OPV from the NID sites (96% in the 1st round and 95% in the 2nd round). 3% percent children received OPV during child-to-child search in each 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 29% households in the 1st round and 39% 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 (80%), followed by mobile miking (55%). About 33% of the parents came to know about the NIDs from their neighbors or family members. NGO workers as source of information of the NIDs were mentioned by 20% of the parents.

Reasons for not receiving vaccines from the NID sites: The primary reason for not receiving OPV from the NID sites included: a) lack of information about the NIDs (25% in the 1st round and 9% in the 2nd round); b) parents' preoccupation on NID day (25% in the 1st round and 55% in the 2nd round); and c) children waited at home to be immunized by the health workers during child-to-child (13% in the 1st round and 9% in the 2nd round).

Conclusions and recommendations

Access to child immunization was quite high (97% for DPT1); but this high access dropped to 69% for valid fully immunized children because of dropouts and invalid doses. There has not been any improvement in reducing the dropout rates over the past 4 years; rather dropout rate for DPT1 to measles has increased from 14% in 2000 to 17% in 2003). 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. 95% of the women received the first dose of TT, which reduced to 40% for TT5 that provides lifelong protection against tetanus. 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 63% (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, 64% and 44% 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 95% of the women who gave birth in the past one year received at least two doses of TT, many newborn babies (7% 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. 40% of the mothers could not mention how many times a child was required to be taken to EPI center to get fully immunized. Similarly, 75% 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 an important primary reason for dropout or partial immunization of children by a sizable number of parents (19%). It appears that the parents may have wrong impressions about adverse reaction of vaccination. However, the current 1% abscess rate might have contributed to such impressions of the parents.

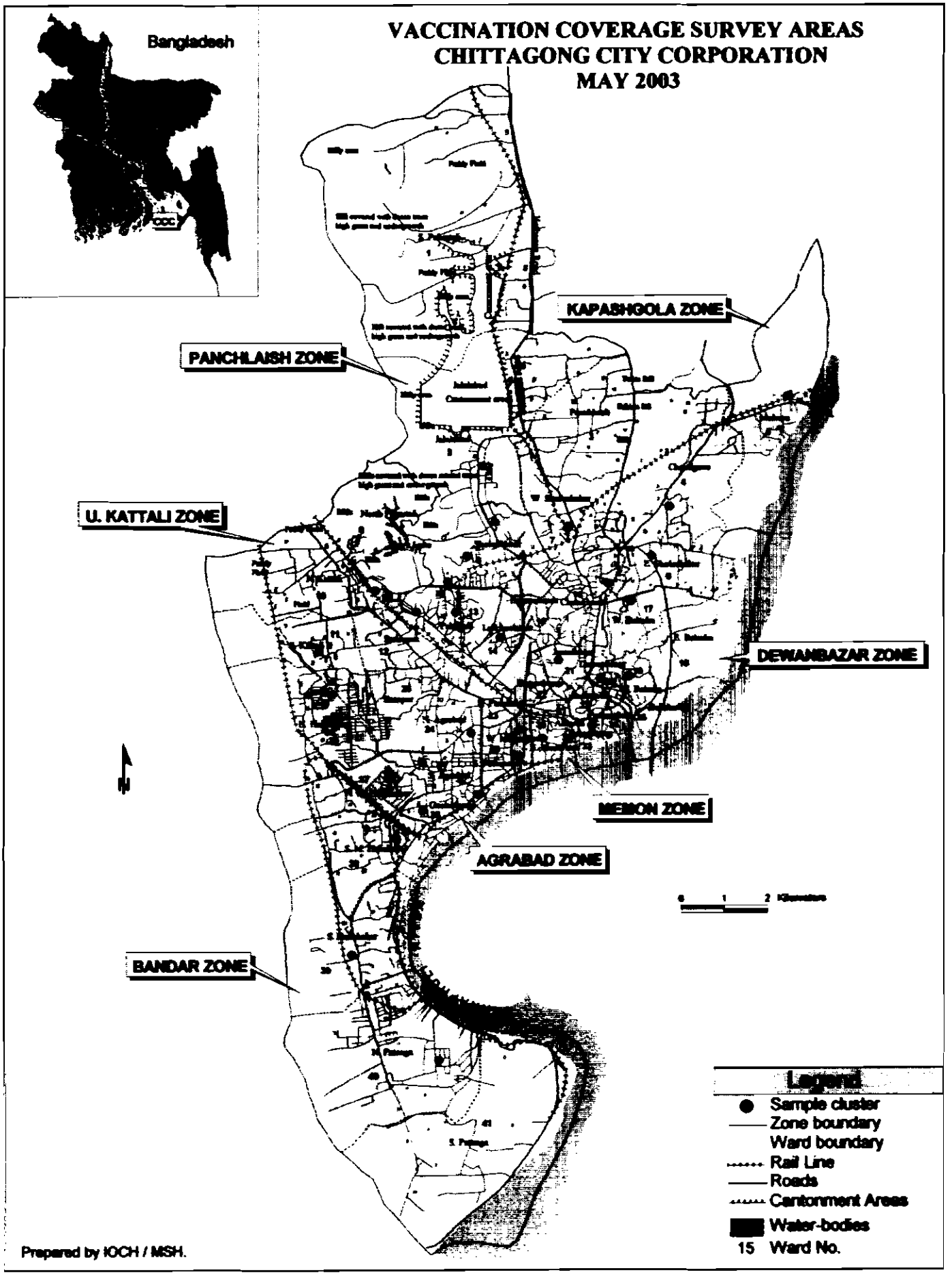
- *Appropriate BCC activities by the health workers during IPC and counseling at the first contact may remove the fear of adverse reaction of vaccination from the minds of the parents. Very selective and focused mass media campaign, in addition to IPC by health workers, may also be conducted to achieve this end.*
- *Special attention should be given to better sterilization/injection safety procedures to reduce current 6% abscess rate*

3% of the children 0 –59 months did not receive OPV in the both rounds of the 11th NIDs. 71% households in the 1st round and 61% 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, 5 ineligible children out of 210 (i.e., 4%) 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 AREAS
CHITTAGONG CITY CORPORATION
MAY 2003
Bangladesh
CCC
KAPASHGOLA ZONE
PANCHLAISH ZONE
U. KATTALI ZONE
DEWANBAZAR ZONE
MEMON ZONE
AGRABAD ZONE
BANDAR ZONE
N
0 1 2 Kilometers
Legend
Sample cluster
Zone boundary
Ward boundary
Rail Line
Roads
Cantonment Areas
Water-bodies
15 Ward No.
Prepared by ICCH / MSH.

TABLES AND FIGURES

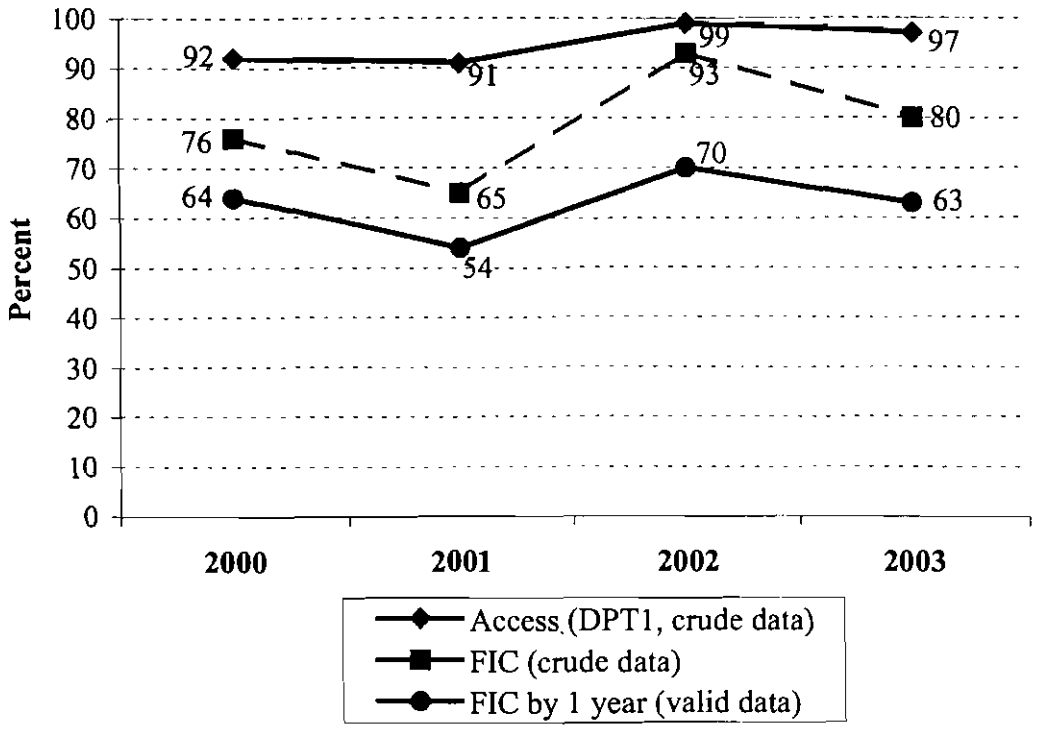
Table 1: Routine immunization coverage levels of the children

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	96	96	95
OPV1	97	88	87
OPV2	92	84	83
OPV3	87	78	77
DPT1	97	88	87
DPT2	92	84	83
DPT3	87	78	77
Measles	80	75	70
Fully immunized	80	69	63
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	98	95	98	95	96	95
OPV1	98	96	90	87	88	87
OPV2	94	91	86	83	84	83
OPV3	90	85	80	77	78	77
DPT1	98	96	90	87	88	87
DPT2	94	91	86	83	84	83
DPT3	90	84	80	76	78	76
Measles	82	78	77	74	72	69
Fully immunized	82	77	71	66	64	63
Zero dose	1	4	-	-	-	-

Figure 1: Child immunization coverage trend



Source: National Coverage Evaluation Survey- 2000, 2001, 2002 and 2003

Figure 2: Drop-out rate for child immunization

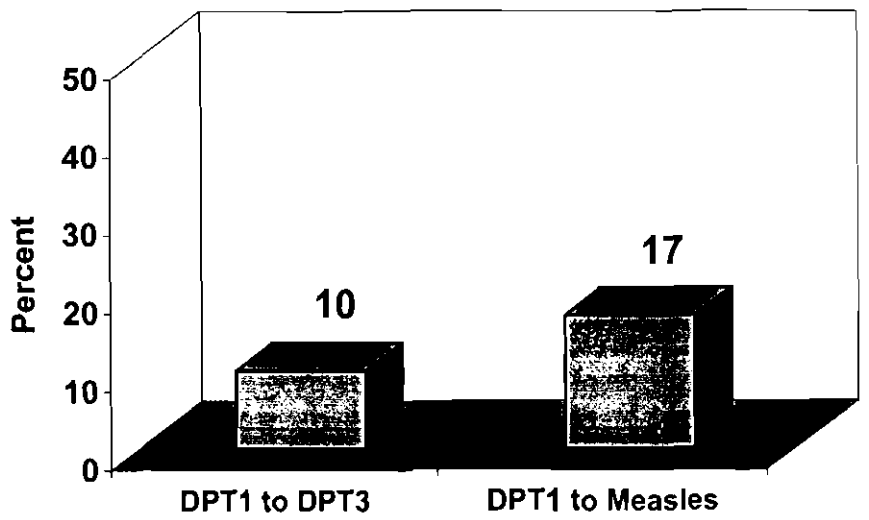
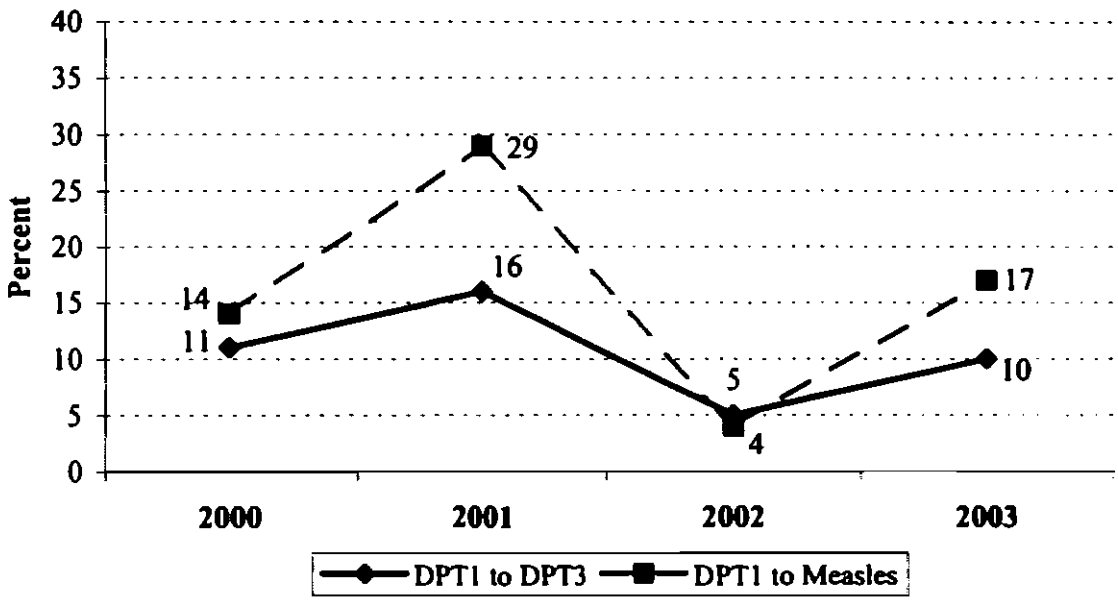


Figure 3: Child immunization dropout trend

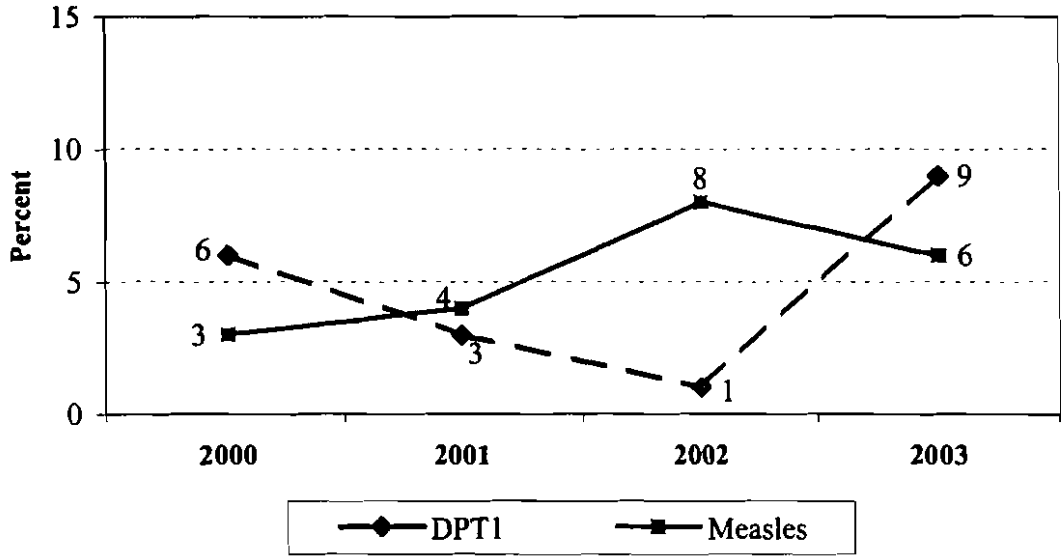


Source: National Coverage Evaluation Survey- 2000, 2001, 2002 and 2003

Table 3: Invalid doses of immunization provided to the children

Antigens	Percents
DPT1	9
DPT2	-
DPT3	1
Measles	6

Figure 4: Trend in invalid doses of child immunization



Source: National Coverage Evaluation Survey- 2000, 2001, 2002 and 2003

Table 4: Missed opportunities by antigens

Name of the vaccine	Uncorrected		Corrected		Total	
	Number	Percent	Number	Percent	Number	Percent
BCG	2	1	12	6	14	7
DPT1	1	0.5	2	1	3	1.5
DTP2	-	-	1	0.5	1	0.5
DPT3	2	1	-	-	2	1
OPV1	1	0.5	1	0.5	2	1
OPV2	-	-	1	0.5	1	0.5
OPV3	1	0.5	-	-	1	0.5
Measles	2	1	2	1	4	2
*Index					28	

* *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	124	60
EPI card ever given	194	92
EPI card retention	124	64

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

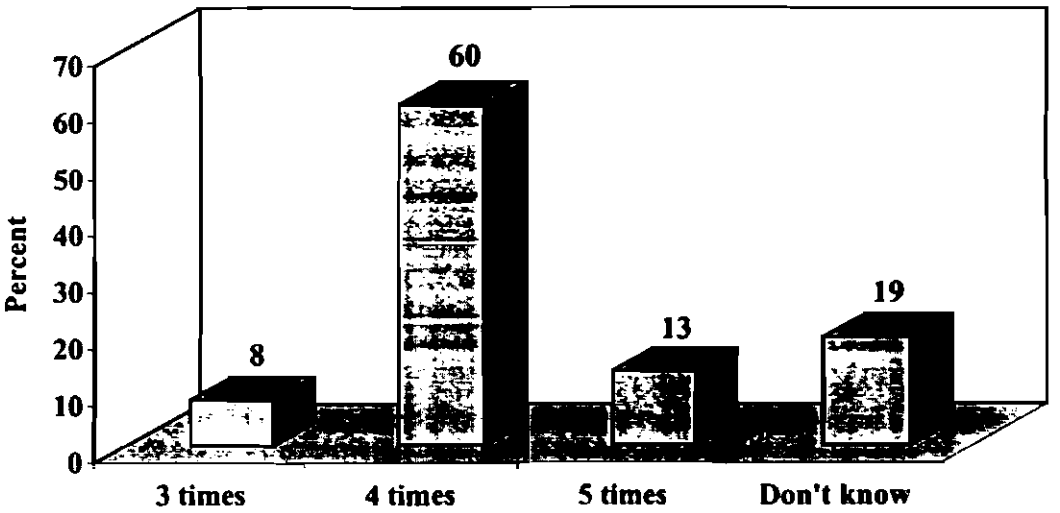


Figure 6: Sources of child immunization services

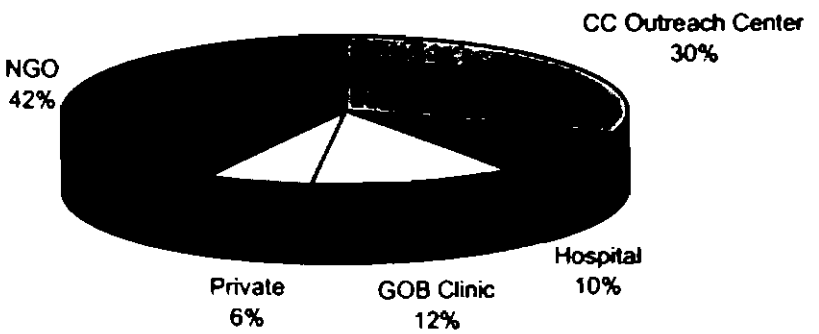


Table 6: Children who had an abscess after receiving vaccine

Status of children abscess	Number	Percentage
Abscess	2	1
No abscess	202	99
Total	204	100

Table 7: Site of abscess (after receiving vaccine)

Site of abscess	Number	Percentage
Arm	1	50
Thigh	1	50
Buttock	-	-
Other	-	-
Total	2	100

Table 8: Children who had any other adverse reaction after receiving vaccine

Status of other adverse reaction	Number	Percentage
Other adverse reaction	12	6
No other adverse reaction	192	94
Total	204	100

Table 9: Nature of other adverse reaction

Nature of other adverse reaction	Number	Percentage
Fever	9	75
Swollen thigh	3	25
Total	12	100

Table 10: Nature of other adverse reaction by antigen

Nature of other adverse reaction	Antigen							
	BCG		DPT		Measles		Total	
	#	%	#	%	#	%	#	%
Fever	7	78	2	22	-	-	9	100
Swollen thigh	-	-	2	67	1	33	3	100
Total	7	58	4	34	1	8	12	100

Table 11: 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	141	69
11-20 Taka	17	8
21-30 Taka	12	6
>30 Taka	10	5
Don't know	1	0.5
No money was paid	23	11.5
Total	204	100

Table 12: Reasons for non-immunization and partial immunization of the children

Reasons for non-immunization or partial immunization	Non-immunized (%) (N=6)	Partially immunized (%) (N=37)
Did not know when return for 2nd/3rd dose	-	11
Did not know when return for measles	-	13
Fear of adverse reaction	17	19
Willingly not take the child	33	5
Planning to vaccinate in future	16	5
Too busy to take the child	17	17
Painful for the children	-	3
Vaccine was not available at the site	17	-
Vaccination site was too far away	-	8
Vaccinator not friendly	-	3
Child was sick, not taken	-	3
Child was sick, taken but not given	-	3
Paid money for vaccine	-	5
Idleness	-	5

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

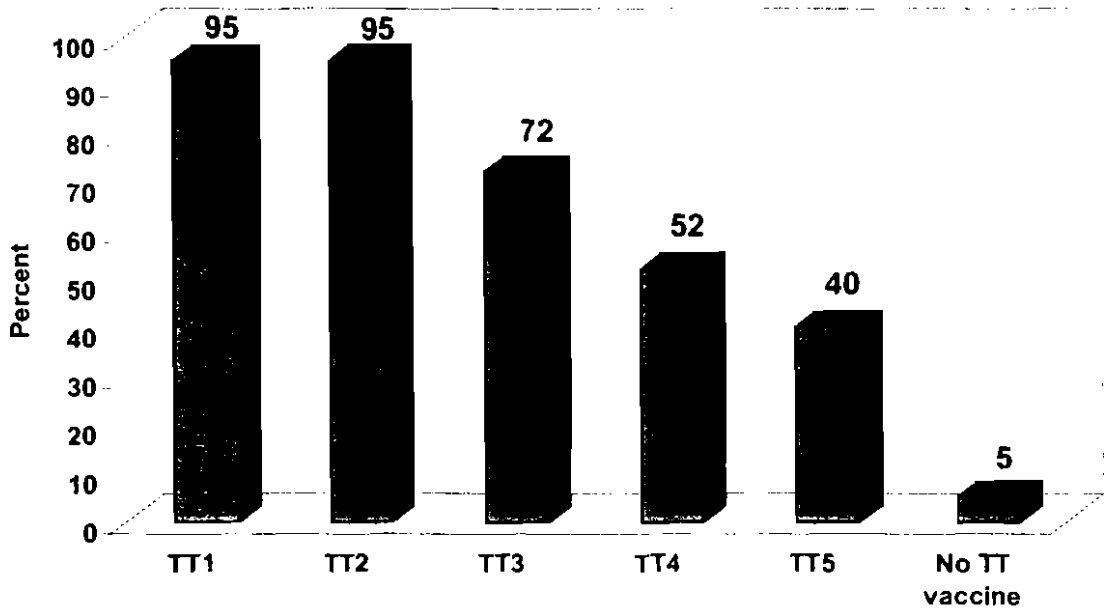
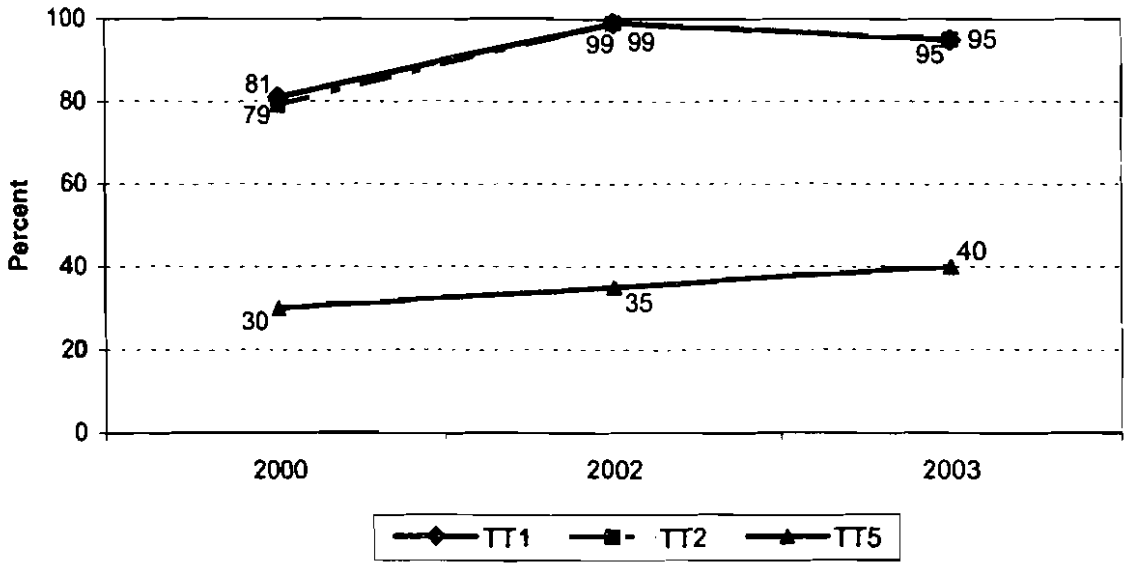


Figure 8: TT immunization trend among the women giving birth in the last one year



Source: National Coverage Evaluation Survey- 2000, 2002 and 2003

Table 13: Age distribution of women who never received TT vaccine (among those who gave birth in last one year)

Age group	# of women	Never received TT	
		#	%
<20 years	11	2	18
20-25 years	104	3	3
26-30 years	64	2	3
31-35 years	20	-	-
>35 years	11	3	27
Total	210	10	5

Table 14: 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	3	2	175	98	-	-	-	-	-	-	-	-	178	100
TT2-TT3	-	-	-	-	43	32	90	68	-	-	-	-	133	100
TT3-TT4	-	-	-	-	-	-	-	-	36	39	57	61	93	100
TT4-TT5	-	-	-	-	-	-	-	-	30	42	41	58	71	100

Table 15: Children born protected against tetanus

Status of children born protected	Number	Percentage
Protected	196	93
Not Protected	14	7

Table 16: Knowledge about number of TT doses required for life time protection against tetanus

Answers	Number	Percentage
2 doses	1	0.5
3 doses	10	5
4 doses	13	6
5 doses	52	25
Don't know/ no idea	134	63.5

Table 17: TT cards availability and retention

Card Status	Number	Percentage
TT card available	75	36
TT card ever given	171	81
TT card retention	75	44

Figure 9: Providers of TT immunization

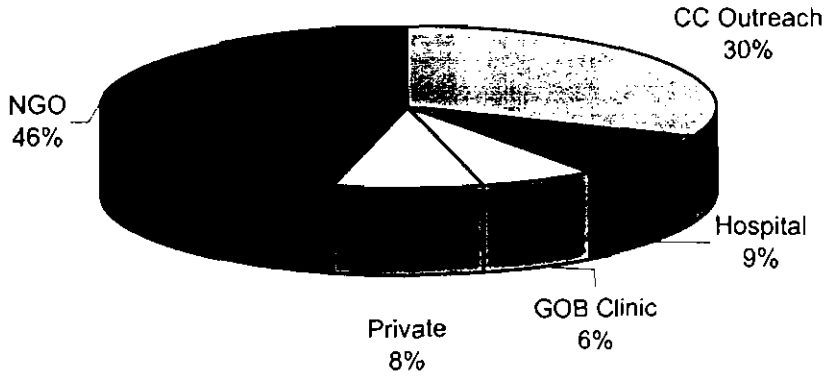


Table 18: Women who had an abscess after receiving TT

Status of women abscess	Number	Percentage
Abscess	1	0.5
Not abscess	199	99.5
Total	200	100

Table 19: Women having abscess after receiving TT by site of abscess

Site of abscess	Number	Percentage
Arm	1	100
Thigh	-	-
Buttock	-	-
Other	-	-
Total	1	100

Table 20: Women who had any other adverse reaction after receiving TT

Status of other adverse reaction	Number	Percentage
Other adverse reaction	3	2
No other adverse reaction	197	98
Total	200	100

Table 21: Nature of other adverse reaction

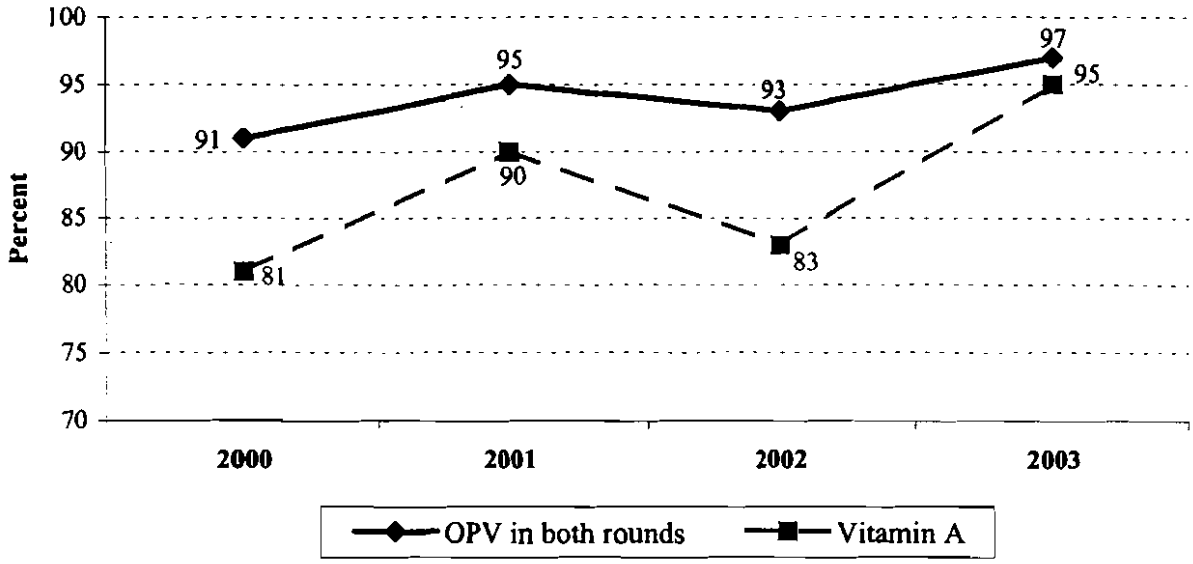
Nature of other adverse reaction	Number	Percentage
Fever	1	34
Eclamsia	1	33
Bleeding	1	33
Total	3	100

Table 22: OPV and Vitamin A Coverage during the 11th NIDs

N=210

Round	OPV (%)	Vitamin A (%)
1st round	99	95
2nd round	98	-
Both round	97	-
Any round	100	-

Figure 10: NID coverage trend



Source: National Coverage Evaluation Survey- 2000, 2001, 2002 and 2003

Table 23: Sources of OPV during the 11th NIDs

Sources of OPV	1st Round		2nd Round	
	#	%	#	%
NID site	202	96	199	95
Child to child search	5	3	6	3
Mobile on NID	-	-	-	-
Mobile after NID	-	-	1	0
Not received	3	1	4	2
Total	210	100	210	100

Table 24: Date of child-to-child search of the 11 NIDs-2003 were written on the door of the house

Variable	1st Round		2nd Round	
	#	%	#	%
Written	61	29	82	39
Not written	149	71	128	61
Total	210	100	210	100

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

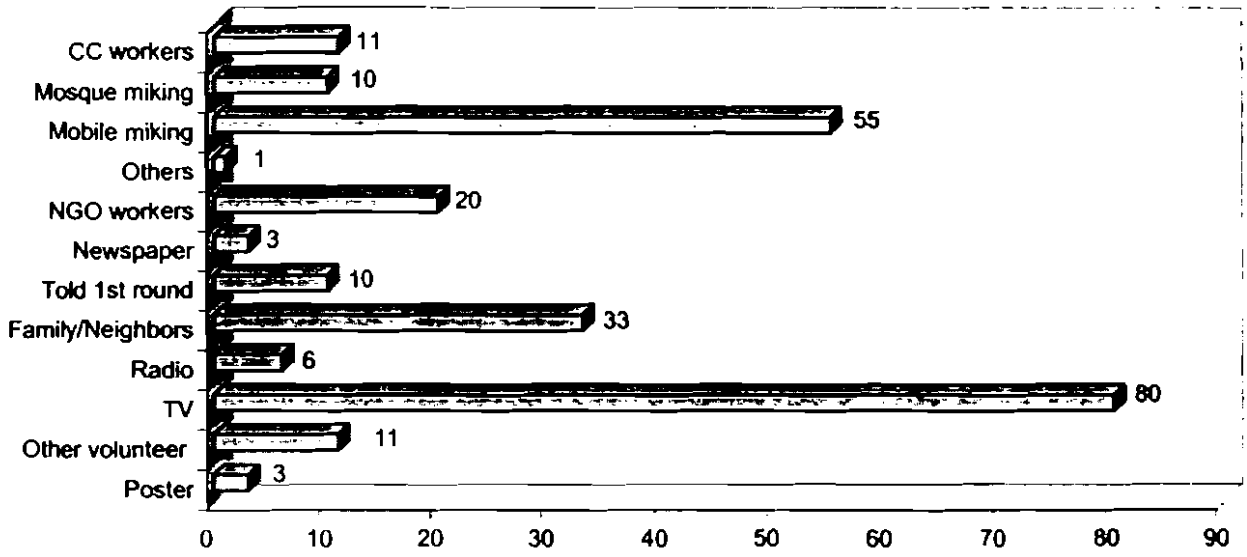


Table 25: Reasons for not receiving of OPV from NID sites of the 11th NIDs

Reasons	1st Round (%) (N=8)	2nd Round (%) (N=11)
Did not know about NID	25	9
Forgot the date	-	9
Traveling	-	-
Too busy	25	55
Fear of adverse reaction	-	9
Child sick, taken but not given	12	-
Waited for house visit	13	9
Mother sick, not taken	-	9
Child was very small, not taken	25	-

Annex-A

List of Selected Clusters for the Survey

New ward No.	Mahalla name	Total HH	Total Pop.	Cluster No.
4	Chandgaon	7693	44477	1
5	Uttar Mohara	1580	9300	2
6	Purba Soloshahar	2767	16021	3
17	Paschim Bakalia	7252	40890	4
19	Dakshin Bakaluia (part-1)	8509	43443	5
37	Bandar Colony	2585	15746	6
38	Dakshin-Madhya Halishahar	6523	40373	7
39	Dakshin Halishahar	9118	52099	8
40	Uttar Patenga	8004	44622	9
14	Lalkhan Bazar (part-1)	8442	43470	10
16	Purba Madarbari	3922	23400	11
29	Paschim Madarbari	4590	23844	12
36	Purba Gosaildanga	1238	5859	13
36	Paschim Gosaildanga	4245	20067	14
27	Bahutala Colony	906	4543	15
24	Hazi Para	2039	10312	16
13	Jungle Dakshin Pahartali	1416	8151	17
16	Kapas Gola	1478	8103	18
21	Jamal Khan	4620	25952	19
20	Dewan Bazar	1124	6227	20
31	Alkaran	3801	25430	21
33	Firingi Bazar	3524	19946	22
8	Paschim Nasirabad	2002	11885	23
9	Jola Para & C.d.a. Market	1586	8456	24
13	Sardarnagar	2055	11491	25
35	Dakshin Kattali	4311	23404	26
8	Kulshi	2070	10145	27
8	Nasirabad	8088	42525	28
7	Pashim Soloshahar (part-1)	9982	46649	29
2	Sindhi Colony & Aziz Colony	779	2824	30

Annex-B

List of Never Vaccinated Children Identified by Clusters

New Ward No.	Mahalla name	Total HH	Total Pop.	Cluster No.	Never vaccinated children
6	Purba Soloshahar	2767	16021	3	7*
17	Paschim Bakalia	7252	40890	4	7*
29	Paschim Madarbari	4590	23844	12	1*, 7*
36	Paschim Gosaildanga	4245	20067	14	6*
24	Hazi Para	2039	10312	16	4*

Acknowledgements

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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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