



ROUTINE EPI COVERAGE EVALUATION SURVEY (CES) 2023



PRESENTATION OUTLINE

- 01** Background, Objectives and Methodology
- 02** Childhood Vaccination Coverage among 12-23 Months Old Children
- 03** Childhood Vaccination Coverage among 24-35 Months Old Children
- 04** Td Vaccination Coverage among Mothers with Children 0-11 Months
- 05** Td5 Vaccination Coverage among Childbearing Age Women
- 06** EPI Program Performance e.g.,invalid doses, drop-out, card retention rate
- 07** Zero Dose (ZD), Under Immunization (UI)
- 08** Behavioral and Social Drivers (BeSD)
- 09** Survey Implementations, Limitations and Recommendations

Background of EPI CES

- The Coverage Evaluation Survey (CES) serves as a crucial tool for assessing the **program's effectiveness** and **identifying areas for improvement**, particularly low performing areas.
- The CES is one of the **strategies to successfully implement EPI**, the GoB periodically conducts EPI Coverage Evaluation Survey, **which provide a scientific evaluation of the programme.**
- The CES is the **proved essential means for monitoring and evaluating** the programme
- **CES findings are used to monitor the program performances,**
- Since **1991 EPI** Conducted CES in every year
- The **first district-wise CES** was conducted in 2002
- CES 2023 marks as the **24th** CES
- Now CES is planned to be conducted at every **2 years.**
- The CES is conducted as per **WHO methodology** and global standard of 'Vaccination Coverage Survey Reference Manual'

SURVEY OBJECTIVES

The objectives of the EPI CES 2023 are to assess-

- Childhood Vaccination coverage among 12-23 months old children
- Childhood Vaccination coverage among 24–35-months-old children considering MR2
- The immunization programme quantity (crude and valid coverage), quality (percentage of invalid doses, vaccination card availability, AEFI, reasons for partial and never vaccination and equity
- Td vaccination coverage among women having child less < 1 year age, proportion of child protected at birth (PAB)
- Td vaccination coverage among the women aged 18-49 years to assess the progress of the Td5 programme
- Provide information as a basis for making concrete recommendations and planning for improving routine immunization activities
- The Behavioral and Social Drivers (BeSD) of vaccination low uptakes

Survey Population

1. Childhood Vaccination Coverage among 12-23 months old children

- Child born between 01/10/2021 and 30/09/2022

2. Childhood Vaccination Coverage among 24-35 months old children

- Born between 01/10/2020 and 30/09/2021

3. Td Coverage

- Mother with children 0-11 months who gave birth child between 01/10/2022 and 30/09/2023

4. Td5 Coverage Survey:

- Childbearing age women of 18-49 years old

Features of EPI CES 2023

- **First 100% online survey:** Online based HH listing and data collection for the first time.
- Applied **WHO new methodology** of cluster sampling-
 - Non-probability sampling to **probability sampling** (multiple stages cluster sampling updated on 2018) instead of previous **fixed 30*7** cluster survey.
 - **No replacement** of selected respondents
 - **Respondents were selected centrally** instead of selecting conveniently by the FIs.
 - **Eligible to be respondent** if slept in the previous night, earlier it was 6 months (Included migrant people, seasonal worker etc.)
 - More emphasis given on **documented evidence of vaccination** (card photos, phone numbers, register check etc.)
- Incorporated WHO “**Behavioral and Social Drivers (BeSD)**” **indicators** to **understand the vaccination-specific beliefs and experiences** that programmes may be able to modify to boost vaccine uptake.
- Took **GIS location to track and monitor the field interviewers and to ensure the field work taken place on the right location.**
- **Documentation** through photos of **vaccination card to re-verify the given vaccination information with card and re-check the other details.**
- Collected **respondents' contact number** to verify
- Ensured **Real Time Monitoring** through **KOBO Online dashboard**
- Covered **more survey units** (**128 survey units:- 64 Urban and 64 districts**) compared to CES 2019 (79 survey Units).
- Given special focus on **urban immunization**, **64 Urban Survey Units:-55 zones from 12 City Corporations** units which was **15 Survey Units:- 12 CCs and 3 slums** in CES 2019.
- For the first time **separate Municipalities (9) Survey Units** were included
- Zero Dose (**ZD**) and under immunized children (**UI**) were identified through household listing

METHODOLOGY: SURVEY DOMAINS & CLUSTERS

Survey Areas

District

64

City Corporations (12)

55 Zone

DNCC 10, DSCC-10, CCC-7, GCC-8, KCC-4, NCC-3,
Rang CC-3, RCC-6, BCC-1, CumCC-1, MCC-1 SCC-1

Municipality Unit

9

Total Survey Units

128

Total Clusters

7168

Data Collection

128

Survey Units

56/44

Clusters.

120

HH Listing.

7/5

Interview Conducted

163965

Total Sample

Data Collection Period: October 2023 – August 2024

METHODOLOGY: SAMPLE DISTRIBUTION

Divisions/City Corporations/Municipality	No. of survey units	No. of clusters for 12-23 months and 24-35 months Old Children	No. of 12-23 months old children (Child)	No. of 24-35 months old children (MR2)	NO. of Td cluster	No. of mothers with children 0-11 months old (Td)	No. of women 18-49 years age (Td5)
Barishal	6	336	2,352	2,352	264	1320	1,848
Chittagong	11	616	4,312	4,312	484	2420	3,388
Dhaka Division	13	728	5,096	5,096	572	2860	4,004
Khulna Division	10	560	3,920	3,920	440	2200	3,080
Mymensingh	4	224	1,568	1,568	176	880	1,232
Rajshahi	8	448	3,136	3,136	352	1760	2,464
Rangpur	8	448	3,136	3,136	352	1760	2,464
Sylhet	4	224	1,568	1,568	176	880	1,232
City Corporation	55	3080	21,560	21,560	2420	12100	16,940
Municipality	9	504	3,528	3,528	396	1980	2,772
Total	128	7168	50,176	50,176	5,632	28160	39,424
Total Sample Achieved			48912	49007		27603	38443
Response Rate			97.5	97.7		98.0	97.5

A total of 163965 samples covered (Children: 97919 , Women: 65846 were surveyed for 128 units) in 4 different groups

ESTIMATION OF FULL VACCINATION COVERAGE (FVC)

FULL VACCINATION COVERAGE AMONG 12-23 MONTHS:

A child is considered as being Fully vaccinated if s/he has received

1. one dose of BCG,
2. 3 doses of Pentavalent (diphtheria, pertussis, tetanus, Hep-B and Hib),
3. 3 doses of OPV,
4. 3 doses of PCV,
5. 2 doses of IPV and
6. 1 dose of MR (Measles and Rubella) vaccines

for [childhood vaccination coverage by the age 12-23 months](#).

FULL VACCINATION COVERAGE AMONG 24-35 MONTHS:

However, for childhood vaccination coverage among children [24-35 months](#) calculated considering

1. one dose of BCG,
2. 3 doses of Pentavalent (diphtheria, pertussis, tetanus, Hep-B and Hib),
3. 3 doses of OPV,
4. 3 doses of PCV,
5. 2 doses of IPV and
6. 2 doses of MR (Measles and Rubella 1st and 2nd doses)

for [childhood vaccination coverage by the age 24-35 months](#).

Valid FVC: All doses should be valid

Crude FVC: Valid & Invalid doses

COVERAGE ANALYSIS OUTLINE

CHILDHOOD VACCINATION COVERAGE AMONG 12-23 Months OLD CHILDREN

- **Valid and Crude** Coverage by the age **12 months**
- **Valid and Crude** Coverage by the age **23 months**

Childhood Vaccination Coverage Among 24-35 Months Old Children Considering MR2

- **Valid and Crude** Coverage by the age **24-35 months**

Td Vaccination Coverage Among Mothers Having Children 0-11 months

- **Valid and Crude Td Coverage**
- **Protected at Birth (PAB)**

Td Vaccination Coverage Among Childbearing aged women (18-49)

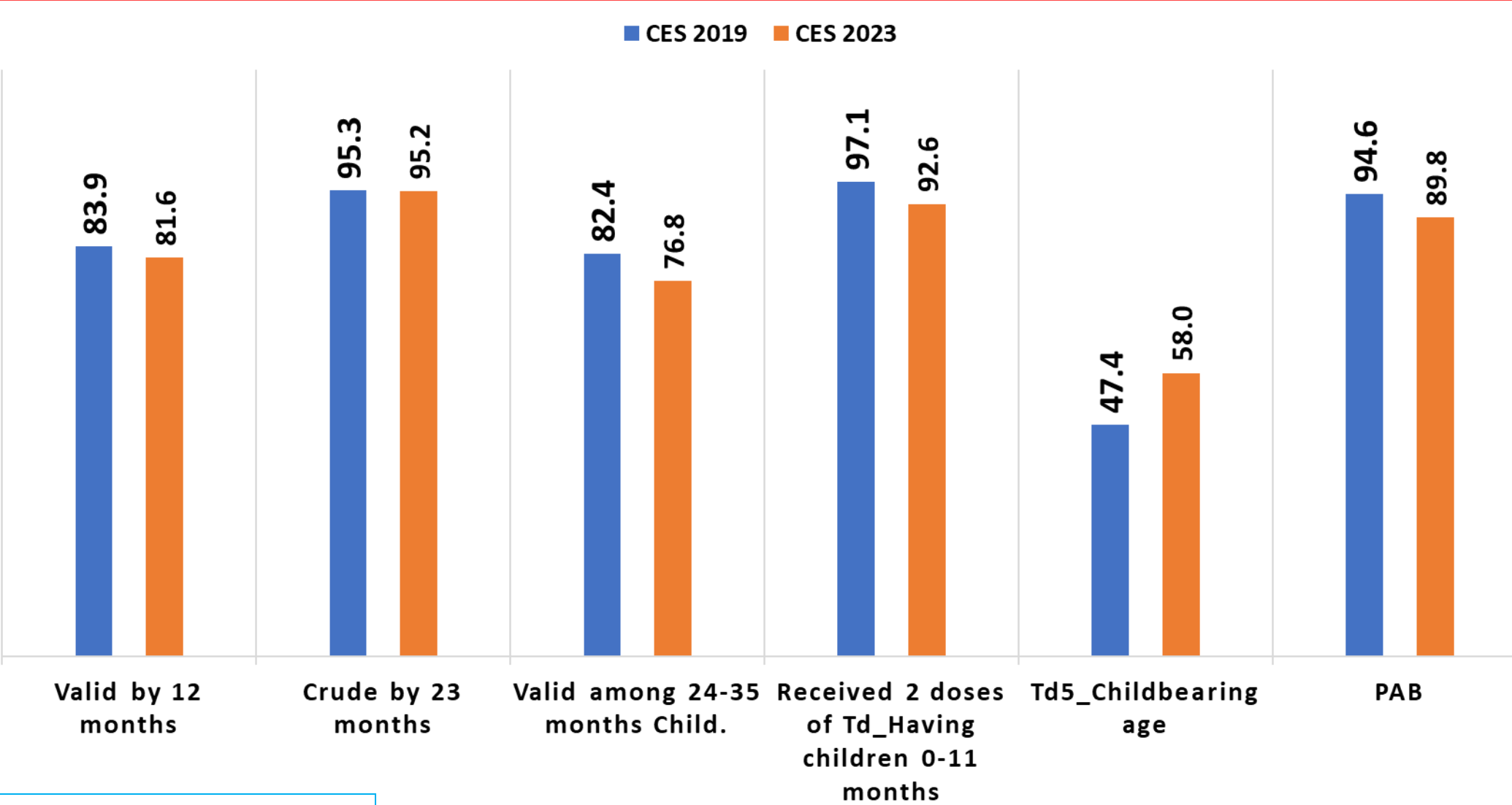
- **Valid and Crude Td Coverage**

Analysis Conducted By 6 Areas:

1. **National, Urban and Rural**
2. **Divisions**
3. **City Corporations**
4. **Municipalities**
5. **Districts**
6. **Survey Units**

CHILDHOOD VACCINATION COVERAGE AMONG 12-23 MONTHS OLD CHILDREN

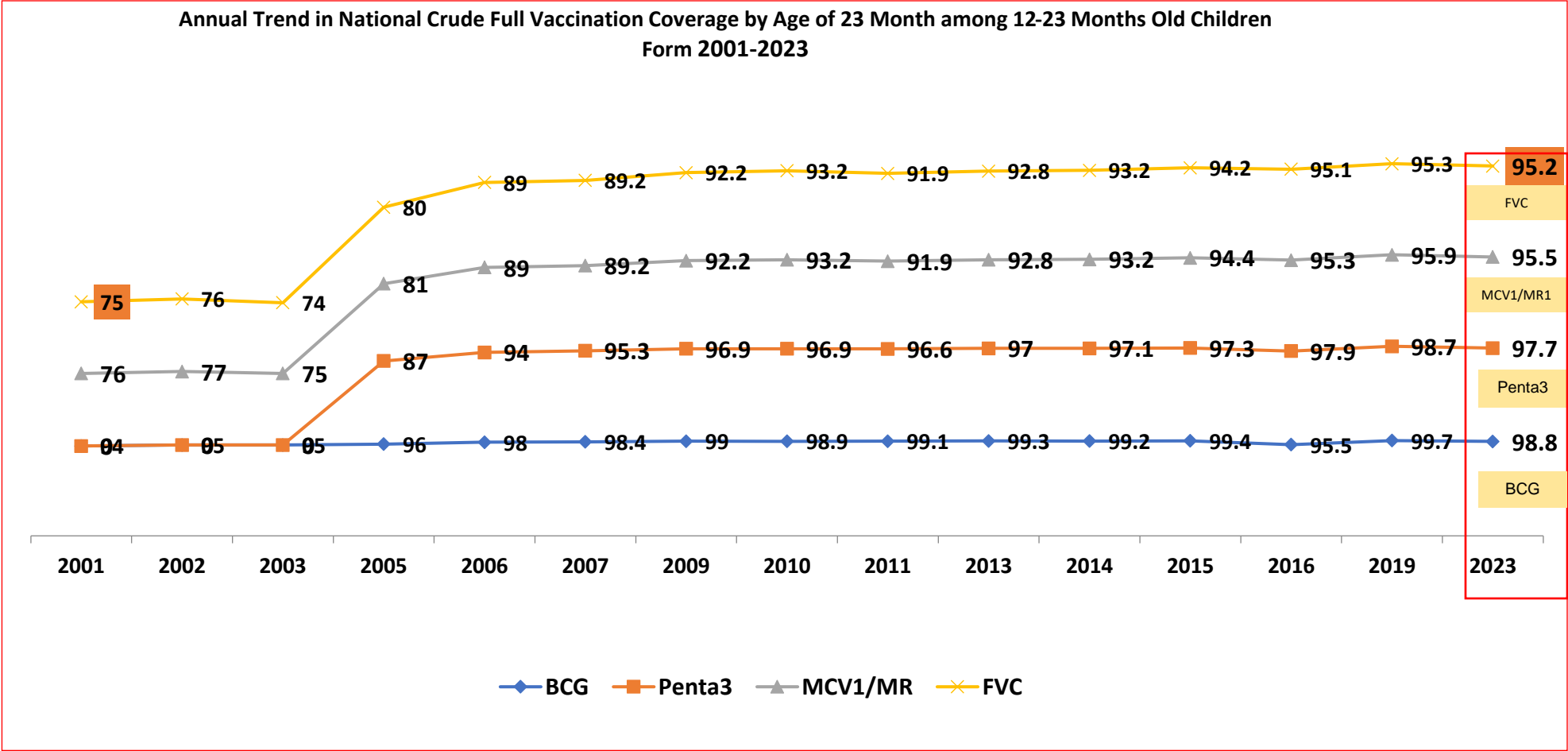
ALL FORMS SUMMARY AND COMPARISON OF FULL VACCINATION COVERAGE



Source: Final draft REPI CES 2023

TRENDS IN COVERAGE: CRUDE COVERAGE BY THE AGE OF 23 MONTHS

National valid FVC rose from 75% in 2001 to 95.2% in 2023

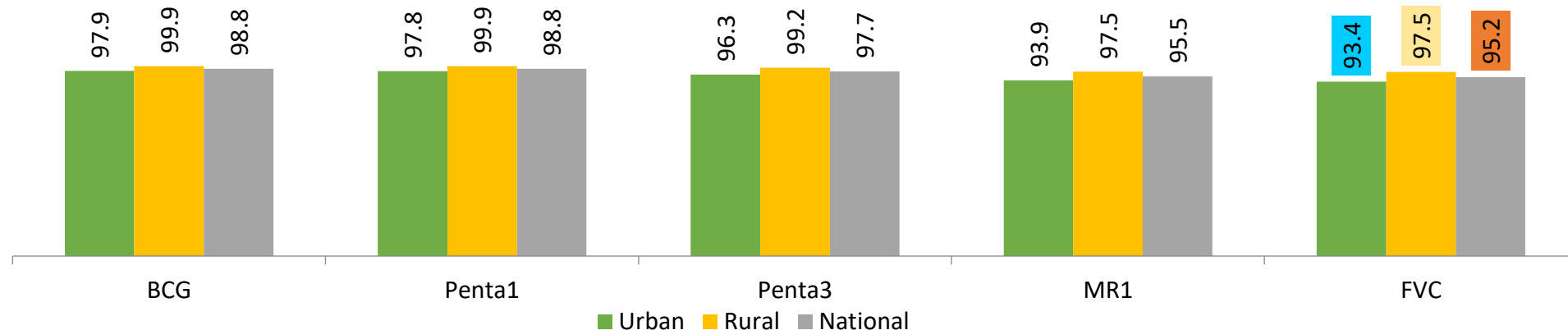


*Crude Coverage: Received all doses irrespective of EPI vaccination schedule such as without maintaining exact age and/or interval between 2 consecutive doses

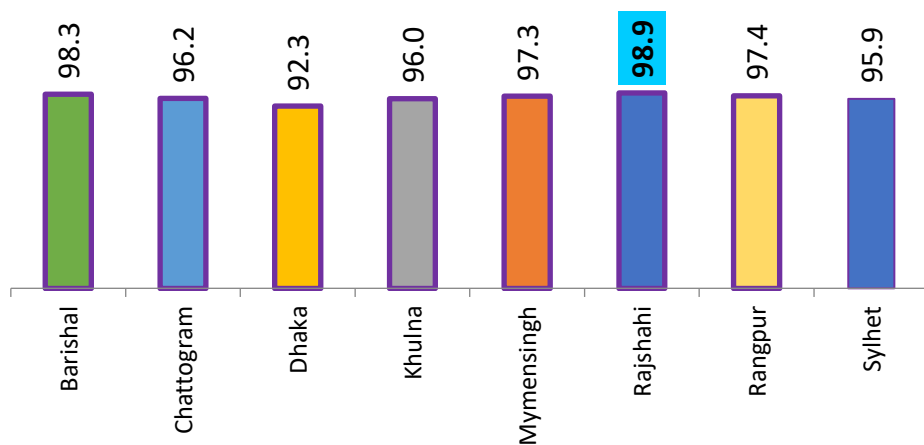
Source: Final draft REPI CES 2023

CRUDE VACCINATION COVERAGE BY AGE OF 23 MONTHS AMONG 12-23 MONTHS CHILDREN

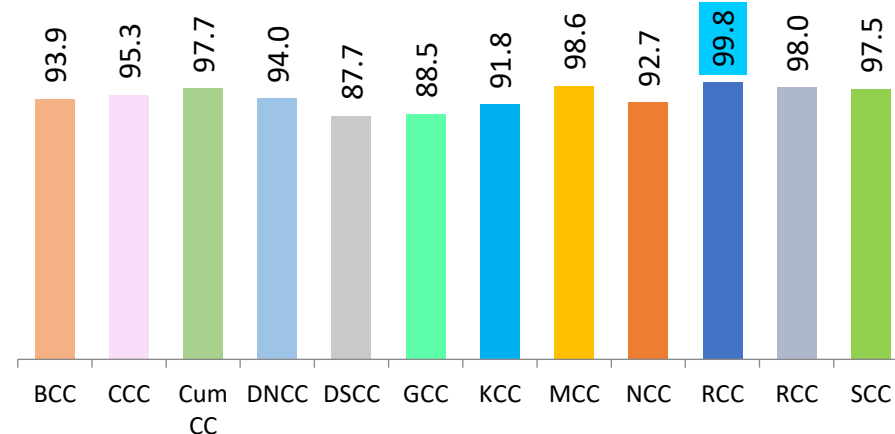
By National (95.2%), Urban (93.4%) and Rural (97.5%) Areas



By Division: The highest 98.9% in Rajshahi



By City Corporation: Highest 99.8% in RCC

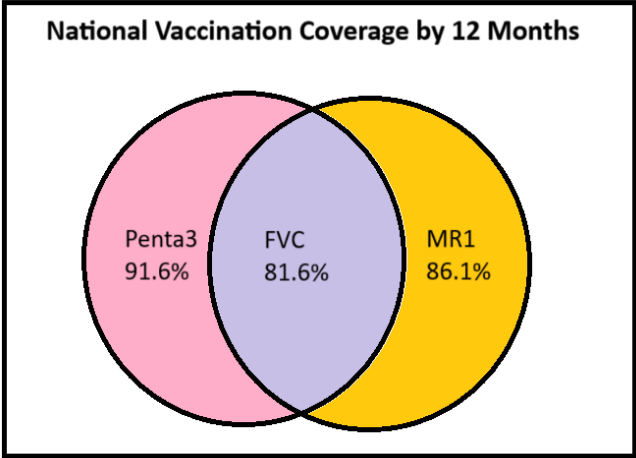
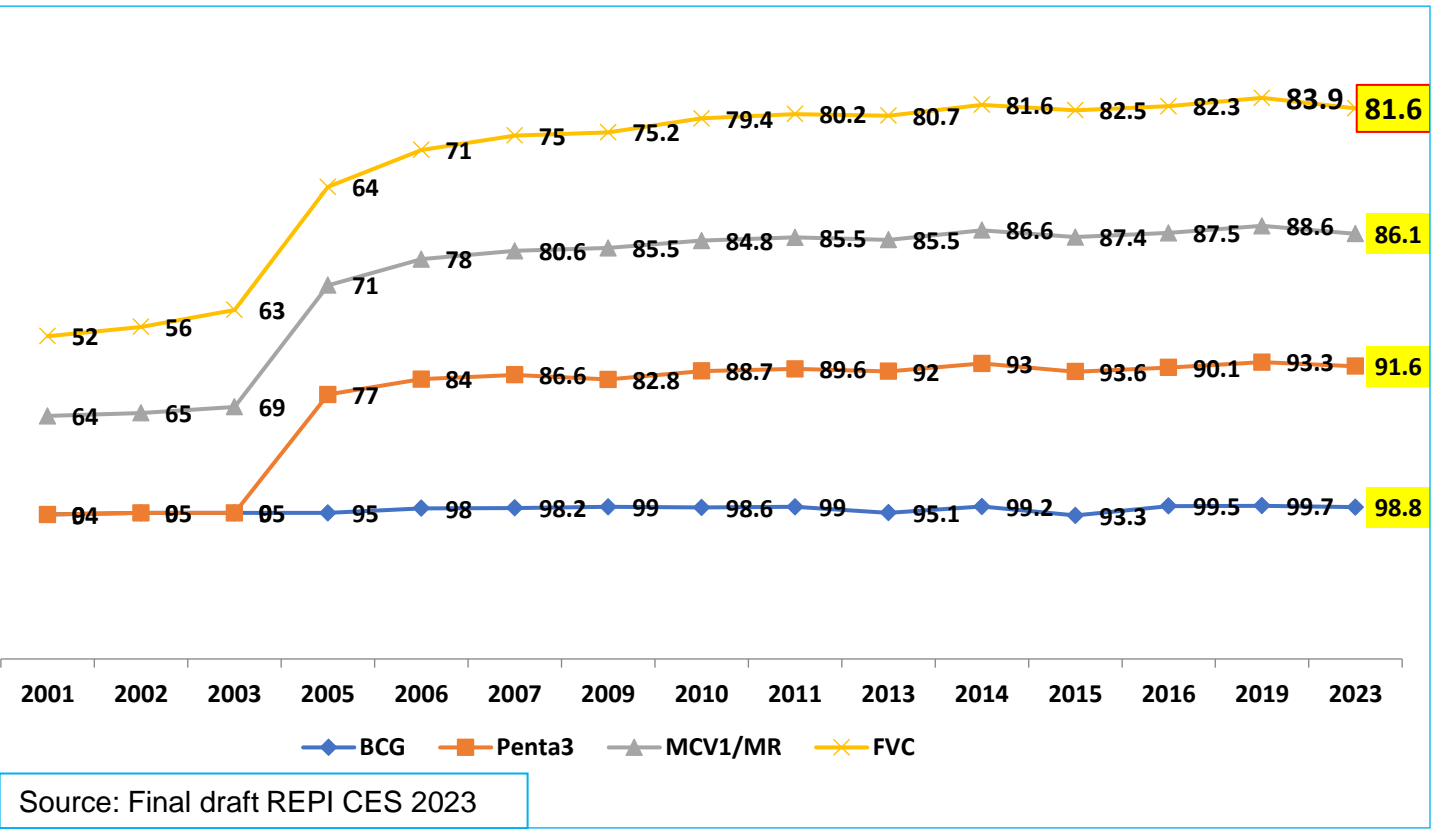


Source: Final draft REPI CES 2023

* 4.1% variation observed in full crude coverage between urban and rural areas (Urban: 93.4%, Rural: 97.5%)

TRENDS IN COVERAGE: VALID FULL COVERAGE BY 12 MONTHS (2001-2023) AMONG 12-23 MONTHS CHILDREN

National valid FVC rose from 75% in 2007 to 81.6% in 2023. The coverage was 2.3% lower than the last CES 2019.



Venn Diagram to understand valid FVC.

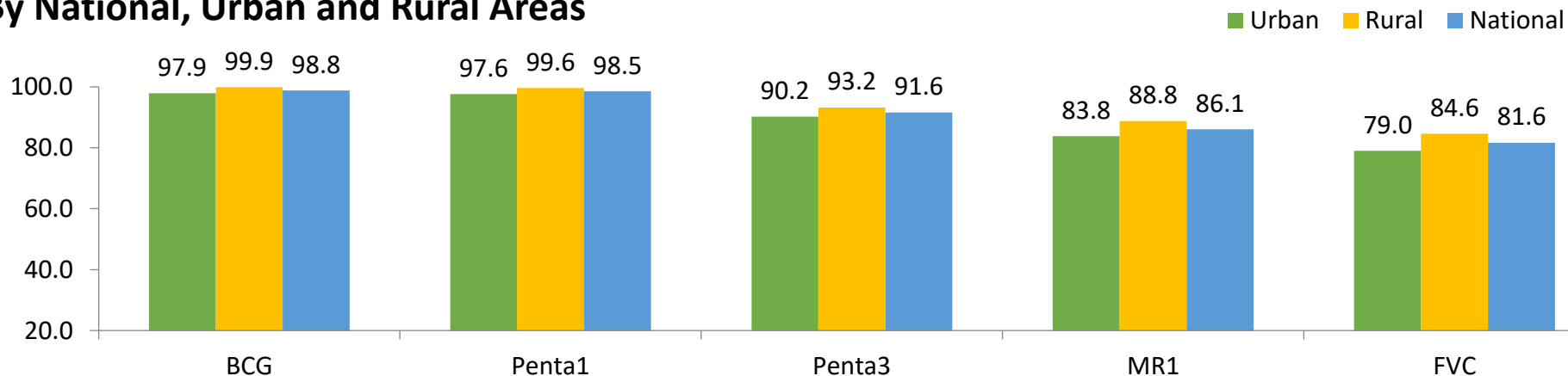
*Valid Coverage: documented evidence (card, register and proportion of valid history as per valid card) of vaccination at correct ages and with correct intervals (includes only valid doses)

*Proportion calculation: Out of 100 Resp, 50 have card, 40 from Hist and 10 didn't get vaccine. Among 50 cards 40 are valid which 80%. Equal 80% will consider as valid from History which is 32 and total valid is (40+32=72 or 72%)

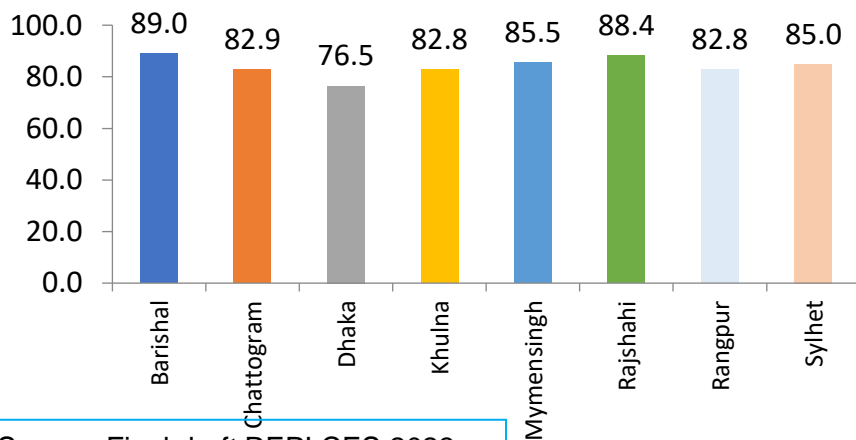
VALID FULL VACCINATION COVERAGE BY AGE OF 12 MONTHS AMONG 12-23 MONTHS CHILDREN

Urban area coverage was 5.6% lower than Rural area (79.0% vs.84.6%)

By National, Urban and Rural Areas

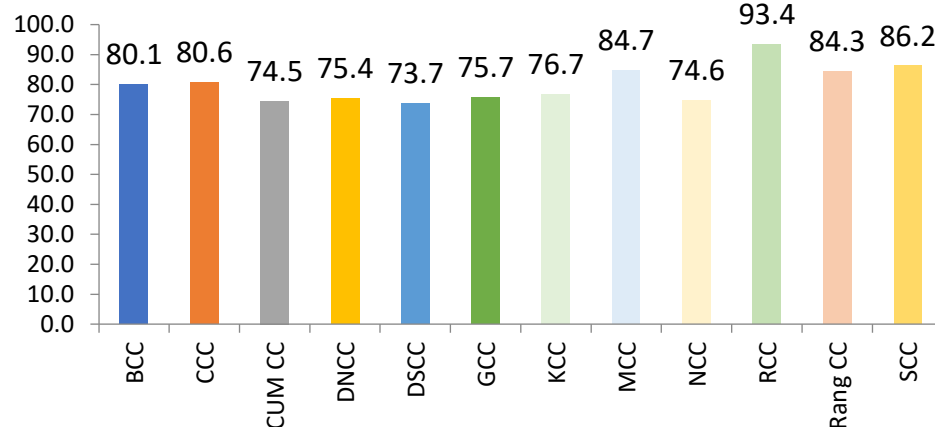


By Division: Highest in Barishal- 89.0%



Source: Final draft REPI CES 2023

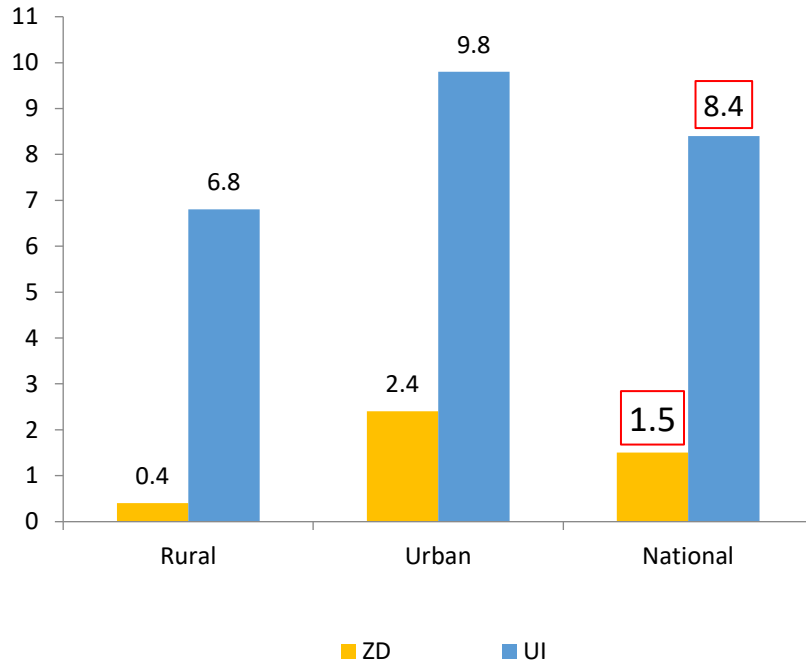
By City Corporation: Highest in RCC- 93.4%



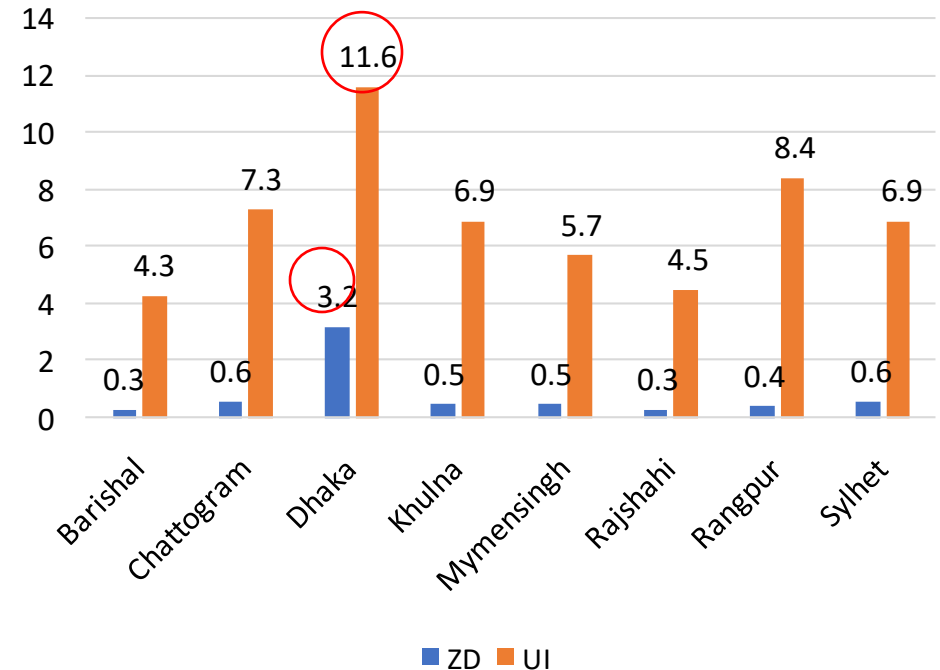
PENTA Zero Dose and Under Immunization

By age of 12 months among 12-23 months children

Percentage of Zero Dose and Under Immunization by National, Urban and Rural Areas



Percentage of Zero Dose and Under Immunization by Division



Source: Final draft REPI CES 2023

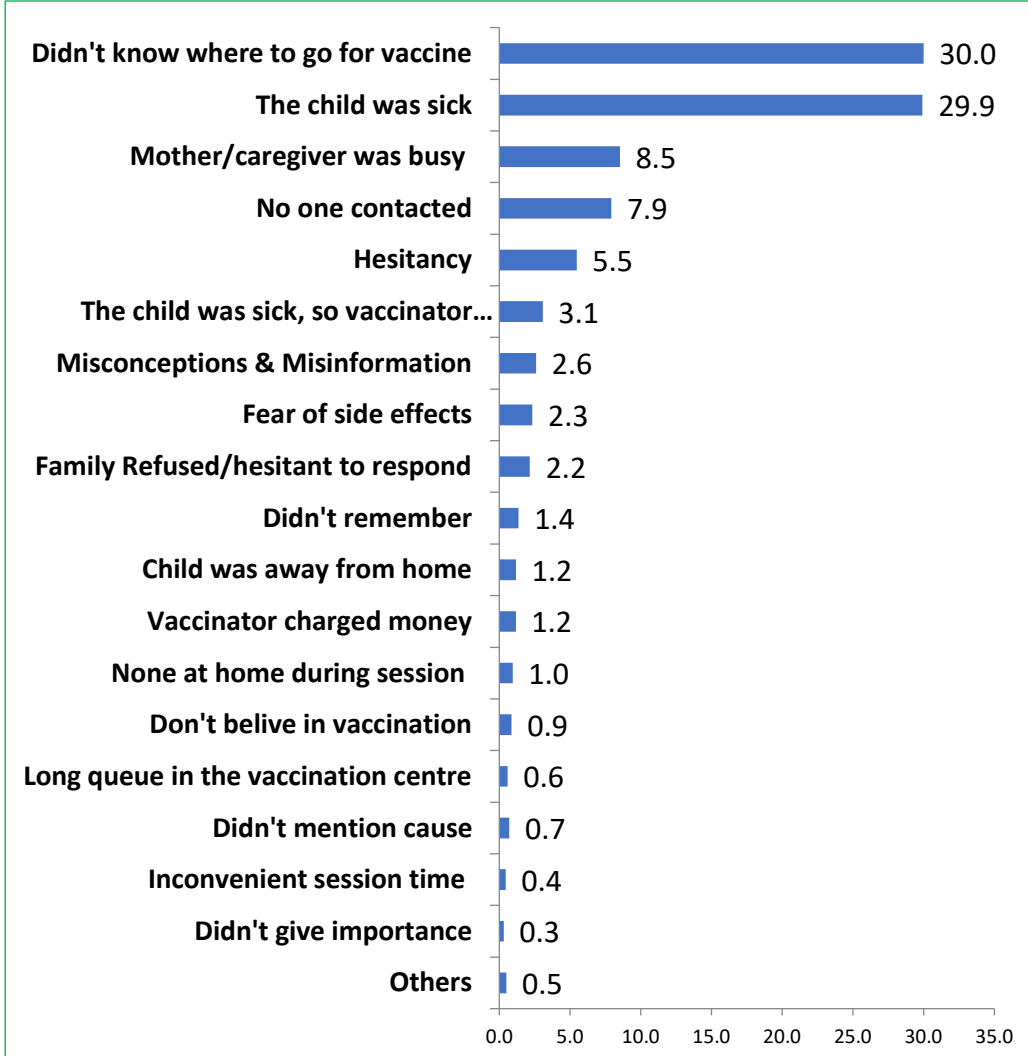


ZD and UI is calculated from valid coverage by age of 12 months among 12-23 months old children.

As per GAVI definition, ZD: Target-P1, UI: Target-P3. We consider target is 100%.

REASONS FOR NEVER and PARTIAL VACCINATION AMONG 12-23 MONTHS CHILDREN

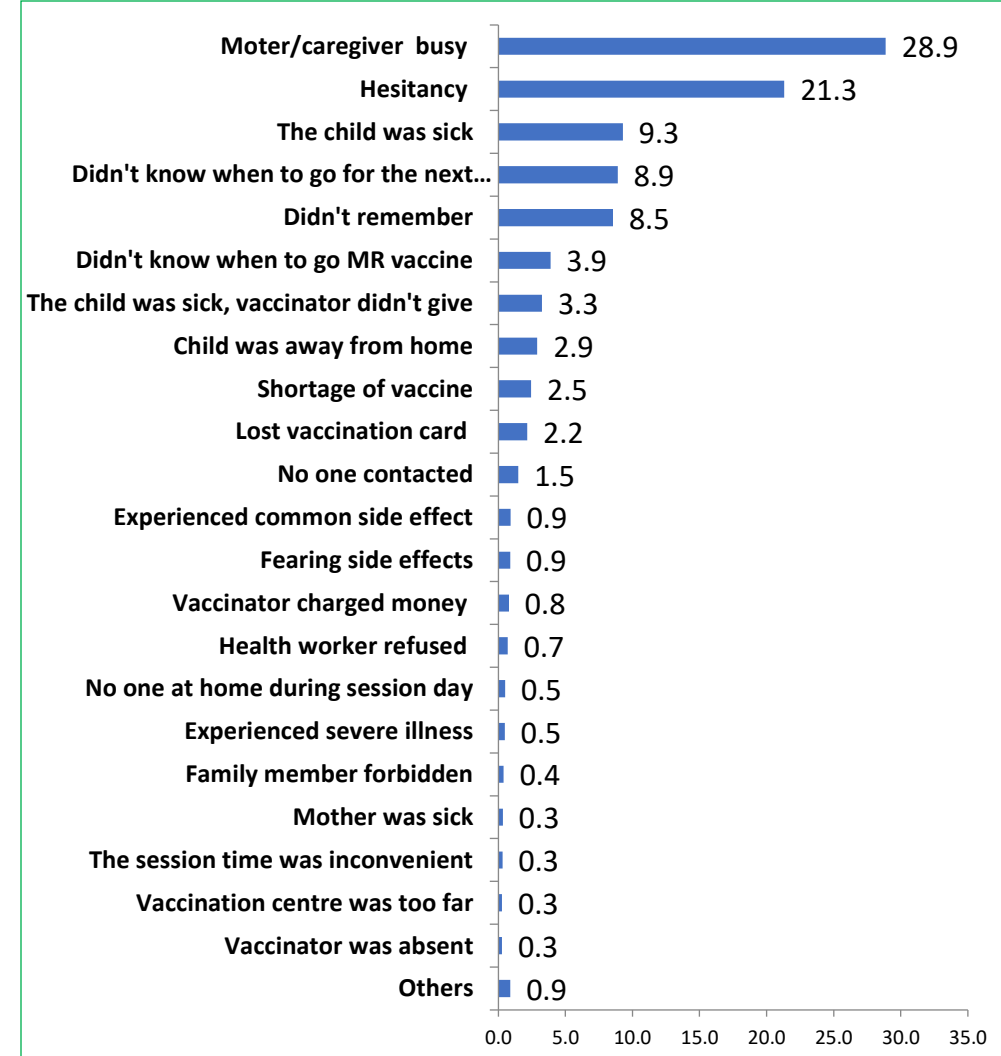
Reason for Never Vaccination



N= 439 (1.2%)

Source: Final draft REPI CES 2023

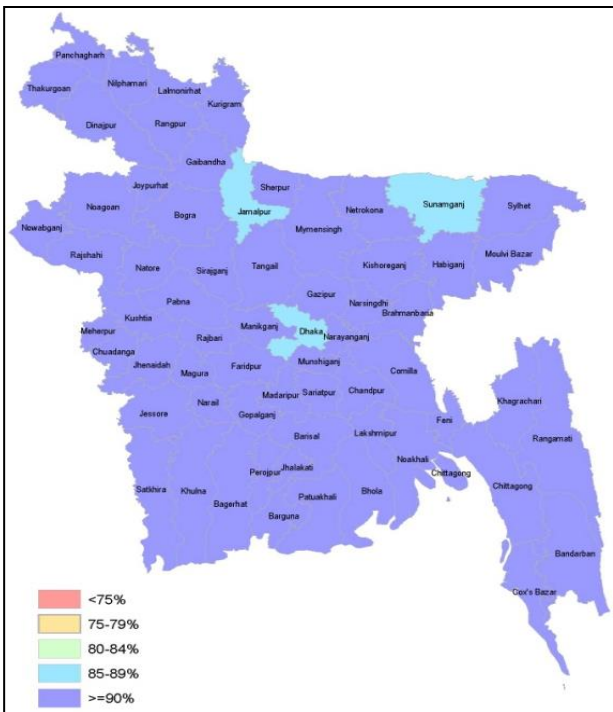
Reason for Partial Vaccination



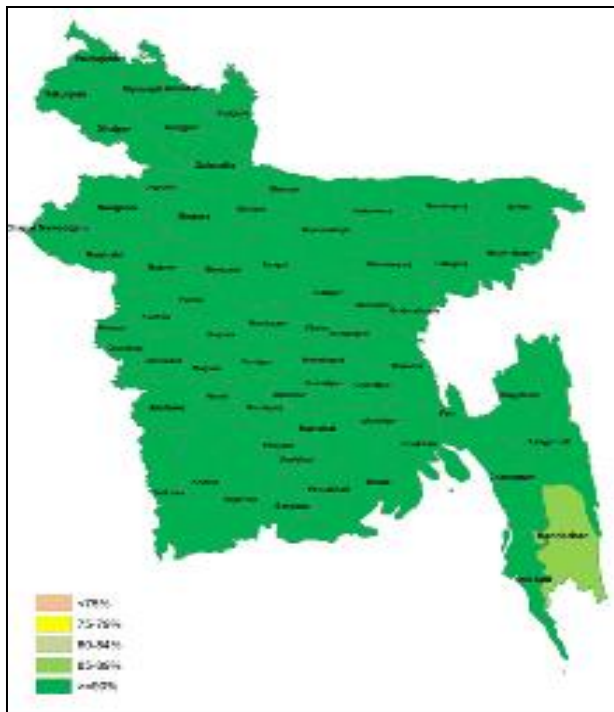
N= 5370 (11.1%)

CRUDE COVERAGE BY DISTRICT in 2016, 2019, 2023

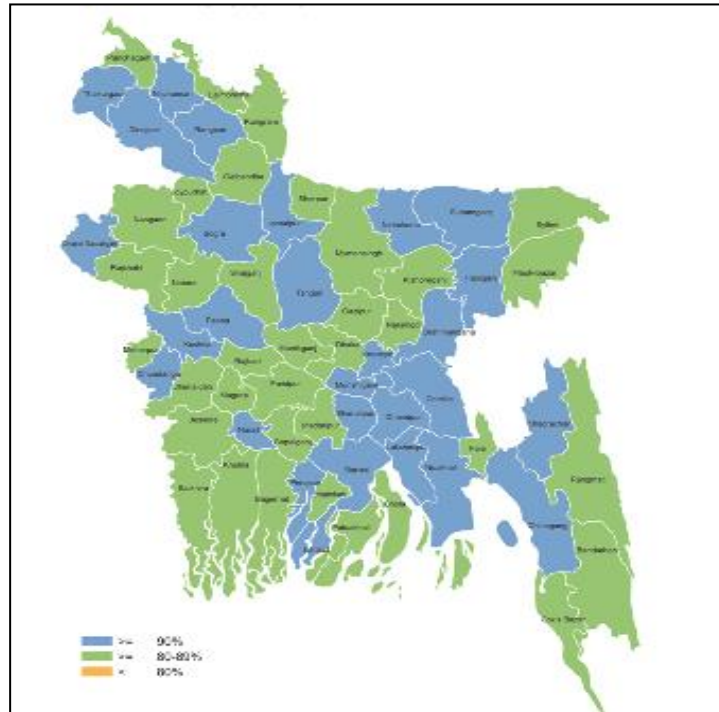
Year: 2016
FVC : 95.1



Year: 2019
FVC : 95.3



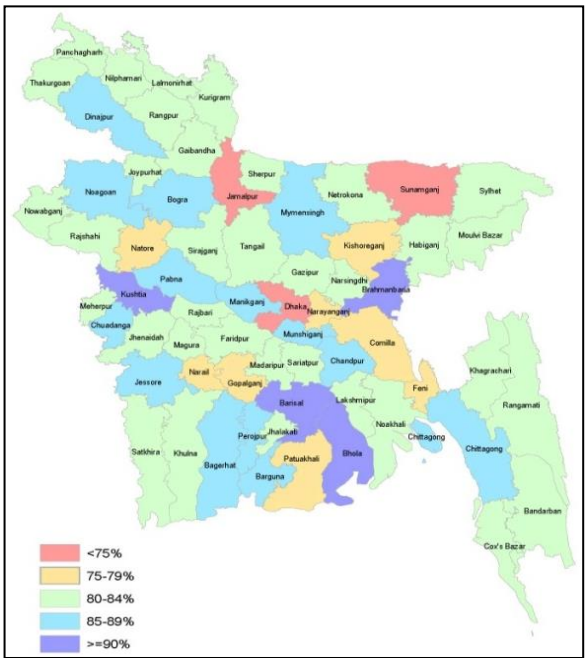
Year: 2023
FVC : 95.2



VALID COVERAGE BY DISTRICT 2016, 2019, 2023

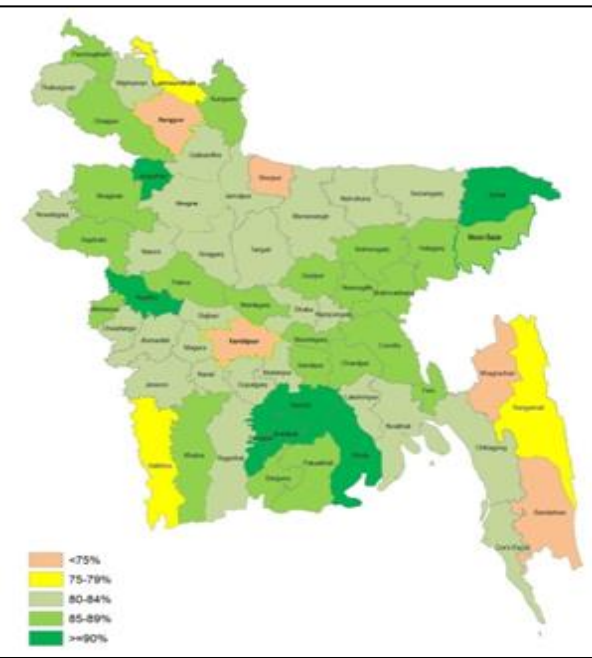
Year: 2016

FVC: 82.3



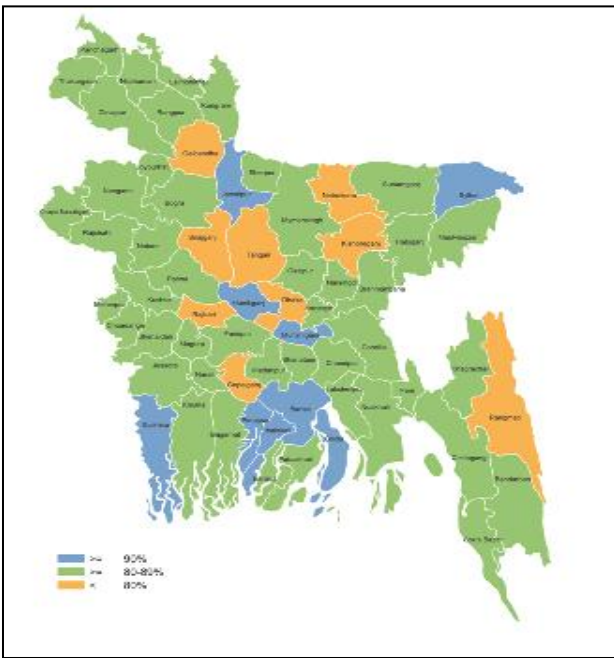
Year: 2019

FVC: 83.9



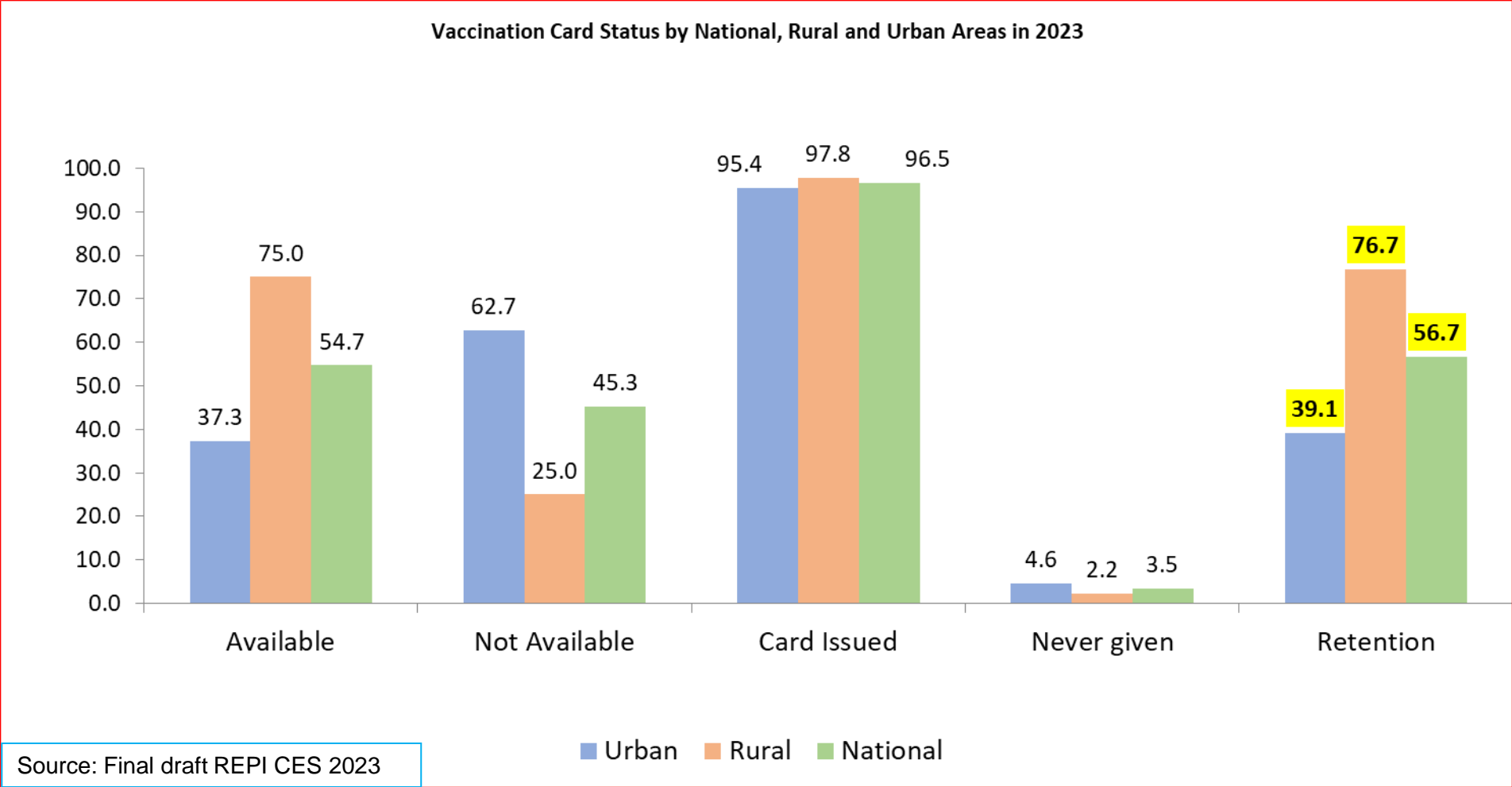
Year: 2023

FVC: 81.6



CARD RETENTION RATE AMONG 12-23 MONTHS OLD CHILDREN

37.6% variations observed in Urban/Rural CRR

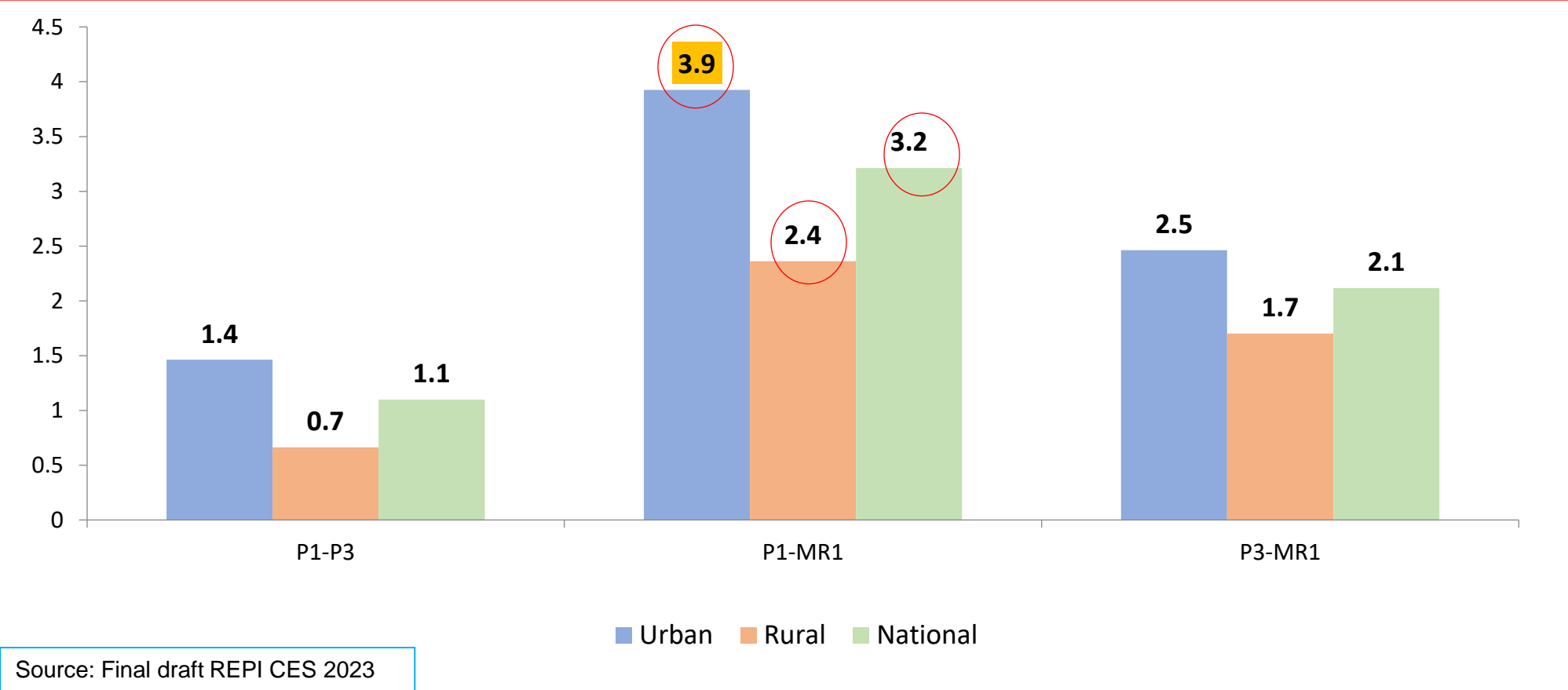


DROP-OUT RATE BY AGE OF 23 MONTHS AMONG 12-23 MONTHS OLD CHILDREN BY NATIONAL, URBAN AND RURAL

Drop-out is lower in Rural Areas

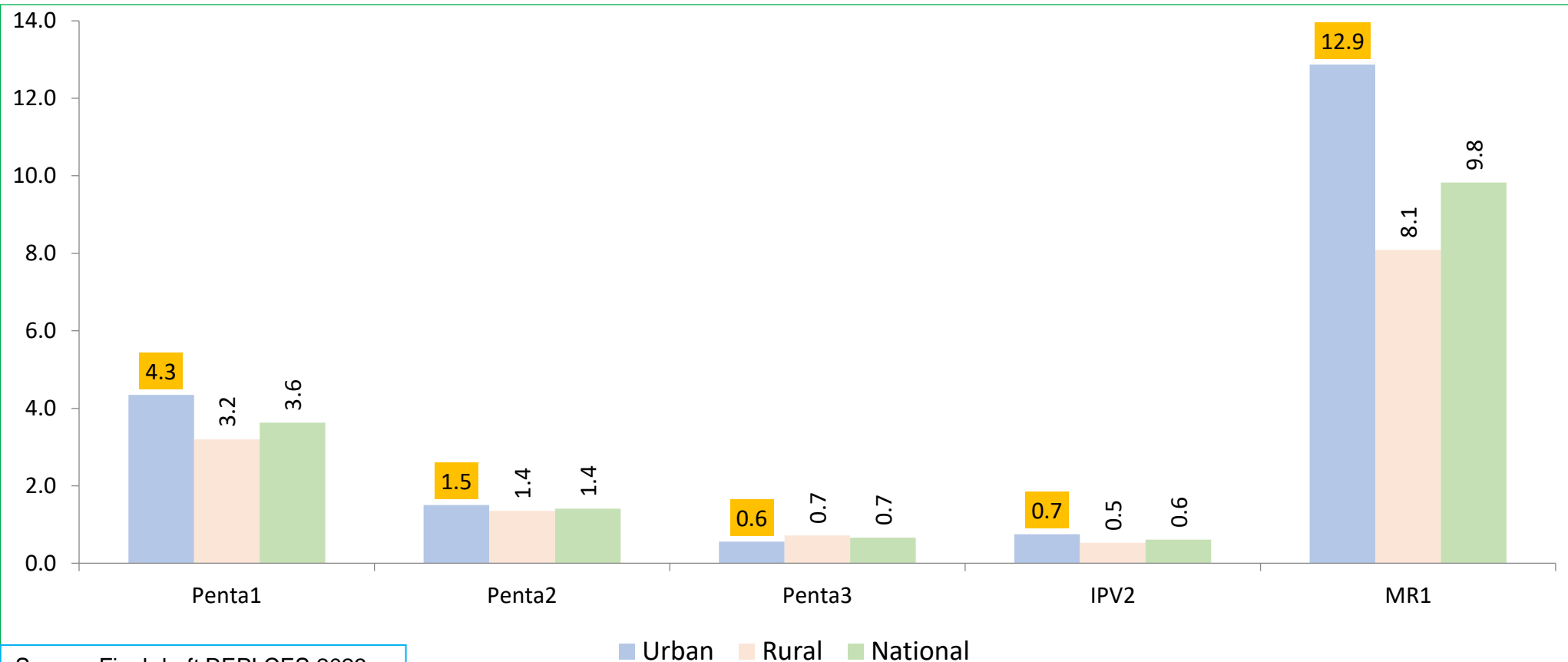
P1-P3: National 1.1%, Urban-1.4%, Rural-0.7%

P1-MR1: National 3.2%, Urban-3.9%, Rural-2.4%



INCIDENC OF INVALID DOSES AMONG 12-23 MONTHS OLD CHILDREN BY NATIONAL, URBAN AND RURAL AREAS

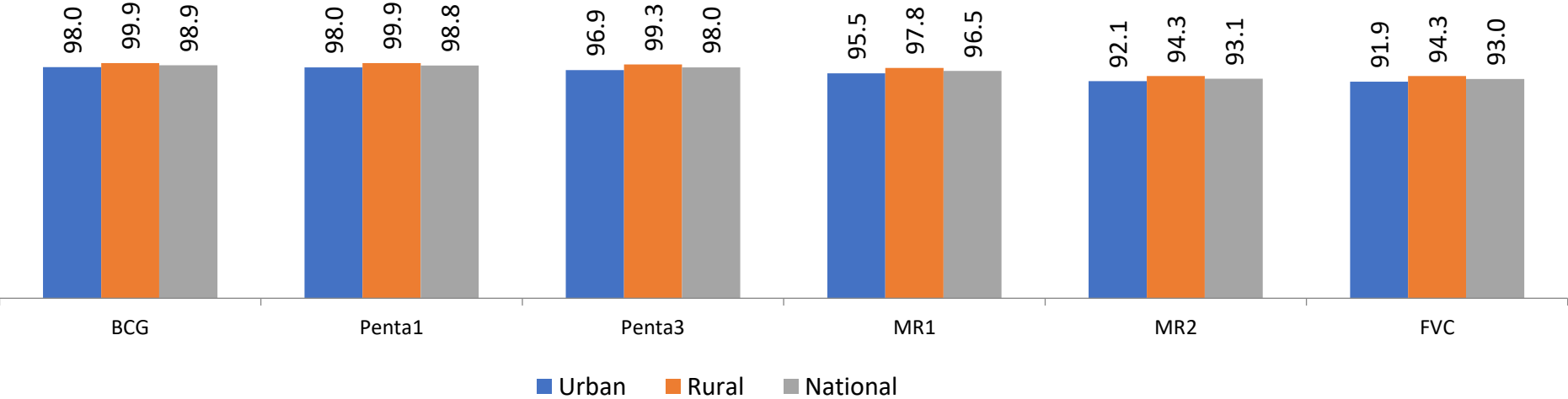
Nationally Penta 1 invalid dose was **3.6%**, Penta2 **1.4%**, Penta3 **0.7%**, and MR1 **9.8%**.
Invalid doses were higher in Urban (**12.9%**) Areas than Rural (**8.1%**) Areas



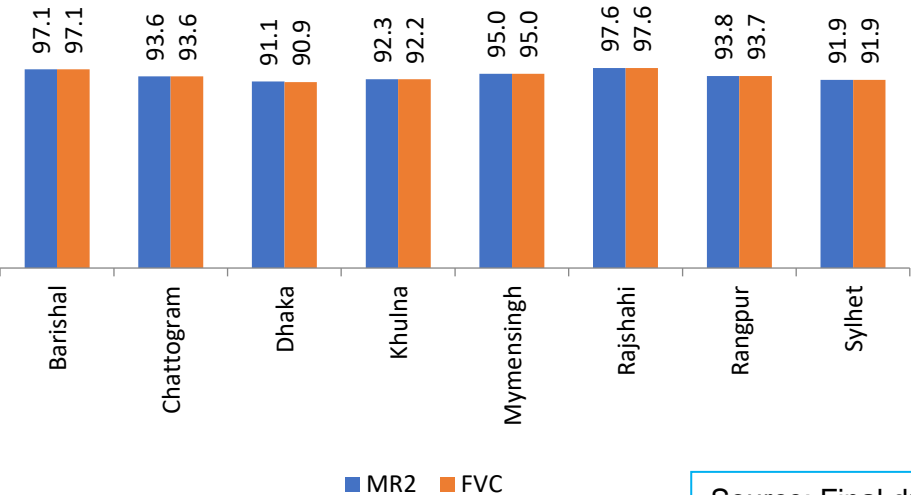
VACCINATION COVERAGE AMONG 24-35 MONTHS OLD CHILDREN

CRUDE VACCINATION COVERAGE BY 24-35 MONTHS AGE

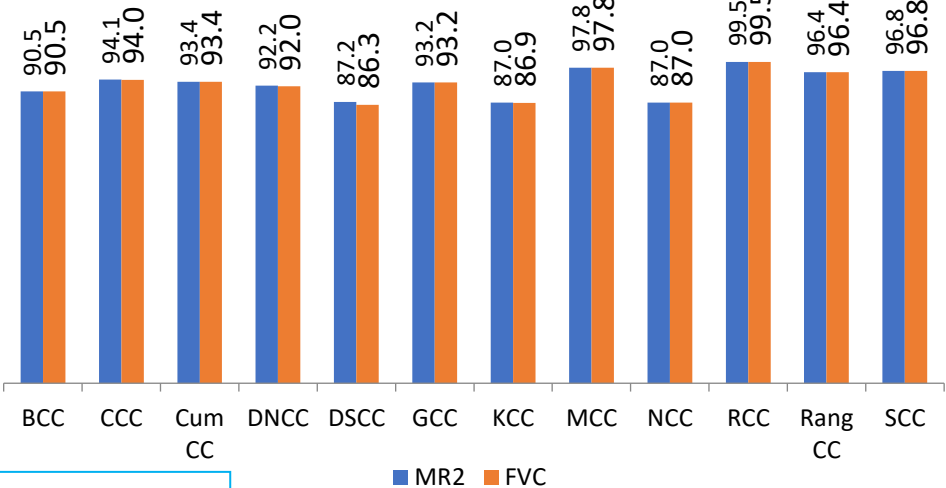
By National, Urban and Rural Areas: 93.0%, 91.9%, and 94.3% respectively



By Division: Highest in Rajshahi (97.6%)

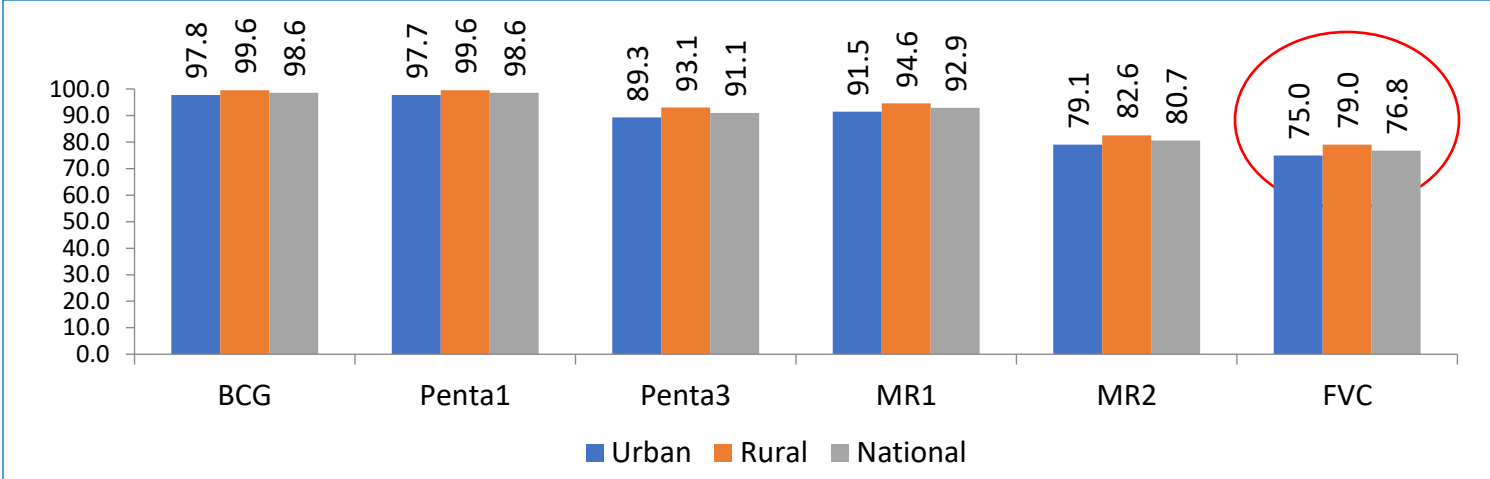


By City Corporation: Highest in RCC (99.5%)



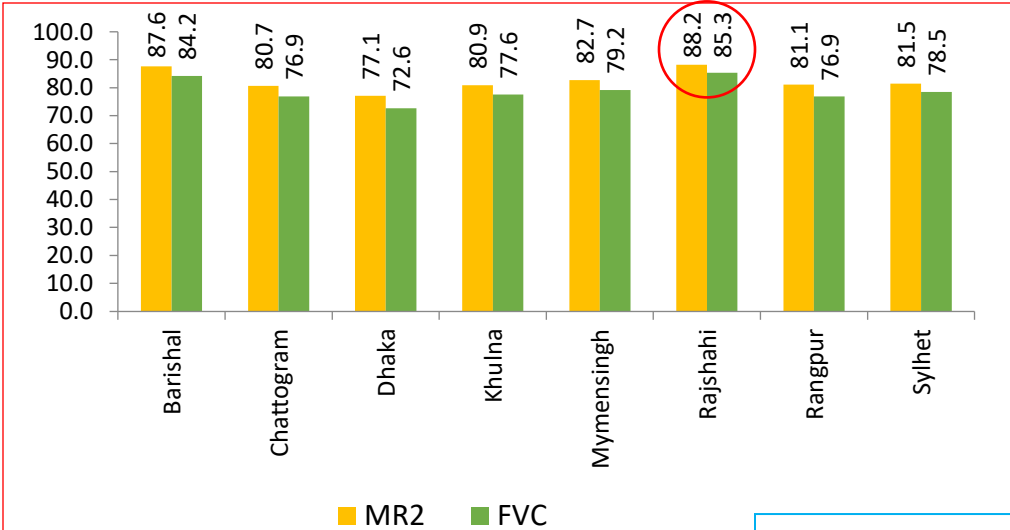
Source: Final draft REPI CES 2023

VALID VACCINATION COVERAGE BY NATIONAL, DIVISION, AND CC AMONG 24-35 MONTHS OLD CHILDREN

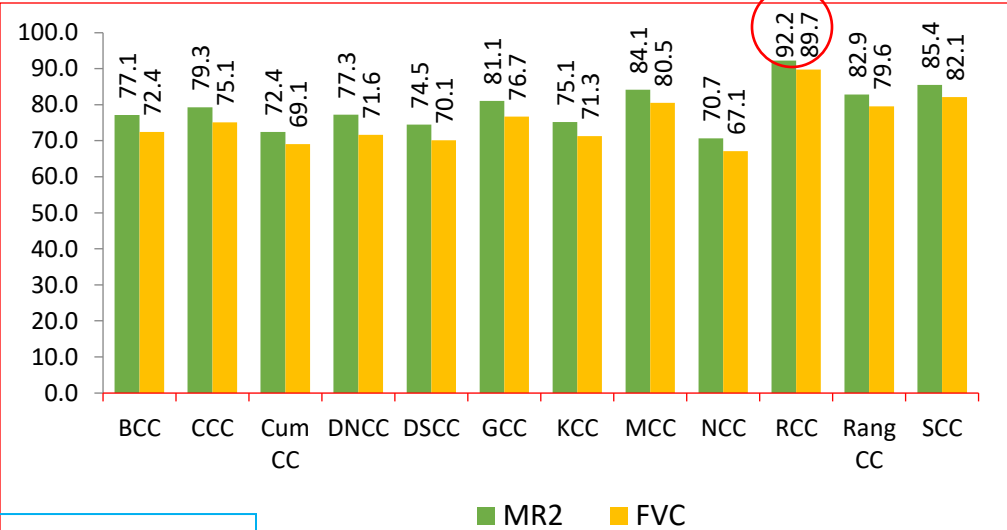


FVC with MR2 was 76.8% Nationally, 75% in Urban, and 79% in Rural Areas. By division the highest 85.3% in Rajshahi, and by CC 89.7% in RCC

Valid Coverage by Division

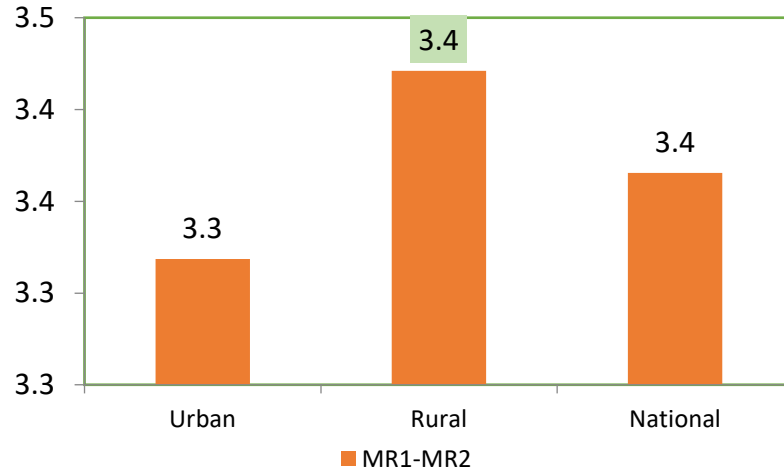


Valid Coverage by City Corporation

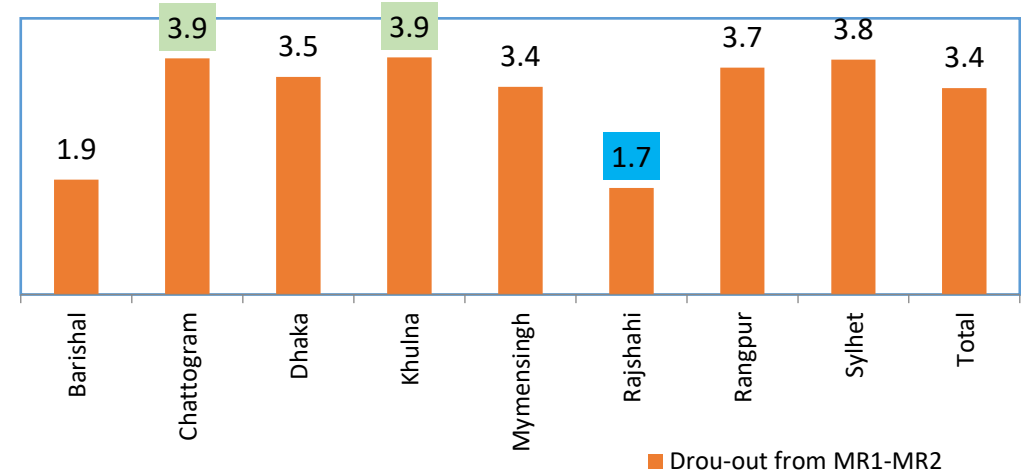


DROP-OUT FROM MR1-MR2 AMONG 24-35 MONTHS OLD CHILDREN

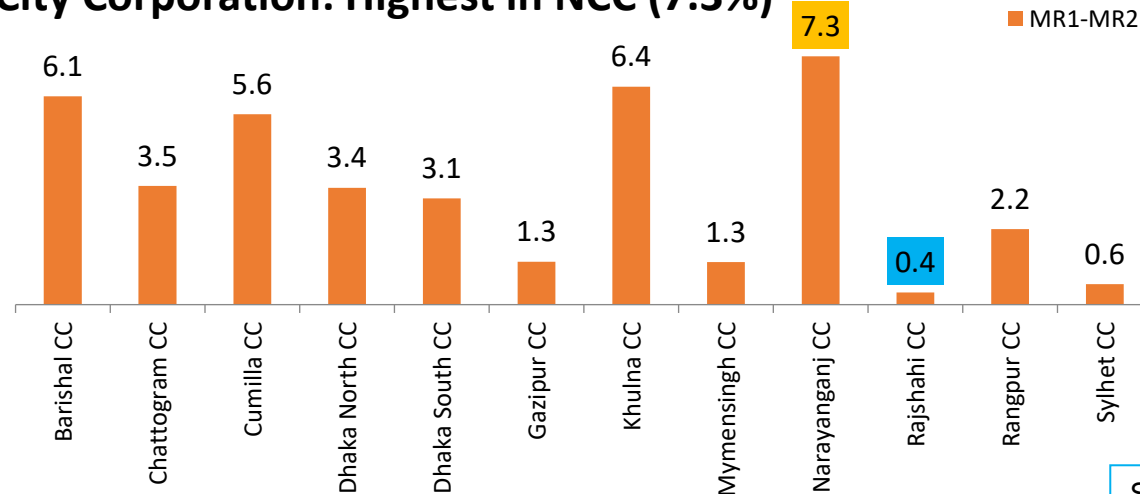
By National (3.4%), Urban (3.3%) and Rural Areas (3.4%)



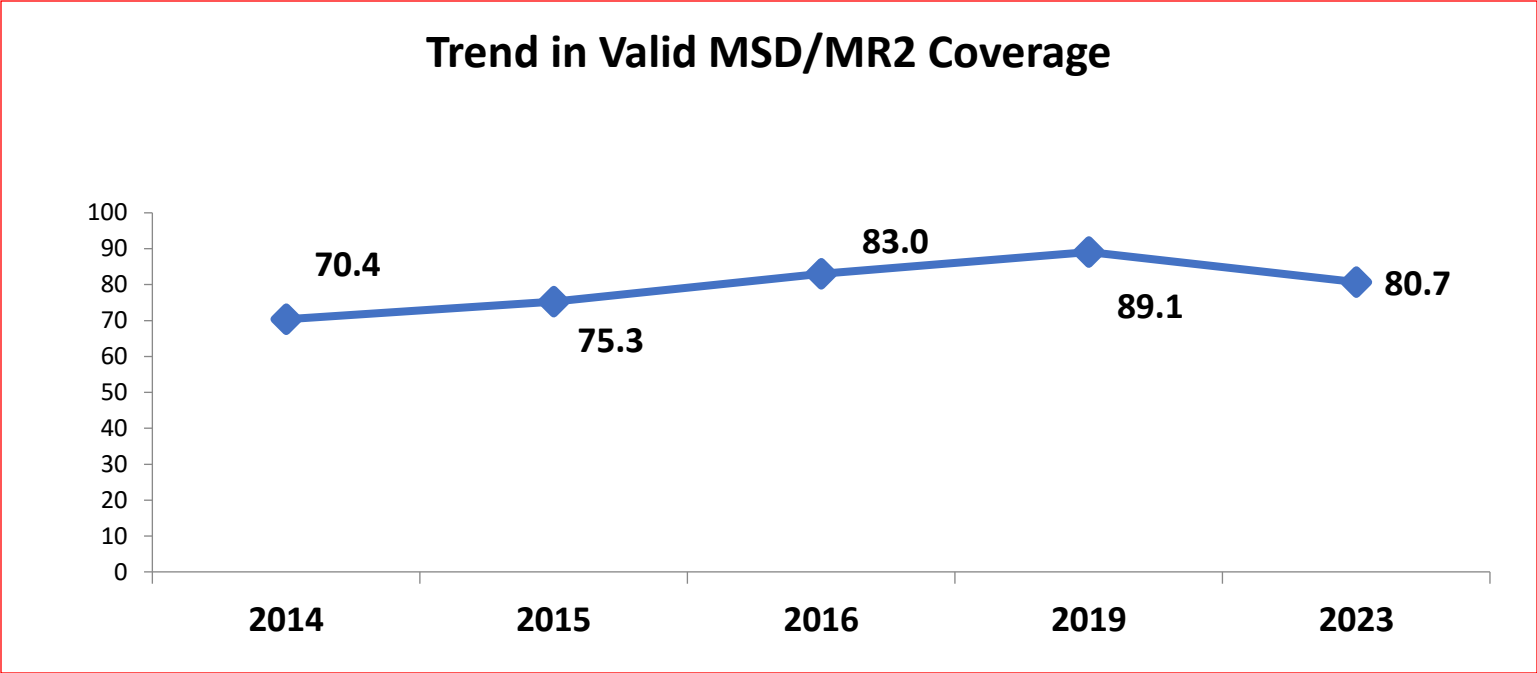
By Division: Highest in Chattogram and Khulna (3.9%)



By City Corporation: Highest in NCC (7.3%)



TREND IN VALID MR2 COVERAGE AMONG 24-35 MONTHS OLD CHILDREN

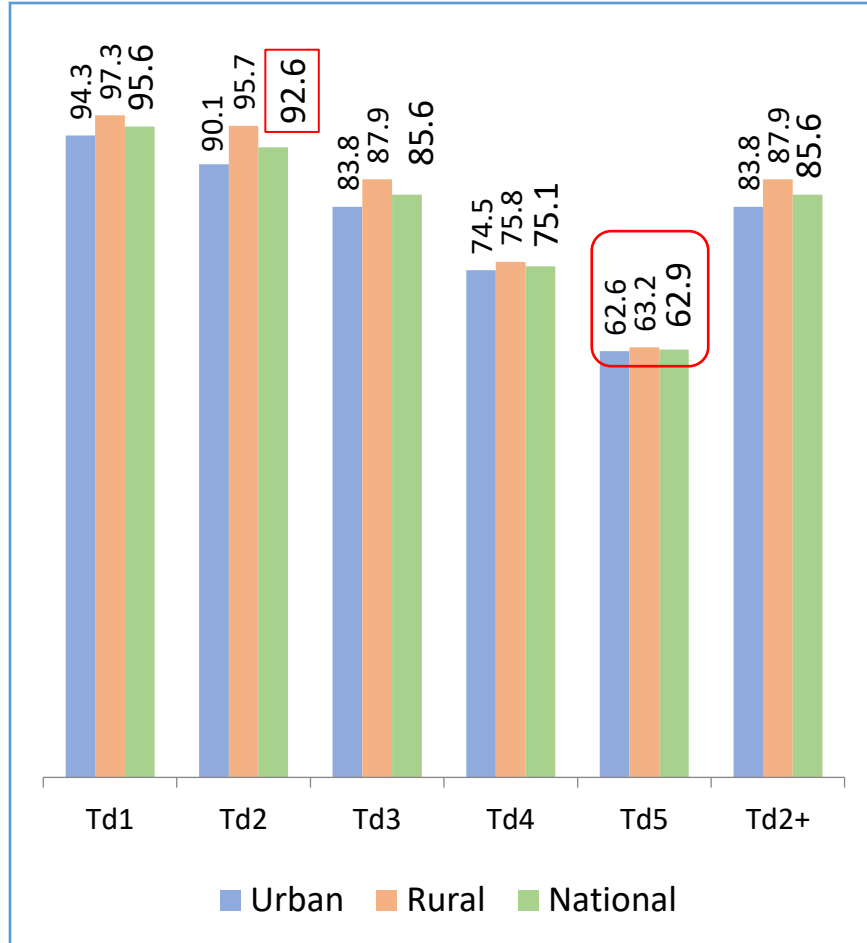


**TETANUS AND DIPHTHERIA (Td5) VACCINATION
COVERAGE SURVEY AMONG MOTHERS OF 0-11
MONTHS OLD CHILDREN**

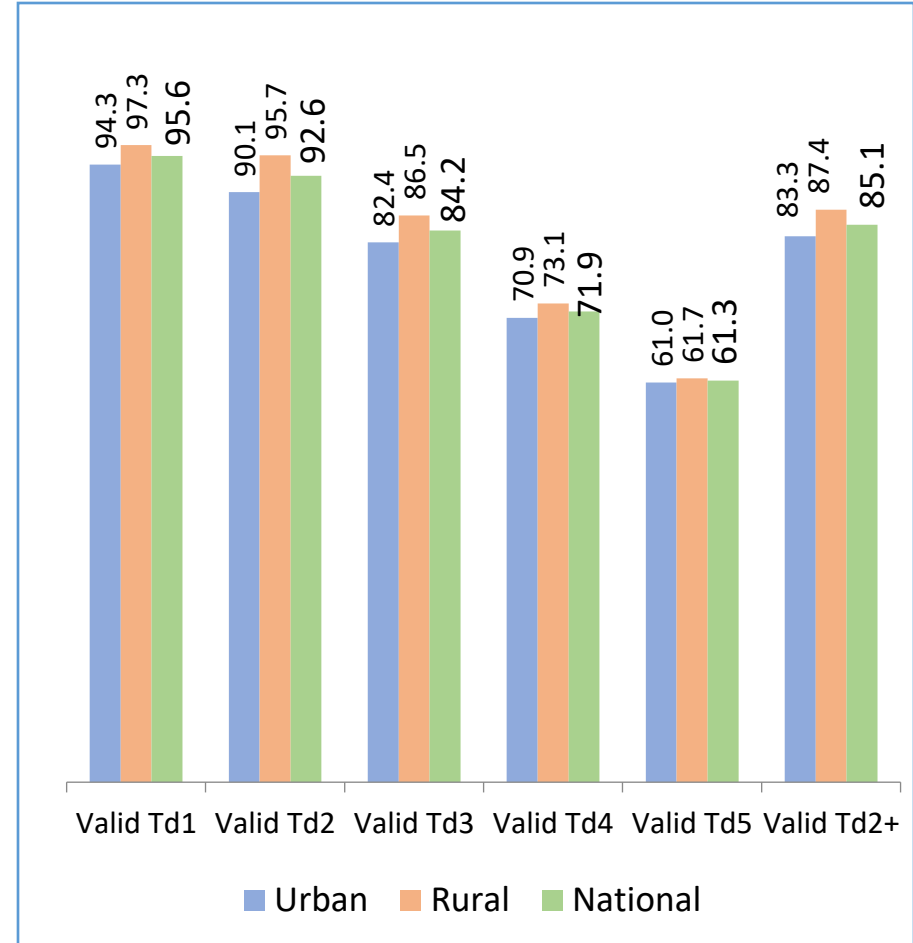
CRUDE AND VALID TD VACCINATION COVERAGE

AMONG MOTHERS WITH CHILDREN 0-11 MONTHS OLD

Crude Td Coverage: **62.9%**

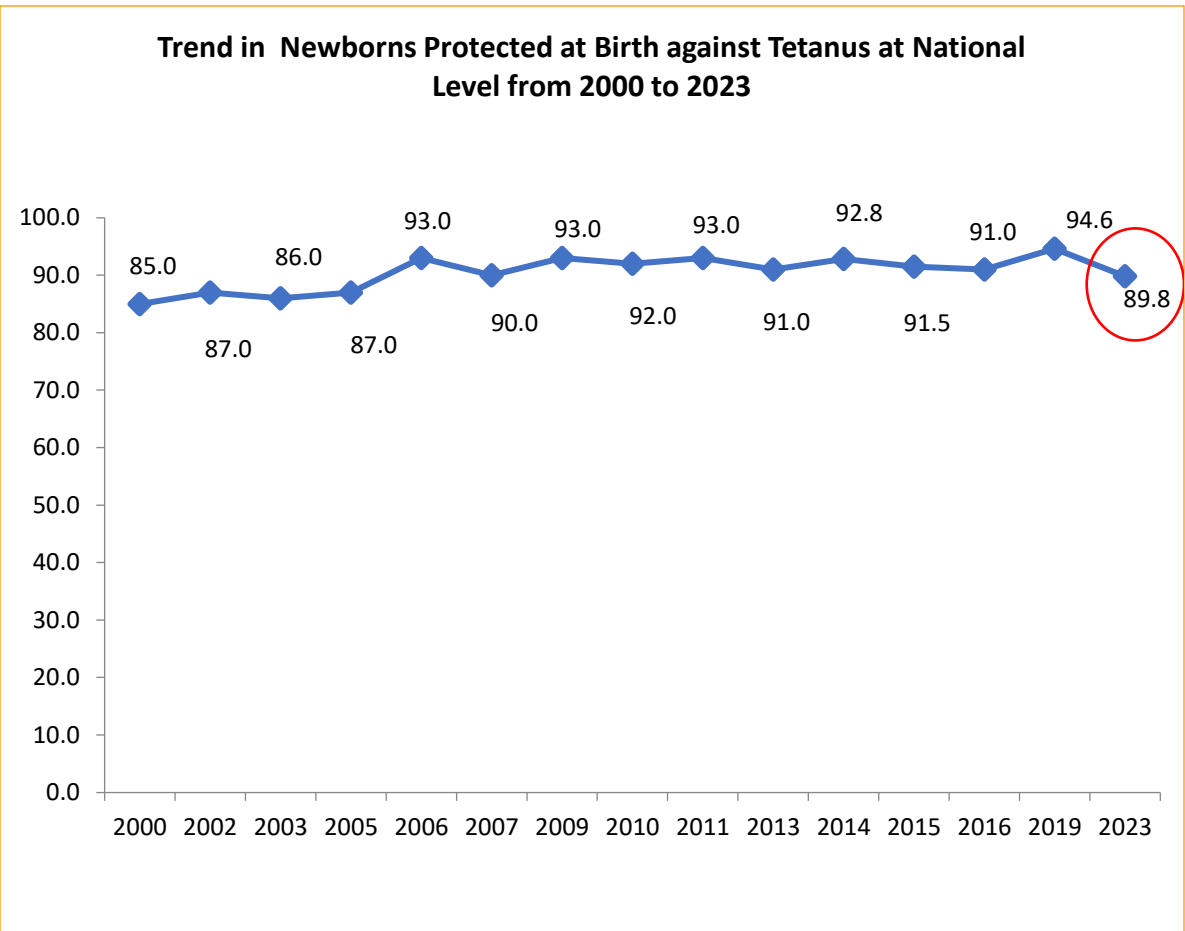
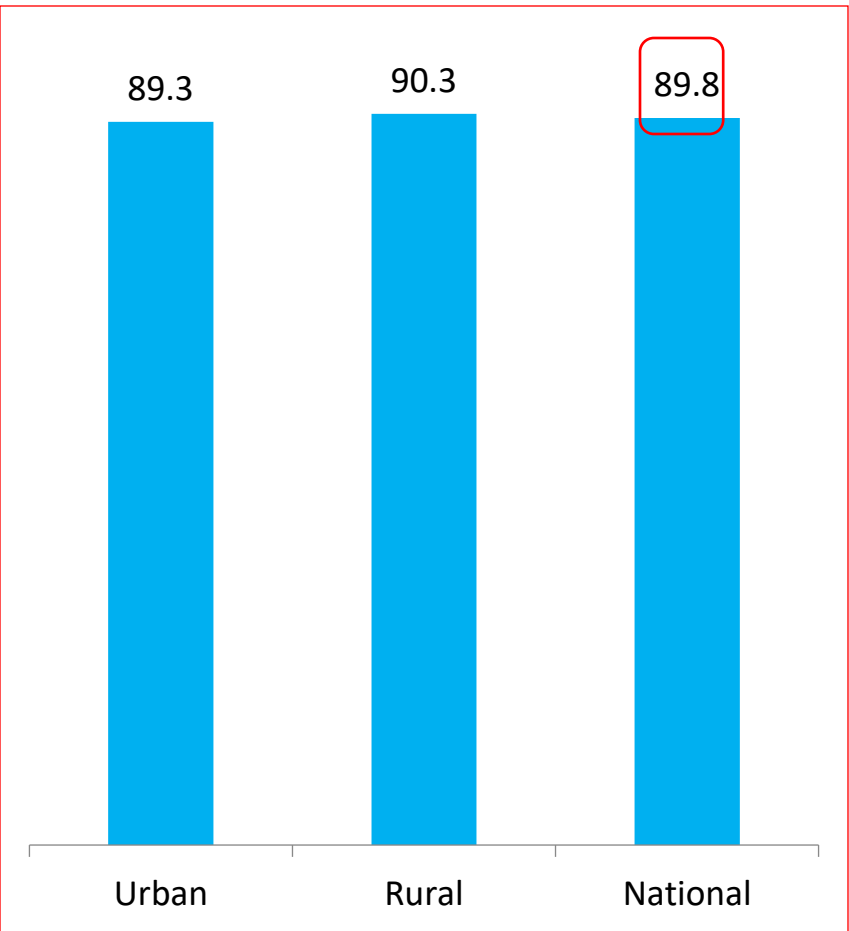


Valid Td Coverage: **61.3%**



CHILD PROTECTED AT BIRTH BY NATIONAL, RURAL AND URBAN AREA AND ANNUAL TRENDS

Nationally 89.8% of the children were protected at Birth against tetanus

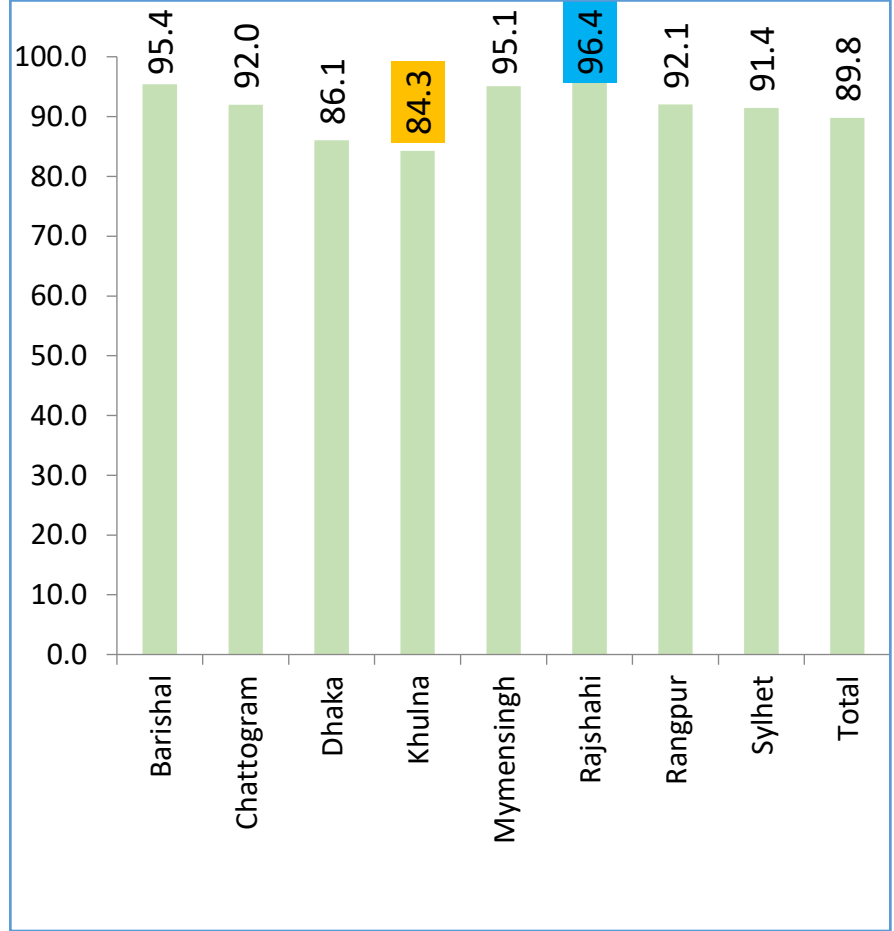


Source: Final draft REPI CES 2023

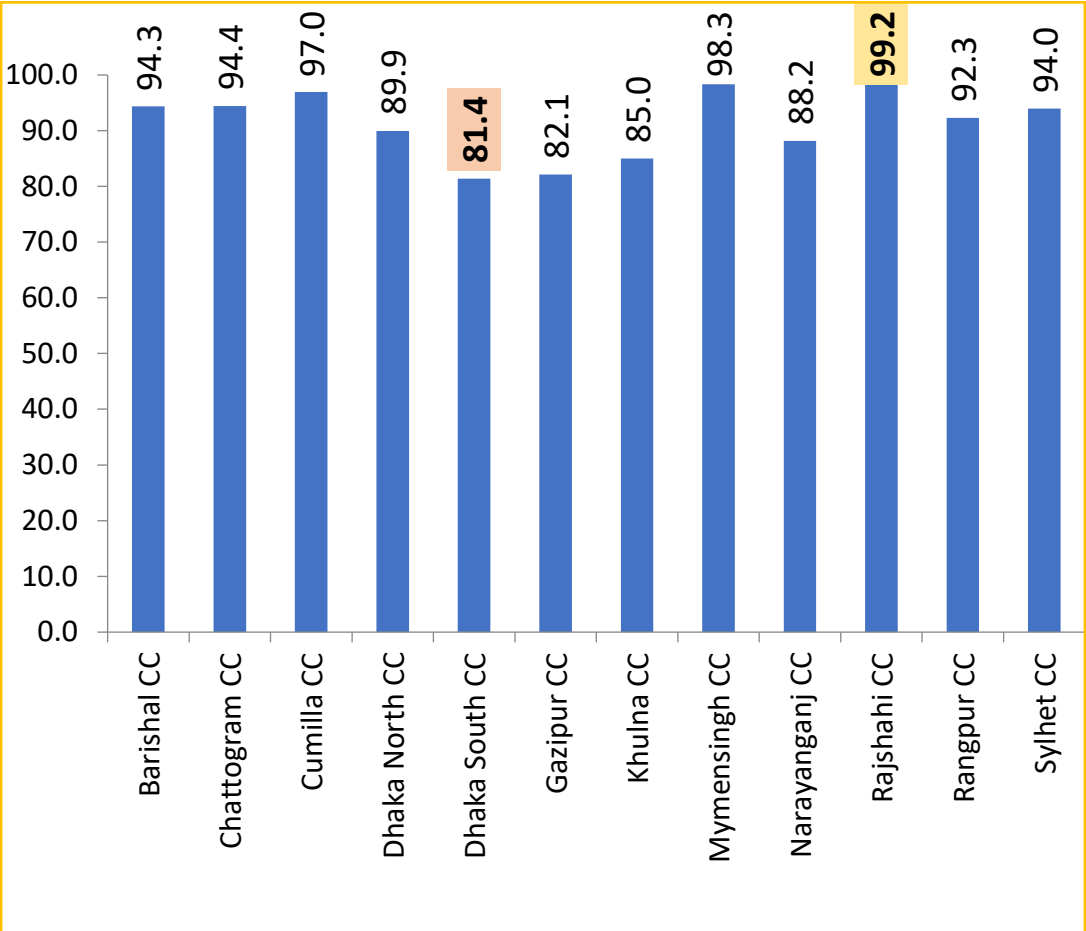
CHILD PROTECTED AT BIRTH BY DIVISION AND CITY CORPORATION

96.4% of the children were protected at Birth in Rajshahi division. It was 99.2% in RCC

By Division



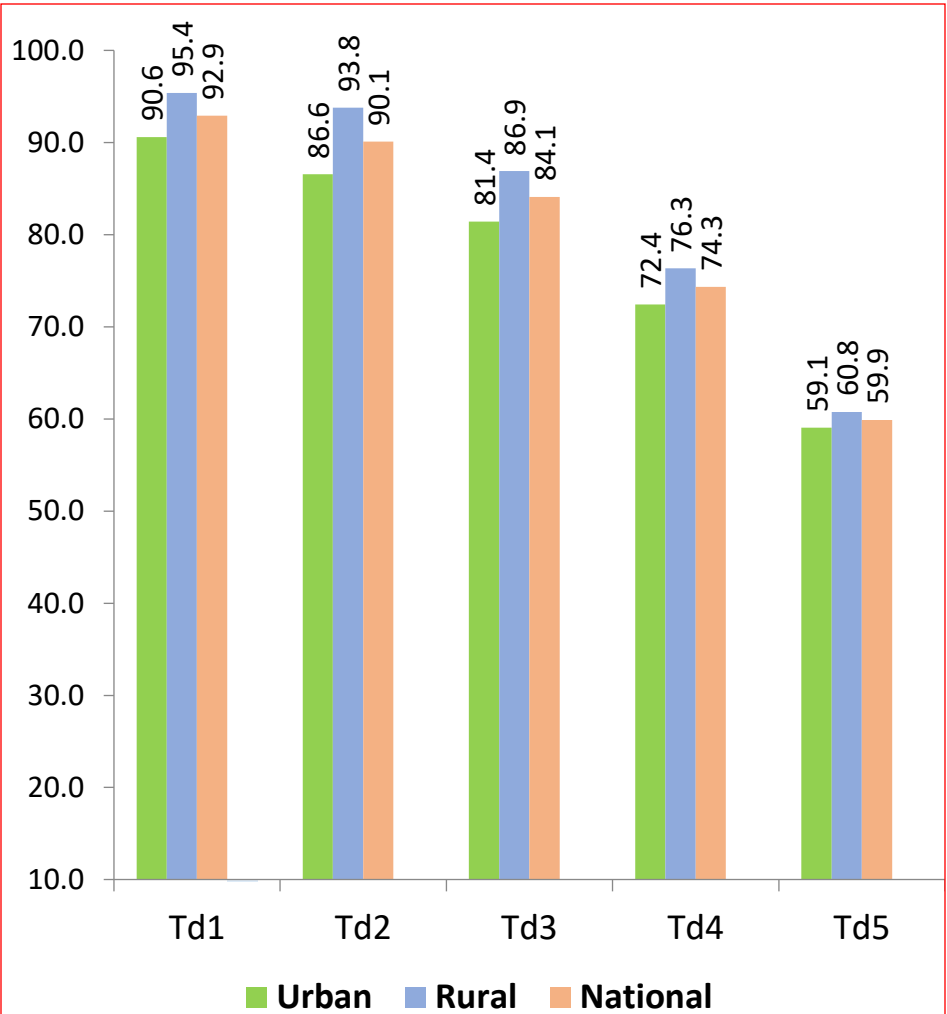
By City Corporation



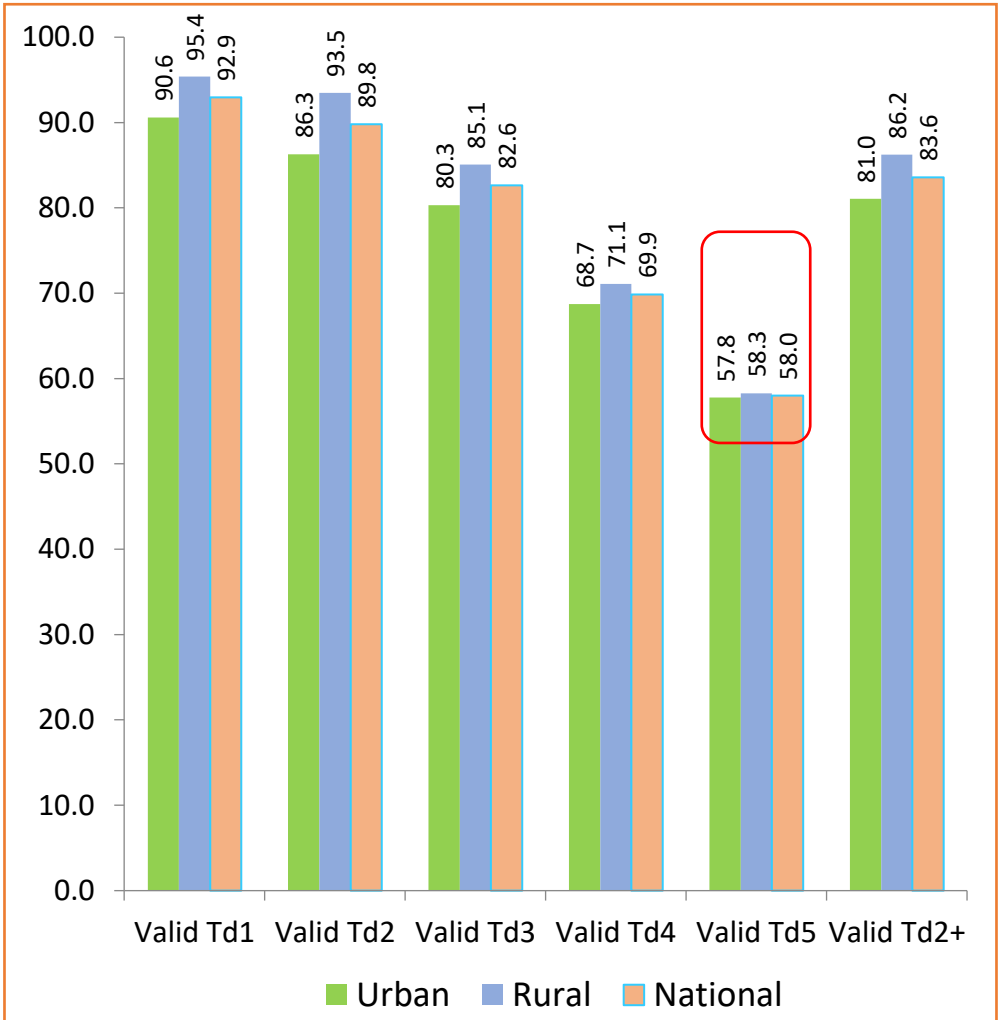
**TETANUS AND DIPHTHERIA (Td5) VACCINATION
COVERAGE SURVEY AMONG WOMEN OF 18-49
YEARS OLD**

Td COVERAGE AMONG CHILDBEARING AGE WOMEN (18-49 YEARS)

Crude Td Coverage

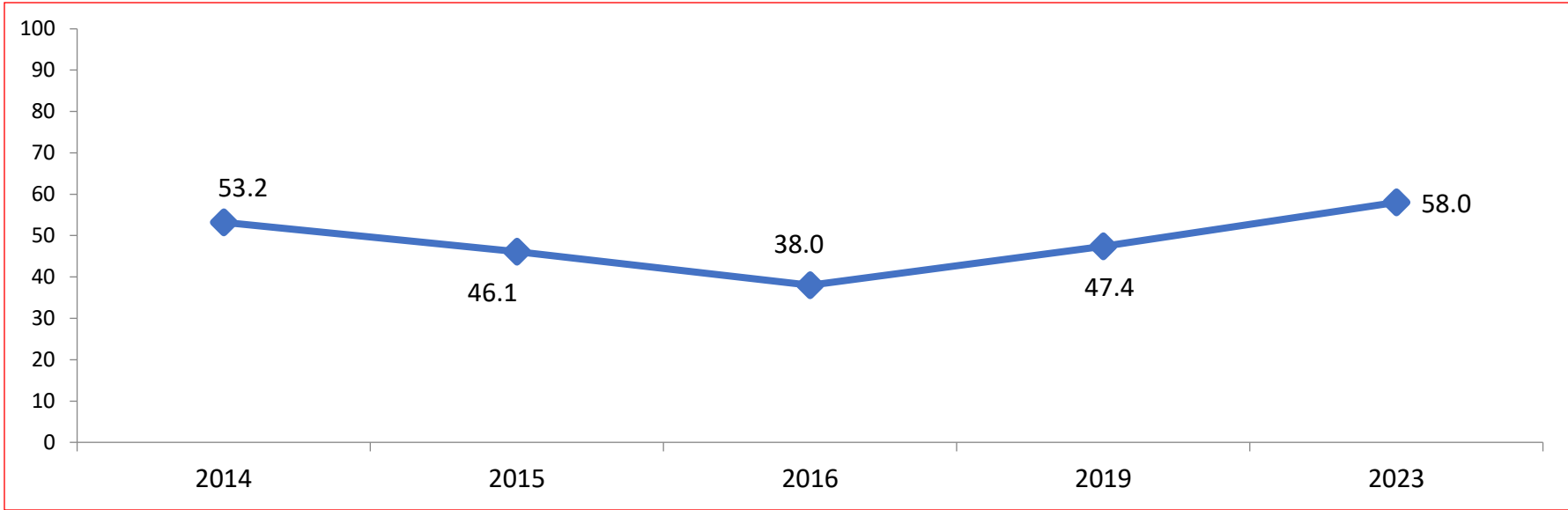


Valid Td Coverage



Source: Final draft REPI CES 2023

TREND IN VALID Td 5 COVERAGE AMONG CHILDBEARING AGE WOMEN (18-49 YEARS)



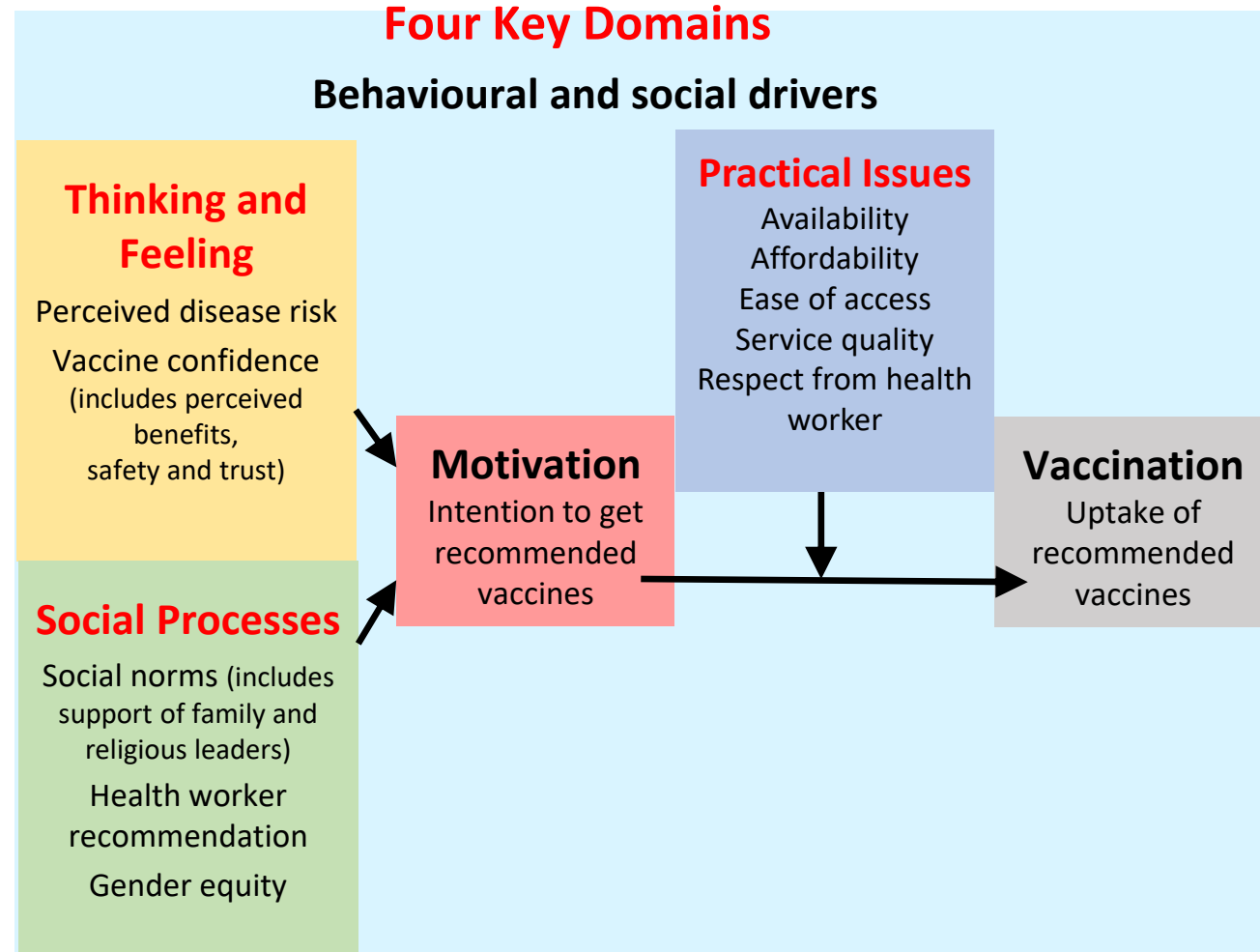
BEHAVIORAL AND SOCIAL DRIVERS-NATIONAL

Background:

- In 2018, the World Health Organization (WHO) established the Measuring Behavioral and Social Drivers (BeSD) of Vaccination global working group to develop tools to measure and respond to these factors.
- WHO's Strategic Advisory Group of Experts (SAGE) recommends that immunization programs use these tools to systematically gather and use data on the BeSD of vaccine uptake as part of their routine service delivery
- For the first time in Bangladesh, WHO BeSD tools is included in EPI CES 2023 as per country context

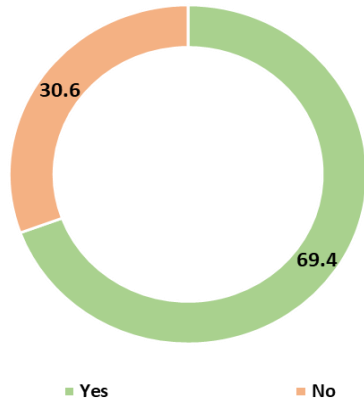
Objectives:

- Understand reasons for low uptake
- Guide policy-making, planning and evaluation
- Tailor and evaluate specific interventions

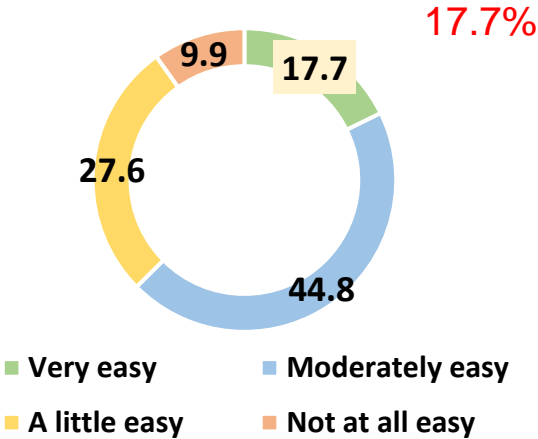


BEHAVIORAL AND SOCIAL DRIVERS-NATIONAL (N=97,919)

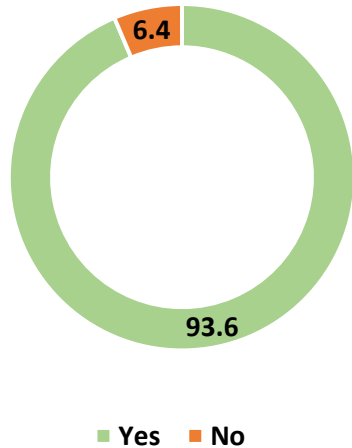
Did the health worker
communicated for vaccination?



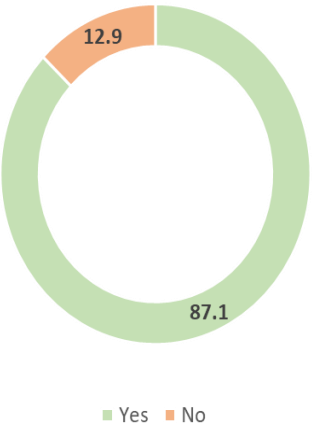
How easy to get your child
vaccinated by taking leave?



Do you know where to get your
child vaccinated?



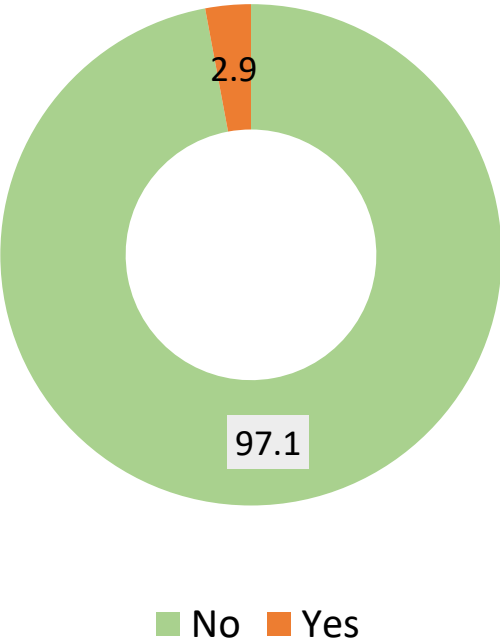
Have you personally ever taken your
child to get vaccinated?



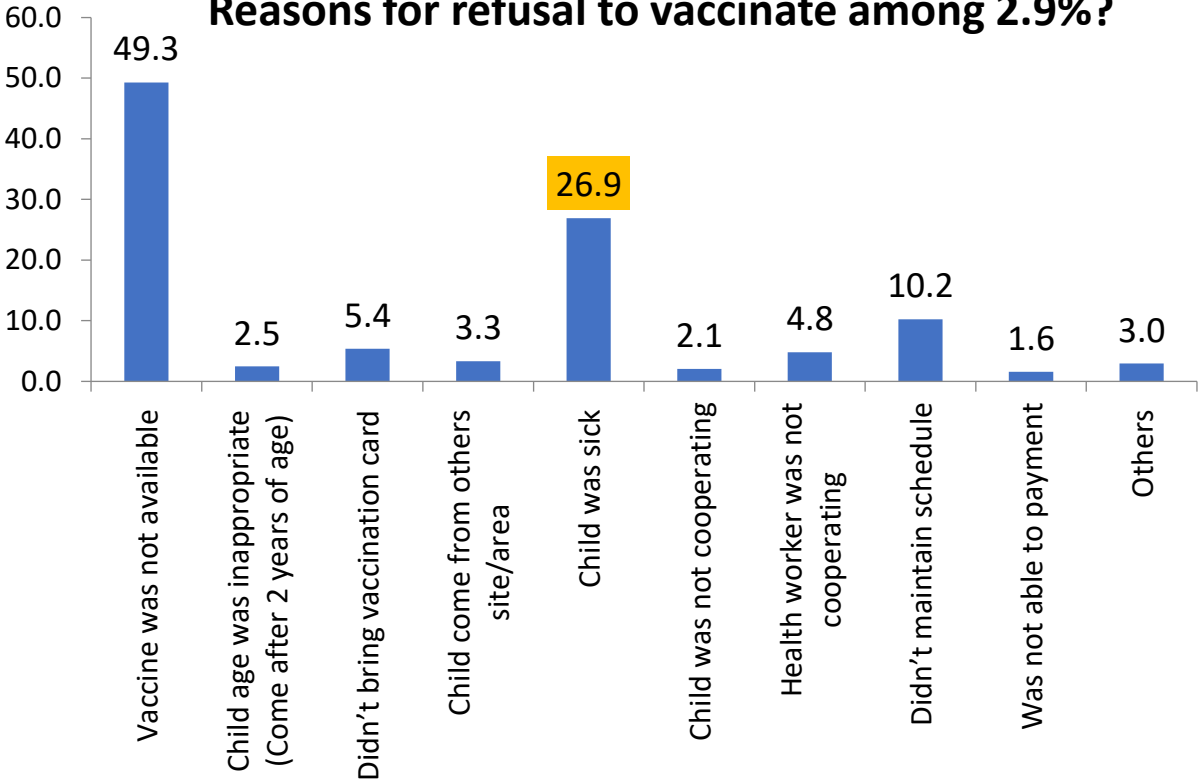
BEHAVIORAL AND SOCIAL DRIVERS-NATIONAL

N=2840 (2.9%)

Whether ever refused by vaccinator to vaccinate?



Reasons for refusal to vaccinate among 2.9%?



LIMITATION AND CHALLENGES

- Replacement of cluster in Bandarban District due to the accessibility issues and other some areas due to floor and river erosion etc.
- Failed to reach the some of the targeted sample after repetitive visit
- Natural calamities e.g. cyclone Remal, waterlogging.
- Non-availability of randomly selected respondents at the interview date.
- Non-replacement of respondents
- Difficult to check the register for recall/history of vaccination

RECOMMENDATIONS (1 OF 2)

- National crude vaccination coverage is 95.2% where valid coverage is only 81.6%. EPI can take initiative to increase the valid coverage.
- Urban valid coverage is 79.0% where rural coverage is 84.6%. EPI needs to focus on urban immunization specially to increase the coverage in the city corporation and municipality.
- EPI can take specific interventions to minimize the invalid doses
- Special attention can be paid to increase coverage in the chronically low performing districts/city corporations.
- Card Retention Rate found relatively less (56.7%) as mothers/caregivers lost the vaccination cards, EPI can take technology-based document preservation system along with the raising awareness to preserve the vaccination card.
- EPI can take initiative to improve interpersonal communication to ensure the timely administration of the routine antigens and as well as to reach the unreachable
- PAB status is decreased compare with previous month. EPI can take initiative to improve the Td coverage to increase the PAB status.
- EPI can consider the identified reason of never and partial vaccinations for any interventions to improve the coverage
- EPI can take special initiative in the identified low performed Districts City Corporations and Municipalities to reduce the ZD and under-immunization

RECOMMENDATIONS (2 OF 2)

- Timely completion of the all-routine antigens to avoid drop out and invalid doses specially focusing on the MR first dose by age of 12 months.
- Full Vaccination Coverage was found low in urban slum and hard-to-reach areas than national average. EPI can consider special attention to the urban slum and hard to reach areas to improve coverage.
- EPI needs to give focus on Td5 coverage for the childbearing age women.
- Special attention should be given to DNCC, DSCC, NCC and GCC to improve REPI coverage
- Evening and or weekend session needs to be ensured for working mothers to improve the urban coverage.

THANK YOU



CRUDE VACCINATION COVERAGE BY AGE OF 23 MONTHS BY DISTRICT

(Arranged in descending order)

Source: Final draft REPI CES 2023

Highest Coverage observed in Perojpur (100%) and the lowest in Sunamganj (90.1%).

District	BCG	Penta1	OPV1	PCV1	Penta2	OPV2	PCV2	Penta3	OPV3	PCV3	IPV1	IPV2	MR1	FVC	Rank
Pirojpur	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1
Thakurgoan	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	2
Sylhet	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.8	3
Satkhira	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.8	4
Barishal	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.7	5
Jhalokati	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	99.5	6
Noakhali	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	99.5	7
Joypurhat	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.4	99.4	8
Munshiganj	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.4	99.4	9
Cumilla	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.7	99.7	100.0	99.7	99.6	99.4	10
Manikganj	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.3	99.3	11
Chattogram	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	99.2	12
Mymensingh	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	99.2	13
Chuadanga	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.1	99.1	14
Dhaka	100.0	100.0	100.0	100.0	99.9	100.0	99.9	99.5	99.5	99.5	100.0	99.5	99.1	99.0	15
Bogura	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.8	99.8	100.0	99.8	98.9	98.9	16
Kushtia	100.0	100.0	100.0	100.0	99.4	100.0	99.4	99.4	99.4	99.4	100.0	99.4	98.8	98.8	17
Natore	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	99.5	99.5	100.0	99.5	98.8	98.8	18
Sirajganj	99.8	99.8	99.8	99.8	99.5	99.8	99.5	99.5	99.5	99.5	99.8	99.5	98.8	98.8	19
Brahmanbaria	99.8	99.8	99.8	99.8	99.4	99.8	99.4	99.0	99.0	99.0	99.8	99.0	99.3	98.7	20
Barguna	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.7	98.7	21
Chandpur	100.0	100.0	100.0	100.0	99.3	100.0	99.3	99.3	99.3	99.3	100.0	99.3	99.1	98.7	22

CRUDE VACCINATION COVERAGE BY 23 MONTHS BY DISTRICT

(Arranged in descending order)

Source: Final draft REPI CES 2023

District	BCG	Penta1	OPV1	PCV1	Penta2	OPV2	PCV2	Penta3	OPV3	PCV3	IPV1	IPV2	MR1	FVC	Rank
Bhola	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.7	98.7	23
Dinajpur	99.8	99.8	99.8	99.8	99.2	99.8	99.4	99.2	99.2	99.2	99.8	99.2	99.0	98.6	24
Magura	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.4	99.4	99.4	100.0	99.4	98.7	98.4	25
Kurigram	100.0	100.0	100.0	100.0	99.8	100.0	99.8	99.6	99.6	99.6	100.0	99.6	98.4	98.4	26
Khulna	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.8	99.8	100.0	99.8	98.4	98.4	27
Jamalpur	100.0	99.7	99.7	99.7	99.3	99.7	99.3	99.1	99.1	99.1	99.7	99.1	98.3	98.3	28
Moulavibazar	100.0	100.0	100.0	100.0	99.8	100.0	99.8	99.6	99.6	99.6	100.0	99.6	98.3	98.3	29
Jhenaidah	99.5	99.5	99.5	99.5	98.9	99.5	98.9	98.8	98.8	98.8	99.5	98.8	98.3	98.1	30
Narsingdhi	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.7	99.7	100.0	99.7	98.1	98.1	31
Panchagarh	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	98.0	32
Nowabganj	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	99.5	99.5	100.0	99.5	98.1	97.9	33
Patuakhali	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.6	99.6	100.0	99.6	97.9	97.9	34
Feni	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.6	99.6	100.0	99.6	97.8	97.8	35
Pabna	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.4	99.4	99.4	99.8	99.4	97.7	97.7	36
Rangpur	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.7	99.7	100.0	99.7	97.3	97.3	37
Sariatpur	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.7	99.7	100.0	99.7	97.2	97.2	38
Meherpur	100.0	100.0	100.0	100.0	99.4	100.0	99.4	99.1	99.1	99.1	100.0	99.1	97.1	97.1	39
Naogaon	100.0	100.0	100.0	100.0	99.1	100.0	99.1	98.8	98.8	98.8	100.0	98.8	97.1	97.1	40
Rajshahi	100.0	99.8	99.8	99.8	99.3	99.8	99.3	98.5	98.5	98.5	99.8	98.5	96.9	96.9	41
Faridpur	100.0	100.0	100.0	100.0	99.6	100.0	99.6	98.5	98.5	98.5	100.0	98.5	96.9	96.9	42

CRUDE VACCINATION COVERAGE BY 23 MONTHS BY DISTRICT

District	BCG	Penta1	OPV1	PCV1	Penta2	OPV2	PCV2	Penta3	OPV3	PCV3	IPV1	IPV2	MR1	FVC	Rank
Gopalganj	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.3	99.3	99.3	100.0	99.3	96.9	96.9	43
Gazipur	99.8	99.8	99.8	99.8	99.5	99.8	99.5	98.6	98.9	98.6	99.8	98.9	97.1	96.8	44
Tangail	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	99.2	99.2	100.0	99.2	96.6	96.6	45
Nilphamari	100.0	100.0	100.0	100.0	99.7	100.0	99.7	99.3	99.3	99.3	100.0	99.3	96.6	96.6	46
Lakshmipur	99.7	99.7	99.7	99.7	98.8	99.7	98.8	97.4	97.4	97.4	99.7	97.4	96.3	96.3	47
Rajbari	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.2	98.2	98.2	100.0	98.2	96.7	96.3	48
Sherpur	100.0	100.0	100.0	100.0	99.7	100.0	99.7	99.4	99.4	99.4	100.0	99.4	96.1	96.1	49
Lalmonirhat	100.0	99.8	99.8	99.8	99.4	99.8	99.4	99.2	99.2	99.2	99.8	99.2	95.9	95.9	50
Jashore	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9	98.9	98.9	100.0	98.9	96.0	95.7	51
Narail	100.0	100.0	100.0	100.0	99.6	100.0	99.6	98.5	98.5	98.5	100.0	98.5	95.9	95.7	52
Cox's Bazar	100.0	100.0	100.0	100.0	99.3	100.0	99.3	98.3	98.3	98.3	100.0	98.3	95.5	95.5	53
Bagerhat	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.1	99.1	99.1	100.0	99.1	95.5	95.5	54
Narayanganj	99.5	99.3	99.3	99.3	99.3	99.0	99.3	98.1	98.1	98.1	99.3	98.1	96.2	95.4	55
Netrokona	99.6	99.6	99.6	99.6	99.5	99.6	99.5	99.1	99.1	99.1	99.6	99.1	94.4	94.4	56
Khagrachari	99.5	99.1	99.1	99.1	98.6	99.1	98.6	98.1	98.1	98.1	99.1	98.1	94.2	94.2	57
Habiganj	98.8	98.8	98.8	98.8	97.8	98.8	97.8	97.2	97.2	97.2	98.8	97.2	94.1	94.1	58
Madaripur	100.0	99.5	99.5	99.5	99.1	99.5	99.1	98.0	98.0	98.0	99.5	98.0	94.1	94.1	59
Kishoreganj	100.0	100.0	100.0	100.0	99.3	100.0	99.3	98.3	98.3	98.3	100.0	98.3	93.9	93.9	60
Rangamati	99.8	99.8	99.8	99.8	99.0	99.8	99.0	99.0	99.0	99.0	99.8	99.0	93.4	93.4	61
Gaibandha	100.0	100.0	100.0	100.0	98.5	100.0	98.5	97.9	97.9	97.9	100.0	97.9	92.8	92.8	62
Bandarban	98.5	98.5	98.5	98.5	96.9	98.5	96.9	95.0	95.0	95.0	98.5	95.0	91.4	91.4	63
Sunamganj	99.8	99.8	99.8	99.8	98.9	99.8	98.9	96.2	96.2	96.2	99.8	96.2	90.3	90.1	64
Total	98.8	98.8	98.8	98.8	98.4	98.7	98.4	97.7	97.7	97.7	98.8	97.7	95.5	95.2	

Source: Final draft REPI CES 2023

VALID VACCINATION COVERAGE BY AGE OF 12 MONTHS

BY DISTRICT (Arranged in descending order)

Source: Final draft REPI CES 2023

Bhola achieved the highest coverage (94.2%), the second highest coverage was in Manikganj (94.1%), 3rd in Barishal, and lowest in Dhaka (67.4%) and Tangail (70.2%)

District	BCG	Penta1	OPV1	PCV1	Penta2	OPV2	PCV2	Penta3	OPV3	PCV3	IPV1	IPV2	MR1	FVC	Rank
Bhola	100.0	99.8	100.0	99.8	99.8	99.8	99.8	97.9	97.9	97.9	99.8	98.4	95.9	94.2	1
Manikganj	100.0	99.7	100.0	99.7	99.7	99.7	99.7	98.7	98.7	98.7	99.7	98.9	94.7	94.1	2
Barishal	100.0	99.7	100.0	99.7	99.7	99.7	99.7	97.8	97.8	97.8	99.7	98.4	95.4	93.6	3
Jhalokati	100.0	99.8	100.0	99.8	99.8	99.8	99.8	97.9	97.9	97.9	99.8	98.1	95.6	93.5	4
Sylhet	100.0	99.8	100.0	99.8	99.8	99.8	99.8	96.3	96.3	96.3	99.8	97.8	95.5	92.5	5
Perojpur	100.0	99.7	100.0	99.7	99.7	99.7	99.7	95.7	95.7	95.7	99.7	97.0	94.4	91.3	6
Jalalpur	100.0	99.3	99.7	99.3	98.8	99.3	98.8	94.8	94.8	94.8	99.3	95.8	92.7	91.2	7
Munshiganj	100.0	99.7	100.0	99.7	99.7	99.7	99.7	96.7	96.7	96.7	99.7	97.9	92.9	90.4	8
Satkhira	100.0	99.8	100.0	99.8	99.5	99.5	99.5	95.3	95.3	95.3	99.8	97.2	93.3	90.2	9
Narsingdhi	100.0	99.7	100.0	99.7	99.5	99.5	99.5	95.8	95.8	95.8	99.7	96.8	92.0	89.5	10
Mymensingh	100.0	99.7	100.0	99.7	99.7	99.7	99.7	95.3	95.3	95.3	99.7	96.5	92.6	89.4	11
Lakshmipur	99.7	99.5	99.7	99.5	98.5	99.5	98.5	93.9	93.9	93.9	99.5	94.6	91.5	89.1	12
Nowabganj	100.0	99.8	100.0	99.8	99.8	99.8	99.8	96.6	96.6	96.6	99.8	97.7	91.4	88.8	13
Chandpur	100.0	99.8	100.0	99.6	98.5	99.6	98.9	94.1	94.1	94.1	99.8	94.7	92.5	88.6	14
Naogaon	100.0	99.6	100.0	99.6	98.7	99.6	98.7	96.1	96.1	96.1	99.6	96.5	90.1	88.0	15
Noakhali	100.0	99.7	100.0	99.7	99.7	99.7	99.7	95.1	95.1	95.1	99.7	96.9	92.3	87.9	16
Barguna	100.0	99.8	100.0	99.8	99.8	99.8	99.8	95.3	95.3	95.3	99.8	97.7	91.8	87.8	17
Feni	100.0	99.7	100.0	99.7	99.7	99.7	99.7	94.5	94.5	94.5	99.7	97.1	91.8	87.2	18
Chuadanga	100.0	99.8	100.0	99.8	99.8	99.8	99.8	94.6	94.6	94.6	99.8	97.1	91.2	87.1	19
Brahmanbaria	99.8	99.5	99.8	99.5	99.1	99.5	99.1	96.5	96.5	96.5	99.5	97.4	89.6	87.1	20

VALID VACCINATION COVERAGE BY AGE OF 12 MONTHS

BY DISTRICT (Arranged in descending order)

Source: Final draft REPI CES 2023

District	BCG	Penta1	OPV1	PCV1	Penta2	OPV2	PCV2	Penta3	OPV3	PCV3	IPV1	IPV2	MR1	FVC	Rank
Bogura	100.0	99.7	100.0	99.7	99.5	99.5	99.5	93.9	93.9	93.9	99.7	96.3	92.3	86.9	21
Magura	100.0	99.6	100.0	99.6	99.6	99.6	99.6	94.1	94.1	94.1	99.2	95.6	90.3	86.8	22
Cumilla	100.0	99.8	100.0	99.8	99.5	99.5	99.5	94.5	94.5	94.5	99.5	96.2	91.1	86.7	23
Khulna	100.0	99.8	100.0	99.8	99.8	99.8	99.8	92.7	92.7	92.7	99.8	94.8	92.0	86.5	24
Sariatpur	100.0	99.7	100.0	99.7	99.7	99.7	99.7	96.1	96.1	96.1	99.7	97.8	89.2	86.4	25
Kushtia	100.0	99.8	100.0	99.8	99.2	99.8	99.2	92.0	92.0	92.0	99.8	94.2	90.1	86.1	26
Rajshahi	100.0	99.6	99.8	99.6	99.1	99.6	99.1	94.4	94.4	94.4	99.6	95.4	89.1	85.8	27
Chattogram	100.0	99.8	100.0	99.8	99.5	99.5	99.5	94.2	94.2	94.2	99.8	96.8	90.7	85.6	28
Natore	100.0	99.8	100.0	99.8	99.6	99.6	99.6	92.0	92.0	92.0	99.6	93.9	91.0	85.6	29
Narail	100.0	99.8	100.0	99.8	99.4	99.8	99.4	95.8	95.8	95.8	99.8	96.3	87.0	85.5	30
Bandarban	98.5	98.3	98.5	98.3	96.6	98.3	96.6	92.7	92.7	92.7	98.3	92.9	87.1	85.3	31
Pabna	99.8	99.6	99.8	99.6	99.6	99.6	99.6	92.6	92.6	92.6	99.6	95.8	91.4	85.3	32
Sherpur	100.0	99.7	100.0	99.7	99.3	99.7	99.3	93.8	93.8	93.8	99.7	95.4	88.8	85.1	33
Rangpur	100.0	99.8	100.0	99.8	99.8	99.8	99.8	93.1	93.1	93.1	99.8	95.4	90.3	84.9	34
Dinajpur	99.8	99.4	99.8	99.4	99.0	99.4	99.0	91.8	91.8	91.8	99.4	93.6	89.7	84.3	35
Nilphamari	100.0	99.7	100.0	99.7	99.2	99.4	99.2	91.4	91.4	91.4	99.8	93.9	90.5	84.2	36
Meherpur	100.0	99.8	100.0	99.8	99.2	99.8	99.2	92.8	92.8	92.8	99.8	93.8	88.3	84.0	37
Patuakhali	100.0	99.7	100.0	99.7	99.7	99.7	99.7	93.7	93.7	93.7	99.7	95.7	88.2	83.5	38
Bagerhat	100.0	99.5	100.0	99.5	99.5	99.5	99.5	92.4	92.4	92.4	99.5	95.8	87.7	83.5	39
Moulavibazar	100.0	99.6	100.0	99.6	99.3	99.6	99.3	92.8	92.8	92.8	99.6	95.0	88.6	83.4	40
Jhenaidah	99.5	99.3	99.5	99.3	98.7	99.3	98.7	94.0	94.0	94.0	99.3	95.8	86.8	83.1	41

VALID VACCINATION COVERAGE BY AGE OF 12 MONTHS

BY DISTRICT (Arranged in descending order)

Source: Final draft REPI CES 2023

The lowest valid coverage in Dhaka (67.4%) and Dhaka (67.4%)

District	BCG	Penta1	OPV1	PCV1	Penta2	OPV2	PCV2	Penta3	OPV3	PCV3	IPV1	IPV2	MR1	FVC	Rank
Lalmonirhat	100.0	99.6	99.8	99.6	98.9	99.4	98.9	94.2	94.2	94.2	99.6	95.3	86.1	83.1	42
Panchagarh	100.0	99.4	100.0	99.4	99.4	99.4	99.4	90.2	90.2	90.2	99.4	92.2	88.3	82.9	43
Habiganj	98.8	98.4	98.8	98.4	97.4	98.4	97.4	92.2	92.2	92.2	98.4	93.7	86.5	82.8	44
Narayanganj	99.5	99.0	99.3	99.0	99.0	98.7	99.0	91.8	91.8	91.8	99.0	93.1	86.4	81.9	45
Faridpur	100.0	99.7	100.0	99.7	99.3	99.7	99.3	93.9	93.9	93.9	99.7	94.6	85.4	81.9	46
Cox's Bazar	100.0	99.5	100.0	99.5	99.1	99.9	99.1	92.1	92.1	92.1	99.5	93.5	85.7	81.8	47
Joypurhat	100.0	99.8	100.0	99.8	99.8	99.8	99.8	98.5	98.5	98.5	99.8	98.7	82.2	81.5	48
Kurigram	100.0	99.8	100.0	99.8	99.6	99.8	99.6	89.2	89.2	89.2	99.8	91.7	88.0	81.2	49
Thakurgoan	100.0	99.7	100.0	99.7	99.7	99.7	99.7	88.0	88.0	88.0	99.7	96.1	92.0	80.9	50
Gazipur	99.8	99.6	99.8	99.6	99.3	99.6	99.3	88.4	88.2	87.9	99.6	91.3	85.4	80.9	51
Jashore	100.0	99.7	100.0	99.7	99.7	99.7	99.7	93.8	93.8	93.8	99.7	94.9	84.7	80.7	52
Sunamganj	99.8	99.4	99.8	99.4	98.2	99.1	98.2	89.7	89.9	89.7	99.1	91.7	85.0	80.6	53
Khagrachari	99.5	98.9	99.1	98.9	98.1	98.6	98.1	92.1	92.1	92.1	98.9	93.9	84.4	80.3	54
Madaripur	100.0	99.2	99.5	99.2	98.8	99.2	98.8	92.7	92.7	92.7	99.2	95.4	83.8	80.3	55
Kishoreganj	100.0	99.7	100.0	99.7	99.0	99.7	99.0	89.6	89.6	89.6	99.7	91.9	84.3	78.6	56
Rajbari	100.0	99.7	100.0	99.7	99.5	99.5	99.5	91.5	91.5	91.5	99.7	93.6	83.5	78.6	57
Rangamati	99.8	99.4	99.8	99.4	98.4	99.2	98.4	89.0	89.0	89.0	99.4	91.6	84.1	78.4	58
Gopalganj	100.0	99.8	100.0	99.8	99.8	99.8	99.8	90.6	90.6	90.6	99.8	93.0	83.9	78.0	59
Netrokona	99.6	99.4	99.6	99.4	99.0	99.2	99.0	92.0	92.0	92.0	99.4	94.2	82.2	77.3	60
Sirajganj	99.8	99.6	99.8	99.6	98.4	99.1	98.9	89.4	89.4	89.4	99.6	91.4	82.1	76.5	61
Gaibandha	100.0	99.6	100.0	99.6	98.0	99.6	98.0	89.3	89.3	89.3	99.6	92.1	81.1	76.4	62
Tangail	100.0	99.8	100.0	99.8	98.6	98.6	98.6	84.6	84.6	84.6	99.8	87.3	78.9	70.2	63
Dhaka	100.0	99.7	100.0	99.7	99.1	99.3	99.2	87.4	87.6	87.4	99.6	89.9	75.5	67.4	64
Total	98.8	98.5	98.8	98.5	98.0	98.4	98.0	91.6	91.6	91.6	98.5	93.6	86.1	81.6	