Coverage Evaluation Survey

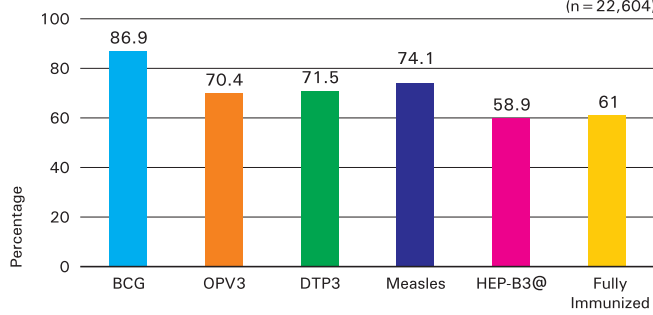## 2009

Introductory Note

The Coverage Evaluation Survey 2009 (CES-2009), a nationwide survey covering all States and Union Territories of India, was conducted during November 2009 to January 2010. The survey was commissioned by United Nations Children's Fund (UNICEF) with the funding from IKEA Social Initiative. ORG – Centre for Social Research was entrusted to carry out the survey.

MOHFW, Government of India constituted a Technical Advisory Committee (TAC) to provide oversight and coordinate various activities related to CES-2009 including sampling, survey methodology, questionnaires, quality guidance, tabulation plan, data analysis, final tabulation and data presentation.
The data collection was monitored independently by National Institute of Health and Family Welfare, New Delhi in collaboration with Population Resource Centers.

Bilingual questionnaires in local language and in English were used. The data was collected from 45,058 households, 22,604 mothers of children of age 12-23 months and 22,984 women who delivered during the last 12 months.
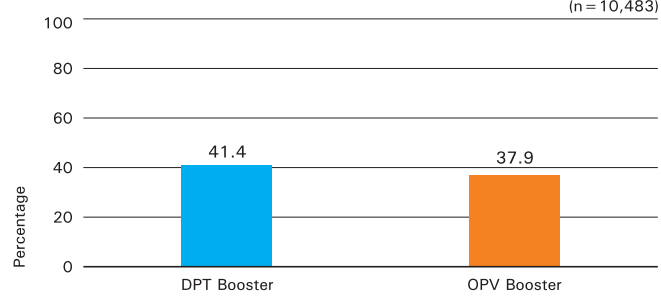
This fact sheet is an abridged version of the detailed report "Coverage Evaluation Report 2009".

unicef ✿
unite for children

Child Immunization

Immunization among 12-23 month Children (%)

(n = 22,604)

BCG: 86.9
OPV3: 70.4
DTP3: 71.5
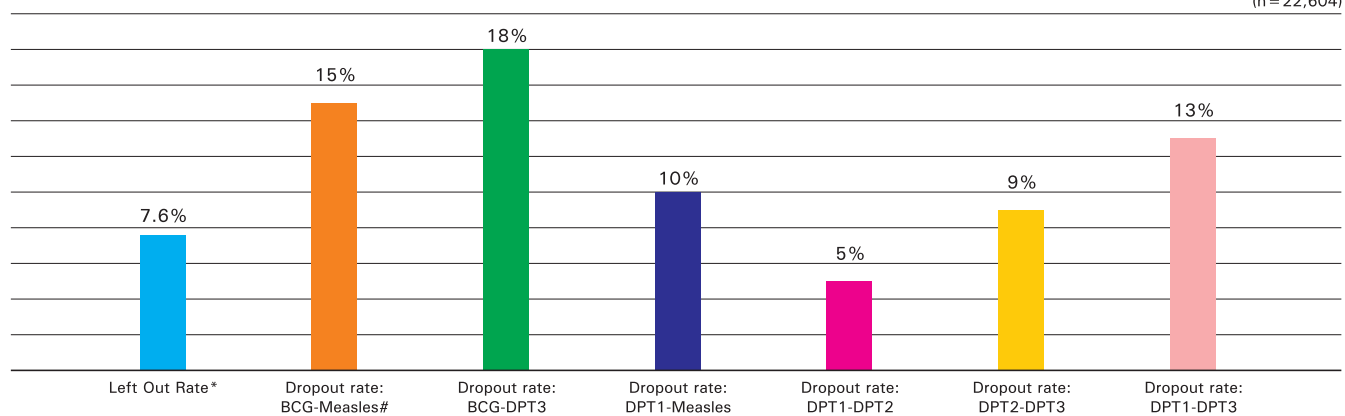Measles: 74.1
HEP-B3@: 58.9
Fully Immunized: 61

@ 3 doses of Hepatitis B vaccine coverage among children 12-23 months in 16 States/UT where it is part of UIP Fully Immunized - Children (12-23 month age) receiving one dose BCG, 3 doses of DPT/OPV each and 1 measles vaccine

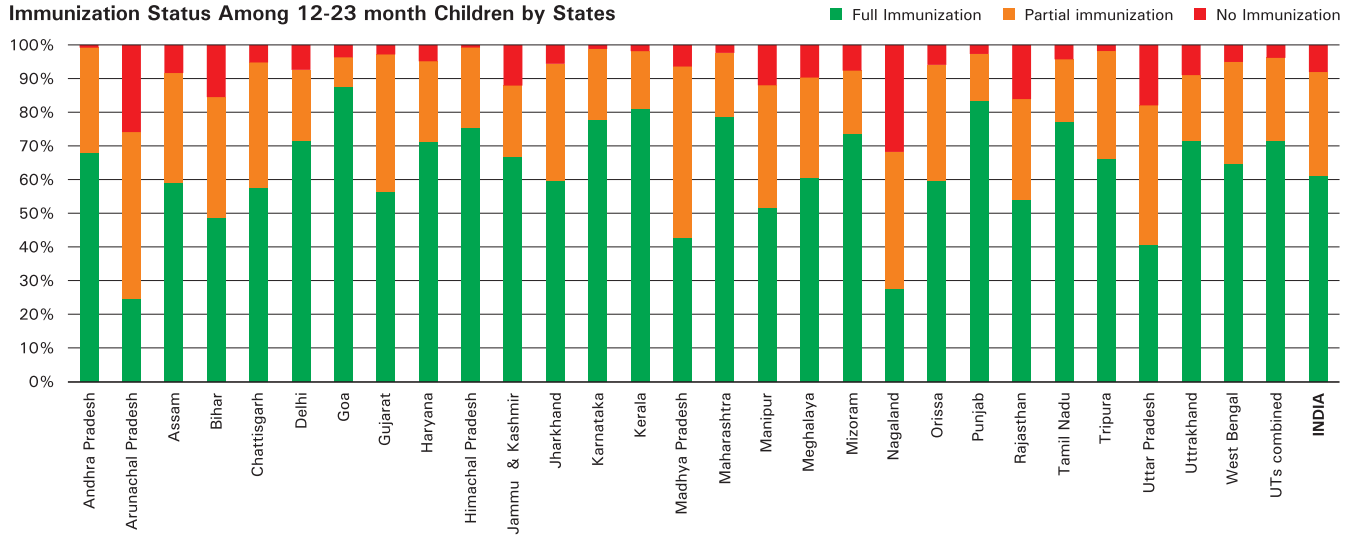## Booster Immunization among 18-23 month old children

(n = 10,483)

DPT Booster: 41.4
OPV Booster: 37.9

Child Immunization - Left-out and Drop-out Rates

(n = 22,604)

Left Out Rate*: 7.6%
Dropout rate: BCG-Measles#: 15%
Dropout rate: BCG-DPT3: 18%
Dropout rate: DPT1-Measles: 10%
Dropout rate: DPT1-DPT2: 5%
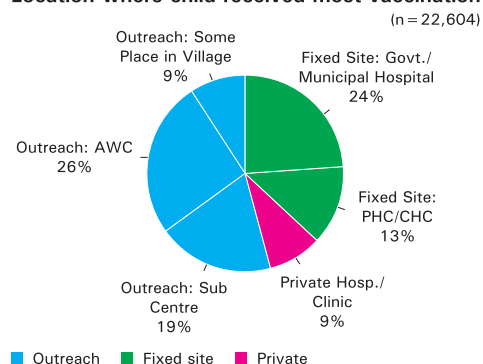Dropout rate: DPT2-DPT3: 9%
Dropout rate: DPT1-DPT3: 13%

*Children 12-23 month age not receiving any vaccination
#Example calculation of drop-out rate: BCG coverage minus measles coverage divided by BCG coverage

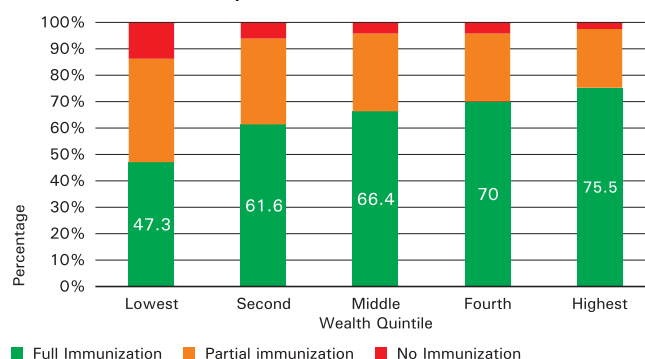## Immunization Status Among 12-23 month Children by States

Legend: Full Immunization | Partial immunization | No Immunization

States (x-axis): Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, Uttrakhand, West Bengal, UTs combined, INDIA

Indicator	Rural	Urban	Total
Number of Children (12-23 months) (n)	12635	9969	22604
Immunization Card (issued and seen) (%)	48.9	58.0	51.5
Distance travelled to reach vaccination site (in km) (%)			
<1	43.7	42.3	56.2
1 to 3	39.3	43.7	30.1
3 to 5	7.3	6.7	5.3
5+	9.7	7.3	8.4
Mean distance (in km)	2.2	2.1	2.2
Time taken to reach vaccination site (in Minutes) (%)			
<20	76.5	78.4	80
20-30	14.3	15.7	12
30+	9.3	5.9	8
Mean Time taken (in minutes)	18	17.6	18.2

Location where child received most vaccination
(n = 22,604)

- Outreach: Some Place in Village 9%
- Fixed Site: Govt./ Municipal Hospital 24%
- Outreach: AWC 26%
- Fixed Site: PHC/CHC 13%
- Outreach: Sub Centre 19%
- Private Hosp./ Clinic 9%

Legend: Outreach | Fixed site | Private

Immunization Status by Wealth Quintile

Wealth Quintile	Full Immunization
Lowest	47.3
Second	61.6
Middle	66.4
Fourth	70
Highest	75.5

Legend: Full Immunization | Partial immunization | No Immunization

Immunization Status by Caste

Caste	Full Immunization
Scheduled Caste	58.9
Scheduled Tribes	49.8
Other Backward Class	60.6
Other Castes	66.3

Legend: Full Immunization | Partial immunization | No Immunization
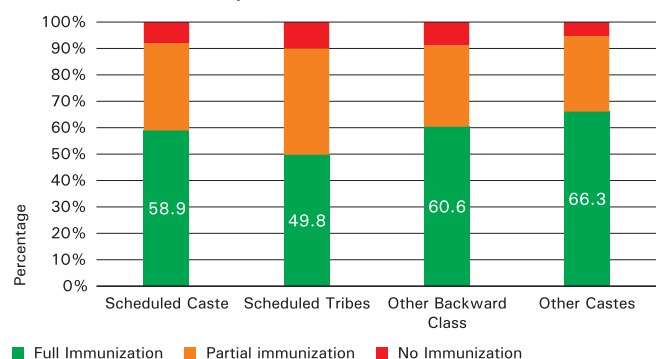
Place of Immunization by Caste

Categories: Scheduled Caste, Scheduled Tribe, Other Backward Class, Othes

Legend: Outreach: Some Place in village | Outreach: AWC | Outreach: Sub Centre | Private Hosp./Clinic | Fixed Site: PHC/CHC | Fixed Site: Govt./Municipal Hospital
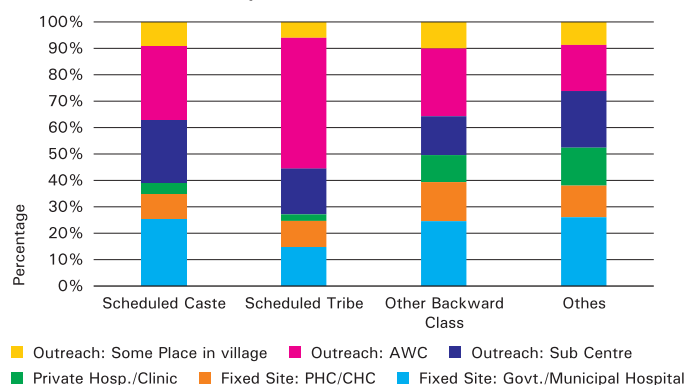
Reasons for partial or no Immunization (multiple responses)
(n = 10,542)

Demand Side Issues:
- Did not feel need — 28.2
- Not knowing about vaccines — 26.2
- Not knowing where to go for immunization — 10.8
- Time not convenint — 8.9
- Fear of side effects — 8.1
- Do not have time — 6
- Wrong advice by someone — 3
- Cannot afford the cost — 1.2

Supply Side Issues:
- Vaccine not available — 6.2
- Place not convenient — 3.8
- ANM absent — 3.9
- Long waiting time — 2.1
- Place too far — 2.1
- Service not available — 2.1

Others — 11.8

Percentage (x-axis: 0, 5, 10, 15, 20, 25, 30)

Child Health (0-2 years)

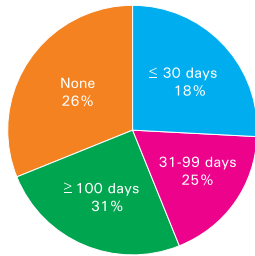| Indicator	Rural	Urban	Total
Number of children of 0-2 years of age (n)	**25236**	**19904**	**45140**
Acute Respiratory Infection (ARI) in previous 2 weeks (%)	**18.9**	**18.5**	**18.8**
Proportion seeking ARI treatment at (multiple response) (%)			
Govt. Health Facility/ Provider	21.9	19	21.1
Pvt. Health Facility/ Provider	59.6	73.3	63.4
Any health facility	79.6	90.5	82.6
Proportion not seeking any healthcare for ARI	20.4	9.5	17.4
Acute Diarrhea in previous 2 weeks (%)	**15.3**	**16.3**	**15.6**
Proportion seeking Diarrhea treatment at (multiple response) (%)			
Govt. Health Facility/ Provider	21.9	18.5	20.9
Pvt. Health Facility/ Provider	44.5	57.9	48.4
Any health facility	64.9	74.8	67.8
Others	5.6	0.9	4.3
Proportion not seeking any healthcare for Acute Diarrhea	35.1	25.2	32.2

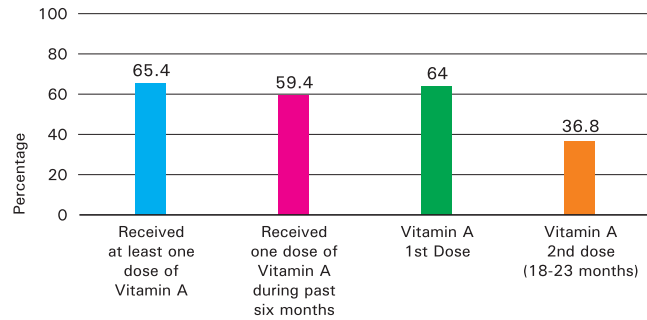## Treatment of Childhood Diarrhea (0-2 years)

(n = 6,464)

Percentage

Category	Value
ORS	42.8
Gruel	14.5
Either gruel or ORS	49.3
Increased fluid	9.7
Any ORT or increased fluid	53.6
No treatment	3.6
Given less fluids to drink	33.7
Given less than usual Breast Feeding	30.2
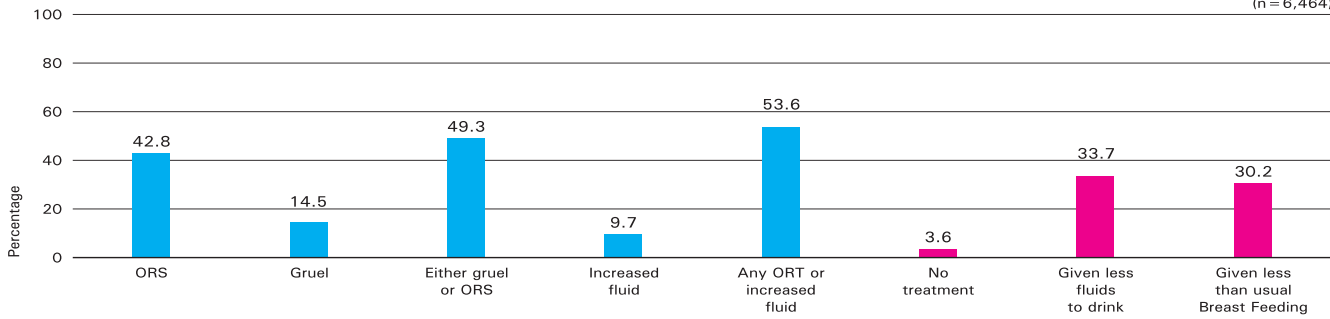
Micronutrient

Consumption of Iron Folic Acid during Pregnancy (in Days)

(n = 22,984)

- ≤ 30 days 18%
- 31-99 days 25%
- ≥ 100 days 31%
- None 26%

Vitamin A Supplementation in Children 12-23 months

Percentage

Category	Value
Received at least one dose of Vitamin A	65.4
Received one dose of Vitamin A during past six months	59.4
Vitamin A 1st Dose	64
Vitamin A 2nd dose (18-23 months)	36.8

Maternal Health

Antenatal Care: Number of times care received

(n = 22,984)
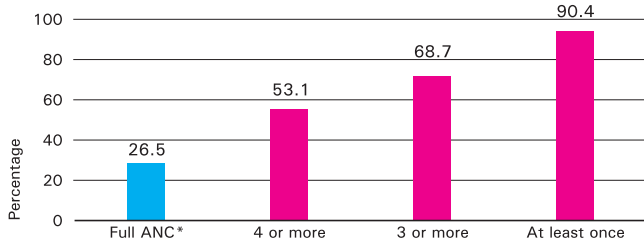
Percentage

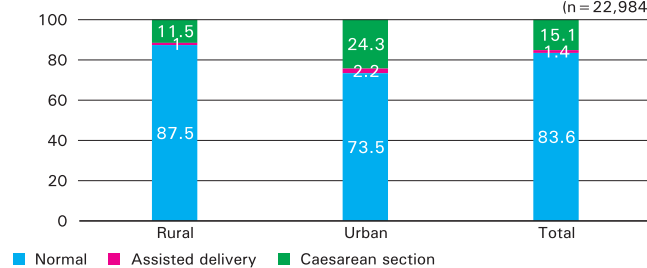| Category	Value
Full ANC*	26.5
4 or more	53.1
3 or more	68.7
At least once	90.4

*Pregnant women who had at least 3 ANC checkups, 1 TT injection and ≥100 IFA tablets/syrup consumed
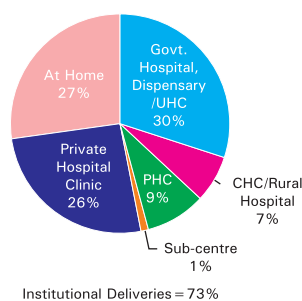
Nature of Last Delivery

(n = 22,984)

	Rural	Urban	Total
Caesarean section	11.5	24.3	15.1
Assisted delivery	1	2.2	1.4
Normal	87.5	73.5	83.6

Legend: Normal | Assisted delivery | Caesarean section

Place of ANC: Women who received any ANC

(n = 21,083)

- Govt. Hospital 25%
- PHC 22%
- Sub Centre 21%
- In village (by ANM) 5%
- Home/Others 4%
- Private Doctor /Hospital/Clinic 23%
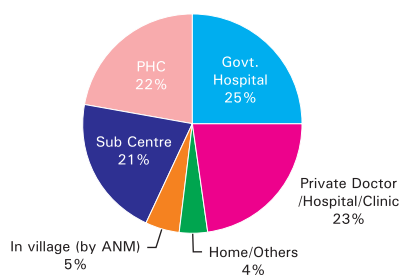
Place of Delivery

(n = 22,984)

- Govt. Hospital, Dispensary /UHC 30%
- At Home 27%
- Private Hospital Clinic 26%
- PHC 9%
- CHC/Rural Hospital 7%
- Sub-centre 1%

Institutional Deliveries = 73%

Skilled Birth Attendance: Home vs Institutional Deliveries

(n = 22,984)

- Institutional 73%
- Home: Skilled Birth Attendance 3%
- Home: Traditional Birth Attendance 17%
- Home: Others 7%
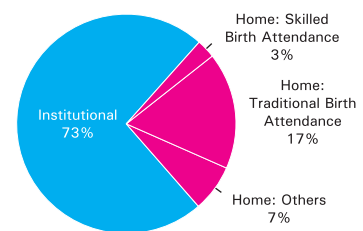
Reasons for not Deliverying at Institution (Multiple Responses)

(n = 5279)

Reason	Percentage
No time to go	40.6
Not necessary	24.6
Better care at home	20.1
Cost too much	17.9
Too far/ No transport	10.4
Family did not allow	10.3
Others	5.3
Lack of knowledge	3.8
Poor quality service	3
Not customary	2.3

Percentage
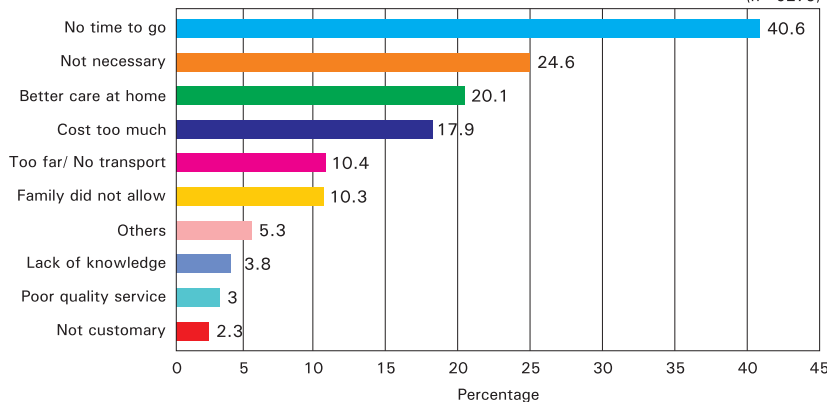
Duration of Stay at Health Facility (Normal or assisted delivery)

(n = 13,517)

- < 24 hours 25%
- 1 day 21%
- 2 day 20%
- 3 days 20%
- 4 + days 14%

4
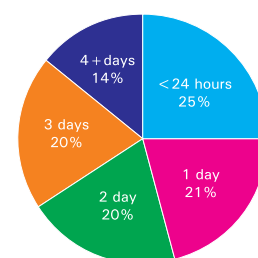
Maternal Care (women delivering in previous 12 months)

Indicator	Rural	Urban	Total
Women delivering in previous 12 months (n)	**12849**	**10135**	**22984**
Pregnancy registration			
Percent registered during last pregnancy	**91.1**	**94.4**	**91.9**
Government doctor	35.6	47.1	38.7
ANM	17.8	6.2	14.8
Anganwadi worker	18.9	6.5	14.9
ASHA	2.5	0.3	2.0
Private doctor	15.6	33.8	20.9
Others	0.7	0.5	0.6
Stage of Pregnancy at the time of first ANC (%)			
No antenatal check up	11.7	4.2	9.6
First trimester	54.9	70.4	59.2
Second trimester	27.9	21.0	26.0
Third trimester	4.8	3.3	4.4
No. of days IFA tablets/syrup consumed during pregnancy (%)			
< = 30	18.9	14.1	17.6
31-99	25.1	25.2	25.1
> = 100	27.6	39.7	31.0
None	28.4	21.0	26.3
TT Injection 2+	85.9	89.4	86.9
Full ANC*	22.8	36.1	26.5
Distance travelled to get ANC services (in Kms) (%)			
<1	31.5	36.2	32.8
1-2	26.6	42.3	31.0
3-4	13.7	9.9	12.6
5+	28.0	11.4	23.4
Mean distance (in Kms)	3.9	2.0	3.4
Time taken to reach the place for getting ANC Services (in minutes)			
<10	16.2	21.7	17.7
10-20	44.0	57.1	47.6
20-30	20.6	13.8	18.7
30-60	13.6	4.7	11.1
60+	3.7	1.0	2.9
Mean time taken (in minutes)	24.7	16.5	22.4

*Pregnant women who had at least 3 ANC checkups, 1 TT injection and ≥100 IFA tablets/syrup consumed

Delivery Care (women delivering in previous 12 months)

Indicator	Rural	Urban	Total
Number of women delivering in previous 12 months (n)	**12849**	**10135**	**22984**
Institutional Delivery (%)	**68**	**85.6**	**72.9**
Public Facility	47.7	45.1	47.0
Private Facility	20.3	40.5	25.9
Skilled Birth Attendance (institutional +home deliveries)	71.7	87.9	76.2
For all Institutional Deliveries			
Distance of health facility (in Km)			
< = 1	11.4	30.0	17.5
2-5	27.8	37.7	31.0
6-10	19.6	9.9	16.5
11-20	16.3	5.6	12.8
20-30	6.9	2.1	5.3
30+	5.7	1.3	4.3
Don't Know/ Can't say	12.2	13.4	12.6
Mean Distance from House (in Km)	11.2	4.9	8.1
Time taken to reach the facility (in minutes)			
< = 30	64.2	85.2	71.0
31-60	24.8	11.1	20.3
61-90	3.6	1.1	2.8
>90	7.4	2.6	5.9
Mean time taken (in minutes) to reach the facility	39.2	24.3	31.8
Combining time and distance renders that > 80% did not walk to the facility			

Institutional delivery and JSY Scheme

Indicator	Low Performing States	High Performing States	Total
Number of women who delivered in the previous 12 months (n)	8037	14947	22984
Proportion aware of JSY scheme* (%)	58.0	61.7	60.0
Proportion received any assistance under JSY during delivery* (%)	39.0	26.9	32.5
Number of women who delivered in institution in previous 12 months (Government + private) (n)	5480	12225	17705
Proportion women reported that ASHA accompanied her to health facility for institutional delivery** (%)	38.0	11.2	21.4
Proportion women reports ASHA stayed at health facility** (%)	33.8	8.7	18.1
Number of women who delivered in Government institution in previous 12 months (n)	3833	7882	11715
Proportion of women who delivered in Government institution and received assistance under JSY*** (%)	79.9	39.2	59.3
Proportion women reported that ASHA accompanied her to Government facility for institutional delivery*** (%)	56.8	23.3	42.8
Proportion women reports ASHA stayed at health facility*** (%)	50.7	16.8	37.8
Number of women who delivered in institution in previous 12 months (Government + private) (n)	5480	12225	17705
Women who delivered in institution by Bed facility** (%)			
Separate bed	84.2	86.8	85.8
Shared bed	9.8	10.8	10.3
No bed	6.0	2.4	3.9

*Base = all women who delivered in the previous 12 months (all government & private institutional and home deliveries);
** Base = all women who delivered in institution (both Government and Private);
***Base = all women who delivered in Government institution;
(Note: Segregation of states into low/high performing is as per JSY scheme)

Newborn Care

Indicators	Rural	Urban	Total
Number of newborns in the previous 12 months (n)	12849	10135	22984
Proportion of newborns checked up <24 hours after birth	60.7	78.2	65.6
Number of checkups done within 10 days after birth (%)			
None	39.3	21.8	34.4
1	21.6	18.5	20.8
2	14.3	16.9	15.0
3+	24.8	42.8	29.8

Newborn Care at Birth (for home deliveries)
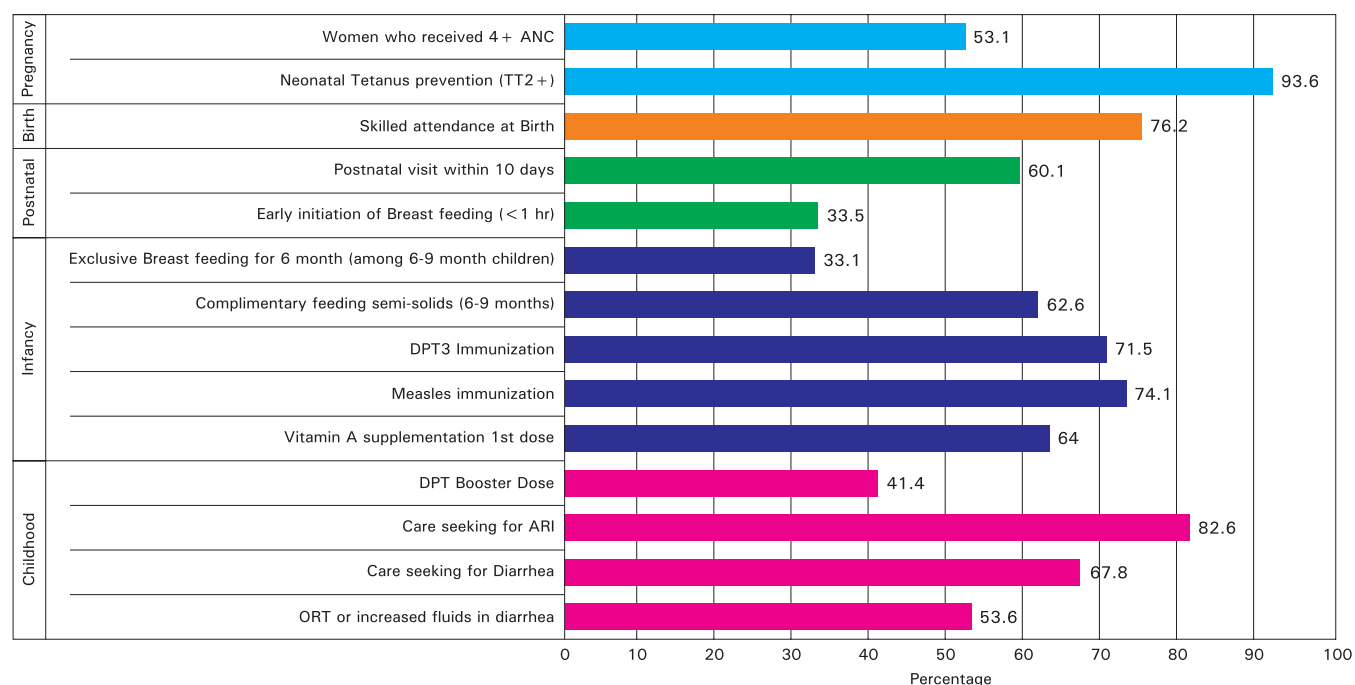
(n = 5222)
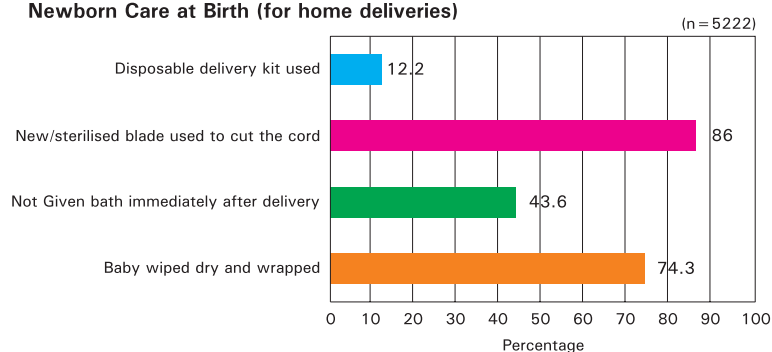
Initiation of Breast Feeding (Home + Institutional live birth)

(n = 5222)
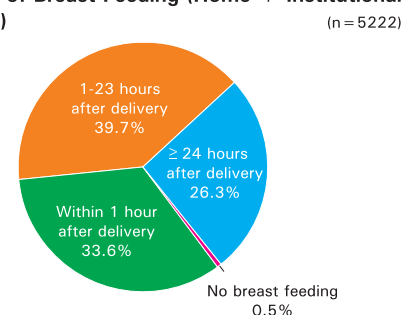
Current Breast Feeding practices according to age of living child

Age in months	Number of living Children (n)	Not breast feeding	Exclusive breast feeding	Not Exclusive Breast Feeding			
				Breast Feeding + Water	Breast Feeding + Other milk	Breast Feeding + Other supplements	Breast Feeding + Other Food
< 2	2038	1.7	81	4.7	4.9	0.2	0.4
2-3	4127	2.2	75.5	7.1	5.6	0.5	0.3
4-5	3829	3.8	56.8	11.8	5.2	1.2	0.5
6-8	5556	6.5	36.6	16.8	3.6	2.3	0.3
9-11	6455	8.8	34.4	16.6	3.2	1.9	0.3
18-23	10483	29.3	34.8	17.7	2.4	1.2	0.3
<4	6164	2	77.3	6.3	5.3	0.4	0.3
<6	9994	7.2	56.8	16.1	3.4	2.3	0.3
6-9	7219	8.6	33.1	17.5	3.3	1.6	0.3

Coverage along the Continuum of Care

		Percentage
Pregnancy	Women who received 4+ ANC	53.1
	Neonatal Tetanus prevention (TT2+)	93.6
Birth	Skilled attendance at Birth	76.2
Postnatal	Postnatal visit within 10 days	60.1
	Early initiation of Breast feeding (<1 hr)	33.5
Infancy	Exclusive Breast feeding for 6 month (among 6-9 month children)	33.1
	Complimentary feeding semi-solids (6-9 months)	62.6
	DPT3 Immunization	71.5
	Measles immunization	74.1
	Vitamin A supplementation 1st dose	64
Childhood	DPT Booster Dose	41.4
	Care seeking for ARI	82.6
	Care seeking for Diarrhea	67.8
	ORT or increased fluids in diarrhea	53.6

Survey Profile

Sample Size			
Respondents	**Rural**	**Urban**	**Total**
Number of children, total and by age	**25228**	**19903**	**45131**
0-5 months	5708	4285	9993
6-11 months	6885	5649	12534
12-17 months	6769	5352	12121
18-23 months	5866	4617	10483
12-23 months	12635	9969	22604
Number of women who delivered in previous 12 months	**12849**	**10135**	**22984**
Number of Households	**25170**	**19888**	**45058**

Characteristics of Sampled Population			
Characteristics	**Rural**	**Urban**	**Total**
Sampled population by Caste (%)			
Scheduled Caste	24.2	18.7	22.7
Scheduled Tribe	9.2	4.1	7.7
Other Backward Classes	40.9	42.3	41.3
Others	25.7	34.9	28.3
Sampled population by Religious Groups (%)			
Hinduism	82.8	73.3	80.1
Islam	12.2	21.0	14.7
Sikhism	1.5	1.5	1.5
Christianity	2.4	2.2	2.4
Other religious groups	1.1	1.9	1.4
Characteristics	**Rural**	**Urban**	**Total**
Main source of drinking water			
Improved source	90.6	96.9	93.2
Type of Toilet Facility			
Flush or Pour Flush Toilet	25.2	68.1	37.2
Pit Latrine	15.9	19.0	16.7
No facility/ Bush/ Field	58.9	12.9	46.1
Type of house			
Kachcha	30.8	9.4	24.8
Semi-Pucca	41.4	34.3	39.4
Pucca	27.8	56.3	35.7
Household with bank account	49.2	62.1	52.8
Household with BPL card	42.5	24.7	37.6

Sampling Design

The data for the CES 2009 was collected from mothers or care takers of child aged 12-23 months for child care services and from women who delivered during 12 months preceding the survey. Sample for each state was estimated to give results at 5% margin of error and 95% confidence interval. It was decided to have deep stratification that will make the samples more efficient and sampling biases get reduced considerably. Further, more sample was covered from bigger states. In each state, rural-urban sample was allocated in 60 to 40 ratios.

Sampling in Rural Areas: For selecting the sample in rural areas in a state, a two stage sampling procedure was followed i.e., selection of villages at the first stage followed by the selection of households. Further, in first stage, districts were grouped into regions considering geographical contiguity as per procedure followed in NFHS-3. The state rural sample was allocated to regions in proportion to their respective rural population sizes. All the villages in each geographical region were further stratified into three strata viz., villages with <50 households, villages with 51-200 households and villages with more than 200 households. The number of PSUs in each region was allocated to each stratum in proportion to the total rural population in the region. In each region, the required number of villages was selected using PPS systematic random sampling procedure using '% SC/ST population' or '% female literacy', both as per 2001 Census, as implicit variables.

Sampling in Urban Areas: In each state all the towns were stratified in to five strata viz., metros, towns with more than 10 lakh population, towns with 5 lakh to 10 lakh population, towns with 1 lakh to 5 lakh population and towns with less than 1 lakh population. Total state urban sample was allocated to different strata in proportion to the urban population and in each stratum wards were selected using PPS systematic random sampling procedure. From each ward, one census enumeration block (CEB) was selected randomly.

Selection of Households: In each selected village/CEB complete listing of the households was done to identify households with children 12-23 months, households with mothers who delivered during last 12 months. In each village/CEB, 10 households with child age 12-23 months and 10 mothers who delivered in the last 12 months were selected using systematic random sampling procedure and from selected households all eligible mothers/care givers were interviewed.

Selected Key Indicators by State

States/UT	At least 1 ANC	≥ 3 ANC	Full ANC (Women who received 3 ANC checkups, one TT injection and consumed 100+ IFA tablets)	Institutional Delivery	Skilled Birth Attendance (Delivery by Doctor, ANM/Nurse/LHV)	DPT3 Vaccine	Measles Vaccine	Full Immunization (Children (12-23 month) receiving 1 dose BCG, 3 doses of DPT/OPV each and 1 measles vaccine)	DPT Booster Dose (Children aged 18-23 months who received DPT booster dose)	Vitamin A 1st Dose	Early Initiation of Breast Feeding (<1hr)	ORT or Increased Fluids for Diarrhea (Among children <2 year of age who had diarrhea in preceding 2 weeks)	Care Seeking for ARI in any health Facility (Among children <2 year of age who had ARI in preceding 2 weeks)
Andhra Pradesh	99.5	97.0	46.2	94.3	95.6	89.9	90.4	68.0	58.3	66.7	27.2	54.9	88.2
Arunachal Pradesh	69.8	50.4	16.3	69.9	71.9	45.0	48.2	24.8	25.1	36.5	55.6	84.6	64.5
Assam	89.6	66.4	21.3	64.4	65.5	67.5	80.1	59.1	35.9	68.6	46.1	60.0	79.2
Bihar	84.3	33.8	4.5	48.3	53.2	59.3	58.2	49.0	27.7	47.0	16.5	40.4	82.9
Chattisgarh	98.7	71.4	19.9	44.9	56.4	66.5	73.1	57.3	26.0	58.8	44.4	68.3	85.0
Delhi	95.9	83.4	41.6	83.6	84.6	79.5	83.3	71.5	37.4	62.3	28.5	75.2	90.7
Goa	99.2	97.7	53.4	99.8	99.8	92.4	91.5	87.9	56.1	72.2	66.3	81.8	97.0
Gujarat	94.8	83.2	45.7	78.1	85.2	68.0	78.0	56.6	89.1	57.7	50.0	63.0	84.4
Haryana	89.4	68.6	42.9	63.3	69.3	75.0	79.9	71.7	43.7	49.9	51.0	79.8	92.2
Himachal Pradesh	91.3	67.4	39.2	50.3	53.7	93.4	96.2	75.8	27.9	77.2	38.8	57.4	92.6
Jammu & Kashmir	93.8	87.0	43.5	80.9	82.9	77.0	77.2	66.6	73.2	53.4	20.4	79.8	83.7
Jharkhand	87.6	57.5	10.9	40.1	47.3	68.7	67.5	59.7	42.0	61.0	15.6	39.4	70.9
Karnataka	97.5	91.3	40.2	86.4	88.4	88.2	89.9	78.0	22.4	73.8	38.2	74.0	90.7
Kerala	97.4	90.8	77.9	99.9	99.9	88.7	86.2	81.5	68.4	66.3	66.0	74.2	94.2
Madhya Pradesh	92.3	60.0	11.1	81.0	82.9	50.6	61.9	42.9	62.4	43.2	31.2	45.9	75.9
Maharashtra	97.3	82.6	27.0	81.9	85.5	85.8	91.2	78.6	29.8	74.5	51.3	58.1	93.1
Manipur	93.7	85.0	28.4	80.0	82.7	62.7	60.3	51.9	57.7	47.5	75.1	82.9	77.8
Meghalaya	95.1	71.0	28.1	63.7	65.2	69.3	74.1	60.8	78.9	51.3	67.7	88.4	94.3
Mizoram	91.9	79.0	21.7	83.0	85.1	77.8	81.1	73.7	50.7	74.4	56.5	60.8	87.6
Nagaland	53.7	29.4	3.5	30.4	43.8	45.9	52.2	27.8	17.0	27.8	49.4	57.5	50.6
Orissa	98.0	77.0	37.5	75.5	79.1	70.5	71.9	59.5	60.6	61.6	63.7	69.0	79.4
Punjab	95.3	73.4	29.4	60.3	66.7	91.4	87.3	83.6	39.9	73.1	16.4	53.3	94.7
Rajasthan	86.8	55.2	14.6	70.4	75.8	60.1	65.6	53.8	16.4	58.5	27.7	48.9	89.9
Sikkim	91.9	87.3	27.7	68.9	69.9	∞	∞	∞	37.1	58.9	55.7	63.5	91.2
Tamil Nadu	98.5	92.6	44.1	98.4	98.6	78.6	88.4	77.3	67.1	50.3	39.1	66.3	88.8
Tripura	90.9	83.1	21.5	82.6	83.1	70.6	68.8	66.0	46.7	68.0	7.1	76.4	95.5
Uttar Pradesh	71.6	38.2	12.4	62.1	64.2	58.1	52.8	40.9	13.6	48.2	15.6	29.2	72.3
Uttarakhand	74.6	54.8	17.0	53.5	58.7	78.1	75.8	71.5	15.9	60.8	24.9	17.6	83.2
West Bengal	99.0	83.2	17.4	69.5	72.6	72.8	77.2	64.9	53.8	71.5	29.2	49.9	77.8
UTs combined	90.2	82.8	41.0	88.1	90.7	82.0	83.3	71.3	72.3	59.8	42.9	65.4	95.8
INDIA	90.4	68.7	26.5	72.9	76.2	71.5	74.1	61.0	41.4	59.3	33.5	53.6	82.6

∞ Data awaited   *(All figures in percentage)*

For more information:
UNICEF India Country Office
73 Lodi Estate, New Delhi – 110003
Tel: +91-11-24690401/0409, 40798000
Fax: +91-11-24690410, 24627521
Web: www.unicef.org/india

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