CHAPTER V
MATERNAL HEALTH

Prevailing high maternal morbidity and mortality has always been source of concern and antenatal and intrapartum care aimed at reducing maternal morbidity and mortality have been components of the Family Welfare programme since inception. In India data on state/district specific maternal morbidity/mortality data is not available. However available data from SRS and survey of causes of death provide sufficient information on mortality rates and causes of death so that rational programmes could be evolved to combat major health problems in women. In the nineties the SRS and the National Family Health Surveys have provided independent data to assess the impact of ongoing programmes on the maternal mortality. During nineties there has not been any decline in MMR; more than 100,000 women die each year due to pregnancy related causes(Table 5.1).

Table 5 .1 Maternal Mortality Ratio

	1992-93	1997	1998
RGI (Sample Registration. Scheme)	NA	408	407
National Family Health Surveys	424*	-	540*

*Differences are not statistically significant
Source : RGI & NFHS 1& 2

Data from SRS indicate that the major causes of maternal mortality continue to be unsafe abortions, ante and post-partum haemorrhage, anaemia, obstructed labour, hypertensive disorders aand post-partum sepsis(Table 5.2). There has been no major change in the causes of maternal mortality over years. Deaths due to abortion can be prevented by increasing access to safe abortion services. Deaths due to anaemia, obstructed labour, hypertensive disorders and sepsis are preventable with provision of adequate antenatal care, referral and timely treatment of complications of pregnancy, promoting institutional delivery and postnatal care. Emergency obstetric services will help saving lives of women with haemorrhage during pregnancy, complications during deliveries conducted at homes. The Ninth Plan envisaged universal screening of all pregnant women, identification of women with health problems, problems during pregnancy and appropriate management including referral to centers where appropriate care is available. This, however, has not been operationalised. Highest priority has to be accorded for operationalization of this during the Tenth Plan.

Table 5.2 Causes of maternal death (%)

Haemorrhage	30
Anaemia	19
Sepsis	16
Obstructed labor	10
Abortion	8
Toxemia	8
Others	8

Source :Survey of Causes of Death 1998

During the Tenth Plan every effort will be made

- to ensure 100% registration of pregnancies, deaths and births so that reliable district level estimates of MMR is made available on a sustainable basis.
- to improve ascertainment of the cause of death through SRS and also from hospital records so that some reliable estimates on changes in causes of maternal mortality over time and impact of ongoing interventions on maternal mortality can be assessed and appropriate interventions initiated. .

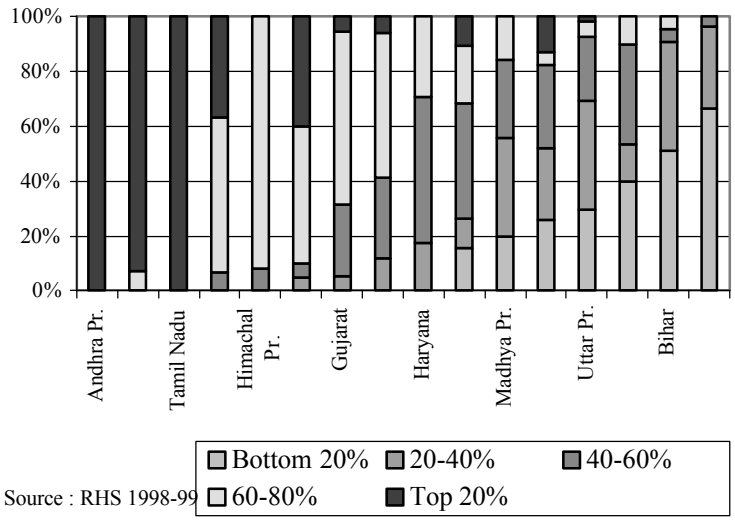
Antenatal care

Under the Reproductive and child health care efforts were made to improve the coverage, content and quality of antenatal care in order to achieve substantial reduction in maternal and perinatal morbidity and mortality.(Fig5.1)

Ante-natal & Intra Partum Care (Ninth Plan)

- Early registration of pregnancy (12 - 16 weeks).
- Minimum three Ante-Natal Check-up
- Screening all pregnant women for major health, nutritional and obstetric problems
- Identification of women with health problems/ complications, providing prompt and effective treatment including referral wherever required.
- Universal coverage of all pregnant women with TT immunisation.
- Screening for anaemia ; providing IFA tablets to prevent anaemia or providing appropriate treatment for of anaemia.
- Advice on food, nutrition and rest.
- Promotion of institutional delivery / Safe deliveries by trained personnel; advising institutional delivery for those with health /obstetric problems .

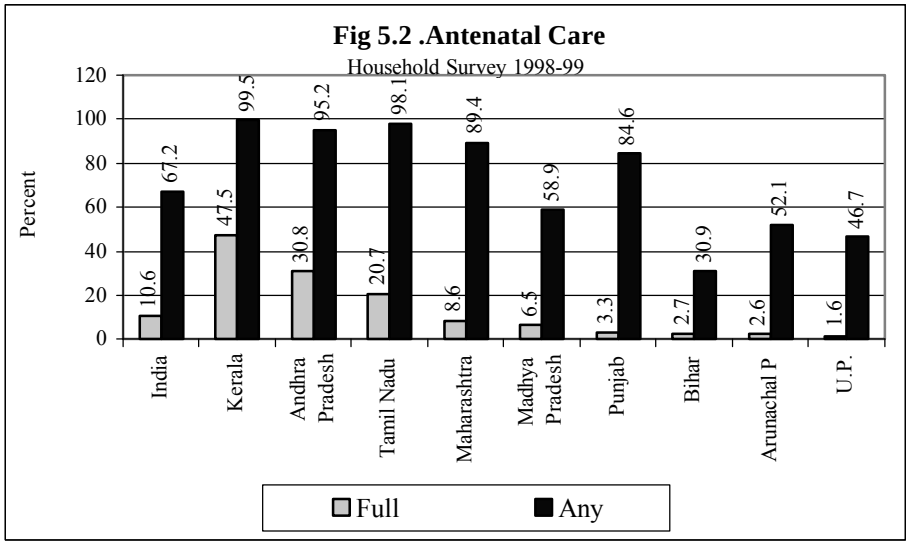
Figure5.1. Distribution of districts as per Three or More ANC Check-up



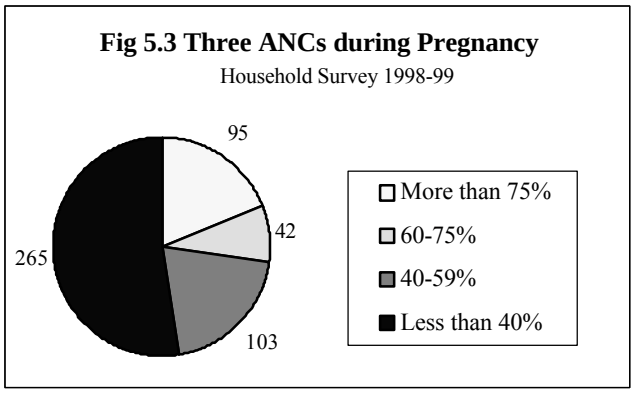
Source : RHS 1998-99

Data from the Rapid Household survey (1998-1999) indicate that at the national level, 67.2% pregnant women received at least one check-up but only 10.6% had three antenatal checkups

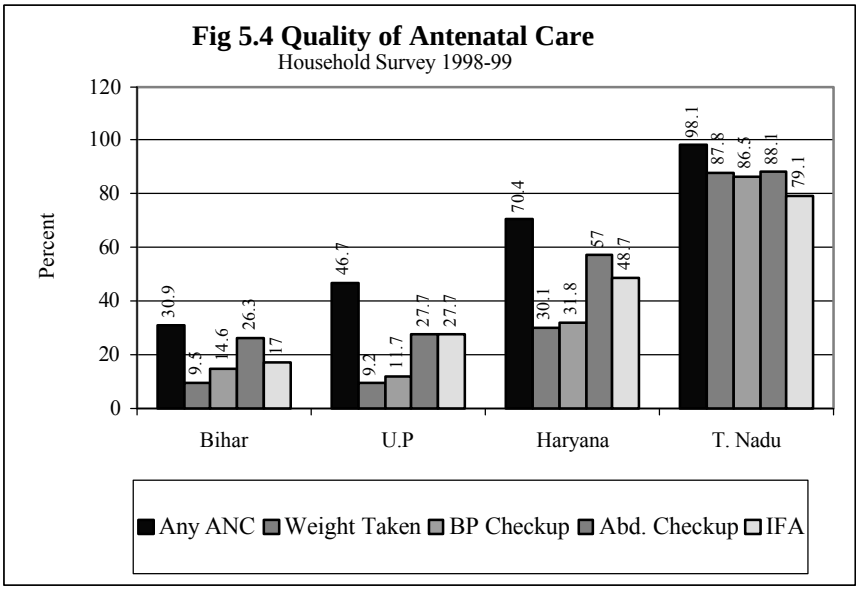
Antenatal coverage in populous states with poor health indices such as UP, Bihar, MP are very low (Figure5.2). In Andhra Pradesh, Tamil Nadu and Kerala antenatal coverage was good in almost all the districts. UP, Bihar and surprisingly Punjab had reported very low coverage figures in most districts.



Rapid Household Survey Data clearly indicates that in 265 districts, less than 40% of the women had three antenatal visit during pregnancy and in only 95 districts, more than 75% had three antenatal visits (Fig 5.3). In UP and Bihar content and quality of AN care was poor as compared to Haryana and Tamil Nadu (Figure5.4).

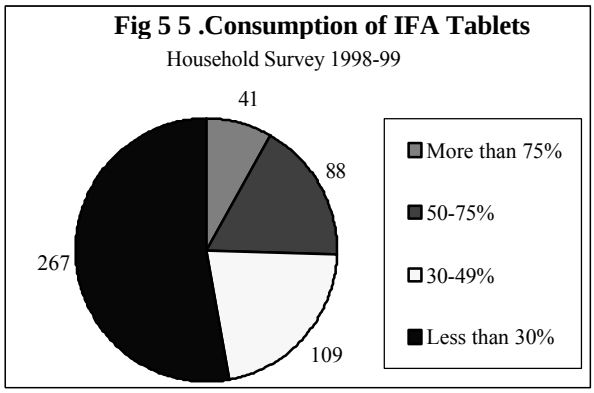


Universal screening of pregnant woman for common risk factors and problems using appropriate antenatal care is essential for detection of problems during pregnancy and referral to appropriate facility for treatment. The problem of poor screening is aggravated by the fact that referral



linkages for management of problems are also poor in these states and as a result both maternal/perinatal morbidity and mortality continue to be high.

Anaemia is major cause of maternal mortality in India. The Ninth Plan envisaged universal screening for anaemia in pregnant women and appropriate iron folate indicated. The programme is yet to be operationalised fully. In none of the states were services for anaemia included as a component of antenatal care. Data from Rapid Household Survey indicated that even iron folic acid consumption is still very low; in 267 districts less than 30% had taken IFA tablets.(Fig 5 .5) During the Tenth Plan every effort will be made to fully operationalize the Ninth Plan strategy for prevention and management of anaemia.



Problems in antenatal care :

- Inadequate coverage; lack of training of health personnel in antenatal screening , risk identification and referral
- Poor content and quality of antenatal screening, lack of systematic recording of findings ; poor referral system – referrals not honoured.
- Over crowding in PHCs/hospitals – lack of gatekeeper function
- Lack of Emergency Obstetric services – at FRU/CHC

Tenth Plan Strategy for improving Maternal Health

The initiatives taken under the RCH programmes will be continued during the Tenth Plan. Every effort will be made to ensure that the skill up gradation training which is critical for improving the content and quality of antenatal care is taken up and completed so that all the healthcare providers at primary , secondary and tertiary care follow the protocol for screening all pregnant women for identification of those with problems. ANM is the critical person in the screening of pregnant women; she will be given necessary skill upgradation training , needed equipment and antenatal cards records to her findings. In order to ensure that the findings at antenatal screening are recorded accurately and reference back and forth becomes a standard practice , it is essential to ensure that findings are recorded in a standard format in an antenatal card which is retained by the woman who takes it with her where ever gets referred to. During the Ninth Plan an antenatal card was designed and tested in some states. It is essential that these cards with suitable modification are printed and made available to all states for use. ANM will work closely with the Anganwadi worker and will conduct maternal and child health clinics in anganwadi on specified days in each village according to the advance tour programme. She will be the gatekeeper whose referrals will be honoured at PHC/ CHC. In states where there are major gaps in ANMs , there is need to strengthen the existing ANM schools so that lack trained ANMs does not

come in the way of improving coverage. In order to cater to the increasing private sector involvement in deliveries some of the states have proposed investing in training of community midwives. This proposal need to be discussed with the Nursing Council of India

CHC/ FRU is the critical institution which provides emergency care and plays vital role in the referral system. Currently reported gaps in number of CHC/FRU will be filled by appropriately reorganizing the Subdivisional hospitals, post partum centers and block level PHCs . The required number of core specialists will be posted through appropriate redeployment of the manpower wherever adequate number of specialist are not available, bring them on contractual basis/part time basis may be considered. In order to strengthen the capability for antenatal and intrapartum care at CHC / FRU all the states may take up training of one of the staff nurses in CHC/FRU at district hospital, so that a nurse specialised in midwifery is available at CHCs/FRUs to provide antenatal and intrapartum care. Over the next five years efforts will be made to improve the availability of all facilities to manage emergencies at least in selected CHCs by improving availability of anaesthetist and access to banked blood .

The available data on Antenatal coverage,safe deliveries from NFHS 2 ,RHS are given in Annexure 5.1.

In view of the massive differences between districts in availability and access to services, and maternal health indices the following **differential strategy** will be adopted for achieving incremental improvement in antenatal care during the Tenth Plan.

In all districts:

- awareness generation to ensure universal screening of pregnant women; identification of women with problem;
- manage/ refer women with complications to appropriate institution for care;
- 100% coverage for Tetanus toxoid
- screening for and treatment of anaemia ;
- provide information on
  - nearest PHC where women with problems can seek doctor's advice,
  - nearest FRU with obstetricians and facilities where women with obstetric emergency can seek admission
  - how to access emergency transport system .

In better performing districts focus on

- improvement in universal coverage and content and quality of ANC to enable very early identification of women with any antenatal problem through examination;
- referral of those with problems to PHC/ FRU for care

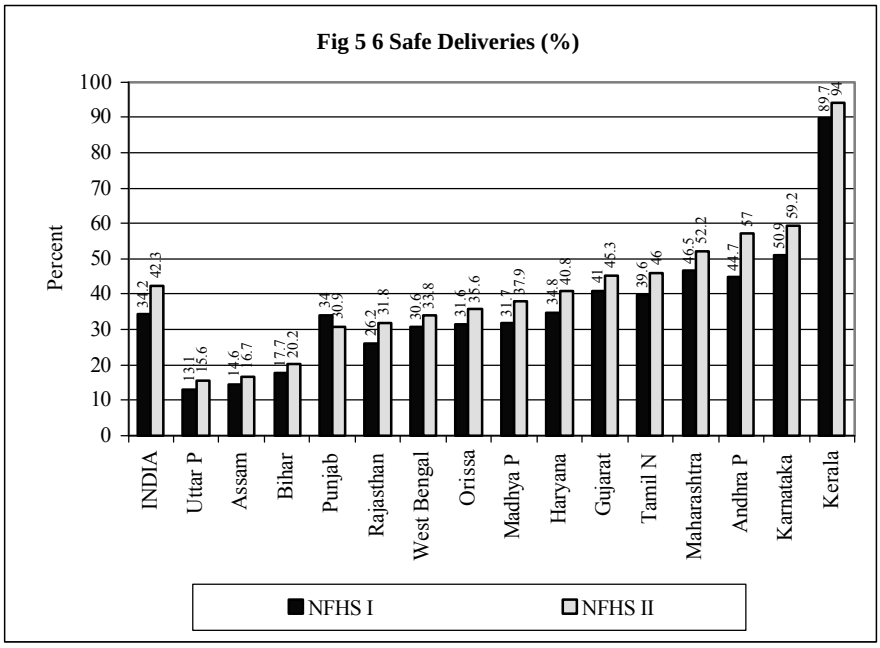
In poorly performing districts focus will be on

- improving coverage for AN screening by ANM providing ANC at least thrice during pregnancy,

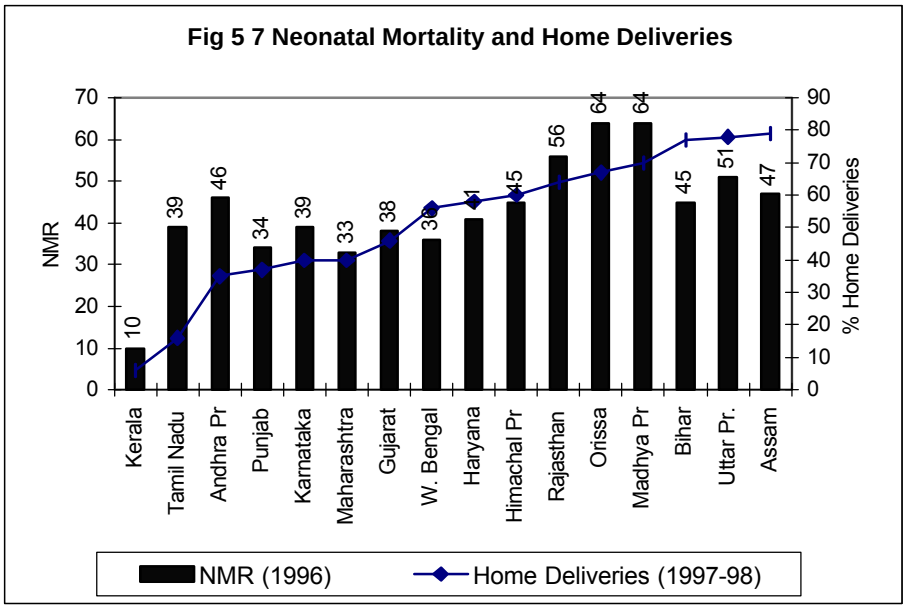
- building up system of RCH camps in PHC/CHC on specific days through out the year when doctors/specialists will be available to examine women with problems and provide treatment/referral

Delivery care

During the Ninth Plan it was envisaged that efforts will be made to promote institutional deliveries both in urban and rural areas; simultaneously in districts where majority of the deliveries were taking place at home, efforts were made to train the TBAs through intensive Dai's Training Programme. The available data from the NFHS-I and II and Household Suvey-98 suggest some improvement in the institutional deliveries, especially in states like Tamil Nadu and Andhra Pradesh; there are, however, in a large number of districts in many States where the situation with regard to safe deliveries is far from satisfactory.(Fig 5. 6)



In States like Kerala over 90% of deliveries are in institutions and neonatal mortality rates are very low (Fig 5.7). However, in States like UP where majority of deliveries is at home and are conducted by untrained persons neonatal mortality is high . Data from NFHS 2 showed that even though there has been a steep increase in the institutional deliveries in Tamil Nadu and Andhra , there has not been a commensurate decline in the

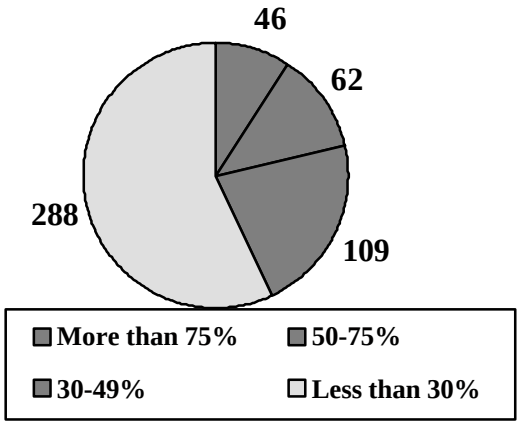


neonatal mortality indicating that there is a need to improve quality of intrapartum and neonatal care for those coming for institutional deliveries. In States where majority of deliveries still occur at home, efforts were made to train Traditional Birth Attendants (TBAs) through Intensive Dai's Training Programme and to increase availability and access to Disposable Delivery Kits. However these efforts have not resulted in substantial decline in the maternal morbidity or neonatal mortality rates.

Women with problems like Anaemia, malpresentations, suspected Cephalopelvic Disproportion (CPD), Hypertensive Disorders of Pregnancy (HDP) and Gestational Diabetes Mellitus (GDM) should not deliver at home. Screening all women during pregnancy to detect those with such problems and referring them at appropriate time to pre-designated institutions for management and safe delivery will substantially reduce maternal and perinatal morbidity and mortality. The mechanism for screening, as well as referral, will have to be be streamlined during the Tenth Plan period; easy - to - follow protocol for referral will have to be developed and made available to all health care providers. In "low risk cases", if home delivery is anticipated, provision has to be made for aseptic delivery by trained persons. In states where majority of the deliveries are at home every effort would be made to train Traditional Birth Attendants and provide them with disposable delivery kits to improve cleanliness during delivery. The TBAs will be trained to recognise women with complications and those in labour longer than 12 hours and refer them to hospitals for delivery. This strategy would result in some reduction in maternal and neonatal deaths and pave way for good antenatal care and safe institutional deliveries at a later date.

Unpredictable complications can arise even during apparently normal labour; rapid transportation of these women to hospital for emergency obstetric care is essential to reduce morbidity and mortality during delivery. In order to assist families in arranging transport to centres where emergency care is provided. The Dept of Family Welfare provided funds which will be available at the village level. Local Panchayats, NGOs and women's organisations will play an important role in ensuring optimum use is made of this fund. In the postpartum period early detection and management of infections, support for breast feeding and nutrition counseling will receive due attention.

Fig 5 8 .Institutional Deliveries - Situation in districts(RHS-1998-99)



Strategy to improve delivery care during the Tenth Plan:

In view of the massive differences between the districts/ states in proportion of institutional deliveries(Fig 5.8) and neonatal mortality rates a differential strategy to achieve incremental improvement in maternal and neonatal care will be taken up during Tenth Plan.

In all districts

- Efforts will be made to identify women with complications early through AN check up and refer them to appropriate institution for safe delivery.

In districts with low institutional delivery

- screen all women late in pregnancy and ensure that those with complications deliver in institutions
- train traditional birth attendants (TBAs) in clean delivery
- train TBAs to recognise problems that arise during labour and refer those with problems to hospitals
- ensure that referrals are honoured
- build up community support for transport of women with problems to FRU

In districts with high institutional delivery

- improve quality of services available;
- address problems and needs of the women in labour seeking institutional deliveries;
- aim at universal institutional delivery by make institutions people friendly
- medical audit for monitoring progressive improvement in quality

Specific efforts will made to strengthen FRU/ CHC/District hospitals to provide Emergency obstetric care for all referred cases. Efforts will be to

- Operationalise adequate number of FRU/CHC by posting specialists in obstetric, Gynaecology/pediatrics in institution where infrastructure is available;
- If necessary provide for funding specialists on contract basis (part time) so that care is available when needed;
- improve access to anaestheitist and banked blood

Annexure 5.1

Maternal Care - Comparison between R.H.S and N.F.H.S.II

State/UT	Any ANC		Full ANC		Safe Delivery		Districts with less than 40% Full ANC Visits (RHS, 98-99)	
							No.of districts	Total Distt. Covered
	RHS	NFHS-II	RHS 3 check-up TT+IFA	NFHS-II 3 or More checkup	RHS	NFHS		
INDIA	**65.3**	**65.4**	**31.8**	**43.8**	**40.4**	**42.3**	**267**	**504**
MAJOR STATES								
Andhra Pr	94.2	92.7	63.4	80.1	60	65.2	0	23
Assam	56	60.1	24.8	30.8	31.1	21.4	18	23
Bihar	26.4	36.3	10.1	17.8	18.8	23.4	30	30
Gujarat	79.1	86.4	42.7	60.2	56.3	53.5	3	19
Haryana	77.7	58.1	23.9	37.4	32.8	42.0	7	17
Karnataka	88.9	86.3	60.1	71.4	60	59.1	0	20
Kerala	84.5	98.8	86.1	98.3	97.4	94.0	0	14
Madhya Pr	53.9	61.0	20.2	28.1	27.5	29.7	31	38
Maharashtra	87.8	90.4	54.8	65.4	61.4	59.4	0	30
Orissa	72.9	79.5	32.5	47.3	32.9	33.4	23	30
Punjab	87.2	74.0	24.5	57.0	55.0	62.6	5	17
Rajasthan	62	47.5	16.6	22.9	32.5	35.8	30	30
Tamil Nadu	98.4	98.5	75.3	91.4	82.5	83.8	0	23
Uttar Pr	48.0	34.6	11.2	14.9	21.9	22.4	55	58
West Bengal	84.1	90.0	33.4	57.0	45.6	44.2	10	19
SMALLER STATES								
Arunachal Pr	44.4	61.6	19.8	40.5	28.2	31.9	12	13
Chattisgarh	52.2	NA	27.1	NA	22.4	NA	5	7
Delhi	89.5	83.5	73.1	68.2	73.8	65.9	0	1
Goa	98.3	99.0	80.3	95.7	95.1	90.8	0	2
Himachal Pr	87.1	86.8	52.7	60.9	36.4	40.2	0	12
Jharkhand	42.8	NA	18.9	NA	19.9	NA	10	13
J & K	58.0	83.2	23.8	66.0	46.8	42.4	5	13
Manipur	77.0	80.2	30.9	54.4	50.0	53.9	4	8
Meghalaya	55.0	53.6	30.9	31.3	35.7	20.6	6	7
Mizoram	80.3	91.8	43.7	75.8	62.9	67.5	1	3
Nagaland	45.7	60.4	15.6	23.1	25.1	32.8	5	6
Sikkim	63.1	69.9	31.9	42.6	36.8	35.1	3	4
Tripura	69.1	NA	34.8	NA	48.4	NA	1	3
Uttaranchal	40.6	NA	17.5	NA	22.3	NA	3	10
UNION TERRITORIES								
A&N Islands	95.9	NA	84.4	NA	67.2	NA	0	2
Chandigarh	79.6	NA	62.9	NA	71.6	NA	0	1
D&N Haveli	90.6	NA	62.0	NA	27.9	NA	0	1
Daman & Diu	95.1	NA	71.1	NA	70.7	NA	0	2
Lakshadweep	99.4	NA	91.4	NA	74.1	NA	0	1
Pondicherry	99.8	NA	83.8	NA	93.5	NA	0	4