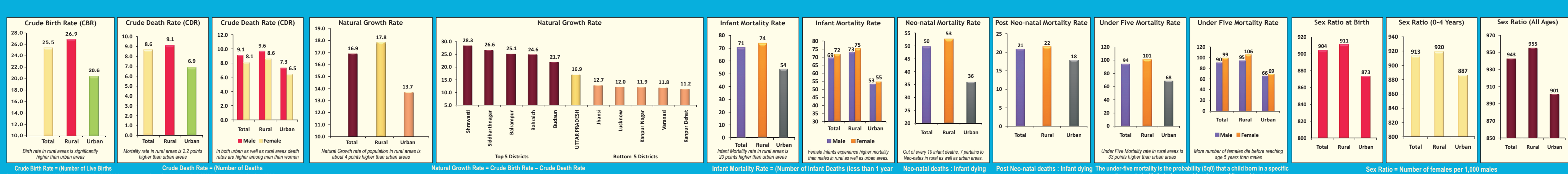


District	Crude Birth Rate (CBR)			Crude Death Rate (CDR)			Natural Growth Rate			Infant Mortality Rate (IMR)			Neo-natal Mortality Rate			Post Neo-natal Mortality Rate			Under Five Mortality Rate (U5MR)			Sex Ratio at Birth			Sex Ratio (0-4 Years)			Sex Ratio (All Ages)			95% Confidence Interval																																													
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban																															
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper																						
Uttar Pradesh	25.5	26.9	20.6	8.6	8.1	9.1	8.6	8.6	7.3	6.5	16.9	17.8	13.7	71	69	72	74	73	75	54	53	55	50	53	36	21	22	18	84	90	99	101	95	106	66	66	69	904	911	873	913	920	887	943	955	901	25.3	25.7	26.7	21.1	20.2	21.0	8.5	8.8	9.0	9.3	6.7	7.1	69	72	73	76	51	57	93	95	100	102	65	70	898	910	904	918	899	899

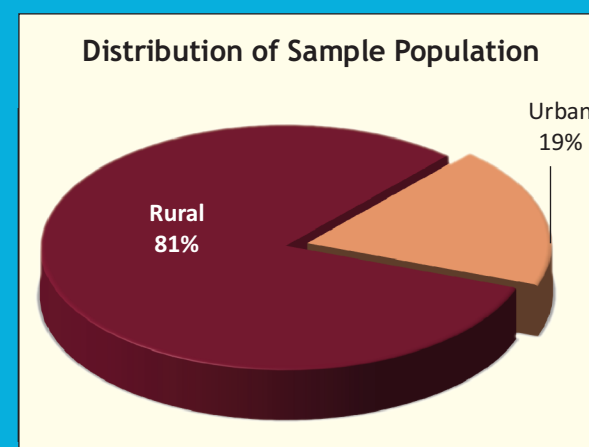
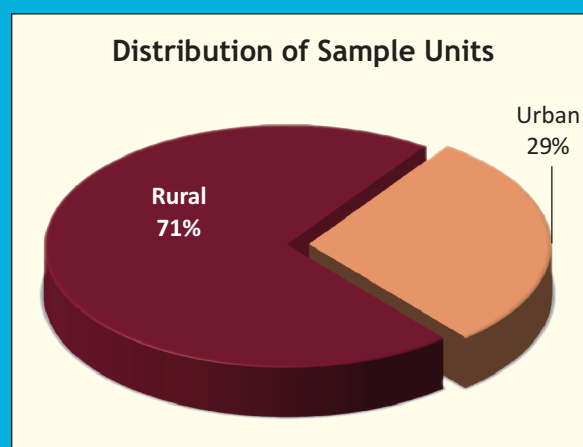
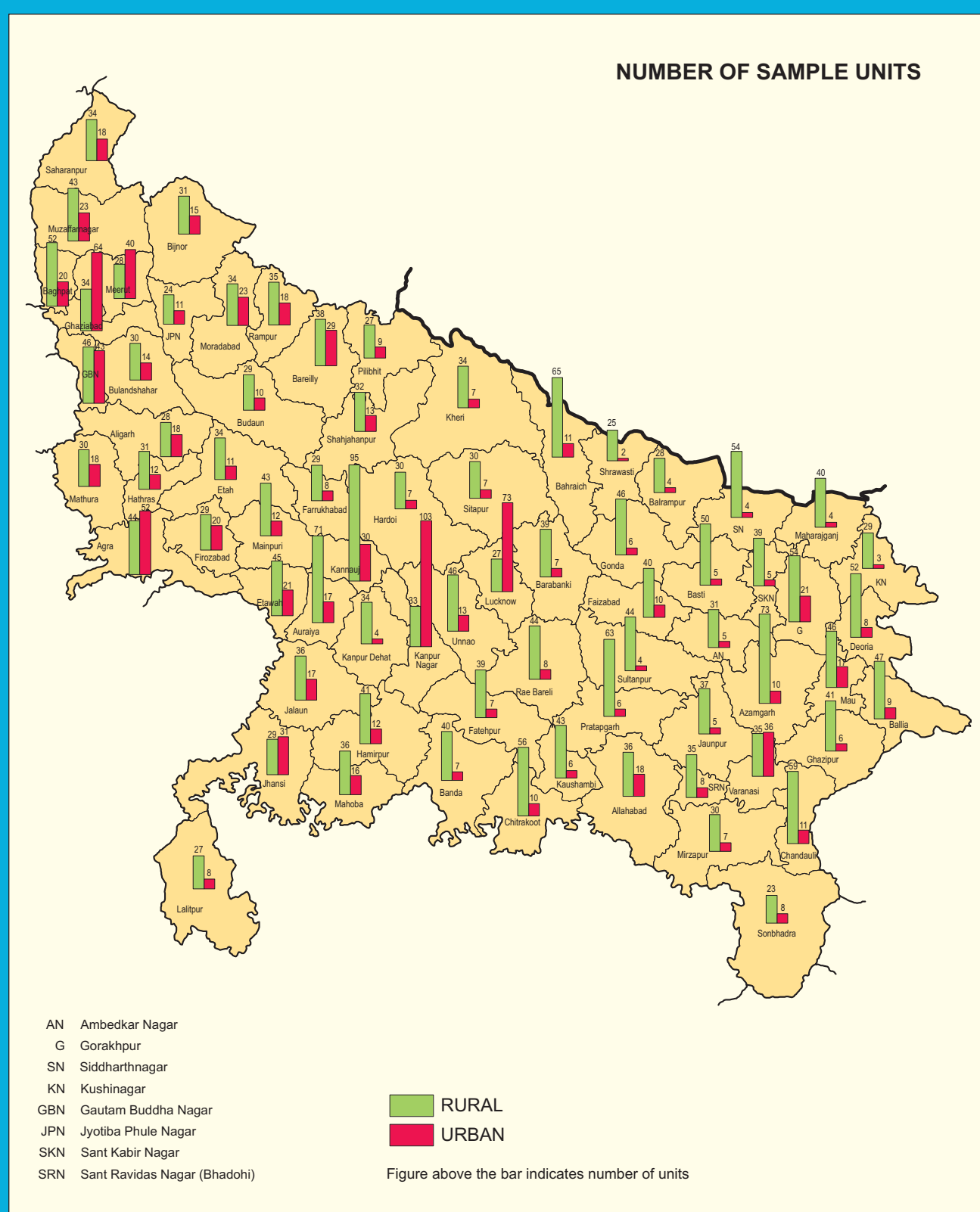


State/Commissionary/Districts	Simple Female Population	Sample Live Births	Maternal Deaths	MMR	95% Confidence Interval Lower/Upper	Maternal Mortality Rate	Life Time Risk
UTTAR PRADESH	1085186	336583	1160	345	325-364	36	1.24%
SAHARANPUR MANDAL	32205	9790	33	337	222-452	34	1.19%
MORADABAD MANDAL	53820	16818	57	339	251-427	35	1.23%
MEERUT MANDAL	104944	29410	75	255	197-313	24	0.83%
ALIGARH MANDAL	35840	12414	46	371	264-477	43	1.49%
AGRA MANDAL	67671	21014	59	281	209-352	29	1.01%
BAREILLY MANDAL	49085	18541	81	437	342-532	55	1.91%
LUCKNOW MANDAL	91555	26653	88	330	261-399	32	1.12%
KANPUR MANDAL	136318	37770	101	267	215-319	25	0.86%
JHANSI MANDAL	37837	10385	25	241	146-335	22	0.77%
CHITRAKOOT DHAM MANDAL	56306	19268	59	306	228-384	35	1.22%
ALLAHABAD MANDAL	62603	19443	86	442	349-536	46	1.59%
FAIZABAD MANDAL	53206	15742	71	451	346-556	44	1.55%
DEVI PATAN MANDAL	57685	24875	108	434	352-516	62	2.16%
BASTI MANDAL	34770	13110	54	412	302-522	52	1.80%
GORAKHPUR MANDAL	64432	19753	70	354	272-437	36	1.26%
AZAMGARH MANDAL	57912	16119	62	385	289-480	36	1.24%
VARANASI MANDAL	62630	17352	60	346	258-433	32	1.11%
MIRZAPUR MANDAL	26367	8126	25	308	187-428	32	1.10%

Age Group	Simple Female Deaths	Maternal Deaths	Proportion	95% Confidence Interval Lower/Upper	Non Maternal Deaths	Proportion	95% Confidence Interval Lower/Upper
15-19	1070	53	5	3-6	1017	15	14-16
20-24	1373	365	31	29-34	1008	15	14-16
25-29	1307	343	30	27-32	964	14	13-15
30-34	1048	175	15	13-17	873	13	12-14
35-39	1106	153	13	11-15	953	14	13-15
40-44	984	45	4	3-5	939	14	13-15
45-49	1108	26	2	1-3	1082	16	15-17
Total	7996	1160	100		6836	100	

Administrative Division	Crude Birth Rate	Crude Death Rate	Infant Mortality Rate	Sex Ratio at Birth
FAIZABAD	451	84	10	945
ALLAHABAD	442	87	11	943
MEERUT	437	84	10	942
DEVI PATAN	424	82	10	941
BASTI	412	80	10	940
ALIGARH	385	78	10	938
LUCKNOW	371	76	10	937
GORAKHPUR	354	74	10	936
UTTAR PRADESH	345	73	10	935
MORADABAD	339	72	10	934
SAMMUR	330	71	10	933
MIRZAPUR	306	68	10	932
CHITRAKOOT DHAM	281	65	10	931
AGRA	267	63	10	930
MEERUT	255	62	10	929
JHANSI	241	60	10	928

• Maternal Mortality Ratio = Proportion of maternal deaths per 1,00,000 live births
 • Maternal Mortality Rate = Proportion of maternal deaths per 1,00,000 women in the ages 15-49 years
 • Life Time Risk = 1 - (Maternal Mortality Rate)³⁵ / 100000



District	Number of Sample Units			Population (in '000')		
	Total	Rural	Urban	Total	Rural	Urban
Uttar Pradesh	3,927	2,782	1,145	4,540	3,681	859
1 Saharanpur	52	34	18	55	45	10
2 Muzaffarnagar	66	43	23	78	63	15
3 Bijnor	46	31	15	50	39	11
4 Moradabad	57	34	23	65	47	18
5 Rampur	53	35	18	68	54	14
6 Jyotiba Phule Nagar	35	24	11	39	31	8
7 Meerut	68	28	40	75	49	26
8 Bagpat	72	52	20	95	82	13
9 Ghaziabad	98	34	64	107	53	54
10 Gautam Buddha Nagar	89	46	43	88	67	21
11 Bulandshahar	44	30	14	61	45	16
12 Aligarh	46	28	18	53	38	15
13 Hathras	43	31	12	54	44	10
14 Mathura	48	30	18	54	40	14
15 Agra	96	44	52	119	73	46
16 Firozabad	49	29	20	61	47	14
17 Etah	45	34	11	52	47	5
18 Mainpuri	55	43	12	60	51	9
19 Budaut	39	29	10	52	44	8
20 Bareilly	67	38	29	77	53	24
21 Pilibhit	36	27	9	43	37	6
22 Shahjahanpur	45	32	13	53	45	8
23 Kheri	41	34	7	57	53	4
24 Sitapur	37	30	7	47	43	4
25 Hardoi	37	30	7	51	46	5
26 Unnao	59	46	13	67	58	9
27 Lucknow	100	27	73	101	45	56
28 Rae Bareilly	52	44	8	64	59	5
29 Farukhabad	37	29	8	52	45	7
30 Kannauj	125	95	30	154	129	25
31 Etawah	66	45	21	75	62	13
32 Aunahya	88	71	17	103	88	15
33 Kanpur Dehat	38	34	4	50	47	3
34 Kanpur Nagar	136	33	103	136	38	98
35 Jalaun	53	36	17	52	41	11

District	Number of Sample Units			Population (in '000')		
	Total	Rural	Urban	Total	Rural	Urban
Uttar Pradesh	3,927	2,782	1,145	4,540	3,681	859
36 Jhansi	60	29	31	68	38	30
37 Lalitpur	35	27	8	38	33	5
38 Hamirpur	53	41	12	62	54	8
39 Mahoba	52	36	16	60	43	17
40 Banda	47	40	7	55	51	4
41 Chitrakoot	66	56	10	80	74	6
42 Fatehpur	46	39	7	54	49	5
43 Pratapgarh	69	63	6	79	76	3
44 Kaushambi	49	43	6	61	57	4
45 Allahabad	54	36	18	59	48	11
46 Barabanki	46	39	7	57	53	4
47 Faizabad	50	40	10	59	54	5
48 Ambedkar Nagar	36	31	5	43	40	3
49 Sultanpur	48	44	4	58	55	3
50 Bahraich	76	65	11	115	109	6
51 Shravasti	27	25	2	38	36	2
52 Balrampur	32	28	4	40	38	2
53 Gonda	52	46	6	71	67	4
54 Siddharthnagar	58	54	4	52	50	2
55 Basti	55	50	5	45	42	3
56 Sant Kabir Nagar	44	39	5	40	37	3
57 Maharajganj	44	40	4	62	58	4
58 Gorakhpur	75	54	21	81	61	20
59 Kushinagar	32	29	3	44	43	1
60 Deoria	60	52	8	59	54	5
61 Azamgarh	83	73	10	91	85	6
62 Mau	63	46	17	67	55	12
63 Ballia	56	47	9	72	65	7
64 Jaunpur	42	37	5	40	37	3
65 Ghazipur	47	41	6	58	54	4
66 Chandauli	70	59	11	82	75	7
67 Varanasi	71	35	36	73	46	27
68 Sant Ravidas Nagar Bhadohi	43	35	8	47	41	6
69 Mirzapur	37	30	7	32	29	3
70 Sonbhadra	31	23	8	30	26	4

Annual Health Survey Bulletin 2010-11

Introduction: Decentralized district-based health planning is essential in India because of the large inter-district variations. In the absence of vital data at the district level, the State level estimates are being used for formulating district level plans as well as setting the milestones thereof. In the process, the hotspots (districts requiring special attention) very often gets masked by the State average. This statistical fallacy compounds the problems of the districts acutely, more so in the health sector. At present, none of the Surveys provides estimates of core vital indicators on fertility and mortality at district level. The District Level Household Survey conducted with periodicity of five years mainly focuses on maternal health and child welfare programmes. There has, therefore, been a surge in the demands from various quarters, in recent years, to generate timely and reliable statistics at the district level for informed decision making in the health sector.

Genesis: 2. The Annual Health Survey was conceived during a meeting of the National Commission of Population held in 2005 under the chairmanship of the Prime Minister wherein it was decided that "there should be an Annual Health Survey of all districts which could be published / monitored and compared against benchmarks". The objective was to monitor the performance and outcome of various health interventions of the Government including those under NRHM at closer intervals through these benchmark indicators. The AHS has been made an integral part of the National Rural Health Mission (NRHM), Ministry of Health & Family Welfare. The responsibility for the project has been entrusted to the Office of Registrar General, India on behalf of the Ministry of Health & Family Welfare keeping in view its expertise in handling the Sample Registration System, one of the largest demographic surveys in the world.

Objective: 3. Realizing the need for preparing a comprehensive district health profile on key parameters based on a community set up, the AHS has been designed to yield benchmarks of core vital and health indicators at the district level on fertility and mortality; prevalence of disabilities, injuries, acute and chronic illness and access to health care for these morbidities; and access to maternal, child health and family planning services. By virtue of being a panel survey, it has the unique ability to map the rate of change in these indicators on a yearly basis. AHS would, thus, enable better capturing of the

health seeking behaviour of the public as compared to other periodic cross-sectional surveys.

Coverage: 4. Keeping in view the mammoth sample size requirement as the sample size at the district level has been derived taking Infant Mortality Rate as the decisive indicator and host of other practical issues relating to execution, it was a considerable decision of the Government to undertake the survey, to begin with, in all the 284 districts (as per 2001 Census) in the 8 Empowered Action Group States (Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Orissa and Rajasthan) and Assam for a three year period during XI Five Year Plan period. These nine States, which account for about 48 percent of the total population in the country, are the high focus States in view of their relatively higher fertility and mortality indicators. A representative sample of 18 million population and 3.6 million households is covered in 20,694 statistically selected PSUs (Census Enumeration Blocks in case of urban areas and villages or a segment thereof in case of villages in rural areas) in these 9 AHS States every year. Even with the present coverage, the AHS is the largest demographic survey in the world and is two and half times that of the Sample Registration System.

Fieldwork Strategy: 5. The project is being implemented as a hybrid model wherein the actual field work has been outsourced to seven selected survey agencies on the pattern of National Family Health Survey (NFHS) and District Level Household Survey (DLHS). The supervision, monitoring and co-ordination of the fieldwork in the States are done by the dedicated staff posted at various levels in the respective Directorate of Census Operations (DCOs). The responsibility for overall supervision, monitoring and co-ordination across the 9 AHS States rests with the AHS Division at ORGI. For smooth and effective execution of the survey, the AHS States have been divided into 18 mutually exclusive and exhaustive zones, each having a group of contiguous districts with more or less similar workload.

Technical Consultation: 6. The outline of the survey such as approach, periodicity, coverage, sampling strategy, sample size, permissible levels of relative standard error, levels of aggregation, were finalized after a series of deliberations on the subject with the representatives from Ministry of Health & Family Welfare, National Sample

Survey Organization, Central Statistical Organization, Ministry of Woman & Child Development, Indian Council of Medical Research, Planning Commission, Indian Institute of Population Sciences and other subject experts. Based on these recommendations, various technical details including preparation of sample design, derivation of sample size etc. were worked out and vetted by the Technical Advisory Group (TAG) constituted for the purpose.

Sample Design: 7. The Sample design adopted for Annual Health Survey is a uni-stage stratified simple random sample without replacement except in case of larger villages of rural areas (population more than or equal to 2000 as per 2001 Census), wherein a two stage stratified sampling has been applied. The sample units are Census Enumeration Blocks (CEBs) in urban areas and villages in rural areas. In rural areas, the villages have been divided into two strata. Stratum I comprise villages with population less than 2000 and Stratum II contains villages with population 2000 or more. Smaller villages with population less than 200 were excluded from the sampling frame in such a manner that the total population of villages so excluded did not exceed 2 per cent of the total population of the district. In case of Stratum I, the entire village is the sample unit. In case of Stratum II, the village has been divided into mutually exclusive (non-overlapping) and geographically contiguous units called segments of more or less equal size, population not exceeding 2000 in any case. One segment was selected from the frame of segments thus prepared in a random manner to represent the selected village at the second stage of sampling.

8. The number of sample villages in each district was allocated between the two strata proportionally to their size (population). The villages within each size stratum were further ordered by the female literacy rate based on the Census 2001 data, and three equal size and disjoint substrata were established. The sample villages within each substratum were selected by simple random sampling without replacement. In urban areas, the Census Enumeration Blocks within a district were also ordered by the female literacy rate based on the Census 2001 data, and three equal size and disjoint substrata were established. The sample Census Enumeration Blocks within each substratum were selected by simple random sampling without replacement. This process of selection ensured equal representation across three sub-strata both in rural as well as in urban areas of a district besides rendering the sample design as self-weighting.

Sample Size: 9. Generating robust estimate of Infant Mortality Rate at the district level has become an utmost necessity as reduction in Infant Mortality constitutes one of the key targets in the Reproductive & Child Health Programme (RCH) under the umbrella of NRHM. This would also facilitate effective tracking of the Millennium Development Goal 4 on Child Mortality. The Infant Mortality Rate has therefore been taken as the decisive indicator for estimation of sample size at the district level. The permissible level of error has been taken as 10 percentage relative standard error (prse) at the district level. The sample size so worked out would yield relatively better estimates of Crude Birth Rate / Crude Death Rate and may also enable generation of rarer indicators like TFR / MMR (for a group of districts) with good precision. In the absence of district level estimates from any other reliable source, the district level estimates of IMR based on SRS pooled data have been used for estimation of sample size for each district.

Sample Identification Work: 10. One of the essential prerequisites before the commencement of the survey is to uniquely identify the sample unit on ground. This was done in all the sample units across the 9 AHS States by the regular staff of ORGI. The work involved firming up of the boundary of the selected villages / Enumeration Blocks; resorting to segmentation in case of villages exceeding the population 2000, random selection of segment thereof and drawing of appropriate notional maps of the sample units to serve as the base map for the survey work.

Survey Tools: 11. The Baseline Survey in all the nine AHS States was carried out during July 2010 to March 2011 and four Schedules in all were administered. These are: (i) House-listing Schedule, (ii) Household Schedule, (iii) Woman Schedule and (iv) Mortality Schedule. In the House-listing Schedule, besides the mapping and listing of all the houses and households in a sample unit, some key particulars relating to the dwelling, basic amenities available to the household and assets possessed by them were also collected. In the Household Schedule, all Usual Residents as on 01.01.2010 were listed and for each listed member, information on background characteristics like Name, Sex, Relationship to head, Date of Birth, Age, Religion, Social Group, Marital Status, Date of first Marriage, Education and Occupation/Activity status was captured. Besides, information in respect of Disability, Morbidity (Injuries, Acute illness, Chronic illness) and Personal habits (like Chewing, Smoking and consumption of Alcohol) was also collected wherever applicable. Woman Schedule comprised two sections. Section-I was

administered to each and every ever married woman and information relating to the outcome of pregnancy(s) (live birth/still birth/abortion), birth history, type of medical attention at delivery, details of maternal health care (ante natal/inatal/post natal), immunization of children, breast feeding practices including supplements, occurrence of child diseases (Pneumonia, Diarrhoea and fever), registration of births, etc. taken place during the reference period i.e. 01.01.2007 to 31.12.2009 were collected. Section II focused on information on pregnancy; use, sources and practices of family planning methods; details relating to future and unmet need, awareness about RTI/STI, HIV/AIDS, administration of HAF/ORT/ORS during diarrhoea and danger signs of ARI/Pneumonia from Currently Married Woman.

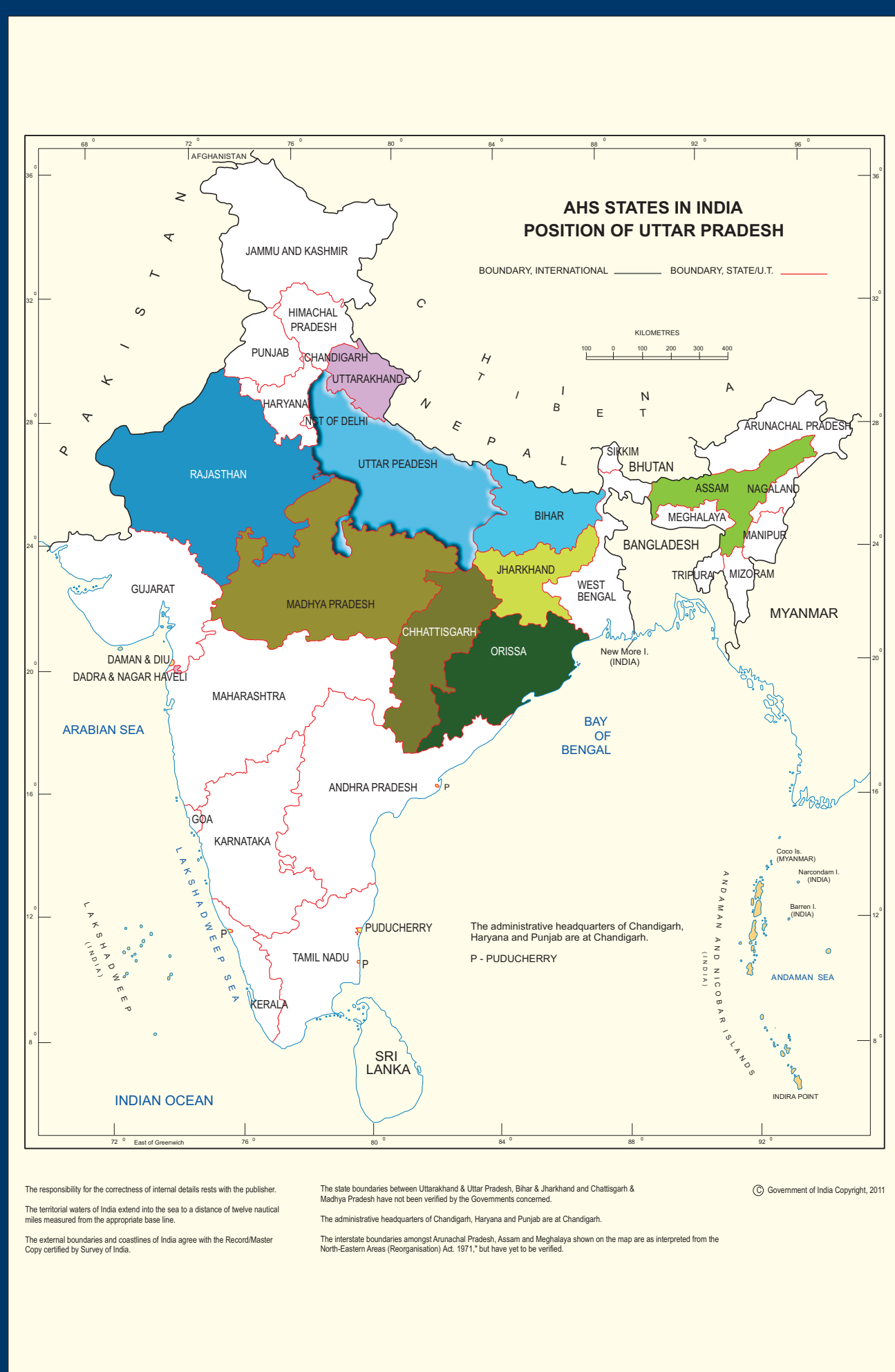
12. Through the Mortality Schedule, details relating to death occurred to usual residents of sample unit during 01.01.2007 to 31.12.2009 were captured and it included information on name & sex of deceased, date of death, age at death, registration of death and source of medical attention before death. For infant deaths, a question on symptoms leading to death was also probed. Information on a variety of questions on factors leading/contributing to death, symptoms leading to death, time between onset of complications and death, etc. were asked in case of deaths associated with pregnancy to yield data on various determinants of maternal mortality. These schedules were finalized after a series of deliberations in the TAG and a pilot was also done to test them. The fieldwork in sample unit was carried out by a team of field enumerators which had at least one female. This was done to ensure that besides canvassing of woman schedule, questions on morbidity for female members in household schedule and questions relating to infant deaths as well as deaths associated with pregnancy in the mortality schedule are probed and recorded only by the female enumerator.


Training: 13. Since information on morbidity, disability, few specific details in case of infant and maternal deaths etc. were being collected at the district level in such a large survey setup for the first time, adequate emphasis was given on training. An exhaustive training manual for the field staff was prepared with inputs from various stakeholders and subject experts. A three day 'Training of Trainers' programme was organized at New Delhi prior to commencement of State/Zone level training sessions wherein experts imparted training on concepts,

definitions and how best to collect data on different parameters. A pool of doctors was arranged with the help of National Institute of Health & Family Welfare (NIHFW) who imparted training to the field staff on disability and morbidity in the State/Zone level training programmes. A standardized Video training module was specially developed for the purpose. Officers from ORGI and DCOs were deputed to observe these training programmes.

Supervision and Third Party Audit: 14. In addition to the multilayer supervision mechanism adopted by the survey agencies, regular inspections were carried out by the officers/officials of respective DCOs and those from ORGI headquarters to secure the quality of data. The inspections were a judicious mix of concurrent as well as post survey audit. Over and above, a component of third party audit has also been included to verify and authenticate the surveyed data through an independent mechanism. The third party audit work has been done in 20 randomly selected AHS units in a district covering every fourth household thereof by following a standard protocol prescribed by ORGI. A truncated version of household, women and mortality schedules were filled in afresh by the field staff of the third party audit agencies. The findings of the third party audit helped in improving the quality of data particularly netting of vital events.

Dissemination of Results: 15. In view of the huge volume of data collected under AHS and also the significant time required for validation and processing, the dissemination of AHS results is being done in two phases. The first set of data is being released in the form of a State-wise bulletin, which contains the district level data on crude birth rate, crude death rate, natural growth rate, infant mortality rate, neo-natal and post neonatal mortality rate, under 5 mortality rate, sex ratio at birth, sex ratio (0-4 years) and overall sex ratio. Though the sample size has been calculated for the district as a whole, the rural and urban estimates at the district level has also been published as a by-product. Users are advised to keep the above fact into consideration while using the rural / urban estimates of a district. In addition, the maternal mortality ratio, maternal mortality rate and life time risk have been published for a group of districts. In order to facilitate direct intervention, the grouping of districts has been done on the basis of existing administrative divisions in the respective AHS States. The data on all other parameters covered under AHS would be released subsequently in the form of district level factsheets.






सत्यमेव जयते

ANNUAL HEALTH SURVEY BULLETIN 2010-11

भारत के महाराजिस्ट्रार

AHS 2010



UTTAR PRADESH

REGISTRAR GENERAL, INDIA

© Copyright Government of India 2011

Enquiries should be directed to:
Vital Statistics Division
Office of the Registrar General, India
Ministry of Home Affairs
Government of India

Email : bmisra97.rgi@censusindia.gov.in
Website : www.censusindia.gov.in

Printed by : Saraswati Offset Printers Pvt. Ltd., New Delhi

Office of the Registrar General & Census Commissioner, India
Government of India, Ministry of Home Affairs
Vital Statistics Division
2/A, Mansingh Road, New Delhi-110 011