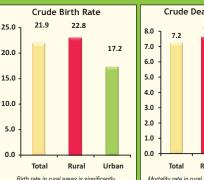


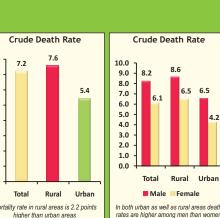
Annual Health Survey 2010-11



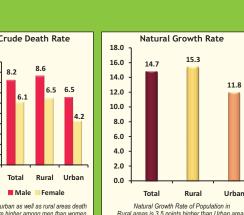
ASSAM

	Crude Birth Rate	Crude Birth Rate	Crude Birth Rate	Rate Crude Death Rate (CDR)		Natu	ral Growth	Infant Mortality Rate (IMR)					Neo-natal Post Neo-nata		o natal	Under Five Mortality Rate (U5MR)				8)	Care	otio	Sex Ratio Sex Ratio		otio	95% Confidence Interval										
District	(CBR)	R)			Rate			Mo	Mortality Rate Mortality Rate					Sex Ratio at Birth		0- 4 Years)	(All Ag	ges)		de Birth Rat		Crude Dea		Infa	nt Mortality	Rate		Mortality Rate	Sex Ratio at B	Birth						
	Total Bural Urban	Total Male Feme	Rural	Urban	mala Total I	Dural Hrhan To	Total	Rui	ral	Urban	omala Total	Dural II	Irhan Total Dur	al Hrhan	Total Male	Eomala Tota	Rural	Ur alo Total M	rban Mala Famala	Total Pura	l Urban Tota	ol Dural Hrhan 1	Total Bural	Hrhan	Total Lower Upper	Rural Lower Upper Lo	Urban T	otal Rura er Upper Lower L	al Urban Jpper Lower Upp	Total er Lower Upp	Rural er Lower Upper L	Urban Lower Upper	Total Ri	ural Urban r Upper Lower Upper	Total Rural Lower Upper Lower Upper	Urban r Lower Upper
	Total Rulal Oldali	Total Wate Fellia	ale Total Iviale Fel	nale lotal Male Fel	IIale Iolai I	Kulai Ulbali I	ilai iliaie r	remale Total Ivia	le remale	TOLAI IVIAIE I	Terriale Total	Ruidi	IDaii IOlai Kui	al Ulball	TOTAL MIGHE	remale 10ta	I Wale Felli	ale IOIai W	viale reiliale	TOTAL KUIA	ii Ulbali 10ta	al Kulai Olbali	IOLAI KUIAI	Ulball	Limit Limit	Limit Limit Li	mit Limit Limi	t Limit Limit I	Limit Limit Lim	it Limit Lim	it Limit Limit I	Limit Limit	Limit Limit Limit	Limit Limit Limit	Limit Limit Limit Limit	Limit Limit
ASSAM	21.9 22.8 17.2	7.2 8.2 6.1	7.6 8.6 6	.5 5.4 6.5 4	1.2 14.7	15.3 11.8	50 58	62 64 62	2 66	35 34	36 39	42	22 20 22	2 12	78 76	80 84	82 8	7 42	42 43	925 923	933 95	6 958 938	953 959	924	21.5 22.2	22.4 23.3 16	6.5 18.0 7.	0 7.4 7.3	7.8 5.1 5.1	7 57 62	2 61 67	30 40	76 80 82	86 39 46	914 936 912 935	902 964
1 Kokrajhar	23.1 23.9 15.9	7.7 7.9 7.	4 7.7 7.9 7	7.6 7.0 8.0 5	5.9 15.5	16.2 8.9	76 74	78 80 78	8 83		- 41	43	- 35 37	7 -	103 95	111 110	101 119	9 -		892 903	3 750 101	7 1024 919	953 957	916	20.6 25.7	21.3 26.4 3	3.2 28.6 6.4	4 8.9 6.3	9.1 5.8 8.2	2 53 98	8 56 104		86 119 92	128	798 995 805 1012	477 1148
2 Dhubri	22.1 22.9 17.3	7.1 8.3 5.	8 7.4 8.7 6	5.0 4.8 5.3 4	4.3 <mark>15.1</mark>	15.5 12.4	72 69	75 76 74	4 78		- 50	54	- 21 22	2 -	91 87	96 97	92 10	1 -		893 888	8 941 96	0 953 1037	930 925	965	20.8 23.4	21.4 24.3 15	<mark>5.4 19.1</mark> 6.0	0 8.1 6.2	8.6 3.2 6.5	5 62 8	1 66 86		81 101 86	107	833 957 826 954	724 1219
3 Goalpara	22.5 22.9 18.1	6.9 8.3 5.	4 6.9 8.3 5	5.4 6.8 7.8 5	5.7 15.6	16.0 11.4	56 57	55 58 58	8 58		- 39	40	- 16 17	7 -	74 76	73 77	78 75	5 -		878 863	3 1112 95	7 955 988 9	946 947	935	20.9 24.1	21.2 24.6 16	6.8 19.4 6.3	3 7.5 6.3	7.5 4.3 9.2	2 46 66	6 47 68		67 82 69	84	830 929 813 914	888 1397
4 Bongaigaon	19.7 21.0 12.0	6.2 8.1 4.	3 6.5 8.4 4	4.7 6.1 3	3.3 13.5	14.5 7.3	53 53	53 56 56	6 55		- 31	31	- 22 24	1 -	68 67	69 73	73 74	4 -		931 944	4 800 98	4 998 849	948 951	932	18.4 21.0	19.5 22.5 10	<mark>0.3</mark> 13.7 5.	5 6.9 5.7	7.2 3.3 6.	1 42 63	3 45 66		61 75 66	81	879 986 889 1002	648 983
5 Barpeta	20.8 21.5 15.3	6.7 8.0 5.	3 6.7 7.9 5	5.5 6.5 8.6 4	4.3 14.2	14.8 8.8	18 47	49 51 48	8 54		- 33	35	- 15 16	3 -	65 64	66 70	67 73	3 -		887 865	5 1185 94	1 925 1176	936 936	936	19.0 22.7	19.6 23.5 11	1.4 19.2 6.0	7.4 6.0	7.5 5.0 7.9	9 38 57	7 41 61		57 72 62	77	835 943 812 921	899 1572
6 Kamrup	18.7 21.0 16.3	5.9 6.9 4.	8 7.8 9.0 6	5.5 3.9 4.8 2	2.9 12.8	13.2 12.4	46 45	46 63 62	2 64	22 22	22 30	42	15 15 22	2 7	57 56	58 80	76 83	3 29 3	30 27	947 953	3 939 96	0 981 934	909 946	873	17.9 19.5	19.9 22.1 15	<mark>5.2 17.4</mark> 5.3	3 6.5 6.8	8.8 3.3 4.6	6 38 53	3 52 75	15 29	52 62 73	87 22 35	908 988 905 1004	872 1011
7 Nalbari	18.8 18.9 14.6	7.4 8.2 6.	7 7.5 8.2 6	5.8 5.8 8.5 3	3.1 11.4	11.4 8.8	64 64	63 65 65	5 65		- 48	49	- 16 16	6 -	88 87	88 90	90 9	1 -		937 938	8 889 98	7 989 906 1	039 1042	970	17.0 20.6	17.1 20.8 11	1.0 18.3 6.3	8.5 6.3	8.6 3.4 8.2	2 41 86	6 42 88		72 103 74	106	838 1046 837 1051	
8 Darrang	20.8 21.2 -	8.3 9.4 7.	1 8.5 9.7 7	'.3	- 12.5	12.7 - (69 68	70 71 70	0 72		- 39	39	- 31 31	-	90 88	92 93	91 95	5 -		953 957	7 786 91	8 921 800	954 954	950	17.7 23.9	18.0 24.4	6.9	9.8 7.0 1	0.0 -	- 49 89	9 50 91		77 104 79	106	868 1047 870 1052	
9 Marigaon	23.5 23.9 16.1	8.5 9.1 7.	7 8.4 9.1 7	7.7 9.0 10.0 8	3.0 15.1	15.5 7.1	72 71	74 74 72	2 76		- 44	45	- 28 29	-	93 92	94 95	93 97	7 -		920 921	1 902 94	4 947 855	956 957	937	22.6 24.5	22.9 24.9 12	2.2 20.1 7.	6 9.3 7.6	9.3 5.4 12.6	6 64 80	0 65 82		87 99 89	101	883 959 883 960	696 1166
10 Nagaon	24.6 26.0 17.9	8.1 9.0 7.	2 8.5 9.3 7	7.7 6.4 7.9 4	4.8 <mark>16.5</mark>	17.5 11.6	66 64	69 69 67	7 71	49 43	55 41	42	33 26 27	7 16	86 83	89 92	89 9	5 51 4	46 55	943 937	7 988 95	2 963 883	964 969	943	23.1 26.1	24.4 27.7 13	3.6 <mark>22.3</mark> 7.0	6 8.6 7.9	9.0 5.1 7.3	7 60 72	2 62 76	34 64	79 93 85	100 32 70	897 991 889 987	830 1176
11 Sonitpur	19.8 20.2 17.4	6.5 7.2 5.	9 6.7 7.2 6	5.2 5.4 7.0 3	3.7 13.3	13.5 12.0	68 67	69 72 70	0 73	41 44	38 46	48	26 22 23	3 16	80 79	82 85	83 86	6 47	51 42	949 964	4 836 97	7 987 884 !	968 972	944	18.8 20.8	19.1 21.3 14	4.9 20.0 6.0	7.1 6.1	7.3 4.1 6.7	7 59 78	8 61 82	26 56	74 86 78	91 31 62	908 991 921 1009	719 969
12 Lakhimpur	24.4 25.0 20.2	6.9 8.0 5.	7 7.2 8.3 6	5.0 4.7 5.7 3	3.6 17.5	17.8 15.5	56 55	57 59 58	8 60	29 32	26 41	43	25 15 16	6 4	68 66	70 71	68 73	3 43 4	45 40	984 991	1 929 101	0 1015 966	950 950	946	21.9 26.9	22.3 27.7 12	2.8 <mark>27.5</mark> 5.8	8 8.0 6.0	8.4 1.7 7.6	6 44 68	8 46 72	16 42	57 79 59	83 17 68	901 1076 901 1090	720 1194
13 Dhemaji	23.0 23.1 21.5	4.5 5.1 3.	8 4.5 5.0 3	3.9 4.8 5.8 3	3.7 18.5	18.6 16.7	14 42	45 45 43	3 47	30 35	26 27	28	12 17 17	7 18	52 50	54 53	50 56	6 39 4	48 29	950 951	1 941 97	2 971 984 !	949 950	939	21.9 24.0	22.0 24.2 20	0.0 23.1 4.	0 4.9 4.0	4.9 3.4 6.	1 36 52	2 36 54	14 47	46 58 47	60 23 55	899 1004 897 1009	797 1111
14 Tinsukia	21.1 22.5 15.7	7.5 8.4 6.	5 7.8 8.7 6	6.8 6.3 7.3 5	5.2 13.7	14.7 9.4	55 52	58 57 50	3 60	45 43	48 39	40	37 16 17	7 8	74 69	79 78	73 84	4 52 4	49 56	942 952	2 893 95	6 969 887	962 967	945	20.2 22.1	21.5 23.5 13	3.6 <mark>17.9</mark> 7.1	0 8.0 7.2	8.3 5.5 7.	1 51 59	9 52 61	32 58	68 79 72	85 39 65	903 983 909 996	793 1005
15 Dibrugarh	20.1 21.4 16.2	7.5 8.9 6.	1 8.1 9.5 6	6.6 6.0 7.3 4	1.5 12.6	13.4 10.2	55 53	57 56 56	6 57		- 37	40	- 18 16	3 -	71 69	74 76	75 78	8 -		912 909	9 921 95	0 936 1006 !	953 958	938	19.1 21.1	20.3 22.5 14	4.7 17.7 7.	0 8.1 7.5	8.7 5.0 6.9	9 46 64	4 50 63		64 78 69	84	866 960 859 963	813 1043
16 Sibsagar	19.7 19.9 17.2	8.1 9.5 6.	7 8.3 9.7 6	5.9 5.7 6.9 4	1.4 11.6	11.6 11.5	58 56	60 60 59	9 62		- 37	40	- 21 21	-	79 77	81 82	81 82	2 -		926 931	1 851 95	2 952 952	959 962	928	18.7 20.8	18.9 21.0 12	2.8 <mark>21.7</mark> 7.5	5 8.7 7.6	9.0 4.8 6.6	6 50 66	6 52 69		70 88 72	91	865 991 868 999	635 1134
17 Jorhat	20.0 20.8 17.9	8.2 9.5 6.	9 8.4 9.6 7	7.7 9.0 6	3.5 11.8	12.4 10.1	57 56	59 60 59	9 61	47 45	50 43	45	36 14 15	5 12	71 69	72 76	75 7	7 54	51 58	962 969	9 941 98	3 998 933	975 981	960	19.4 20.7	15.9 25.7 16	6.3 19.5 7.	7 8.7 6.5 1	0.2 7.0 8.4	4 52 62	2 44 76	39 55	66 76 70	82 44 64	925 1001 927 1012	860 1029
18 Golaghat	21.9 21.9 21.8	8.0 9.0 6.	9 8.3 9.4 7	'.1 5.8 6.1 5	5.6 13.9	13.6 16.0	62 58	66 64 6	1 69		- 47	49	- 15 16	6 -	82 78	86 86	82 90	0 -		923 932	2 854 95	5 969 856	959 966	907	21.0 22.9	21.0 22.9 18	8.0 <mark>25.7</mark> 7.4	4 8.7 7.6	8.9 3.6 8.	1 52 7	1 54 75		74 90 77	95	871 978 876 991	708 1028
19 Karbi Anglong	21.2 22.2 18.0	6.9 7.7 6.	0 7.0 7.7 6	5.2 6.4 7.7 5	5.0 14.4	15.2 11.7	59 53	65 61 55	5 68	49 45	52 36	37	33 23 25	5 15	77 71	85 83	75 92	2 56	54 59	930 911	1 1014 92	6 916 967 !	946 94	957	20.0 22.4	20.9 23.5 15	5.5 20.5 6.4	7.3 6.4	7.6 5.7 7.0	0 50 68	3 52 71	27 70	69 86 74	92 40 73	875 990 851 975	876 1174
20 North Cachar Hills	18.6 19.5 17.9	5.5 6.2 4.	8 6.9 7.5 6	5.1 4.3 5.0 3	3.6 13.1	12.6 13.5	58 55	61 66 6	1 72	50 48	51 35	36	34 23 30	16	78 72	84 99	85 113	3 57	58 56	884 855	5 914 94	0 936 944	935 912	955	17.3 20.0	17.0 22.0 16	6.6 19.1 5.1	1 6.0 6.1	7.6 4.0 4.7	7 48 67	7 50 82	40 60	67 88 81	117 45 70	815 959 757 964	819 1020
21 Cachar	26.5 27.4 22.6	7.5 8.6 6.	4 7.8 8.9 6	6.7 6.5 7.8 5	5.3 18.9	19.7 16.0	57 56	58 60 58	8 61	44 42	46 36	40	20 20 20	24	79 78	81 83	82 84	4 62	58 65	929 909	9 1031 95	3 947 983	974 977	964	25.0 27.9	26.6 28.3 18	8.6 26.6 7.1	8.1 7.5	8.1 5.6 7.5	5 49 65	5 56 63	27 61	74 85 77	89 47 77	892 967 871 949	910 1169
22 Karimganj	25.8 26.4 17.4	6.6 6.8 6.	3 6.7 7.0 6	5.5 4.7 4.8 4	1.5 19.3	19.7 12.7	69 66	73 71 67	7 75	32 40	23 46	47	22 23 24	1 11	83 78	89 85	80 9	1 40 4	40 39	913 915	5 860 93	3 931 986	964 963	980	22.8 28.9	23.2 29.6 14	4.7 20.0 5.	7 7.5 5.8	7.7 3.0 6.3	3 55 83	3 56 86	24 41	72 95 74	97 0 80	840 991 841 996	565 1292
23 Hailakandi	32.1 34.2 19.9	7.0 8.2 5.	9 7.1 8.1 6	5.0 7.0 8.6 5	5.3 25.1	27.2 12.9	55 57	54 56 57	7 56		- 36	37	- 20 19) -	91 100	82 96	105 86	6 -		810 836	5 588 87	4 900 631	942 943	935	28.4 35.9	29.8 38.7 11	1.3 28.5 5.0	8.5 5.4	8.7 5.5 8.5	5 36 75	5 35 78		75 107 79	113	724 905 743 939	388 857
'-' denotes inadequate sample.							'Tota	l' under Infant I	Mortality Pate	a may not ad	d up to corre	spondir	ng 'Total' of No	o natal a	nd																					

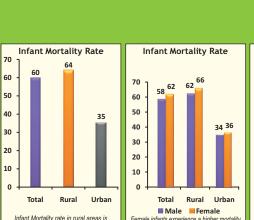


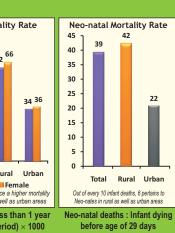


in reference period / Mid-year population) × 1000

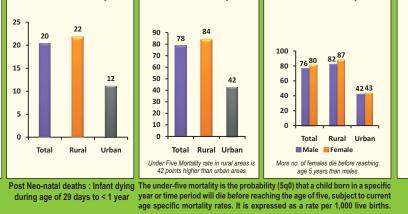


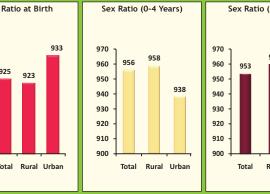








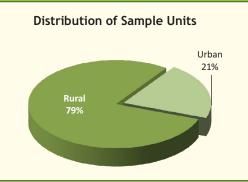




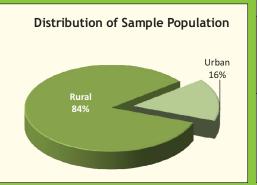
Sex Rat	io = Number	of females	per	1,0

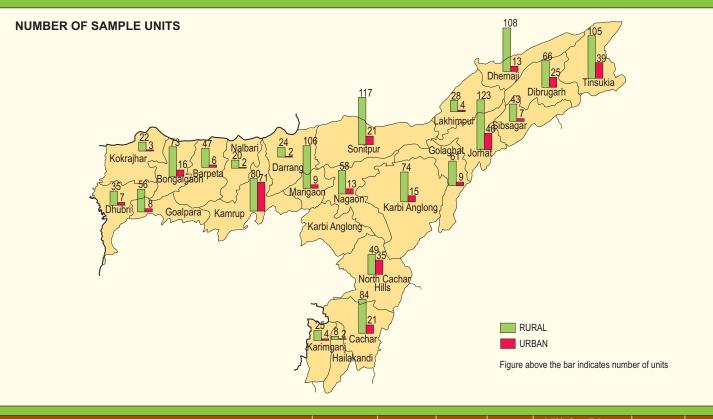
INFANT MORTALITY RATE

District		Numb	er of Samp	r of Sample Units Population (in '						
	District	Total	Rural	Urban	Total	Rural	Urban			
Α	ssam	1,784	1,412	372	1,741	1,461	280			
1	Kokrajhar	25	22	3	19	17	2			
2	Dhubri	42	35	7	50	45	5			
3	Goalpara	64	56	8	74	68	6			
4	Bongaigaon	89	73	16	80	70	10			
5	Barpeta	53	47	6	67	62	5			
6	Kamrup	151	80	71	149	91	58			
7	Nalbari	22	20	2	23	21	2			
8	Darrang	26	24	2	29	28	1			
9	Marigaon	115	106	9	133	128	5			
10	Nagaon	71	58	13	84	74	10			
11	Sonitpur	138	117	21	138	124	14			
12	Lakhimpur	32	28	4	27	23	4			
13	Dhemaji	121	108	13	75	66	9			
14	Tinsukia	144	105	39	135	111	24			
15	Dibrugarh	91	66	25	95	74	21			
16	Sibsagar	50	43	7	57	53	4			
17	Jorhat	163	123	40	167	131	36			
18	Golaghat	70	61	9	70	63	7			
19	Karbi Anglong	89	74	15	64	50	14			
20	North Cachar Hills	84	49	35	42	18	24			
21	Cachar	105	84	21	120	105	15			
22	Karimganj	29	25	4	30	28	2			
23	Hailakandi	10	8	2	13	11	2			

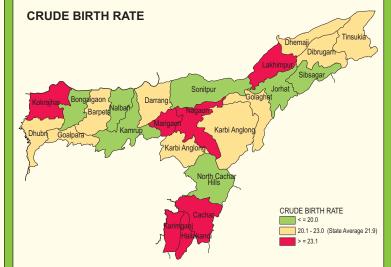


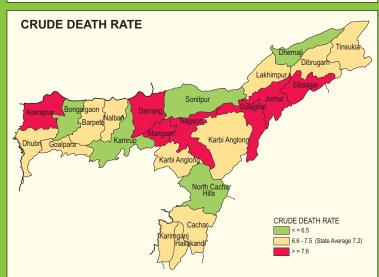
'Total' population may not add upto 'Rural' and 'Urban' population due to rounding.



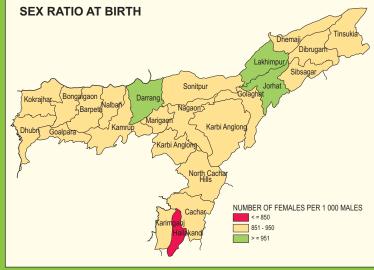


State/Commissionary/(Districts)	Sample Female	Sample Live	Maternal	MMR		nfidence erval	Maternal Mortality	Life Time	4
	Population	Births	Deaths		Lower Limit	Upper Limit	Rate	Risk	
ASSAM	460250	111150	423	381	344	417	31	1.07%	
HILLS AND BARAK VALLEY DIVISION (Karbi Anglong, North Cachar Hills, Cachar, Karimganj, Hailakandir)	71640	19290	66	342	260	425	31	1.07%	
LOWER ASSAM DIVISION (Kokrajhar, Dhubri, Goalpara, Darrang, Bongaigaon, Barpeta, Kamrup, Nalbari)	128018	29520	108	366	297	435	28	0.98%	
NORTH ASSAM DIVISION (Marigaon, Nagaon, Sonitpur, Lakhimpur, Dhemaji)	117042	30259	111	367	299	435	32	1.10%	
UPPER ASSAM DIVISION (Tinsukia, Dibrugarh, Sibsagar, Jorhat, Golaghat)	143550	32081	138	430	359	502	32	1.12%	•

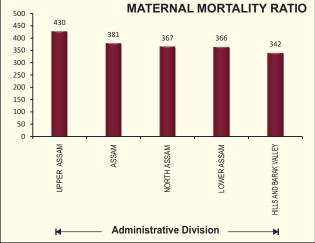




Kokrajhar Bongalgaon Barpett Vallbah Darrang Nagaon Marigaen Karbi Anglor Karbi Ang	Jornat Sibsagar Jornat Sibsagar INFANT MORTALITY RATE < = 55 56 - 65 (State Average 60) > = 66
SEX RATIO AT BIRTH	Dhemaji Tinsukia Dibrugarh



Age	Sample Female	Maternal	Proportion	Inte	rval	Non Maternal	Proportion	Inte	rval	500 ק		
Group	Deaths	Deaths	Floportion	Lower Limit	Upper Limit	Deaths	. reperuen	Lower Limit	Upper Limit	450 - 430 400 -	3	
15-19	310	28	7	2	11	282	11	10	13	350 -		
20-24	386	112	26	22	31	274	11	10	12	300 -		
25-29	424	117	28	23	32	307	12	11	14	200 -		
30-34	376	81	19	15	23	295	12	11	13	150 -		
35-39	459	50	12	7	17	409	17	15	18	100 -		
40-44	406	24	6	2	10	382	15	14	17	0		
45-49	536	11	3	0	6	525	21	20	23	ASSAM		
Total	2897	423	100			2474	100			UPPER AS		
Matern	Maternal Mortality Ratio = Proportion of maternal deaths per 1,00,000 live births											
Matern	• Maternal Mortality Rate = Proportion of maternal deaths per 1,00,000 women in the ages 15-49 years											
• Life 7	Life Time Risk = 1. $\left(1 - Maternal Mortality Rate\right)^{35}$											



Annual Health Survey Bulletin 2010-11

Introduction:

Decentralized district-based health planning is essential in India because of the large interdistrict 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

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 considerate 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 Health 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 coordination 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

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.

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:

Survey Tools:

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.

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/natal/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.

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.

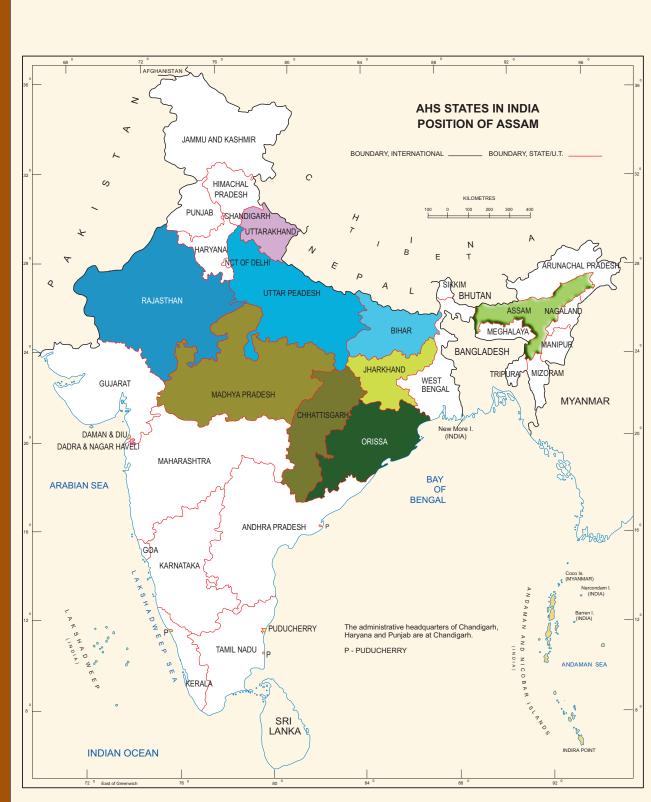
definitions and how best to collect data on different parameters. A pool of doctors was arranged with the help of National Institute of Health & Family Welfare (NIHFW) who imparted training to the field staff on disability and morbidity in the State/Zone level training programmes. A standardized Video 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.

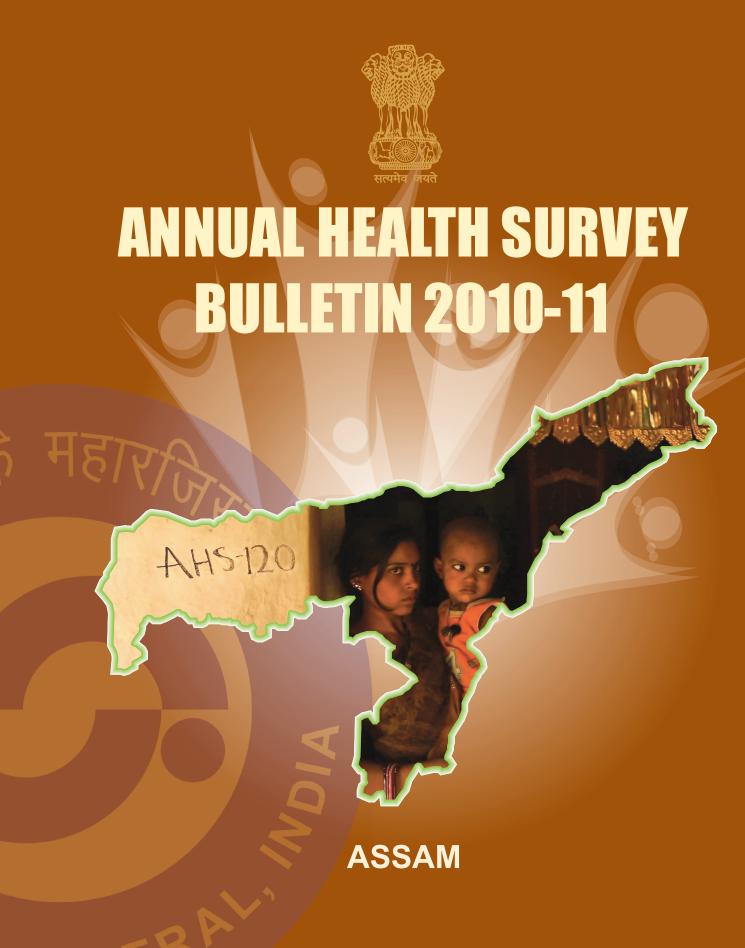


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