

6. HEALTH INFRASTRUCTURE

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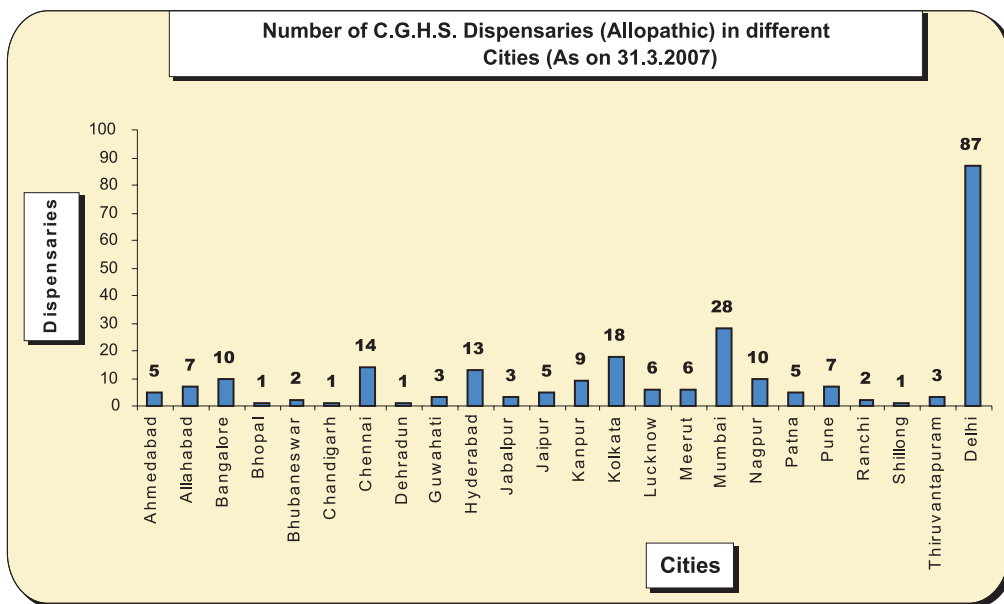
6. Health Infrastructure

Health Infrastructure is an important indicator to understand the healthcare delivery provisions and mechanisms in a country. It also signifies the investments and priority accorded to creating the infrastructure in public and private sectors.

This section on Health Infrastructure indicators is subdivided into two categories viz. educational infrastructure and service infrastructure. **Educational infrastructure** provides details of medical colleges, students admitted to M.B.B.S. course, post graduate degree/diploma in medical and dental colleges, admissions to BDS & MDS courses, AYUSH institutes, nursing courses and para-medical courses. **Service infrastructure** in health include details of allopathic hospitals, hospital beds, Indian System of Medicine & Homeopathy hospitals, sub centers, PHC, CHC, blood banks, mental hospitals and cancer hospitals.

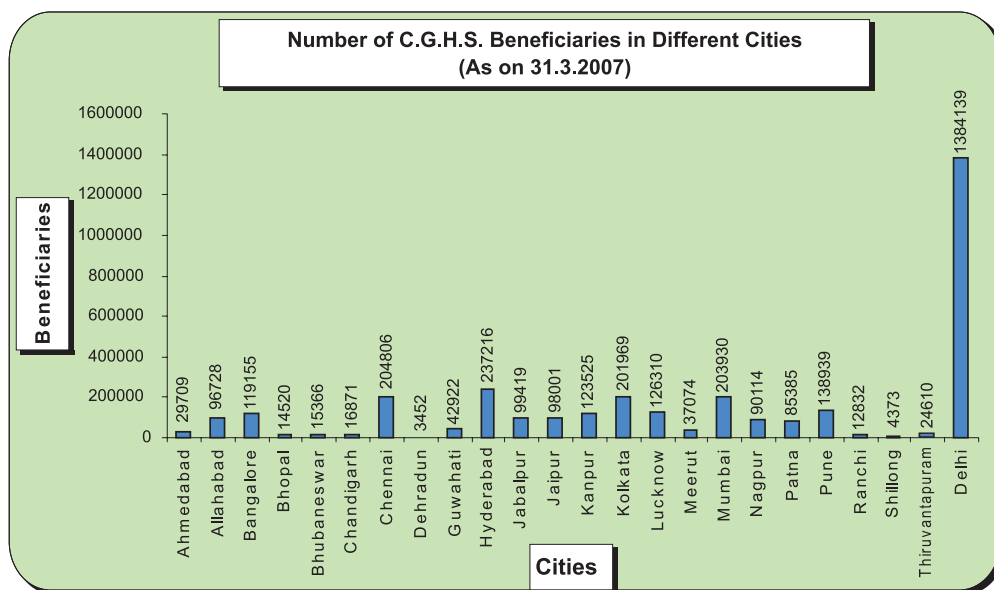
- ▶ Medical education infrastructures in the country have shown rapid growth during the last 15 years. The country has 266 medical colleges, 268 Colleges for BDS courses and 104 colleges conduct MDS courses with total admission of 30,290, 20,080 and 2,069 respectively during 2007-08.
- ▶ There are 1,597 Institution for General Nurse Midwives with admission capacity of 59138 and 461 colleges for Pharmacy (diploma) with an intake capacity of 27735 during 2006-07.
- ▶ There are 9,923 hospitals having 480306 beds in the country 6,909 hospitals are in rural area with 1,52,736 beds and 3,014 hospital are in Urban area with 3,27,570 beds.
- ▶ Medical care facilities under AYUSH by management status i.e. dispensaries & hospitals are 21,351 & 3,203 respectively during 2007.
- ▶ There are 1,44,988 Sub Centers, 22,669 Primary Health Centers and 3,910 Community Health Centers in India as on March 2006 (Latest).
- ▶ India has 903 Government licensed Blood banks and 358 voluntary blood banks. Private hospitals has 666 blood banks and other private commercial centers are 483 in India during 2007.

- ▶ CGHS has health facilities in 24 cities having 247 Allopathy Dispensaries and Total 332 Dispensaries in the Country with 9.00 Lakhs registered cards/ families.



Source: Central Government Health Scheme , Dte. GHS, M/O. Health & F.W., Nirman Bhawan, New Delhi

- ▶ During 2006-07 the city wise no. of CGHS beneficiaries has been analysed and presented in the graph.



Source: Central Government Health Scheme , Dte. GHS, M/O. Health & F.W., Nirman Bhawan, New Delhi

6.1 Education Infrastructure

6.1.1 Number of Medical Colleges & Students Admitted to the 1st Year M.B.B.S. in India 1991-92 to 2007-08

S. No.	Year	No. of Medical Colleges	Admission		
			Male	Female	Total
	1	2	3	4	5
1	1991-92	146	7468	4731	12199
2	1992-93	146	6927	4314	11241
3	1993-94 ¹	146	5989	3541	10400
4	1994-95	152	7685	4564	12249
5	1995-96	165	4416	2623	7039
6	1996-97	165	2212	1269	3568
7	1997-98 ²	165	2348	1274	3949
8	1998-99 ²	147	NR	NR	11733
9	1999-00 ³	147	NR	NR	10104
10	2000-01	189	NR	NR	18168
11	2004-05	229	NR	NR	24690
12	2005-06	242	NR	NR	26449
13	2006-07	262	14449	10609	28928
14	2007-08	266	18208	12082	30290

Notes:

- 1 Total may not tally with male and female column as some Medical Colleges have given the information for total only.
 - 2 Data not received from 59 colleges in 1997-98 and 1998-1999
 - 3 Data not received from 89 colleges in 1999- 2000
- The data for the years 2001-02, 2002-03 & 2003-04 not provided by the source agency.

NR Not Received.

Source: Medical Council of India, 2006

6.1.2 Number of Dental Colleges & Admissions to BDS and MDS Courses in India 1994-95 to 2007-08

S. No.	Year	BDS		MDS		
		No. of Dental Colleges	No. of Admission	No. of Dental Colleges	No. of Admission	
	1	2	3	5	6	
1	1994-95	77	1987	32	225	
2	1995-96	94	2562	32	263	
3	1996-97	100	2859	35	301	
4	1997-98	100	3301	37	427	
5	1998-99	110	6100	41	729	
6	1999-00	121	7100	44	801	
7	2000-01	135	8340	49	859	
8	2001-02	149	9550	52	922	
9	2002-03	164	10970	56	992	
10	2003-04	185	12960	58	1106	
11	2004-05	189	13300	61	1173	
12	2005-06	205	14700	67	1291	
13	2006-07	240	18180	87	1764	
14	2007-08	268*	20080	104	2069	

Notes:

BDS Bachelor of Dental Surgery

MDS Master of Dental Surgery

* One college namely Baba Mastnath Dental College has been closed down, hence deleted

Source : Dental Council of India

6.1.3 State/UT wise Number of Undergraduate Ayush Institutes & their Admission Capacity in India as on 1.4.2007*

S. No.	State/UT	Ayurveda		Unani		Siddha		Naturopathy		Homoeopathy		Total	
		No.of Colleges	Adm. Capacity	No.of Colleges	Adm. Capacity	No.of Colleges	Adm. Capacity	No.of Colleges	Adm. Capacity	No.of Colleges	Adm. Capacity	No.of Colleges	Adm. Capacity
1		2	3	4	5	6	7	8	9	10	11	12	13
1	Andhra Pradesh	5	200	2	125	—	—	1	30	5	230	13	585
2	Arunachal Pradesh	—	—	—	—	—	—	—	—	1	50	1	50
3	Assam	1	50	—	—	—	—	—	—	3	90	4	140
4	Bihar	11	330	4	180	—	—	—	—	16	930	31	1440
5	Chhattisgarh	3	170	1	40	—	—	1	40	3	200	8	450
6	Chandigarh	1	50	—	—	—	—	—	—	1	80	2	130
7	Delhi	1	40	2	90	—	—	—	—	2	150	5	280
8	Goa	1	40	—	—	—	—	—	—	1	50	2	90
9	Gujarat	11	485	—	—	—	—	1	50	15	1585	27	2120
10	Haryana	6	310	—	—	—	—	—	—	1	50	7	360
11	Himachal Pradesh	1	50	—	—	—	—	—	—	1	100	2	150
12	Jammu & Kashmir	1	60	2	40	—	—	—	—	—	—	3	100
13	Jharkhand	1	40	—	—	—	—	—	—	2	100	3	140
14	Karnataka	53	2470	4	170	—	—	3	110	12	855	72	3605
15	Kerala	14	680	—	—	1	50	—	—	5	250	20	980
16	Madhya Pradesh	17	715	4	180	—	—	—	—	19	1735	40	2630
17	Maharashtra	62	3305	5	250	—	—	—	—	47	3900	114	7455
18	Orissa	6	190	—	—	—	—	—	—	6	195	12	385
19	Punjab	12	560	—	—	—	—	—	—	4	410	16	970
20	Rajasthan	6	300	2	90	—	—	—	—	7	535	15	925
21	Tamil Nadu	6	210	1	40	6	300	4	155	10	750	27	1455
22	Uttar Pradesh	15	650	11	505	—	—	—	—	8	400	34	1555
23	Uttarakhand	4	210	—	—	—	—	—	—	1	50	5	260
24	West Bengal	2	110	1	40	—	—	—	—	13	730	16	880
	TOTAL	240	11225	39	1750	7	350	10	385	183	13425	479	27135

Note:

* Provisional

— NIL

- 3 Colleges each of Bihar & Karnataka & one each of M.P & T.N under Ayurveda and one College of Jammu & Kashmir under Unani have not been permitted to take the admissions.

Source: Central Council of Indian Medicine /Homeopathy/Deptt. of AYUSH

6.1.4 Number of Institutions and Admission Capacity/Number Admitted in Nursing/Para Medical Courses in India 2006-07

S.No.	Description of the courses	No. of Institutions	Admissions capacity / no. Admitted
1	2	3	
1	General Nurse Midwives ¹	1597	59138
2	Aux. Nurse Midwives ¹	312	7467
3	Health Visitors & Health Supervisors ²	11	NA
4	Pharmacy (diploma) ³	461	27735
5	Dental Hygienist	17	65
6	Dental Mechanics Courses	18	50
7	B.Sc. (Med. Lab. Technicians)	3	56
8	Lab.Tech./lab. Asstt.	97	2193
9	Sanitary/health/malaria inspectors	26	1695
10	Radiographers	33	410
11	X-ray technicians	41	426
12	Operational therapist Asstt.	6	59
13	Physiotherapist	8	174
14	Occupational therapist	4	75
15	Speech therapist	3	72
16	Orthopedist	4	24
17	Optician & refractionist	7	134
18	Health workers(male) under M.P.W	102	5334
19	Leprosy training centre		
	(i) Para-medical workers (lep)	40	2078
	(ii) Non-medical supervisor (lep)	7	106
	(iii) Lab tech. (lep)	7	120
	(iv) Physiotherapist tech. (lep)	6	67
20	Miscellaneous (incl. Ophth. Asstt.)	90	2668

Notes:

1. Reference period 31-3-2006
2. Reference period 31-12-2000
3. Reference period upto Aug -2006

NA Not Available

Source: Indian Nursing Council, Pharmacy Council of India. 2006

6.2 Service Infrastructure

6.2.1 State/UT wise Number of Sub Centers, PHCs & CHCs Functioning in India as on March 2006 (Latest)

S.No.	State/UT	Sub Centres	PHCs	CHCs
1	2	3	4	
	India	144988	22669	3910
1	Andhra Pradesh	12522	1570	167
2	Arunachal Pradesh	379	85	31
3	Assam	5109	610	100
4	Bihar	8858	1641	70
5	Chhattisgarh	4692	518	118
6	Goa	172	19	5
7	Gujarat	7274	1072	273
8	Haryana	2433	408	82
9	Himachal Pradesh	2069	439	66
10	Jammu & Kashmir	1888	374	80
11	Jharkhand	3958	330	194
12	Karnataka	8143	1679	254
13	Kerala	5094	909	107
14	Madhya Pradesh	8874	1192	229
15	Maharashtra	10453	1800	407
16	Manipur	420	72	16
17	Meghalaya	401	101	25
18	Mizoram	366	57	9
19	Nagaland	397	84	21
20	Orissa	5927	1279	231
21	Punjab	2858	484	126
22	Rajasthan	10512	1713	325
23	Sikkim	147	24	4
24	Tamil Nadu	8683	1252	165
25	Tripura	539	73	10
26	Uttarakhand	1631	222	49
27	Uttar Pradesh	20521	3660	386
28	West Bengal	10356	922	346
29	A& N Islands	108	20	4
30	Chandigarh	13	0	1
31	D & N Haveli	38	6	1
32	Daman & Diu	21	3	1
33	Delhi	41	8	0
34	Lakshadweep	14	4	3
35	Puducherry	77	39	4

Source: Bulletin on Rural Health Statistics in India 2006. Infrastructure Division MOHFW/GOI

6.2.2 State/UT wise Number of Govt. Hospitals & Beds in Rural & Urban Areas (Including CHCs) In India (Provisional)

S. No.	State/UT	Rural Hospitals		Urban Hospitals		Total Hospitals		Projected Population as on 1.3.2007 (In thousand)	Population Served Per Govt. Hospital	Population Served Per Govt. Hospital Bed	Reference Period	
		No.	Beds	No.	Beds	No.	Beds					
	1	2	3	4	5	6	7	8	9	10	11	
	India	6955	154031	3021	328491	9976	482522		113124	2339		
1	Andhra Pradesh	167	6220	192	28113	359	34333	81554 (80712)	224825	2351	01.01.2007	
2	Arunachal Pradesh	36	379	30	1674	66	2053	1184 (1141)	17288	556	01.01.2005	
3	Assam	100	3000	NR	NR	100	3000	29053 (27878)	278780	9293	01.09.2004	
4	Bihar	101	3030	NR	NR	101	3030	92208 (87745)	868712	28959	01.09.2004	
5	Chattisgarh	116	3514	22	2051	138	5565	22934 (21553)	156181	3873	01.01.2004	
6	Goa	9	452	11	2127	20	2579	1540 (1492)	74600	579	01.01.2007	
7	Gujarat	1483	18832	229	22200	1712	41032		55808	32598	1360	01.01.2008
8	Haryana	56	1178	93	6484	149	7662		23743	159349	3099	01.01.2008
9	Himachal Pradesh	94	2146	55	5963	149	8109		6526	43799	805	01.01.2008
10(a)	Jammu Division	28	830	8	870	36	1700	11099 (10461)				01.01.2000
10(b)	Kashmir Division	33	990	23	1255	56	2245					01.01.2008
11	Jharkhand	47	1410	NR	NR	47	1410	29745 (28388)	604000	20133		01.09.2004
12	Karnataka	444	7290	424	35301	868	42591	56909 (56259)	64815	1321		01.01.2007
13	Kerala	173	12450	77	15945	250	28395		33535	134140	1217	01.01.2008
14	Madhya Pradesh	275	8179	102	11739	377	19918		67569	179228	3392	01.01.2008
15	Maharashtra	424	15380	242	30593	666	45973	106386 (104804)	157363	2280		01.01.2007
16	Manipur	24	669	4	1251	28	1920		2336	83429	1067	01.01.2008
17	Meghalaya	26	780	8	1839	34	2619	2500 (2470)	72647	943		01.01.2007
18	Mizoram	10	320	10	904	20	1224		958	47900	783	01.01.2008
19	Nagaland	123	1962	12	790	135	2752	2145 (2094)	15511	761		01.01.2006
20	Orissa	1623	5882	84	8668	1707	14550		39276	23009	2699	01.01.2008
21	Punjab	77	2100	172	8927	249	11027	26391 (26059)	104655	2363		01.01.2007
22	Rajasthan	347	11850	128	20217	475	32067		63408	133491	1977	01.01.2008
23	Sikkim	29	700	3	820	32	1520		583	18219	384	01.01.2008
24	Tamil Nadu	533	25078	48	22120	581	47198		65629	112959	1391	01.01.2008
25	Tripura	16	500	15	1762	31	2262		3449	111258	1525	01.01.2008
26	Uttar Pradesh	397	11910	528	20550	925	32460	186755 (183282)	198143	5646		01.01.2007
27	Uttarakhand	24	100	94	5413	118	5513	9365 (9219)	78127	1672		01.01.2007
28	West Bengal	99	5171	284	44510	383	49681		86125	224869	1734	01.01.2008
29	A&N Island	6	355	1	450	7	805	434 (419)	59857	520		01.01.2007
30	Chandigarh	2	50	5	2150	7	2200	1161 (957)	136714	435		01.01.2004
31	D&N Haveli	1	30	1	130	2	160		281	140500	1756	01.01.2008
32	Daman & Diu	2	52	2	140	4	192	227 (182)	45500	948		01.01.2004
33	Delhi	21	972	102	20220	123	21192		16484	134016	778	01.01.2008
34	Lakshadweep	5	160	—	—	5	160	73 (69)	13800	431		01.01.2005
35	Puducherry	4	110	12	3315	16	3425		1146	71625	335	01.01.2008

Notes:

- Projected Population shown in the brackets relates to the reference period.
- Government hospitals includes central government, state government and local govt. Bodies

Source: Directorate General of State Health Services

6.2.3 Medical Care Facilities under AYUSH by Management Status as on 1.4.2007(Provisional)

S. No.	Management	Ayurveda		Unani		Siddha		Yoga		Naturopathy		Homoeopathy	
		Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries
1		2	3	4	5	6	7	8	9	10	11	12	13
1	State	2196	12665	226	951	276	457	4	28	8	13	85	4769
2	Local Bodies	14	1006	0	43	0	0	0	0	0	8	2	774
3	Others	163	12	30	1	3	0	4	40	10	32	137	61
	Subtotal (1 to 3)	2373	13683	256	995	279	457	8	68	18	53	224	5604
4	C.G.H.S.	1	31	0	9	0	2	0	3	0	3	0	34
5	Railways Ministry	0	39	0	0	0	0	0	0	0	0	0	129
6	Labour Ministry :												
i)	Employees State Insurance	0	104	0	1	0	3	0	0	0	0	0	29
ii)	Mica Mines	0	3	0	0	0	0	0	0	0	0	0	0
iii)	Dolomite Mines	0	13	0	0	0	0	0	0	0	0	0	0
iv)	Beedi Workers	0	7	0	0	0	0	0	0	0	0	0	0
7	Energy Ministry (Coal Mines)	0	28	0	0	0	0	0	0	0	0	0	0
8	Central Research Councils	24	6	12	5	2	2	0	0	0	0	6	40
	TOTAL	2398	13914	268	1010	281	464	8	71	18	56	230	5836

Source: State Governments & Concerned agencies

6.2.4 State/UT wise Number of Licensed Blood Banks in India 2007

S.No.	State/ UT	Government	Voluntary	Private Hospital	Private Commercial	Total
	1	2	3	4	5	6
	India	903	358	666	483	2410
1	Andhra Pradesh	71	47	79	49	246
2	Arunachal Pradesh	2	1	N.A.	N.A.	3
3	Assam	40	4	23	6	73
4	Bihar	44	7	13	22	86
5	Chattisgarh	18	3	6	11	38
6	Goa	5	N.A.	2	3	10
7	Gujarat	30	76	9	64	179
8	Haryana	17	8	18	12	55
9	Himachal Pradesh	21	1	N.A.	N.A.	22
10	Jammu & Kashmir	25	N.A.	1	N.A.	26
11	Jharkhand	9	N.A.	6	2	17
12	Karnataka	42	25	68	39	174
13	Kerala	36	5	96	9	146
14	Madhya Pradesh	46	22	24	31	123
15	Maharashtra	82	39	73	93	287
16	Manipur	3	N.A.	N.A.	N.A.	3
17	Meghalaya	4	N.A.	2	N.A.	6
18	Mizoram	4	N.A.	2	N.A.	6
19	Nagaland	4	N.A.	N.A.	N.A.	4
20	Orissa	6	52	15	2	75
21	Punjab	50	8	38	2	98
22	Rajasthan	48	6	14	6	74
23	Sikkim	3	N.A.	N.A.	N.A.	3
24	Tamilnadu	101	25	79	56	261
25	Tripura	3	N.A.	4	N.A.	7
26	Uttar Pradesh	72	13	43	47	175
27	Uttarakhand	17	4	5	1	27
28	West Bengal	70	6	14	21	111
29	Andaman & Nicobar	2	N.A.	N.A.	N.A.	2
30	Chandigarh	3	1	N.A.	N.A.	4
31	Dadra & Nagar Haveli	N.A.	1	N.A.	N.A.	1
32	Daman & Diu	1	N.A.	N.A.	N.A.	1
33	Delhi	19	4	23	7	53
34	Lakshadweep	N.A.	N.A.	N.A.	N.A.	0
35	Puducherry	5	N.A.	9	N.A.	14

Note:

N.A. Not Available

Source: Drug Controller General (I), DGHS, MOHFW (Drug Section), 2006

6.2.5 State/UT wise Number of Mental Hospitals in India during 2007 (Provisional)

S.No.	State/UT	No. of Mental Hospitals	Total Number of Beds
	1	2	3
1	Andhra Pradesh	2	300
2	Assam	1	336
3	Goa	1	190
4	Gujarat	7	367
5	Jammu & Kashmir	2	100
6	Jharkhand ¹	3	1173
7	Karnataka	2	375
8	Kerala	3	868
9	Madhya Pradesh ¹	2	212
10	Maharashtra	5	3197
11	Meghalaya ¹	1	NR
12	Nagaland ¹	1	25
13	Orissa ¹	1	60
14	Punjab ¹	1	450
15	Rajasthan ¹	2	312
16	Tamil Nadu ¹	1	1800
17	Uttar Pradesh	4	408
18	West Bengal ¹	7	386
19	Delhi	1	220
	Total	47	10779

Note:

NR Not Received

Source: Mental Health Division, DGHS

6.2.6 State/UT wise Number of Cancer Hospitals in India during 2004 (Latest)

S. No.	State/UT	No. of Hospitals	Number of Hospitals Reported Information	Total Number of Beds reported	Reported Admission			Reported Discharged			Reported Deaths		
					Male	Female	Total	Male	Female	Total	Male	Female	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Andhra Pradesh	1	1	250	NR	NR	11204	NR	NR	11007	NR	NR	197
2	Assam	1	1	118	1072	583	1655	1001	563	1564	71	20	91
3	Bihar	1	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
4	Gujarat	4	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
5	Himachal Pradesh	1	1	48	188	283	471	184	280	464	4	4	8
6	Karnataka	2	1	429	2130	3021	5151	1920	2878	4798	242	160	402
7	Kerala	1	1	1000	1211	1072	2283	1163	1041	2204	61	53	114
8	Madhya Pradesh	5	1	156	2870	2388	5258	2794	2336	5130	75	50	125
9	Maharashtra	2	1	24	350	476	826	336	456	792	15	19	34
10	Orissa	1	1	146	NR	NR	NR	NR	NR	NR	NR	NR	NR
11	Rajasthan	1	1	140	1524	1151	2675	1452	1095	2545	61	43	104
12	Tamil Nadu	4	1	423	3064	5523	8587	3003	5481	8484	53	46	99
13	Tripura	1	1	50	966	606	1572	915	583	1498	48	21	69
14	Uttar Pradesh	1	1	106	1068	1242	2310	1035	1224	2259	31	12	43
15	West Bengal	6	1	25	612	661	1273	536	575	1111	88	85	173
16	Delhi	3	2	262	6823	7939	14762	6617	7791	14408	201	144	345
	Total	35	15	3177	21878	24945	58027	20956	24303	56264	950	657	1804

Notes:

NR Not Received

- The sum of male and female may not tally with the total as some states have not reported gender wise information separately.

Source: *Specialized Cancer Hospitals, 2005*

6.2.7 Number Of C.H.H.D. Dispensaries in Different Cities as on 31.3.2007

S. No.	Name of City	Date Of Starting	Type Of Dispensaries		Poly Clinic	Cghs Lab	Dental Units
			Allopathy	Ayush			
1	2	3	4	5	6	7	
1	Ahmedabad	Mar., 79	5	2	0	1	1
2	Allahabad	1969	7	2	1	1	0
3	Bangalore	16.2.1976	10	4	1	1	1
4	Bhopal	Mar., 02	1	0	0	0	0
5	Bhubaneswar	18.8.1988	2	1	0	0	0
6	Chandigarh	19.3.2002	1	0	0	0	0
7	Chennai	25.5.1975	14	3	2	4	1
8	Dehradun	Jul., 05	1	0	0	0	0
9	Guwahati	1996	3	1	0	0	0
10	Hyderabad	Feb., 76	13	6	2	2	1
11	Jabalpur	Oct., 91	3	0	0	1	0
12	Jaipur	Jun., 78	5	2	0	4	1
13	Kanpur	1972	9	3	0	3	1
14	Kolkata	Aug., 72	18	4	1	5	1
15	Lucknow	1979	6	3	1	2	1
16	Meerut	19.7.1977	6	2	0	2	1
17	Mumbai	8.11.1963	28	5	2	4	2
18	Nagpur	Oct., 73	10	3	1	1	1
19	Patna	May., 05	5	2	1	1	1
20	Pune	Jul., 78	7	3	1	2	1
21	Ranchi	1972	2	0	0	1	0
22	Shillong	17.6.2002	1	0	0	0	0
23	Thiruvantapuram	1996	3	2	0	0	0
24	Delhi	1954	87	37	4	35	5
Total			247	85	17	70	19

Note:

- This table shows only the number of dispensaries in different cities. For exact address of the dispensaries please contact the source agency

Source: Central Government Health Scheme , Dte. GHS, M/O. Health & F.W., Nirman Bhawan, New Delhi

6.2.8 Number of Cards and Beneficiaries Availing C.G.H.S. Facilities in Various Cities as on 31st March, 2007

S. No.	Name Of City	Total No. Of Cards	Total No. Of Beneficiaries
	1	2	3
1	Ahmedabad	8505	29709
2	Allahabad	21886	96728
3	Bangalore	38880	119155
4	Bhopal	3635	14520
5	Bhubaneswar	2958	15366
6	Chandigarh	5421	16871
7	Chennai	53741	204806
8	Dehradun	1349	3452
9	Guwahati	11332	42922
10	Hyderabad	59132	237216
11	Jabalpur	23257	99419
12	Jaipur	27137	98001
13	Kanpur	27017	123525
14	Kolkata	64714	201969
15	Lucknow	23984	126310
16	Meerut	9568	37074
17	Mumbai	58537	203930
18	Nagpur	24034	90114
19	Patna	17077	85385
20	Pune	40774	138939
21	Ranchi	3249	12832
22	Shillong	1306	4373
23	Thiruvantapuram	8056	24610
24	Delhi	364786	1384139
	Total	900335	3411365

Source: Central Government Health Scheme, Dte. GHS, M/O. Health & F.W., Nirman Bhawan, New Delhi

6.2.9 Statewise/ Systemwise Number of AYUSH Hospitals and Dispensaries in India as on 1.4.2007*

S. No.	State/UT & others	Ayurveda		Unani		Siddha		Yoga		Naturopathy		Homoeopathy	
		Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries	Hospitals	Dispensaries
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Andhra Pradesh	9	620	6	193	-	-	-	-	1	-	6	283
2	Arunachal Pradesh	1	2	-	-	-	-	1	1	-	-	1	44
3	Assam	1	380	-	1	-	-	1	25	-	2	3	75
4	Bihar	11	311	4	144	-	-	-	-	-	-	11	179
5	Chhattisgarh	8	634	1	6	-	-	-	-	1	-	3	52
6	Delhi	10	148	2	25	-	-	2	4	4	2	2	98
7	Goa	1	11	-	-	-	-	-	-	-	-	1	3
8	Gujarat	48	501	-	-	-	-	-	1	-	8	14	216
9	Haryana	8	472	1	19	-	-	-	-	-	-	1	20
10	Himachal Pradesh	24	1105	-	3	-	-	-	-	1	-	1	14
11	Jammu & Kashmir	2	273	3	235	-	-	-	-	-	-	-	-
12	Jharkhand	1	122	-	30	-	-	-	-	-	-	2	54
13	Karnataka	122	589	13	51	1	-	3	-	5	5	20	42
14	Kerala	124	740	-	1	2	6	-	-	1	-	33	580
15	Madhya Pradesh	34	1427	3	50	-	-	-	-	-	-	20	146
16	Maharashtra	51	490	6	25	-	-	-	-	-	1	44	-
17	Manipur	-	-	-	-	-	-	-	-	2	-	1	9
18	Meghalaya	1	12	-	-	-	-	-	-	-	-	7	10
19	Mizoram	-	-	-	-	-	-	-	-	1	-	-	1
20	Nagaland	-	-	-	-	-	-	-	-	-	-	1	-
21	Orissa	8	624	-	9	-	-	-	35	-	30	6	603
22	Punjab	15	507	-	35	-	-	-	1	-	-	6	107
23	Rajasthan	100	3496	3	92	-	-	1	-	2	4	8	147
24	Sikkim	1	1	-	-	-	-	-	-	-	-	-	1
25	Tamil Nadu	7	32	1	21	275	435	-	1	-	1	9	43
26	Tripura	1	55	-	-	-	-	-	-	-	-	1	93
27	Uttar Pradesh	1771	340	209	49	-	-	-	-	-	-	8	1482
28	Uttarakhand	7	467	2	3	-	-	-	-	-	-	1	60
29	West Bengal	4	295	1	3	-	-	-	-	-	-	12	1220
30	A&N Islands	1	1	1	-	1	-	-	-	-	-	1	8
31	Chandigarh	1	6	-	-	-	-	-	-	-	-	1	5
32	D&N Haveli	-	3	-	-	-	-	-	-	-	-	-	1
33	Daman & Diu	-	1	-	-	-	-	-	-	-	-	-	-
34	Lakshadweep	-	2	-	-	-	-	-	-	-	-	-	1
35	Puducherry	1	16	-	-	-	16	-	-	-	-	-	7
36	C.G.H.S.	1	31	-	9	-	2	-	3	-	3	-	34
37	Research Council	24	6	12	5	2	2	-	-	-	-	6	40
38	Ministry of Railways	-	39	-	-	-	-	-	-	-	-	-	129
39	Ministry of Labour	-	127	-	1	-	3	-	-	-	-	-	29
40	Ministry of Coal	-	28	-	-	-	-	-	-	-	-	-	-
	TOTAL	2398	13914	268	1010	281	464	8	71	18	56	230	5836

* Provisional
NIL

Source: D/o. AYUSH, Ministry of Health & Family Welfare.

6.3 Vaccinewise and Institution-wise status of production, demand and supply 2006-07

1. BCG - Installed Capacity and Production demand and supply

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	BCG VL Chennai	800	580.46	637.00	637.00	831.47	894.94	758.66	84.77	Mar., 07
2	SII Pune	1200				895.00				Mar., 07
Total		2000	580.46	637.00	637.00	1726.47	894.94	758.66		

2. DPT - Installed Capacity, Production, demand and supply

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	PII Coonoor	705	571.90	120.25	549.05	409.82	660.00	380.52	57.65	Mar., 07
2	CRI Kasauli	255	151.19	170.01	155.00	284.64	275.00	275.00	100.00	Mar., 07
3	HBPCL Mumbai	488	114.89	115.10	114.83	79.33	80.00	79.40	99.25	Mar., 07
4	SII Pune	3000	1358.02	1358.02	1358.02	871.96	871.96	871.96	100.00	Mar., 07
5	Biological E Ltd. Hyd'bad	800								
6	SBL Hyderabad	3000	2080.00	1050.00	1050.00	94.00	30.00	30.00	100.00	
Total		8248	4276.00	2813.38	3226.90	1739.75	1916.96	1636.88	85.39	

3. DT - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	PII Coonoor	705	154.50	306.75	114.02	178.53	170.00	170.00	100.00	Mar., 07
2	CRI Kasauli	200	88.20	86.70	89.70	136.90	139.15	139.15	100.00	Mar., 07
3	HBPCL Mumbai	100	43.40	36.78	36.98	36.24	41.21	33.49	81.27	Mar., 07
4	SII Pune	300	42.57	42.57	42.57	27.65	27.65	27.65	100.00	Mar., 07
5	Biological E Ltd. Hyd'bad	240								
Total		1545	328.67	472.8	283.27	379.32	378.01	370.29	97.96	

6.3 (Contd.) Vaccinewise and Institution-wise status of production, demand and supply 2006-07

4. TT - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	PII Coonoor	1800	229.75	1400.00	181.65	597.70	961.75	471.34	49.01	Mar., 07
2	CRI Kasauli	300	188.52	230.21	188.79	197.92	190.86	190.83	99.98	Mar., 07
3	HBPCL Mumbai	712	36.70	35.00	31.65	274.42	184.79	205.72	111.33	Mar., 07
4	SII Pune	7000	1281.83	1281.83	1281.83	1276.95	1276.96	1276.96	100.00	Mar., 07
5	KIPM Chennai	30	2.34	2.34	2.34	2.73	1.77	1.77	100.00	Mar., 07
6	PI Shillong	50	0.50	0.09	0.09	0.76	0.22	0.22	100.00	Mar., 07
7	Bio Vaccine Hyd'bad	300				652.00	1000.00	706.00	70.60	Mar., 07
8	Dano Vaccine H'bad	1600	716.48	1000.00	724.25	37.90	35.10	35.10	100.00	Mar., 07
9	SBI Hy,bad	3000	34.73	3000.00	3000.00					Mar., 07
Total		14792	2490.85	6949.47	5410.60	3040.38	3651.45	2887.94	79.09	

5. OPV - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	HBPCL Mumbai	6000	37.56	30.00	30.17	1155.87	1174.1	1283.63	109.33	Mar., 07
2	BIBCOL Bulandshahar	6000	670.00	670.00	670.00	0.00	126.00	0.00	0.00	Mar., 07
3	Panacea Bio-tech Ltd. Delhi	15800	951.88	998.96	998.96	3167.14	3513.56	3513.56	100.00	Mar., 07
4	Bio-Med (P) Ltd. Ghaziabad	80				10.00	10.00	10.00	100.00	
5	BBL Hy,bad	1000	2.66	0.00	0.14	6.80		5.29		
Total		28880	10262.10	1698.96	1699.27	4339.81	4823.66	4812.48	99.77	

6. Measles - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	SII Pune	3000	2240.23	2240.23	2240.23	2107.74	2688.10	2688.10	100.00	Mar., 07
Total		3000	2240.23	2240.23	2240.23	2107.74	2688.10	2688.10	100.00	

7. JEV - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	CRI Kasauli	11.10	5.88	4.69	6.69	2.31	0.63	0.63	100.00	Mar., 07
2	Shanta Biotechnics Pvt. Ltd Hy'bad	2000.00								
Total		2011.10	5.88	4.69	6.69	2.31	0.63	0.63	100.00	

6.3 (Contd.) Vaccinewise and Institution-wise status of production, demand and supply 2006-07

8. YFV - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	CRI Kasauli	0.55	0.54	0.85	0.83	0.738	0.986	0.888	90.06	Mar.,07
2	Other									
Total		0.55	0.54	0.85	0.83	0.738	0.986	0.888	90.06	

9. TCARV - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	PII Coonoor	5	1.00	1.00	1.00	2.08	2.50	2.00	80.00	Mar.,07
2	SII Pune	20	19.00	20.00	17.02	8.16	8.68	8.68	100.00	Mar.,07
3	Zydus Cadilla Ahmedabad	24	20.00	20.00	20.00	14.11	11.50	6.80	59.13	Mar.,07
4	HBI Udhagamand Gujrat	60	77.50	55.50	59.15	37.00	37.00	37.00	100.00	Mar.,06
5	Chirion Behring Vaccine Lab. Ankleshwar Guj	75	8.54	10.00	8.25	62.51	42.39	42.89	101.18	Mar.,07
6	Sanofi (Aventis) Pasteur, New Delhi	20	8.00	5.50	5.50	22.00	22.00	22.00	100.00	Mar.,07
7	Bharat Bio tech Hy,bad	24	-	-	-	2.00	2.00	2.00	100.00	Mar.,07
Total		228	134.04	112.00	110.92	147.86	126.07	121.37	96.27	

10. Typhoid (Vi-Poly) - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	Bio-Med (P) Ltd Ghaziabad	40				6.00	6.00	6.00	100.00	Mar., 07
2	Zydus Aventis Ahmedabad	30	7.40	5.44	5.44	1.60	1.60	1.60	100.00	Mar., 07
3	BBL Hy'bad	300	10.68	0.00	6.08	0.74	3.49	3.50	100.23	Mar., 07
Total		370	18.08	5.44	11.52	8.34	11.09	11.10	100.07	

11. Typhoid (AKD) - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	CRI Kasauli	30	12.64	11.57	11.57	4.41	6.57	6.35	96.65	Mar., 07
2	Other									
Total		30	12.64	11.57	11.57	4.41	6.57	6.35	96.65	

6.3 (Contd.) Vaccinewise and Institution-wise status of production, demand and supply 2006-07

12. Hepatitis-B - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on
			2005-06			2006-07			
			Production	Demand	Supply	Production	Demand	Supply	
1	SII Pune	1000							
2	Panacea Bio-tech Ltd. New Delhi- multidose presentation	540	4.60	3.47	3.47	15.01	0.00	0.00	Mar., 07
3	Panacea Bio-tech Ltd. New Delhi-single dose presentation	120	3.34	3.52	3.51	0.00	0.38	0.38	100.00
4	Bharat Biotech, Hy'bad,	1000	154.13	0.00	140.23	13.34	36.91	36.91	100.00
5	Biological E. Ltd. Azamabad, hyderabad	500				7.04	7.04	7.04	100.00
6	Shanta bio technic Pvt. Ltd. Hy,bad	2000	753.50	250.00	49.00	799.50	799.50	799.50	100.00
	Total	5160	915.57	256.99	196.21	834.89	843.83	843.83	100.00

13. Quaderivalent Meningococcal Minigitis Vaccine (MMV) - Installed Capacity, Production, deman and supply

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on
			2005-06			2006-07			
			Production	Demand	Supply	Production	Demand	Supply	
1	Bio-Med Private Limited Ghaziabad	15.00				0.22	0.22	0.22	100.00
2	NICD Delhi-Import	2.08				1.57	1.57	1.57	100.00
	Total	17.08	0	0	0	1.79	1.79	1.79	100.00

14. Newer Vaccines By Panacea - Installed Capacity, Production, deman and supply

14.1 Haemophilis Influenzae Vaccine

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Doses						Status as on
			2005-06			2006-07			
			Production	Demand	Supply	Production	Demand	Supply	
1	Bio-Med Private Limited Ghaziabad	40				6.00	6.00	6.00	100.00

14.2. Newer Vaccines from panacea Biotec Limited

15	Quadruple Vaccine (DTwp- HepB)	540	0	0	0	0	0.44	0.44	100.00
16	Tetavalent Vaccine (DTwP - Hib)	4500				8.29	5.56	5.56	100.00
17	Pentavalent vaccine (DTwp-HepB-Hib)					13.86	8.92	8.92	100.00

6.3 (Contd.) Vaccinewise and Institution-wise status of production, demand and supply 2006-07

18. ATS - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	CRI Kasauli	0.90	0.00	0.03	0.02					
2	HBPCL Mumbai	0.90	0.00	0.30	0.27	0.00	0.00	0.00		Mar., 07
3	SII Pune	0.40								
4	Biological E Ltd. Hyd'bad	0.50								
5	B.S. & V Ltd. Thane	1.00								
Total		3.70	0.00	0.33	0.29	0.00	0.00	0.00		

19. ADS - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	CRI Kasauli	0.80	0.06	0.08	0.05	0.07	0.08	0.06	75.00	Mar., 07
2	HBPCL Mumbai	0.90	0.04	0.04	0.04	0.005	0.01	0.0080	77.50	Mar., 07
3	SII Pune									
4	B.S. & V Ltd. Thane	0.50								
Total		2.20	0.10	0.12	0.09	0.075	0.09	0.068	75.28	

20. ASVS (Snake) - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)						Status as on	
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply		% Achieved
1	CRI Kasauli	3.00	1.96	2.05	2.05	1.98	2.11	2.11	100.00	Mar., 07
2	HBPCL Mumbai	39.30	1.49	2.00	1.40	1.43	1.55	1.37	88.27	Mar., 07
3	SII Pune	4.00	0.91	0.68	0.88	0.26	0.20	0.20	100.00	Mar., 07
4	Biological E Ltd. Hyd'bad	10.00								
5	KIPM Chennai	7.50	0.00	0.00	0.00	0.03	0.03	0.03	100.00	Mar., 07
6	Bengal Chemical & Pharmaceutical Kolkata	0.60	0.55	0.60	0.54	0.33	0.60	0.42	69.41	Mar., 07
7	Vins Bio-Products Ltd. Hy'bad	0.40								
8	Bharat Serum & Vaccine Ltd. Thane	8.40	4.60	4.10	4.10	7.26	6.50	6.50	100.00	Feb., 07
Total		73.20	9.51	9.43	8.97	11.29	10.99	10.63	96.67	

6.3 (Contd.) Vaccinewise and Institution-wise status of production, demand and supply 2006-07

21. ASVS (Scorpion) - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	HBPCL Mumbai	0.90	0.01	0.07	0.07	0.00	0.11	0.11	100.00	Mar., 07
2	Bharat serum & Vaccines Thane	0.05				0.00	0.00	0.00		Feb., 07
Total		0.95	0.01	0.07	0.07	0.00	0.11	0.11	100.00	

22. ARS - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	CRI Kasauli	0.60	0.30	0.33	0.23	0.35	0.32	0.32	100.00	Mar., 07
2	Bharat Serum & Vaccine Ltd. Thane	3.00	2.00	1.80	1.80	2.30	2.00	2.00	100.00	Feb., 07
3	Cadilla Pharmaceutical Ltd. Ahmedabad	1.00	0.25	0.00	0.17	0.50				
4	Haffkine BPCL Mumbai	0.90	0.04	0.15	0.14	0.15	0.60	0.15	24.83	Mar., 07
Total		5.50	2.59	2.28	2.34	3.30	2.92	2.47	84.55	

23. AGGS - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	Bharat Serum & Vaccine Ltd. Thane	4	0	0	0	0	0	0	0	
Total		4	0	0	0	0	0	0	0	

24. NHS - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	CRI Kasauli	?				0.04	0.05	0.05	100.00	Mar-07
Total		0	0	0	0	0.04	0.05	0.05	100.00	

25. Diagnostic Antigen (ML) - Installed Capacity and Production during 2005-06 and proposed production during 2006-07

S. No.	Institutions	Installed Capacity	Quantity in Lakh of Vials (LV)							Status as on
			2005-06			2006-07				
			Production	Demand	Supply	Production	Demand	Supply	% Achieved	
1	CRI Kasauli	2.75				1.04	1.47	1.47	100.00	Mar., 07
Total		2.75	0	0	0	1.04	1.47	1.47	100.00	

6.4 The Directory Of Health Research Institutions In India – 2007

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The Background

Over the years, the health sector has seen the emergence of several stakeholders, resources mechanisms and commitments towards meeting various health and development needs. Increasing emphasis is also being laid on developing evidence based health policies. Today, there is a greater recognition for the role that health research can and must play in achieving various health and related goals.

A health research system functions as the “brain” of a health system, to enable it to respond effectively to the health challenges. The key objective of a health research system is to coordinate health research through appropriate architecture and mechanisms. There is an array of specific objectives of a health research system, which include, inter alia, setting health research priorities, generating knowledge, building capacity, developing standard procedures and mechanisms to ensure ethics, quality, accountability and transparency, mobilizing resources and conducting advocacy for better partnership. A prime objective is immediate response and being alert to the continuing needs and challenges of health development (Strategies for Health Research Systems in South East Asia Region, WHO 2001).

In India, various organizations are engaged in health research – research institutes, medical colleges, non governmental organizations as well as government institutions. However, there is presently no comprehensive database available on health research institutions in the country and their areas of expertise. With a view to fill this lacunae, the Indian Council of Medical Research (ICMR) in collaboration with the WHO Country Office for India undertook an exercise on mapping Health Research Institutions to develop a database of health research institutions in the country. It is envisaged that such a directory of health research institutions would be useful in outlining ongoing research priorities as well as developing partnerships in health research.

The Process

Given the vast scope of health research, one of the foremost tasks was to develop an operational definition for health research and to set the scope of the study. An expert group meeting was held to define Health Research, Health Research Institutions, classification of Research, and the areas of research and who to access for information.

The definition and class of research as agreed upon is as follows:

- ▶ **Health Research:** Systematic generation of knowledge that can be used to promote, restore, maintain and/or protect health of the individuals and populations.
- ▶ **Health Research Institutions:** Groups of/and professionals, dedicated to health research as a legal entity or a unit of a larger legal entity.

Health Research Classification: This included:

- ▶ Basic Research – Studies detailing structure and function including immunity and pathogenesis, usually laboratory based.
- ▶ Clinical Research – Research conducted with human subjects in a medical setting, designed to obtain better information on the natural history, response to interventions/prophylaxis or pathogenesis of a condition that may lead to improved strategies for diagnosis, treatment or prevention of ill health.
- ▶ Epidemiological Research – The study of distribution and determinants of health related conditions in human populations and the use of this knowledge to improve their health status.
- ▶ Health Systems Research – Research that examines the provisions, resource generation (human and infrastructure), financing, governance and the utilization of health care services.

contd...

- ▶ Social, Economic and Behavioral Research – Research that focuses on social, cultural, economic and behavioural factors that may modify the risk and outcome of disease in individuals and populations.
- ▶ Operational Research – Combination of research techniques looking at problems in a system so as to provide better solution to managers in control of operations.
- ▶ Bio-Ethics Research – Research on moral, ethical, legal and social issues pertaining to health.
- ▶ Health Information Research and Bio-informatics – Research in the field of health information science.
- ▶ Bioengineering and Diagnostics – Research to develop innovative biologics, materials, processes, implements, devices and informatics for the prevention, diagnosis treatment and rehabilitation.
- ▶ Biotechnology and Pharmaceutical Research – Research related to discovery and development of new chemicals entities and biological products for health care.
- ▶ Traditional and Complementary Medical Research – Application of all the above research systems on the rich heritage of India and other traditional systems which can be incorporated in the following health care system.

Based on the deliberations at the meeting, a questionnaire was prepared and pre-tested. Simultaneously, a database of approximately 2000 health institutions in the country was created. Health Institutions, medical colleges and universities in the country were identified from:

- (i) Published papers in Indian medical journals and articles by Indians in foreign medical journals for 2004-2005.
- (ii) Databases obtained from donor agencies like World Bank.
- (iii) Websites of Ministry of Health, Defence, Petro-chemicals, Department of Education, DBT, DST, CDRI, CSIR, CII, OPPI, FICCI, Department of Indian System of medicine, Association of Indian Industries, MCI, NGOs, donor agencies, UN organizations, Association of Universities and health institutions.
- (iv) Annual reports from 2003-2004 Ministry of health & family welfare, Directory of Recognized In-House R&D Units, Directory of Public Funded Research Institutions and others registered with DSIR, Directory of Recognized Scientific and Industrial Research Organisations by Department of Scientific and Industrial Research Ministry of Science & Technology.

The questionnaire was mailed to these institutions. The questionnaire aimed to identify the type and area of research undertaken by the institution. The contact details and brief description about the institution was also sought..

The response to the questionnaire was low – less than 300 (299) institutions responded. In view of this, to fill in the information gap, internet searches were also conducted. Information obtained from the survey as well as internet searches and other sources has been compiled in this directory. Such information is therefore restricted to those institutions that have a website and have listed research as one of its activities or have indicated participating in development projects related to health.

As part of the compilation of the directory, the team faced various challenges such as incomplete information, information provided by individuals departments of medical colleges, the absence of websites for many institutions, time consuming effort required to get web addresses etc. While the information provided in the directory is not complete, and several institutions engaged in health research may be outside its ambit, this is a first step towards compiling in a single place, information about institutions that indicate that they are carrying out health research in India. As more information becomes available this may be updated. Notwithstanding these limitations, it is hoped that this directory would be useful not only to research institutions/researchers but also for government departments, donor agencies and private institutions interested in health research.