REPORTS OF THE WORKING GROUP ON HEALTH

FOR

THE ELEVANTH FIVE YEAR PLAN (2007 – 2012)

VOLUME NO. 1.

GOVERNMENT OF INDIA
PLANNING COMMISSION
2006

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WORKING GROUP SERIAL No. WG 11

REPORT OF THE WORKING GROUP ON

HEALTH INFORMATICS INCLUDING TELEMEDICINE

FOR THE ELEVANTH FIVE YEAR PLAN (2007-2012)

GOVERNMENT OF INDIA
PLANNING COMMOSSION
AUGUST 2006

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Constitution of **Working Group**

On

Health Informatics including

Telemedicine

(WG-HITm)

WG 11

No. 2(19)/2006-H & F.W
Government of India
Planning Commission
(Health, Family Welfare & Nutrition)

Yojana Bhawan
Sansad marg
New Delhi
25th May 2006

ORDER

Subject: **Constitution of Working Group on Health Informatics including Tele-Medicine for the Eleventh Five Year Plan (2007-2012)**

In the context of formulation of the Eleventh Five Year Plan (2007-12) it has been decided to set up a Working Group on Health Informatics including Tele-Medicine under the Chairmanship of Director General of Health Services, Ministry of Health & Family Welfare, Government of India. The composition of the Working Group is as follows:

1.	Director General of Health Services, Ministry of Health & Family Welfare, New Delhi	Chairman
2.	Secretary (Health), Government of Himachal Pradesh	Member
3	Secretary (Health) Govt. of Andhra Pradesh	Member
4.	Representative of Andaman & Nicobar Islands Administration	Member
5.	Shri Rajeev Lochan, Director (Health), Planning Commission, New Delhi	Member
6.	Shri K.M. Gupta, Director, Ministry of Finance, New Delhi	Member
7.	Representative, Communication & Information Division, Planning Commission, New Delhi	Member
8	Representative of Indian Council of Medical Research, New Delhi	Member
9.	Representative of Ministry of Information & Technology & Communication, New Delhi	Member
10.	Representative of Department of Space, New Delhi	Member
11.	Representative of Registrar General & Census Commissioner of India, New Delhi	Member
12.	Representative of Apollo Hospital , New Delhi (Telemedicine)	Member
13.	Chief Director (M&E), Ministry of Health & Family Welfare, New Delhi	Member
14.	Director, North Eastern Indira Gandhi Regional Institute of Medical Sciences, Shillong	Member

15	Dr. Arvind Pandey, Director, National Institute of Medical Statistics, ICMR, New Delhi	Member
16	Ms. Ganga Murthy, Economic Adviser, Ministry of Health & Family Welfare, New Delhi	Member
17	Dr. (Mrs.) M. Bhattacharya, Head of Department of Community Health Administration, National Institute of Health & Family Welfare, New Delhi	Member
18	Dr. Shashi Kant, Professor, Centre for Community Medicine, All-India Institute of Medical Sciences, New Delhi	Member
19	Dr. K.K. Aggarwal, Past President, Delhi Medical Association, New Delhi	Member
20	Dr. Y.P.Gupta, Health & IT Consultant, New Delhi	Member
21	Representative, EPOS Health Consultants, New Delhi	Member
22	Director, Central Bureau of Health Intelligence, Ministry of Health & Family Welfare, New Delhi	Member Secretary

2. The Terms of reference of the Working Group will be as under:

(i) To assess the availability and quality of data, their accuracy and reliability and problems in making estimates. Methods for improvement in 11th Plan period.

(ii) To review the present Health Management Information System(HMIS), its capability to provide up-to-date information for effective timely response to policy makers & implementing agencies so as to make HMIS an integral part of National Rural Health Mission.

(iii) To suggest modification in policies, priorities and programmes during 11th Plan period , New initiatives and strategies such as tele-medicines etc., so to improve quality and coverage of services at affordable cost and also cope with existing, reemerging and new challenges in diseases, emerging problems of non-communicable diseases due to increasing longevity, life style changes and environmental degradation;

(iv) To indicate Manpower requirement and financial outlays required for implementation of these programmes during the 11th Plan period.

(v) To deliberate and give recommendations on any other matter relevant to the topic.

3. The Chairman may form sub-groups and co-opt official or non–official members as needed. The Steering Committee will submit its report by 31st August, 2006.

4. Shri Rajeev Lochan, Director (Health), Room No. 463, Planning Commission, Yojana Bhawan, New Delhi will be the Nodal Officer for all further communications.

5. The expenditure on TA/DA in connection with the meetings of the Steering Committee in respect of the official members will be borne by the parent Department

/Ministry to which the official belongs as per the rules of entitlement applicable to them. The non-official members of the Steering Committee will be entitled to TA/DA as permissible to Grade I officers of the Government of India under SR 190 (a) and this expenditure will be borne by the Planning Commission

(Rajeev Lochan)
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To: The Chairman and all Members of the Working Group.

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2. All Pr. Advisers/Advisers/ HODs in Planning Commission
3. Prime Minister's Office, South Block, New Delhi
4. Cabinet Secretariat, Rashtrapati Bhawan, New Delhi
5. US(Admin.I) / Pay & Accounts Officer/ Accounts-I Section, Planning Commission / DDO, Planning Commission
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Proceedings of the

Meetings of

WG-HITm held on

5th July

and

1st August 2006

2. The subgroup should emphasize how it can be an integral part of the National Rural Health Mission (NRHM) launched by MOHFW in April 2005.

3. The set of formats for collecting information should be simplified.

4. A World Bank supported study on IT Infrastructure on Health is presently being conducted by EPOS – a brief about this study will be presented by Dr. Surwarde in the next meeting.

The next meeting of Sub Group I has been fixed on 17th July 2006, 1100 hrs in the office of its convener.

In the meeting of Sub Group II, convened by Mrs. Gangamurthy, Economic Adviser, Ministry of Health & FW, following major points emerged:

1. Medical Council of India should make it mandatory to include at least 20 hrs syllabous in application of IT in health care delivery system. It should be for all the Doctors, and All the medical workers involved in health care delivery.
2. There should be training and teaching for the general physicians in IT Application in Health sector.
3. Training and Capacity building in private and Public Sector in Health care and IT delivery.
4. There should be at least one National Training institute and 4-5 Regional Training institutes. The students from IITs should also be trained in the application of IT in Health Sector.
5. National Institute of Health Information should be set up.
6. Trauma is one of the major emerging public health problems.
7. There should be integration of all the existing information on health related field. The website of the MOHFW should be the repository of the health information. The information should come from all the sources to the Central repository.
8. There should be identification of all the Shortcomings.
9. There should be standard protocol available foe the general public.

The next meeting of Sub Group II to be held on 12th & 24th July 2006 in the office of the convener.

The meeting ended with vote of thanks.

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Second Meeting of Working Group on Health Informatics including Tele-Medicine (WG-HITm) for the Eleventh Five Year Plan (2007-12), under the chairmanship of Dr. R.K. Srivastava, DGHS was held on 1.8.2006 (1100-1330 hrs) at Committee Room (No. 249 A), Nirman Bhawan, New Delhi.

While welcoming all the participants, **the chairman** requested the Member Secretary to summarise the activities & progress of working group, so far. **Dr. Ashok Kumar, Member Secretary** briefed about the summary of first meeting already communicated to all members and formation & TORs of two sub groups on 5.7.2006 itself viz. Sub group I **(Convener Dr. Arvind Pandey, Director NIMS, ICMR)** and Sub Group II **(Convener Ms. Gangamurthy, Economic Adviser, MOHFW/GOI)** and the meetings of these two sub groups and he then requested **Ms. Gangamurthy, Convener** Sub Group-II to present the report of her group.

While presenting & sharing the report of Sub Group-II, Ms. Gangamurthy explained about the developments that has already taken place in the field of telemedicine during Xth Five Year Plan, existing gaps, and the recommendations of this group for the eleventh five year plan. She also briefed about the setting of National Task Force on Tele-Medicine in MOHFW/GOI. She however, informed that this sub group has not yet finalized about the manpower and financial requirement that can be incorporated after the report of the National Task Force on Telemedicine under the chairmanship of Union Secretary (HFW/GOI), which is likely to be finalized by 14.8.2006. While clarifying the query of the chairman **Sh. L.S. Satyamurthy,** the expert from ISRO shared the experiences in tele-consultation system that has been implemented on the pilot basis in different states like Karnataka, Tamil Nadu, Kerala, Rajasthan, Chhattisgarh etc. He explained the need of the project to be operationalised now along with capacity building for this purpose that can be taken up in the next five year plan. **Prof. K. Ganapathy** from Apollo Telemedicine Networking Foundation informed about the development in technologies which can be useful not only for tele-consultation but also for tele-treatment with proper training to the service providers. Chairman desired that capacity building exercise should be taken to properly utilize the existing telemedicine facilities. **Dr K K Aggrawal,** former DMA President, stressed the need to of e-prescription as it is already in practice in USA. **Mr. M M Chanda,** Director (I&T) from planning Commission was of the view that students from all the engineering and polytechnic colleges should be trained in application of IT in health sectors.

The **chairman** also shared his experience in telemedicine while he was working with SGPGIS wherein the objective was the text and graphic trasfer which ended up as text transfer only. He also stressed the **need** of further discussions in this issue with Dr. B.S. Bedi, Deptt. of IT; representative from C-DAC, Govt. of Himachal Pradesh and West Bengal on the initiative taken in telemedicine and this meeting can be organized in his office immediately. The chairman further expressed the need of preparing a **doable model**, keeping in mind the financial and the physical capacity of the country. He requested the experts of this Working Group to further debate on this issue and come up with a suggestive planned document. He informed that the National Task Force will definitely cover all this aspects but this group should identify those **gaps** on telemedicines including tele-consultation and tele-treatment with suggested solutions which might have already been taken by some individuals efforts. The technological and the legal issues must be kept in mind while developing the model. The model should setup the goals which may include the plan for successive five year plans also and move in this direction in a phased manner. He observed that at this stage, during Eleventh Five Year Plan, it may be difficult to go below district level. He requested to come up with the planned **document** involving the financial outlay which is feasible and can be afforded by the Planning Commission. Further he stressed on the need for holistic treatment including Standard treatment protocol, health education, related regulatory Authority, working through the system having dedicated Satellite involving all the stakeholders. He talked about ideal situation wherein there should be a dedicated satellite but we have to see our resources. The chairman desired that we can have different goals like for 10 yrs, 15 yrs, 20 yrs goals. He further stressed that our targets should be fixed keeping in mind what is the scope of improvement in TI sectors as well. What are the likely advances which is likely to take place. Dr. Ganapathy also informed that while developing the financial outlay, the contribution from private sectors may also be incorporated and he hoped that around 20% of this outlay could be contributed by the private hospitals.

Dr. Arvind Pandey, the convener of SubGroup-I presented & shared the reports and recommendations of Sub Group-I. This sub group met twice, on 5.7.2006 and again on 17.7.2006 to finalise the report. He briefly presented about the historical background of HMIS which was introduced during the Eighth Five Year Plan by CBHI. However, this could not take off due to some major problems like (i) maintenance of registers and formats (ii) inadequate facilities of NIC (iii) Non availability of any legal provision for collection of data from Non Govt. sector etc. He then described about the developments taken during the Xth Five year plan period (2002-07). The National Statistical Commission recommended a comprehensive Assessment of the Health Management Information

System (HMIS) by a small committee. Accordingly MOHFW constituted a **committee** under the chairmanship of DGHS with 13 members from MOHFW/GOI, Planning Commission and NIC with Director CBHI as the Member Secretary. This committee after due deliberations **recommended** that Integrated Disease Surveillance Project (IDSP) launched by MOHFW should be further strengthened and efficient health information system from periphery with computer/server facilities at each district and State/UT and with due flexibility to State/UT to incorporate local information in the system. There is a **need** to integrate HIMS and IDSP with an appropriately designed information format and indicators at various levels of health care delivery for an appropriately timely corrective measures. He also briefed about the **development** of IDSP since November 2004, the disease covered under it and its satellite communication system viz. **EDUSAT** with 800 Satellite Interactive Terminals. He also emphasized about the report of National Commission on Macroeconomics and Health on "Building a Health System for Improving Health Information System – The Way Forward". This report recommended **establishment of a National Institute of Health Information & Disease Surveillance** comprising of economics, public health specialists, epidemiologists, doctors etc. This institute should have additional fund for research and capacity building to develop a skilled health work force for policies in an objective manner. He also briefed about the **National Rural Health Mission** and their goals. He then briefed about the recommendations of this sub group on:

- Reduction of the loan of MPW (female) at the sub center level in filling up registers etc.
- Creation of more CHCs in the country.
- Unified formats under NRHM for monitoring of information and evaluation system.
- Strengthening of HIS with its proper linkage with IDSP.
- Creation of National Institute of Health Information System and capacity building of health manpower.

The **chairman** observed that this group should very clearly analyse the failure of HMIS and the basic reasons may be the obsession of the management in collecting information which are irrelevant and redundant. At the sub center level, the grass root level worker were loaded with large volume of registers and formats which ultimately was the reason for not taking up the work load and there was very little support from NIC regarding electronic data transmission system.

He explained that for all planning purposes, fixing of targets for our work plan, the Health Information System is extremely important. At present, neither IDSP nor CBHI is able to do justice to HIS. He insisted that we must learn from our earlier failures and design the plan for Health Information System in Eleventh Plan in a more realistic manner. He felt the need of support from Donor Agencies like World Bank, WHO, UNICEF, UN Agencies etc. in developing a successful model for HIS. He also gave a practical demonstration with the Form No. 6 related to Family Welfare programme and described about various indicators that are redundant and should be deleted while collecting information at the grass root level. He said that at every level like district, state and at national level, the health indicators must be determined and accordingly the data should be collected while keeping in mind removing all redundant components in the data reporting system. **Ms. Gangamurthy** emphasized the need of HIS for critical planning. She explained about the change of concept from the outlay budget to the outcome budget and thus there is a definite need of validated information at every level. She felt the need of locating State Institutes which can take up the responsibility of data validation. **Mr. P. Chattopadhyay, Chief Director, MOHFW** also requested for creation of manpower who will be responsible for providing validated data from grass root level to the national level. **Dr. Ashok Kumar, Director CBHI** emphasized that at every level starting from district the state machineries need to be mobilized in Health Information System. He felt that the major issue is the managerial problem in getting and transmitting this data from periphery upward.

The chairman in his concluding remark expressed his satisfaction about the progress of WG-HITm & work done so far. However, he also requested both the sub groups to design their plan in a justified manner and to link with the outcome of the plan. He requested both the sub groups to concretize and finalise their plan that should also include the manpower and financial requirement for the Eleventh Plan and finalise the **positively submit their respective sub groups reports to Member Secretary by 11.8.2006.** He also emphasized the need of preparing a well documented doable plan for the Eleventh Five Year Plan.

The meeting ended with the thanks to the chair.

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Formation of Subgroups & Their TORs

Subgroup-I
On Health informatics

Subgroup-II
On Telelmedicine

Formation of two Sub Groups

Sub Group – I

(TOR 1) To assess the availability and quality of data, their accuracy and reliability and problems in making estimates. Methods for improvement in XIth FYP.

(TOR 2) To review the present Health Management Information System (HMIS), its capability to provide up-to-date information for effective timely response to policy makers & implementing agencies so as to make HMIS an integral part of National Rural Health Mission.

(TOR 4) - To indicate Manpower requirement and financial outlays required for implementation of these programmes during the 11th Plan period.

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Sub-Group --II

(TOR 3) To suggest modification in policies, priorities and programmes during 11th Plan period, New initiatives and strategies such as tele-medicines etc., so to improve quality and coverage of services at affordable cost and also cope with ex isting, re-emerging and new challenges in diseases, emerging problems of non-communicable diseases due to increasing longevity, life style changes and environmental degradation.

(TOR 4) To indicate Manpower requirement and financial outlays required for implementation of these programmes during the 11th Plan period.

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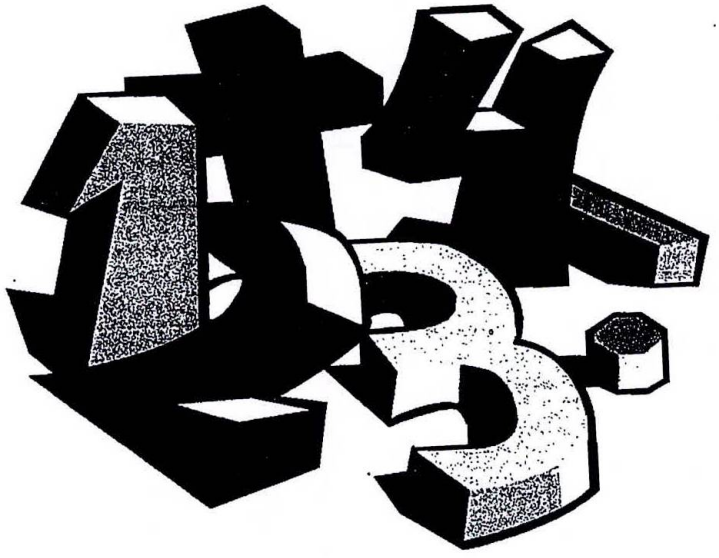
Report and Recommendations of SubGroup-I on Health Informatics for the XI Five Year Plan



10TH FIVE YEAR PLAN (FYP) – FOCUS

INITIATIVES TAKEN DURING 10TH FYP

MAJOR THRUST AREAS DURING XI FYP

MANPOWER & FINANCIAL REQUIREMENT

Report & Recommendation of Sub Group – I for XI Five Year Plan

In its first meeting of the Working Group on Health Informatics held on 5.7.2006 under the Chairmanship of DGHS, the sub-group I was constituted with Dr. Arvind Pandey, Director, National Institute of Medical Statistics (NIMS), as the Convener and other members. This sub-group focused on three terms of references (TORs) of the Working Group viz. (i) **to assess the availability and quality of data, their accuracy and reliability and problems in making estimates. Methods for improvement in XI FYP (ii) to review the present Health Management Information System (HMIS), its capability to provide up-to-date information for effective timely response to policy makers & implementing agencies so as to make HMIS an integral part of National Rural Health Mission** and (iii) **to indicate Manpower requirement and financial outlays required for implementation of these programmes during the XI Plan period.**

The sub-group I in its meting held on **17.7.2006** discussed at length the present scenario of the health information, its limitations and inadequacies. It was noted by the sub-group that accurate, relevant and up-to-date information is essential to health service managers if they are to recognize the weaknesses in health service provision and take actions that will improve service delivery. Accordingly, the development of effective information systems is a necessary precursor to managerial improvement. It was observed that a health management information system is a process whereby health data (input) are recorded, stored, retrieved and processed for decision-making (output). Decision making broadly includes managerial aspects such as the planning, organizing and control of health care facilities at the national, state and sub-state levels and clinical aspects which can be subdivided into (i) providing optimal patient care (ii) training of medical personnel to generate appropriate human resources, and (iii) facilitate research and development activities in various fields of medicine.

Subsequently after the **second meeting** of the working group held on 1st August 2006 the chairman expressed his satisfaction about the progress made so far. However, he also suggested both the sub-groups to design their plan in a more focused manner linking with the outcome of the plan. He suggested concretizing and finalising their plan with due inclusion of the manpower and financial requirement for the Eleventh Plan and submit report by 11 August 2006. Accordingly, a meeting of this subgroup was organized on **8.8.06** to review the recommendations and to finalise the report of subgroup – I.

HMIS is an essential management tool for effective functioning of the health system. During the Eighth Plan the Central Bureau of Health Intelligence and the state Bureaus of Health Intelligence developed a HMIS system for sending district level information on morbidity reported by the government primary health care institutions through National Informatics district computer network. Though some states responded initially the system was never fully operationalised in any state. The HMIS system did not take root due to the several inherent deficiencies. The **major problems** faced in the implementation of HMIS were:

a) HMIS proforma requires continuous maintenance of detailed Subcentre Registers, numbering 13, along with the Reporting formats. This involves substantial recurring expenditure for printing of forms and registers. The States/UTs expressed inability to meet the recurring expenditure for printing of forms and registers.

b) Lack of hardware, software and trained personnel at the district and lower levels and the NIC facilities were inadequate to meet computing requirements of HMIS

c) Separate programme wise Information System - required by some users

d) No legal provisions for collecting data from non-government sector.

e) No compulsion at State / UT level to implement the system.

As a result there is no system through which **reliable data** on morbidity in different districts/states could be collected and analyzed and used for decentralized district based planning. So far there has not been any effort to use the currently available IT tools to build up a comprehensive HMIS and use it to improve efficiency and functional status of the health system.

2. 10TH FIVE-YEAR PLAN (2002-07) – FOCUS

During the Tenth Plan the focus was to **ensure** that effective two way management information system is built up throughout the country; all data pertaining to health and family welfare programmes to be collected, collated and reported from all districts and utilized to improve functional status and efficiency of the health system. **Efforts** would also be made to build up a fully functional, accurate HMIS utilizing currently available IT tools; this real time communication link requires to send data on births, deaths, diseases, drugs, diagnostics and equipment and status of ongoing programmes through service channels within existing infrastructure and manpower and funding. It also facilitates **decentralized** district based planning, implementation and monitoring.

The Tenth Plan envisaged a **comprehensive review** of **(a)** disease surveillance programmes which was being implemented in different states under different disease control programmes and under the project on disease surveillance. Private sector provides over 75% of curative care. However, data from private health providers is not yet included in any disease surveillance system, **(b)** laboratory facilities available for investigation of epidemic prone diseases and **(c)** also the reporting systems currently in use. However, health and family welfare issues continued to follow two different pathways which were far from the concept of integration necessary for a unified health information system. Efforts also need to be made to integrate the ongoing programmes for disease surveillance and develop a comprehensive disease surveillance programme at the district level.

Thus tenth five year plan (2002-07) focused on:

- **Building up** a fully functional, accurate Health Management Information System (HMIS) utilizing communication link will send data on births, deaths, diseases, request for drugs, diagnostics and equipment and status of ongoing programmes through service channels within existing infrastructure and manpower and funding; it will also facilitate decentralized district based planning, implementation and monitoring.
- **Building up** an effective system of disease surveillance and response at the district, state and national level as a part of existing health services.

3. INITIATIVES UNDERTAKEN DURING X FIVE YEAR PLAN

3.1 Constitution of National Statistical Commission

The Union Ministry of Statistics & Programme Implementation (MOSPI) during the year 2001 constituted the National Statistical Commission (NSC) under the Chairmanship of Dr. C. Rangarajan which had articulated the deficiencies observed in the health and family welfare statistics. It had **observed** * that as extensive data are being collected by various agencies and compiled, there exist various problems, deficiencies and gaps. The system was not successful on account of non-reporting, under-reporting, variable coverage, delays in receipt of reports, data not being gender-specific and age specific, data not catering to the needs of the general public, etc.

The **major problems** faced in the implementation of HMIS in the past were lack of hardware, software and trained personnel at the district and lower levels. The National Informatics Centre **(NIC)** facilities were inadequate to meet the computing requirements

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* – Report on National Statistical Commission published by M/o SPI 2001

of HMIS. Further, while the information for various programmes is collected separately by the peripheral worker and sent upwards from sub-centre, primary health centre and community health centre to the district and

State levels, there is no coordination between the various health programmes implemented by the several Departments of Ministry of H&FW. Maintenance of patient care records is also very poor in most of the Government hospitals. The information from the private sector is not properly collected and included in the data generated by the official sources. Most of the States have not paid attention to implement the programme due to various reasons including lack of funds and trained manpower resources. As a result the HMIS has failed to achieve the objectives for which it was set up and has not functioned satisfactorily.

Due to **poor implementation** of HMIS by the States, the earlier system of collection of information by various programme authorities has continued to be in existence along with HMIS, which has created an undue burden on the peripheral workers as they have to fill up a number of proforma and maintain a number of records related to various programmes namely, malaria eradication, goitre, immunisation, MCH, family planning, blindness control, tuberculosis, AIDS and leprosy.

The Commission observed that a computerised health information system at all treatment facilities is an essential prerequisite for establishing an effective Health Management Information System. The HMIS has a good potential to provide a comprehensive database on working of health programmes at the decentralised level up to the district. The HMIS if properly implemented would reduce delays in the information flow, provide qualitative information in a standardised form, avoid duplication and facilitate quick retrieval of information by all agencies concerned. Some of the key recommendations of the Commission are:

(a) A comprehensive **assessment** of the Health Management Information System (HMIS) should be made by a small Committee quickly and HMIS be reintroduced in the country in a phased manner with necessary modifications. The combined HMIS format should be separated into programme-wise modules. While revising the programme modules, care should be taken to meet the data requirements of both the Central and State Governments. Flexibility should be given to the States and UTs to include additional items to meet their State specific data requirements.

(b) Steps should be taken to **rationalise and minimise** the number of records and registers maintained by the peripheral health workers such as ANMs and public health inspectors to **reduce their burden** and to improve the quality of data. The minimum data set on which data from the grass root levels should be regularly collected along with their periodicity should be clearly identified.

(c) A suitable **mechanism** to collect the data at the grass roots level and its upward transmission to the district, State and the National level should be evolved and for that methods of data collection, transmission, and processing must be modernised. As NIC facilities are inadequate to meet the requirements of HMIS, adequate funds need to be provided for necessary hardware, software and connectivity and training of personnel.

(d) The Central Bureau of Health Intelligence **(CBHI),** which is at present a part of Directorate General of Health Services (DGHS) should be separated and **upgraded** to a full-fledged Directorate of Health Statistics (DHS) directly under the Department of Health. An officer from the Indian Statistical Service at the Additional Secretary level should head this Directorate and act as the Statistical Adviser to the Ministry. Also required posts of supporting officers should be created. The DHS should be the nodal agency in matters of health statistics and should advise the Department in all matters related to the collection of Health Statistics; coordinate with the National Statistical Office the Central and State Governments as well as international agencies in matters related to health statistics.

(e) The CBHI upgraded as DHS should be strengthened with adequate **Electronic Data Processing (EDP)** personnel and existing personnel should be **trained** in EDP operations, to enable the processing, tabulation and presentation of the large volume of data on health. Adequate funds out of the national health programmes should be earmarked for development and maintenance of information system as well as for verification of field level performance data through independent agencies.

(f) In order to facilitate effective implementation of the HMIS in the States and UTs, the State Department of Health and Family Welfare in every **State should have a Statistical Division** headed by a senior level statistical officer. In the districts, a health statistics cell should be set up in the Office of Chief Medical Officer (CMO) to implement HMIS and to take care of all health and family welfare statistical activities of the district.

3.2 Constitution of a committee by MOHFW/GOI to review HMIS & its recommendation

Accordingly, Union M/o Health & Family Welfare **constituted a Committee*** under the chairmanship of DGHS with 13 members from MOHFW/GOI, CSO, Planning Commission and NIC and Director CBHI as the Member Secretary, with the following **terms of references**:

I. Comprehensive Assessment of HMIS for re-introduction with modifications and schedule of re-introduction in phased manner.

II. Separation of combined format into programme-wise modules.

III. Flexibility of States/UTs to include additional items to meet States specific data requirements.

IV. Setting up of detailed action plan with definite milestones and target dates for implementation of recommendations of National Statistical Commission, keeping in view result of HMIS assessment.

The committee **met twice**, on 5.10.2004 and 2.12.2004 and reviewed the HMIS and its functioning in the country.

Keeping in view of **National Health Policy** (1983) and to achieve the **goal of Health for All** by 2000 AD through Primary Health Care Approach there was a strong need for efficient Management Information & Evaluation System in health sector. As a combined effort of Dte.GHS/MOHFW, State Health Departments, NIC, Planning Commission and WHO (1986-88), the need based HMIS was developed and field-tested in 1989 in one District each of Gujarat, Haryana, Maharashtra and Rajasthan. It was only meant to cover rural health services. In a review meeting during 1989 HMIS found to be satisfactory and merited implementation throughout the country in phased manner. Also it was decided that the system should be given a computer compatible format and to operate the same through **NICNET** in due course. Accordingly the system was made computer compatible by NIC/ CBHI and PHC/District Hospital/Private Hospital Formats were developed **(HMIS version 2.0)** in 1990. **During 1992,** under HMIS Ver. 2.0, NIC/CBHI developed thirteen Sub-Centre Registers, three Model Reporting Formats and Control Charts for PHC & District levels. In all 13 States were included for HMIS Ver. 2.0 implementation and the States were requested to examine the model formats and adapt accordingly to specific needs with minimal set of essential information.

In a review meeting held in **March 1996** it was observed that only two States (Haryana & Sikkim) had implemented HMIS 2.0. This review **recommended** that **(i)** a task force with adequate and appropriate representation from various programme and states be constituted which should inter-alia look into desirability of devising a unified programme by consulting the existing machinery at sub-centes, PHC, District, State and Central level programme officers to

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(*) - Vide Order No. Z – 18021 / 5/2002 – PH(CBHI) dated 31.12.2003

come up with suitable recommendations for changes in the existing formats, **(ii)** since the district NIC facilities are inadequate to meet the computing requirements of HMIS, this set up needs to be suitably strengthened in terms of manpower, equipment and infrastructure, for meeting the HIS requirements, **(iii)** also to make the HMIS more comprehensive and effective, the urban health care system should also be studied, **(iv)** the training programmes required more funding and manpower to make the implementation rapid and effective, and (v) the respective State Governments may consider bringing an Act with a view to formulate guidelines making it obligatory on the part of private sector, Local Self Govt. Departments (LSGD) to provide information related to various health services being rendered by them.

In a subsequent workshop held in **December 1997** on HMIS reviewed the extent of computerization of distt. Chief Medical & Health Officer & their connectivity to NIC-NET. Following important **recommendations** emerged:

i) Computers at NIC district centre are hardly available for entry of HMIS and other health data. It is, therefore, necessary that the requisite hardware with accessories and the latest operating softwares are provided to the District Chief Medical Officer and Directorate of Health Services at State/UT HQrs. with common software.

ii) The trained personnel may be available at district and state level for operation and maintenance of computer hardware and softwares. Each programme should have a component of training in "General awareness to computer, data entry, programming etc." at district and state level. The requisite fund may be kept at the disposal of District Chief Medical Officer and Directorate of Health Services/State Bureau of Health Intelligence at State/UT HQrs. Distt. Programme Manager to ensure data entry in Distt. CMHO office computer.

iii) It was strongly felt that 15% of the total cost of hardware may be earmarked for annual maintenance and a fixed amount in every district may be provided towards purchase of computer consumables and other stationery items. There should be a nodal agency at the national level and also at the state level for all the programmes responsible for drawing funds from different programmes and make available the registers and formats.

iv) HMIS format to be revised to independent programme wise modular formats keeping in view that the modular formats may be uniform over States/UTs and contain gender information and also information by specific age groups wherever applicable.

v) NIC to Centrally Develop Data entry software with flexibility for add on information.

This Committee under the chairmanship of DGHS/GOI after due deliberations observed that over last two decades an appreciable advancements have taken place in the development of health information systems in India, especially National Health Programmes like RNTCP, NVBDCP, NBCP, NLEP, etc. have utilized the modern information technology/software for their information system. The Union Ministry of Health & Family Welfare after due planning has **launched** (November 2004) the World Bank supported Integrated Disease Surveillance Project **(IDSP)** with cost of more than Rs.400 Crores and this projects envisages the further strengthened and efficient health information system from periphery with computer/server facilities at each district and State / UT and with due flexibility to State / UT to incorporate information in the system.

Under this project, **care has been taken** to link all the program specific computers in each district with IDSP server so as to make integration of all health information. With this advancement and commitment by the MOHFW / GOI, there is a **need to integrate** HMIS with IDSP with an appropriately designed information format and indicators at various levels of health care delivery for an appropriate timely corrective measures.

The **final recommendation** of this committee was communicated to M/o Statistics & PI * clearly indicating that "it will be desirable to strengthen this IDSP as a national health information system with appropriate computer connectivity rather than pursuing the HMIS which was conceived about two decades back and could not succeed for various reasons. In the present context, this Union M/o Health & FW is committed to ensure the efficient implementation of IDSP which is one of the major projects undertaken with World Bank loan. This Ministry is also tracking the **information** on financial, logistics, manpower and implementation aspects for ensuring timely corrective appropriate measures I hope this will suffice fulfilling the need of aforesaid recommendation of NSC on the subject matter. Your further suggestion will be appreciated".

3.3 Launch of Integrated Disease Surveillance Project (IDSP)

Integrated Disease Surveillance Project **(IDSP)** is a decentralized, State based Surveillance Program in the country. It is intended to detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner. It is also expected to provide essential data to monitor progress of on-going disease control programme and help allocate health resources more efficiently.

D.O. letter no. Z –18021 / 5/ 2002 – CBHI dated 28.1.2005 from Union Secretary MOHFW to Union Secretary, M/o Statistics & PI.

The **IDSP was launched** by Hon'ble Union Minister of H&FW in November 2004 with following **objectives** to:

i) Establish a decentralized district based system of surveillance for communicable and non-communicable diseases so that timely and effective public health actions can be initiated in response to health challenges in the urban and rural areas while establishing Public private Partnership.

ii) Integrate the existing surveillance activities (to the extent possible without having a negative impact on their activities) so as to avoid duplication and facilitate sharing of information across all disease control programmes and other stake holders, so that valid data are available for decision making at district, state and national levels.

A **brief** on IDSP indicating (a) diseases covered in Regular Surveillance, Sentinel Surveillance, regular Periodic Surveys, State Specific Diseases, (b) Organization Structure, (c) Training of District Surveillance Teams, (d) Procurement of Goods (e) Development of software for diseases surveillance (f) Baseline study on Public Health Laboratories (g) External Quality Assurance System (h) Participation of Private Sector & Medical colleges (i) NCD Risk Factor Surveillance (j) budget allocated and utilized, are enclosed at **Annexure – I**.

3.3.2 IDSP Satellite Communication System

IDSP launched Satellite Linkage on 29th March 2006 with Central studio at National Institute of Communicable Diseases with a sub-hub in Nirman Bhawan and 800 Satellite Interactive Terminals (SITs) located throughout the country would be set up connecting all the State and Districts Units, Medical Colleges and premier state and national public health institutions. For a fully functional network, it is also being considered of intervention of network under National Rural Health Missions and various National Health Programmes. **EDUSAT**, a dedicated educational satellite launched by ISRO is being utilized to set up communication and information network throughout the country. Proposal has been submitted to the World Bank for clearance. This network will be utilized for distance training programmes, teleconferencing and data transmission. Funds have been sanctioned from IDSP Budget for 2005-06 to ISRO to cover 400 SITs by June 06. Remaining 400 SITs would be covered during 2006-07 and covered by December 2006.

3.4 Constitution of National Commission on Macroeconomics and Health (NCMH) by Govt. of India

The NCMH in its **Report*** titled "Building a Health System for Improving Health in India – The Way Forward" **recommended:**

- A National **Institute** of Health Information & Disease Surveillance **needs to be established** as an autonomous body consisting of Board members from other ministries, statisticians, researchers and State-level policy makers. The Institute must also have a multidisciplinary composition comprising economists, public health specialists, epidemiologists, and doctors. Disease burden estimations, National Health Accounts, cost-effectiveness studies of interventions, efficacy of vertically driven interventions including ICDS in countering the problem of malnutrition in the country, independent evaluations of programme implementation are examples of the kind of work that needs to be undertaken.
- There is a **need of reviewing** National health information system at various levels – Central, State, district and block - by various agencies - different ministries and departments in the government – method of data flow, gaps in data, utilization of the data, organizational set up, accessibility of information to various persons at various levels are aspects to be examined.
- Alongwith domestic resources, external aid, WHO assistance etc. be fruitfully utilized for processresearch capacity by earmarking fellowships every year to institutes of excellence abroad and within India. Of the total 25% must be at the doctoral level and the rest at the Master's level. It should be our target to have a pool of atleast 500 persons with a combination of such critical skills by the end of 2012. Such fellowships should be open for competition and not be confined to central government employees of the Ministry of Health. This will help develop capacity and expertise outside government and be available for policy advise in an objective manner.

3.5 Launch of National Rural Health Mission (NRHM) by Govt. of India

Recognizing the importance of Health in the process of economic and social development and improving the quality of life of our citizens, the Government of India has **launched the NRHM in April 2005** to carry out necessary architectural correction in the basic healthcare delivery system. The Mission adopts a synergistic approach by relating Health to determinants of good health viz. of nutrition, sanitation, hygiene and safe drinking water.

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* – Report of National Commission on Macroeconomics and Health – 2005

It also aims at mainstreaming the Indian systems of medicine to facilitate health care. The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programmes, community participation and ownership of assets, induction of management and financial personnel into district health system, and operationalising Community Health Centres into functional hospitals meeting India Public Health Standards in each Block of the Country.

The **goal** of the Mission is to **improve** the availability of and access to quality health care by people, especially for those residing in rural areas with specific **objectives:**

- Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR)
- Universal access to public health services such as Women's health, child health, water, sanitation & hygiene, immunization, and Nutrition.
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases
- Access to integrated comprehensive primary healthcare
- Population stabilization, gender and demographic balance.
- Revitalize local health traditions and mainstream AYUSH
- Promotion of healthy life styles

The NRHM **seeks to provide** effective healthcare to rural population throughout the country with special focus on 18 states, which have weak public health indicators and/or weak infrastructure. These 18 States are Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu & Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttaranchal and Uttar Pradesh.

3.6 Constitution of Task Force on HMIS by Union Ministry of Health & FW

A Task Force on HMIS was constituted by the Ministry of Health & Family Welfare during March, 2006 * under the chairmanship of DGHS with the **TOR's** to:

(a) Suggest a format of reporting from Districts and States that could capture health information required for purposes of planning, monitoring and review.

(b) Suggest the manpower structure at District, State and national levels for a commonly agreed system of data collection, data entry and data analysis.

(c) Agree on the formats of data collection at various levels and its analysis.

(d) Reconfigure the system of statistics and data gathering at the national level to provide for a more effective and efficient internal organization that meets the requirements of States.

(e) Develop illustrative structures of coordination among various health data interventions including IDSP at district and State levels.

(f) Weed out unwanted data collection systems and replace them with a consolidated and comprehensive data system; which can thus satisfied the need.

This task force in its two meetings held till date, viewed the HMIS of different states like Tamil Nadu, Rajasthan, Gujarat and Chattisgarh through their detailed presentations as well as through video conferencing. This task force is in the process of deliberation and is expected to come out with its recommendations on the above TORs by end of August 2006.

3.7 In depth Review with all the States/UTs for Improving & Strengthening Health Information System & use of ICD 10 and National Recommendations

In order to ensure electronic data flow and further improve the efficient Health Information System (HIS), CBHI had held (a) training workshop of States/UTs for sensitizing them on electronic data transmission, October 2003, and (b) followed by four regional workshops with the State/UTs for improving and strengthening the Health Information System during 2002-2004. The **Combined Report & Recommendation** (Annexure-II)** of the above said workshops were communicated to all State/UT health authorities for necessary action. This was **pursued by CBHI** officers who **visited 18 states/UTs** upto peripheral level to make an "on the spot" situation analysis & supportive supervision for efficient HIS. **During 2005**, two national workshops were organized to review the action plan of all the States/UTs to implement the above said national recommendations.

During 2006-07, CBHI has planned with selected states to concretize their District specific action plan to improve & strengthen HIS upto peripheral level, while involving Private Public Partnership and also study for electronic flow of health information from peripheral to district/state/national level.

CBHI undertook a case study of 20 hospitals belonging to Central Govt, State Govt, Local Bodies, Private Sector in cities of Delhi and Rohtak, during years 2004 & 2005 with the objective to identify the status of implementation of ICD 10, the major constraints and their feasible solutions to improve and strengthen the use of ICD 10 as well as medical record department in the country. The important recommendations of the case study are (i) Capacity Building and Trained Manpower development for using ICD 10, (ii) ensuring administrative actions to ensure and improved use of ICD 10 in all medical & health institutions in the country and

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(*) Vide order no. N-23011/13/2006-Policy dated 23.3.2006

(**) Combined Reports & Recommendation published by CBHI in August 2004

(iii) establishment of World Health Organisation Collaborating Centre for Family of International Classifications on Diseases & other Health Related Aspects for South East Asia Region in India, in CBHI.

The Executive summary & major recommendations **(Annexure-III)** * of this case study have been communicated to all States/UTs health authorities & others concerned for prompt implementation.

3.8 Health Sector Policy Reform Options Database (HS-PROD) with website address www.prod-india.com

HS-PROD is a Health Sector Reforms Database. On request of the Donor Coordination Division, MOHFW, GOI; CBHI after getting due approval from Director General of Health Services has allotted a Project of high national importance on "Health Sector Policy Reform Option Database (PROD) of India" which is being supported by European Commission through its Sector Investment Plan (SIP) with an estimated budget provision of Rs.84 lakhs (approx.). Already 152 entries have been uploaded in the website prod.india.com and this site is being brought to MOHFW/GOI through NIC. The brochure detailing on HS-PROD is placed as **Annexure IV.**

4. MAJOR THRUST AREAS SUGGESTED/RECOMMENDED DURING XI FYP

1. While prioritizing Efficient Health Information System (HIS), to begin the States/UTs should strengthen the existing **State/UT health statistics unit** in their respective health & FW directorates with identified nodal officers, trained personnel and computer so as to effectively coordinate for validated health data base & capacity building in State/UT & closely link with CBHI. Subsequently States/UTs to make efforts for establishing a dedicated State/UT Health Statistics Division, equipped with adequate infrastructure. This Division be responsible for efficient HIS, validated health database of the State/UT, monitoring & evaluation as well as capacity building, while keeping close linkages with CBHI and various reporting unit within the State/UT.
2. At district level, Chief Medical & Health Officer is responsible for all health statistical activities under whom the existing **Distt. Health Statistics** cell be strengthened by the States/UTs and efforts be initiated to equip this cell with a dedicated trained officer as its incharge and a Group C staff oriented in computer operation and atleast one computer with accessories. This Distt. Health Information Unit can then coordinate for efficient health information system in the district, including on the spot supervision and related capacity building of PHCs & other Health units in the district.

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* - Report & Recommendations Published by CBHI, 2006..

3. At **PHC/CHC/Dispensary** level, the States/UTs should make efforts to orient & reorient the medical officers and health supervisors towards health data management through continued supportive supervision and wherever necessary through in service training program organized by State/UT, CBHI and other Institutions. A close coordination with all the existing govt./non govt. health institutions in respective jurisdiction will ensure maximum coverage of health & medical data with requisite quality & timeliness.

4. Since ANMs at grass root levels are **heavily loaded** due to their multitasking operations it is necessary to reduce their workload by providing two MPW(F) in each sub-centre as per IPHS requirements. They should be given the responsibility of maintaining registers for all health and family welfare related database. The acute shortfall of MPWs* (64211 out of sanctioned strength of 81561) has been a cause of concern not only to provide basic health services but also to document the quantifiable services as a pivot for health management information system. Similarly there is an **urgent need** on part of all the States/UTs to fill in all the post of MPW (male) at both, Sub-Centre and PHC levels, that will be responsible for collection of health related information.

5. There is a **acute shortage** of CHCs too. To maintain the norm of having one CHC per 1,00,000 population, the present requirement is at least 7415 CHCs, against only 3043 CHCs. Moreover, in the 3,043 CHCs that we *do* have, only 440 have a pediatrician, only 704 have a physician, only 780 have a gynecologist and 781 a surgeon. So not only is the infrastructure inadequate, we don't even have the staff to use the existing infrastructure. Such a large shortfall in medical and paramedical personnel has got an important bearing on the low priority of the documentation of the information, which should on priority basis be attended by all concerned state/UT and central level health authorities.

6. Central & State/UT Governments may bring an **act for compulsory registration** of all *private / non govt. medical institutions and practitioners with the State/UT Government and* mandatory for them to furnish medical/health reports to appropriate Govt. Health Facility in their vicinity.

7. For Monitoring of Information & Evaluation System (MIES) an **integrated format** on different health indicators is being developed under RCH/NRHM with an aim to ensure uniformity in the health information collection system. It is expected that this format will rationalize the information system avoiding the multiplicity of formats, weeding out redundant information and thus leading to qualitative dissemination with varying periodicity

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* Rural Health Bulletin, 2006, MOHFW/GOI

8. In order to maintain **data quality** which is required to be used as inputs for any decision making, the exercise of validation at different levels hardly needs any emphasis. Since NRHM had already initiated the concept of establishing Programme Management Units at state and sub-state levels, their involvement in the validation process should be ensured. In addition, possibilities may also be explored to associate and identify a nodal officer in the district health offices so as to assume the ownership of data being transmitted from the district to the state.

9. What is most important is to remove any underlying apathy to collect the health information and document them with greater speed and accuracy. This can be achieved by putting the right people at the right place having a data sense and data use. The States have got a greater visible role to play to ensure this important aspect of HMIS. To improve the **quality of data,** the grassroots level functionaries need to understand the importance and use of data generated at their level so that the recording and reporting of data by them could be improved. Also, the monitoring system at all levels need to be strengthened and emphasis should be on monitoring of all programmes/components, strengthening feedback mechanism and utilization of data at all levels for monitoring and planning purposes. States/UTs may ensue all measures to **fully utilize the in-service training programs of CBHI** on Health Statistics and Medical Coding (ICD-10) as well as Medical Record Management, being organized for various categories of medical/non-medical staff involved in handling medical/health data, for which purpose CBHI communicates its annual training calendar well in advance to all States/UTs. For this purpose, every State/UT should prepare district wise inventory of such training needs, people trained and remaining to be trained and utilize this inventory for promptly recommending the names of untrained personnel to various CBHI in-service training courses. The **GIS mapping** is an essential tool now-a-days. NIC has already developed GIS maps up to the village level. The facility should be availed by all the State/UT authorities for GIS mapping on various health indicators.

10. The Birth and Death Registration System in the country is still way behind and there is an **urgent need** to improve the system. The Civil Registration System must be improved and strengthened. For this purpose the ASHA, recruited under NRHM can also be utilized for recording & reporting the birth and death cases to the appropriate authority with a suitable honorarium.

11. The **capacity building** of the Health manpower starting from grass root level is extremely essential and allocation of funds for providing the training must be earmarked in this plan period. The training on the electronic data management system should also be provided in association with D/o IT and NIC.

12. **ICD-10 coding system** be implemented throughout the country for comparison at both, national and international levels and the use of ICD-10 be concurrently monitored by hospital administration for timely corrective measures at various levels, including meeting the ICD-10 trained manpower needs.

13. As already decided by the MOHFW/GOI, it will be desirable to strengthen IDSP as a national health information system with appropriate computer connectivity rather than pursuing the HMIS which was conceived about two decades back and could not succeed for various reasons. In the present context, this Union M/o Health & FW is committed to ensure the efficient implementation of IDSP which is one of the major projects undertaken with World Bank loan. Apart from the work on surveillance, also attempt to collect information on financial, logistics, manpower and implementation aspects in the health sector.

14. Like CBHI has developed a central website for health information, the States/UTs may also initiate efforts to develop similar websites along with district specific health information, while utilizing the available expertise of state & districts NIC units.

15. States/UTs may initiate steps towards **computerizing the Hospital Information System** in a phased manner to begin with state/regional level hospitals. This will facilitate efficient hospital database on morbidity & mortality based on ICD-10, essential for District/State/National Statistics on morbidity & mortality. Likewise at the grass root level, on a **pilot basis** the use of Hand Held Electronic Device can be explored in association with the Ministry of Information Technology.

16. A National Institute of Health Information System, as already recommended by NCMH may be considered, for which purpose, CBHI be properly upgraded with necessary supports from public health, statistics and national health programmes to play the role effectively. This institute will also be responsible for Human Resource Development and research studies. NIMS, ICMR may be involved in taking up evolution studies and operation research periodically. The recommendation of National Statistical Commission to upgrade the CBHI as a full fledged Directorate of Health Statistics as a nodal agency to provide sufficient inputs on health statistics should be seriously pursued. The M & E division of the Department of Family Welfare which is responsible for collecting and collating all Family Welfare information including RCH should be merged in the proposed National Institute of Health Information System. Keeping in view the recommendations of NRHM, the synergy between the Health and Family Welfare Information System need to be made and this Institute should be responsible for Monitoring and Evaluation of all health related programme including RCH.

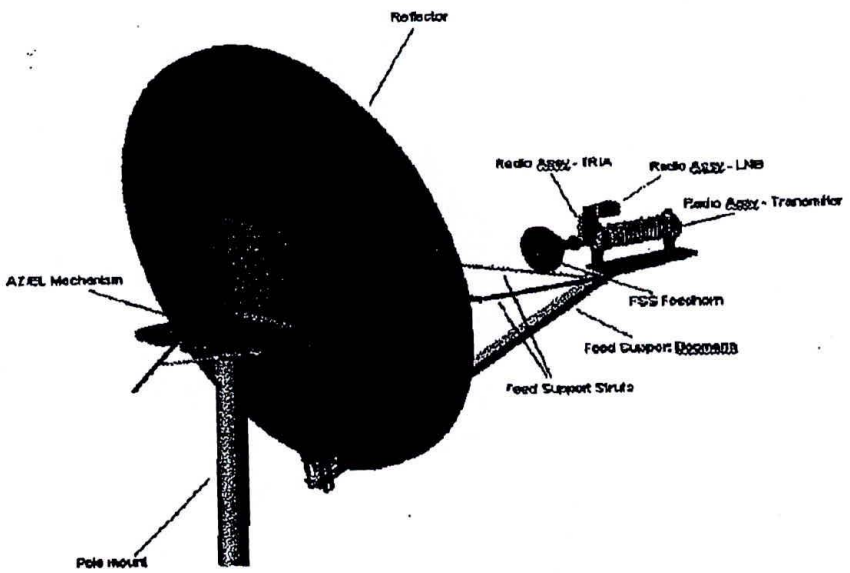
Report and Recommendations

of

SubGroup-II

on Telemedicine

for the XI Five Year Plan



10TH FIVE YEAR PLAN (FYP) – FOCUS

INITIATIVES TAKEN DURING 10TH FYP

MAJOR THRUST AREAS DURING XI FYP

MANPOWER & FINANCIAL REQUIREMENT

REPORT OF SUB-GROUP II

The Working Group on Health Informatics including Telemedicine in its first meeting on 5.7.2006 discussed the terms of reference and time schedule for its functioning. It was decided in this meeting that the terms of reference would be gone into in-depth by two sub-groups separately constituted for the purpose. Sub-group-II was constituted with Mrs Ganga Murthy, Economic Advisor/ MOHFW as Convenor to look into the following TORs: **(i) To suggest modification in policies, priorities and programmes during 11th Plan period, New initiatives and strategies such as tele-medicines etc., so to improve quality and coverage of services at affordable cost and also cope with existing, reemerging and new challenges in diseases, emerging problems of non-communicable diseases due to increasing longevity, life style changes and environmental degradation.(ii) To indicate Manpower requirement and financial outlays required for implementation of these programmes during the 11th Plan period.**

With the area of 32,87,268 Sq km, Population of 1.1 billion, urban-rural divide, inaccessible hilly regions, islands and many tribal areas, India is an ideal setting for telemedicine assisted health care delivery. Growing number of medical, paramedical colleges and schools with lack of adequate infrastructure, learning materials and teachers needs is a matter of grave concern. E health technology has the potential to create a national level GRID which can form the backbone to be shared by healthcare providers, trainers and beneficiaries. A strong fiber backbone and indigenous satellite communication technology in place with large mass of human potential trained in IT and local presence of telepathy industry, e health application and implementation should not be a problem technically. Further a number of pilot projects over last five years with successful outcome stand to its testimony. A ground work on telemedicine in the country has already been laid with the efforts of ISRO and Information Technology department partnering with many State Government and specialty Institutes/hospitals. Policy standardization and infrastructural issues have already been researched. Professional societies on telemedicine/e health have been active. Print and electronic media are participating in awareness campaign. However, a country level plan is long due to steer the Telepathy ship by the Captain (M/o Health & Family Welfare/GOI) with its crew (technology and healthcare providers/educators) and passengers (citizen) in right direction (policy, implementation, application, security, social and legal issues) to reach at the destination (Quality healthcare & wellness).

1. Focus & initiatives on telemedicine During 10th Five Year Plan period

The 10th Plan inter-alia had focused on building up a fully functional accurate health management system, utilizing available IT tools, so as to enable the real time communication link to send data on births, deaths, diseases, requests for drugs, diagnostics and equipment, facilitate decentralized district planning, implementation and monitoring.

A strong formulation for telemedicine in the country has been laid by ISRO and the Department of Information & Technology partnering with many State governments, hospitals and speciality hospitals. Issues of policy, standardization and infrastructure have been delved into by them. Professional societies on telemedicine/ e-health are actively engaged in its development.

Information Technology is now one of the major components of the technological infrastructure for health management. All sub-sectors dealing with the generation, transmission and utilization of demographic and epidemiological data such as bio-informatics, bio-statistics, HMIS and the decision support systems (DSS) are finding increasing use in health planning and management. The nationwide network of NICNET provides rapid reporting mechanism for health information; MEDLARS Biomedical Informatics Programmes provides ready access to medical databases to post graduates and research workers as well as practicing physicians. Planning Commission has provided additional central assistance to the UHSs in Karnataka, Andhra Pradesh, Tamil Nadu, Punjab and Maharashtra for strengthening of libraries and networking them through IT. This effort has to be augmented and all medical colleges need to be brought into the network.

1.1 Indian Space Research Organisation (ISRO)

ISRO has been actively engaged in applying space technology for healthcare and education through specific initiatives which include inter-alia:

(a) Providing telemedicine technology and connectivity between remote/rural hospitals and super-speciality hospital for tele-consultation, treatment and training of doctors and para-medics.

(b) Providing technology and connectivity for continuing medical education between medical colleges and post-medical institutions/hospitals.

(c) Providing technology and connectivity for mobile tele-medicine units for rural health camps in the areas of ophthalmology and community health.

ISRO's experience goes back to more than 2 decades of SatCom Application Programmes namely "Training and Developmental Communication Channel" (TDCC) and "Jhabua Developmental Communication Project" (JDCP) for application of SatCom for rural development. The Telemedicine initiative developed in selected parts of the country during the past 4 years has been one such effort to reach the Speciality Health care to the rural and remote district / trust hospitals. The technology involved the ICT based system consisting of customized medical software integrated with computer hardware along with the medical diagnostic instruments and connected through the telecom medium like ISDN or VSATs at each location. The initial pilot efforts had adopted point-to-point telemedicine system wherein at a given time one rural end could have tele-consultation with one specialist end. The telemedicine software consisted essentially of store and forward modules for tele-radiology, tele-cardiology and tele-pathology purposes alongwith video-conferencing facility.

With the growing demands of telemedicine facility by various States, "point-to-multipoint" connectivity through Local Area Network (LAN) and finally "multi point" to "multi point" connectivity with Wide Area Network (WAN) with integration of the facility for Continuing Medical Education requirement have been evolved and established. ISRO has constantly been upgrading the technology with a view of bringing down the cost both for the ICT hardware and software. Over more than 1,00,000 patients have been treated in the ISRO network including the Army network, Mobile Tele-Ophthalmology for rural eye camps, telemedicine services for special situations catering to the large pilgrim population etc. The aspects of development of business model and also the involvement of medical insurance scheme is getting evolved gradually.

1.2 Department of IT, Ministry of Information and Technology

As with ISRO, the DIT has also started tele-medicine projects in different parts of the country. DIT by acting as facilitator has taken initiatives for development of technology, launching of pilot schemes and standardization of tele-medicine in the country. Some of the achievements of DIT in this regard include:

(a) Development of tele-medicine software systems. Under the ongoing C-DAC project, technology developed has been used for connecting 3 premier institutions namely SGPGI, Lucknow, AIIMS, New Delhi and PGIMER, Chandigarh using ISDM connectivity.

(b) Tele-medicine for diagnosis and monitoring of tropical diseases has been implemented in West Bengal.

(c) An oncology network for providing tele-medicine services in cancer detection, treatment, pain relief, patient follow-up and continuity of care in peripheral hospitals of RCCs has been established.

(d) Development of State-wise telemedicine network based on terrestrial communication in the State of Himachal Pradesh.

1.3 Private Sector

A number of initiatives in tele-medicine have been made in the private sector, SGPIMS, Apollo Hospitals, Asia Heart Foundation, Escorts and others are presently engaged in extending consultations through tele-medicine and are conducting regular tele-education, tele-consultation and tele follow-up sessions with patients.

1.4 Initiatives by State Governments

State-wise location & progress of telemedicine projects is at **Annexure-III.** Several States have also come up with their own initiatives with the usage of information technology. A drug inventory monitoring and control system has been evolved in Haryana. The med-centre of Haryana is an integrated software project to capture utilization of medicine inventory data and analysis consumption pattern of various medicines location-wise to monitor disease occurrence pattern, pilferages and any other deviation in the functioning of the health institutions. The initiative of personal digital assistant provided to auxiliary mid-wife in Nalgonda district of Andhra Pradesh is another illustration in point. Through this device, ANMs could record patient information directly on the PBAs which enable them to follow up cases, whether of pregnant women for ante-natal care or of children for immunization. In electronic format, this data can be also transmitted to higher administrative levels. (Advantages of better targeting the beneficiaries for ante-natal care and immunization and identification of high risk population in terms of illness). The tele-doc initiative of the JIVA Institute provides for field health representatives in villages transmitting health information on mobile phones to doctors who then diagnose and prescribe treatments according to which medicines are supplied.

2. Need for strengthening telemedicine / e-health initiatives in India

Despite the massive public health infrastructure, **healthcare in rural areas remains a critical challenge**. The magnitude of healthcare services required in the context of the existing shortage of medical officers and trained para-medics clearly demonstrate the need for strengthening tele-medicine and other e-health initiatives over the next Plan. The National Rural Health Mission provides an opportunity for taking tele-medicine to the healthcare facilities at the primary, secondary and tertiary levels of care. Computerization of health related data would be an essential first step.

With the establishment of about **300 Telemedicine** nodes by Govt. / Private / Trust agencies of which 175 nodes by ISRO all over the country and the experiences gained by each of the implementation agencies have brought to bear some of the important issues that needs to be addressed for future implementation strategies for the development of telemedicine and e-health for augmenting the present healthcare delivery system in the country.

Internet and mobile communication can enormously enhance connectivity between grass-root health worker and medical specialists as well as translation and storage of data from the field through the Centralized units.

Telemedicine aims at equal access to medical expertise irrespective of the geographical location of the person in need. Recent developments in Information and Communication Technologies (ICT) have enabled the transmission of medical images in sufficiently high quality that allows for a reliable diagnosis to be determined by the expert at the receiving site.

Access to many different sources of medical data, usually geographically distributed, and the availability of computer based tools that can extract the knowledge from that data are key requirements for providing a standard healthcare provision of high quality.

Developments in the integration of bio-medical knowledge, advances in imaging, new computational tools and the use of these technologies in diagnosis and treatment suggest that Grid-based systems can make a significant contribution to this goal. In addition to enhancement of improved access by integration of information, the benefits are raised to a new level, over a Grid because of multi dimensional access to the information.

Medical informatics is often called healthcare informatics or biomedical informatics, and forms part of the wider domain of e-Health. Medical informatics optimises the computer analysis, storage, retrieval and transfer of patient and other health care data.

3. Lessons Learnt during X Five year Plan:

- Lack of IT infrastructure in the state governments health administration and the district/taluk hospital.
- Non- acceptability of telemedicine/e governance by doctors, patients and the associated staff due to certain "fear of the unknown" and "fear of loss of opportunity" which has retarded the speed with which the facility could be established.
- The administrative and financial constraints by the State Health Administration for supporting the implementation of telemedicine at the District Hospitals.
- Lack of requisite infrastructure and financial support for establishment of the facility.
- The cost of the equipments though progressively brought down considerably, is still expensive for most of the hospitals and the Government establishments.
- The communication bandwidth cost, presently provided by ISRO's satellites free of charge whereas others like BSNL and Private Agencies are charged which is expensive for most of the Hospitals, Health Centre and even Super Specialty Hospitals.
- Need for enhanced public awareness of the advantages of Telemedicine / Tele-health for medical consultations, treatment and postoperative follow-up.
- The present Healthcare delivery system in each state has detailed procedures established long time ago in terms of Medical Administration and practice covering diagnosis, treatment, drug prescription and distribution, surgery and follow-up, Continuing Medical Education and Training of Doctors and Paramedics etc., and they have certain policy and operational guidelines. This requires to be extended or additionally enunciated for appropriate implementing the technology based healthcare delivery system of telemedicine / tele-health.
- The policy aspects related to availability and utilization of information which constitute medical Information and Communication Technologies (ICT) which constitute the connectivity need to be integrated with the healthcare delivery system effectively.

4. MOHFW/GOI has constituted task force vide order no. T 2105/1/2004-NCD in September 2005 on Tele-Medicine in India for formulation of strategies regarding its

applications in Health Sector under the chairmanship of Secretary, Health & Family Welfare with the following **TORs:**

1. To work on inter-operability – Standards for data transmission; software, hardware, training etc.
2. To define a National telemedicine Grid and consider its standards and operational aspects. (The task force needs to consider connectivities to be provided in the next two-three years, as currently there is certain ad-hocism in this process. Available bandwidth etc. has to be most efficiently used for obtaining priority connectivites).
3. To identify all players and projects currently involved in telemedicine in India and evaluate their performance, capacity and replicabilty.
4. To prepare pilot projects for connection of super speciality hospitals/ medical colleges with district hospitals and /or CHCs / PHCs specially keeping in the mind to provide access to remote areas. (The focus would be North-East, J&K, three new States, other tribal areas and Lakshdeep).
5. To prepare National Cancer Telemedicine Network.
6. To examine possibility of utilization of stand alone centers of the deptt. Of communication in rural areas.
7. To define standards and structures of electronic medical records and patient data base which could be accessed on a National telemedicine Grid. For this purpose, the national task force may constitute sub committees for developing electronic medical records in various fields.
8. To enable the telemedicine centers in teaching institutions to impart training to all govt. medical/Dental/Nursing Colleges in 3 years time (as there is a huge shortage of teaching faculty).
9. To prepare curriculum and projects for CMEs through telemedicine.
10. To draft a National Policy on 'Telemedicine and Telemedical Education and to prepare a central scheme for the 11th plan.

Five subgroups have been formed to look into different matters:

Subgroup I: On Telemedicine Standards.

Subgroup II: For formation of National Telemedicine Grid.

Subgroup III-A: To identify players and framing evaluation framework for projects involved in Telemedicine in India, prepare pilot projects (pending proposals, mobile services, national medical Colleges network etc.) (TOR 3&4).

Subgroup III-B: For ONCONET INDIA (TOR 5).

Subgroup IV: For utilization of existing tele linkage facility in rural areas by Department of Communication, Standardisation of e-records, training and CMEs in telemedicine, human resources- medical informatics.

Subgroup V: For preparation of National Policy on Telemedicine and to prepare central scheme for 11th FYP.

5. Initiatives Needed on telemedicine During XI Five Year Plan:

All these aspects will need to be carefully addressed in the XI Plan. The action plan would need to take into account the following:

- A massive **awareness** programme to the public, doctors and the hospitals staff – about the benefits of telemedicine & e-health and its efficacy.
- A proper **inter-departmental** coordination and cooperation to ensure adequate support to the doctors and hospitals for commissioning, operation and maintenance of the facility.
- A **cost effective** business model by which the system can be made self sustainable over a period of time.
- Effort by the concerned Industries to ensure availability of the equipments and facilities at reasonable and affordable costs.
- Aspects of drugs distribution at the remote hospitals when provided with teleconsultation/treatment by speciality hospitals.
- **Social aspects** of telemedicine covering the licensing aspects of medical practitioners / agencies including the legal aspects.
- Aspects of **private, public partnership** for delivery of health care to the rural and semi-urban population.
- An appropriate policy by Government of India to provide bandwidth at affordable cost.
- Aspects of **Continuing Medical Education & Training** for Doctors, Paramedics and Health care workers in the form of separate network.

- **Referral hierarchy** for medical treatment, disease prevention and health promotion aspects.
- Introduction of **academic courses** on all aspects of Telemedicine / Medical information in various Engineering and Medical Institutions.

5.1 The **National Task Force** is recommending a national telemedicine grid which will contain the following major functions / constituents. The Task Force is already looking into the connectivity, hardware, software requirements for projection under the 11th Five Year Plan which could be incorporated in the Report of the Health Informatics Working Group. Essentially the following is already under consideration of the Task Force:

a. A health portal at the M/o H&FW providing all information related to health informatics, telemedicine, disease surveillance data, medical care details and other educational material or information related to specific Indian healthcare system not available in the internet or hyper link to the internet data repository. This portal will be a constituent of the national grid for repository of information and guidance.

b. An All India Medical Institution network connecting the various recognised medical institution, national institutes like PGMER, AIIMS, JIPMER, SGPGI etc., and major super speciality hospitals (Govt. & Private) in the country for medical education, exchange of knowledge, CME etc.

c. An All India Network connecting the various selected district hospitals in the country to be connected to major super speciality hospitals (Govt. /Trust/ Private) for specialist referrals for consultation and treatment and also medical informatics, disease information and health promotion aspects from different states of the country. (super speciality hospital network).

d. A national network for medical training connecting various agencies in the country and also establish/integrate similar networks at state levels. (National Medical Training Network).

5.2 State Telemedicine/e-Health Grids (STG)

As a part of e-health program and digitalisation of health records some of the states have been operating Telemedicine Networks initiated by ISRO and other agencies like Department of Information Technology (DIT) under Closed Usage Group (CUG) concept e.g. Chhattisgarh, Karnataka, and Kerala. Many more states are planning to implement such state level networks. There is a need to formalise the state Telemedicine networks into standard State Grids for specific purposes of application and usage like; providing State Health Information, Monitoring and Surveillance of Disease/Epidemic outbreak, identification and mapping susceptible areas and population etc., as mandated by MoH&FW for health governance.

5.3 National Medical Education Institutions Network (NMEIN)

A National Medical Education Institutions Network if created would act as a useful resource base for knowledge sharing for Medical Education, Research and training including CME. The teaching and practical sessions can be configured in live or recorded video, audio and information data broadcast, accessed on the grid, for an effective learning experience.

5.4 Association / Society / Health portals Network (ASHPN)

Several associations/agencies are hosting and maintaining diverse health portals like DOCTORYANYWHERE.COM in health care services.

It is necessary to pool the resources available with the various autonomous/government/trust medical associations like Indian Medical Association (IMA), Cardiology Society of India (CSI), Neurological Society of India (NSI), Federation of Gynaecological and Obstetrics Society of India (FoGSI) etc and form an Association/society /health portals Network.

5.5 Digital Library & Medical Informatics Network (DLMIN)

It is required to establish a Digital Library & Medical Informatics Network, that will be a network of pooled information in the form of digital library of data bases and Medical/Health Information that can be accessed through Internet / Intranet and used for administrative/research and / or clinical purposes.

Some of databases of immediate value would include, but not limited to:

1. Manuals of illness, diseases, symptoms, and diagnostic tools.
2. National registry of speciality hospitals and specialists: names, contact information.
3. Health education programs and curricular materials.
4. Medicines: description, side effects, location, costs.
5. Online journals, abstracts, preprints.
6. Environmental profiles by state/region
   - (a) Locations of safe water supplies.
   - (b) Location of polluted sources (symptoms and treatment).
   - (c) Location of emergency food supplies.
   - (d) Location and description of health services.
   - (e) Location of disease outbreaks.
   - (f) Changing environments.

5.6 Disaster Management Support Network (DMSN)

It is required that the health care services in times of disaster can be effectively provided through establishment of Disaster Management Support (DMS) Network. This network is required to integrate identified disaster Monitoring Stations (current and proposed) across the country and provide periodic and timely information both statistical and remedial to the central station for necessary advice/action through the power of medical informatics and digital connectivity.

Capacity building: Thrust of health informatics education should be use of health information standards, storage of health information in electronic health records and research and extra collation of health information for better healthcare. Clinicians, healthcare managers, technologists, researchers would all need to specialize in various aspects of healthcare technologies. The course for skill development to include, certificate course in computer application, education framework for general, para-medical and nursing staff. These course would need to be certified by Medical Council of India.

6. Major thrust areas for 11th Five Year Plan

Focus in the XI Plan should be on:

- Establishment of e-Health department in M/o H&FW in states D/o H&FW with support of state IT Department.
- Computerisation of health care delivery system and health records at state, institutions, district and taluk / block level for the flow of information over the network.
- Computerisation of three tier healthcare system: CHC/PHC & SC.
- To acquire and implement IT equipments like servers and client systems, multicast video conferencing facilities, data storage and archival facilities in all the speciality hospitals, medical institutions and other centres of excellence who will be providing teaching and training facility.
- To identify agencies within the medical institutions / speciality hospitals / research institutions to develop content for medical education / CME / training modules.
- To acquire and implement terrestrial / wireless / satcom technologies required for various connectivities from taluk / block to district to the state capital.

- To plan for one dedicated medium weight class Communication satellite (HEALTHSAT) for satcom based connectivity which will have the capability to meet the broadband connectivity requirements for various applications of the National Grid.
- The cost of HEALTHSAT with launch, operations and maintenance of the satellite is around Rs.400 crores. Apart from this, the various connectivity charges by other technologies have to be incorporated. The present cost of a standard telemedicine node including computer hardware/software and video conferencing system is around Rs.4.0 lakhs at the district hospital level. Whereas at the CHC / PHC level the cost will be around Rs.1 to1.5 lakhs. . Hence number of nodes which will come up during the 11th Five Year Plan upto the block level may have to be worked out.
- All tele-medicine network should evolve around a National tele-medicine grid. Ultimately, every individual would need to have a unique ID.
- Formal specific training programmes in tele-health for all levels (grass-root to policy makers depending on requirements) and facilitate a support system to provide current information to doctors in the management of patients through new data bases, software packages etc.
- Medical Council of India to include Information Technology in healthcare in the curriculum of all medical and para-medical degree courses. Information Technology to be also included in all IT and MBA courses.
- Introduce at least one mobile van in each district.
- Trauma care, ambulance on National Highways to be provided with technology for transmitting audio-video images using EDGE, GPRS, MMS etc. Pilot studies using tele-medicine and ambulances would be required.
- Setting up of a Tele -health Corporation of India. Given the highly specialized and technical nature of tele-medicine, a Tele-medicine Board of India needs to be established under the aegis of the Ministry, which will include a set of technical experts with representatives from major healthcare organizations and NGOs working for tele-medicine. The basic objective of this Board would be to oversee the growth of tele-medicine, develop R&D tools, provide software, manage the National tele-medicine grid and interact with international organizations.
- E prescriptions at all levels by the end of XII Plan but to cover atleast PHCs and above during the XI Plan. This will necessitate availability of computers and net facility at all healthcare facility.

- Minimum standards of treatment to be documented and made available on the Ministry of Health website. Details should be available regarding new drugs, banned drugs, new indications, list of essential drugs, adverse effects, standard treatment protocol, drugs of choice etc. Skill, knowledge and care should be the corner stone of what we strive for.
- Magnitude of care may vary at different levels but the standard of care to remain the same. This will be possible once the standard treatment protocols are available and will help in identifying the kind and nature of drugs to be placed at each level and the financial requirements for making available these drugs at different health facilities.
- **Synergy amongst all existing initiatives and programmes between different Departments/Ministries in the area of health:**
    - TCI network being created under Department of IT.
    - North-Eastern Council initiatives with support from ISRO.
    - E-governance initiatives like common service centres under Department of IT.
    - Integration of existing infrastructure like CBHI, IDSP, NICD etc. in the Ministry of Health & F.W. to have proper synergy between them and avoid duplicacy in data collection, compilation and transmission.
    - Proposed Tele-medicine project by Delhi Government.
    - Any other State initiative/Central project which will cater to health needs and requirements.

Tele-medicine would require minimum bandwidth connectivity which facilitates video-conferencing, image, x-ray, medical transcription etc.

7. Financial and Manpower requirements

Tele-medicine/Health Information Unit upto the District level

The objectives of this would be to facilitate proper data collection, compilation, storage and facilitate analysis and flow of information. The end objective would be to create the basic foundation structure and build in future the Tele-medicine grid and take on e-governance activities.

7.1 Total number of units to be covered under telemedicine programme

Sl. No.	ITEMS	Total
1	District Hospitals	604 (As per NIC website)
2	Government Medical Colleges	115 (Only Govt. Medical College excluding Trusts, Societies, Pvt.)
3	State Headquarters	36 (Jammu & Kashmir has twoseparate Division).
4	Total	755

7.2. Manpower required and financial Implication

Sl. No.	Items	Expenditure	Total cost in a yea
1	1 Supervisor	Rs.10, 000 per month	9.06 Crore
2	1 Data Entry Operator	Rs.6500 per month	5.90 Crore
3	**Total for the annual Plan**	**Rs.16, 500 per month**	**15 Crores**
4.	**Provision for XIth five year plan:**		**80 Cr**

(a) Equipments

Sl. No.	ITEMS	Total Cost
1	Financial assistance for equipments @ Rs.10 lakh each unit f units	Rs. 75.5 Crs.
2	Maintenance @Rs. 2 lakh per annum/unit X 5 years for 755 un	Rs.75.5 Crs.
	Total	**Rs. 151 Crs.**

This can be provided in a phased manner (in three years) with a provision of Rs. 50 Crores in annual plan 2007-08, 2008-09 and Rs. 51 Crore in 2009-10

(b) Cost of Computerization at PHC level:

Sl. No.	ITEMS	Total Cost
1.	Computer with 5 years on-site maintenance with spares & trainir @ Rs.35, 000 per PHC per annum X 23109 (PHC).	**Rs. 80.90 crores**

This also can be provided in a phased manner (in two years) with a provision of Rs. 40 Crores in annual plan 2007-08 and Rs. 41 Crore in 2008-09.

(c) Health Channel

There should be one dedicated Health Channel from Doordarshan. It should cover the areas like Education to UG, PG and Post PG Courses; Education to medical practitioners; Consultations; News at certain intervals; National programmes, disease forecast, helpline one hour a day, live OPD etc. It should be made mandatory to all cable operators to beam this channel.

- 30 minutes programme
- 12 hours per day
- 30 days every month
- 30 X 24 = 720 programmes per month
- Total cost per month = 720 X 2 lakhs = Rs. 14.40 crores
- Total cost per year = Rs. 14.40 X 12 = Rs. 172 crores
- Software development of programme can be for **Rs. 100 crores** instead of Rs. 172 cores
- Also equipments = **25 Crores**
- Total cost in the entire plan period = 125 Crores (Entire expenditure to be taken during the first year of the Plan period)

7.3 Other Expenditure

7.3.1 Digital ECG Machine at District hospitals Rs. 20,000 X 604 Hospitals = 1.2 Crore

7.3.2 Web-site and Content Development = Rs. 5 crores

There should be a national health website covering various aspects like Standard Treatment Protocols, links to various health related website etc.

7.4 GRAND TOTAL: Rs. 443.2 Crores – for the entire Five Year Plan

Year wise Annual Plan requirement

Year	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Amount Rs.in Crores	236.2	108.0	67.0	16.0	16.0	443.2

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Financial Requirement

Proposed Outlay for the XI Five Year Plan Period (2007-012)

In Respect of :

1. Scheme : Strengthen of Health Information and Monitoring Systems
2. Telemedicine (Scheme yet to be proposed by Union MOHFW/GOI)

1. Scheme "Strengthening of Health Information and Monitoring System"

Central Bureau of Health Intelligence a national nodal institution for Health Intelligence, with the broad objectives to (i) Maintain and disseminate the data on Health Profile of India, (ii) Facilitate capacity building, human resource development and need based operational research for efficient Health Information System (HIS) and ICD 10 use. CBHI in the Ministry of Health & FW is responsible for this ongoing scheme on **"Strengthening of Health Information and Monitoring System"** through its Field Survey Units and training centers. The six FSUs of CBHI are located in different Regional Offices of Health and Family Welfare (ROHFW) of GOI at Bangalore, Bhopal, Bhubaneswar, Jaipur, Lucknow & Patna; each headed by a Dy. Director with Technical & Support staff, who function under the supervision of Regional Director (HFW/GOI). Regional Health Statistics Training Centre (RHSTC) of CBHI at Mohali, Punjab and other Training Centres namely (i) Medical Record Department & Training Centre at Safdarjung Hospital, New Delhi and (ii) JIPMER Pondicherry are responsible for capacity building and trained manpower development.

In order to achieve the objectives of this scheme as well as efficient functioning of CBHI, while also keeping in view the thrust required to improve & strengthen the health information system during XI five year plan, the following outlay for the XI five year plan period (2007-012) has been worked out ;

OUTLAY FOR THE XI FIVE YEAR PLAN (2007-12)

(Rs. In lakhs)

YEAR	2007-08	2008-09	2009-10	2010-11	2011-12	Total
PLAN	212.00	207.00	227.00	247.00	272.00	**1165.00**
NON- PLAN	98.00	93.00	98.00	108.00	118.00	**515.00**
TOTAL	**310.00**	**300.00**	**325.00**	**355.00**	**390.00**	**1680.00**

Note: This outlay does not include the requirement on "National Health Accounts", which is a separate scheme.

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2. "Telemedicine"

Under this new initiative, it has been proposed to introduce this facility of telemedicine in district hospitals, Govt. Medical Colleges and the State Health Directorate. A total number of units to be covered under telemedicine programme is as follows:

S. No.	Type of the facilities	Total
1	District Hospitals	604 (As per NIC website)
2	Government Medical Colleges	115 (Only Govt. Medical College excluding Trusts, Societies, Pvt.)
3	State Headquarters	36 (Jammu & Kashmir has two separate Division).
4	Total	755

In this scheme, it is proposed to provide one supervisory official and one Data Entry Operator alongwith equipments for this purpose in the above mentioned 755 units. The manpower requirement and financial implication for this purpose is as follows :

Sl. No.	Items	Expenditure	Total cost in a year
1	1 Supervisor	Rs.10, 000 per month	9.06 Crore
2	1 Data Entry Operator	Rs.6500 per month	5.90 Crore
3	**Total for the annual Plan**	**Rs.16, 500 per month**	**15 Crores**
4.	**Provision for XIth five year plan:**		**80 Crores**

The total budget requirement under equipment is as follows :

Sl. No.	ITEMS	Total Cost
1	Financial assistance for equipments @ Rs.10 lakh each unit for 755 units	Rs. 75.5 Crs.
2	Maintenance @Rs. 2 lakh per annum/unit X 5 years	Rs.75.5 Crs.
	Total	**Rs. 151 Crs.**

This can be provided in a phased manner (in three years) with a provision of Rs. 50 crores in annual plan 2007-08, 2008-09 and Rs. 51 Crore in 2009-10

This scheme also proposes to provide computers at every PHC

(a) Cost of Computerization at PHC level:

Sl. No.	ITEMS	Total Cost
1.	Computer with 5 years on-site maintenance with spares & training @ Rs.35, 000 per PHC per annum X 23109 (PHC).	**Rs. 80.90 crores**

This also can be provided in a phased manner (in two years) with a provision of Rs. 40 Crores in annual plan 2007-08 and Rs. 41 Crore in 2008-09.

Taking all the above aspects the year wise Annual Plan requirement for the XI Five Year Plan will be as follows:

Rs.in Crores

Year	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Amount	236.2	108.0	67.0	16.0	16.0	443.2

NOTE : This outlay is an indicative and the **Task Force on Telemedicine in India as constituted by MOHFW/GOI** vide order no. T 2105/1/2004-NCD, September 2005, under the chairmanship of Union Secretary (Health & Family Welfare) is already in process of working out & recommending with regard to the central scheme on Telemedicine for the XI Five Year Plan. This task force in its report will present the final outlay for this scheme.

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Annexure - I

Integrated Disease Surveillance Project INDIA
Progress Report- March 2006

1. INTRODUCTION

Integrated Disease Surveillance Project (IDSP) is a decentralized, State based Surveillance Program in the country. It is intended to detect early warning signals of impending outbreaks and help initiate an effective response in a timely manner. It is also expected to provide essential data to monitor progress of on-going disease control programme and help allocate health resources more efficiently.

The IDSP proposes a comprehensive strategy for improving disease surveillance and response through an integrated approach with rational use of resources for disease control and prevention. Data collected under IDSP would also provide a rational basis for decision-making and implementing public health interventions. Specific objectives of the IDSP are :

- To establish a decentralized district-based system of surveillance for communicable and non-communicable diseases so that timely and effective public health actions can be initiated in response to health challenges in the urban and rural areas
- To integrate existing surveillance activities (to the extent possible without having a negative impact on their activities) so as to avoid duplication and facilitate sharing of information across all disease control programmes and other stake holders, so that valid data for available for decision making at district, state and national levels.

Regular Surveillance

Vector Borne Disease:	1. Malaria
Water Borne Disease	2. Acute Diarroheal Disease (Cholera)
	3. Typhoid
Respiratory Diseases	4. Tuberculosis
Vaccine Preventable Diseases	5. Measles
Diseases under eradication	6. Polio
Other conditions	7. Road Traffic Accidents
Other International commitments	8. Plague, Yellow fever
Unusual clinical syndromes (Causing death/hospitalization)	9. Menigoencephalitis/ Respiratory Distress Hemmorragic fevers, other undiagnosed conditions

Sentinel Surveillance

Sexually transmitted diseases/Blood borne diseases	10. HIV/HBV, HCV
Other Conditions	11. Water Quality
	12. Outdoor Air Quality (Large Urban centers)

Regular Periodic Surveys

NCD Risk Factors	13. Anthropometry, Physical Activity, Blood Pressure, Tobacco, etc.

State Specific Diseases

Each State can include upto 5 diseases prevalent in the State.

2.3 Training of District Surveillance Teams (Rapid Response Teams)

Nine training institutes were identified to conduct training of the District Surveillance Teams. A training module has been developed for use during the training programme. States were allotted to the training institutions and time frame for various batches is fixed mutually by the training institutions and the State Surveillance Units. Training of State/District Surveillance Teams has been completed for 9 States covered under Phase-I of the Project as indicated below :

Training Institution	States Allotted	No. Trained
NIHFW, New Delhi	Himachal Pradesh, Uttaranchal	95
NICD, Delhi	Madhya Pradesh	113
NIE, Chennai	Tamil Nadu	99
CMC, Vellore	Kerala, Karnataka	118
JIPMER, Pondicherry	Andhra Pradesh	67
BJ Medical College, Pune	Maharashtra	59
GMC, Nagpur	Maharashtra (Vidharbha)	58
AIIH&PH Kolkata	Mizoram	41
	Total	**650**

Training of Phase-II states has begun. Funds for training of District Surveillance Teams are released directly to the training institutions based on estimated cost governed by financial norms prescribed for the Project.

Training Institution	States Allotted	No. of Trainees
NIHFW, New Delhi	Haryana, Rajasthan	108
NICD, Delhi	Gujarat, Delhi	106
NIE, Chennai	Orissa, Pondicherry	146
BJ Medical College, Pune	Goa, Gujarat	53
GMC, Nagpur	Chhattisgarh	69
AIIH&PH, Kolkata	West Bengal, Manipur, Meghayala, Tripura	167
PGI, Chandigarh	Haryana, Rajasthan, Chandigarh	115
	Total	**764**

Quality control of training is an essential component of training strategy. In view of this it would be necessary to conduct an evaluation as proposed in the PIP. This will be compared with similar surveys during mid-term and end-line evaluation of the training activities. Faculty from Teacher training centers (BHU, Varanasi; PGI, Chandigarh; AIIMS, Delhi and St. Johns Medical College, Bangalore) and IndiaClen have been identified to conduct this evaluation as per plan given below:

Organization	States/UTs covered		
	Phase-I	**Phase-II**	**Phase-III**
Teacher Training Centre, BHU, Varanasi	Mizoram	NE Region	Uttar Pradesh
Teacher Training Centre, PGI Chandigarh	Uttaranchal Himachal Pradesh	Haryana & Chandigarh	J&K
Teacher Training Centre, AIIMS	Maharashtra Madhya Pradesh	Gujarat Rajasthan & Delhi	Punjab
Teacher Training Centre, St. Johns, Bangalore	Karnataka Andhra Pradesh	Goa Chhattisgarh Pondicherry	UTs
India Clen Group	Kerala & Tamil Nadu	West Bengal & Orissa	Bihar Jharkhand

First meeting of the Working group on evaluation of training was held on 12.12.05 at NICD. It was attended by faculty from BHU, Varanasi, AIIMS & Indiaclen. It was decided that the survey instrument will be prepared by IndiaClen & pre-tested by them after approval. This has been sent & comments from other members are awaited. Pilot testing of the instrument will be completed by May 06 & final report is expected by July 06.

States are organizing other training programmes for medical Officers, Lab technicians and Health Workers. Training of Accountants in Financial Management and Training of Data Entry Operators in Application Software is also organized at the State level.

2.4 **Procurement of Goods**

M/s. Hospital Services Consultancy Corporation (HSCC) was appointed as Procurement Consultant. During the year 2005-06, centralized procurement of major laboratory equipment, computers and accessories and other office equipment was initiated. Current status is as follows :

- Letter of Award issued for Binocular Microscopes. Supply under process.
- Evaluation of bids for other Lab. Equipment has been completed. Approval of Integrated Purchase Committee (IPC) being sought.
- Invitation for Bids for Diagnostic Kits being initiated
- Evaluation of bids for Office equipment has been completed. Approval of IPC being sought.
- Computer Hardware :

a) To ensure that data collected in prescribed formats are compiled and analyzed at the District level, 215 PCs with accessories were procured through National Shopping procedures (DGS&D Rate Contract)
b) Centralized procurement of Computers and System Software for Phase I and II. Bids were opened on 16.2.2006. Evaluation of bids has been completed. Approval of IPC being sought.
c) Servers would be procured after selection of software development agency.

2.5 **Development of Software for Disease Surveillance**

- Preliminary software has been developed in-house for data entry and basic analysis.
- In response to an advertisement published in leading national newspapers and UNDB journal for selection of agency for software development and related services, 22 vendors submitted Expression of Interest.
- A committee was constituted by the Ministry of Health & FW to shortlist 6 most qualified bidders who were issued 'Request for Proposals'
- Detailed proposals have been received from following 4 short-listed bidders : IBM, Tata Consultancy Services, Wipro and ECIL

Technical evaluation for the proposals has been completed and report submitted to the World Bank for clearance.

2.6 **Baseline Study on Public Health Laboratories**

"Expression of Interest" was sought for conducting Baseline Study on Public Health Laboratories and conducting Baseline External Quality Assurance System. 24 organizations had expressed interest. Six agencies were shortlisted. After seeking clearance of the World Bank, RFP was issued to the six agencies. Proposals have been received on 21st March 2006 and evaluation of the proposals has been initiated. Report would be submitted by April 2006.

2.7 **External Quality Assurance System :**

There is limited availability of institutions who have capacity and/or experience of conducting EQAS of laboratory services. It was decided to engage NICD, Delhi, NIV, Pune, NICED, Kolkata and CMC, Vellore to share the responsibility. CMC Vellore was given the responsibility to work out detailed proposal. This has been submitted and being examined.

2.8 **Monitoring of the Project through Regional Coordinators**

"Expression of Interest" was sought for Monitoring of Project through six Regional Coordinators to be posted at Chandigarh, Bhopal, Bangalore, Gandhinagar, Kolkata and Guwahati. 22 organisations had expressed interest. Six agencies were short-listed. After seeking clearance of the World Bank, RFP was issued to the six agencies. Proposals have been received on 21st March 2006 and evaluation of the proposals has been initiated. Report would be submitted by April 2006.

2.9 **Participation of Private Sector and Medical Colleges in IDSP**

A Workshop was organized in April 2005 in Bangalore to discuss strategies for involvement of private sector. A task force was constituted to develop scheme for involvement of private sector in disease surveillance. A scheme including MOU was prepared and forwarded to Indian Medical Association and Indian Academy of Pediatrics, who have agreed to facilitate participation in IDSP. Four Orientation Workshops of key members of these associations were planned of which two have been organized in Delhi and at Thiruvanthapuram. Third workshop is being organized in Mumbai on 16th April 2006. Scheme for participation of medical colleges has been prepared and forwarded to the States and other stakeholders.

2.10 **NCD Risk Factor Surveillance**

The Working Group was constituted for development of protocol for NCD Risk factor Surveillance. After several meetings, Study design and Sampling has been worked out. Questionnaire to be used during the surveys has been finalized and being pre-tested. Terms of reference for National Nodal Agency, Regional and State level Institutions have been forwarded to the World Bank for clearance. Surveys would be undertaken after awarding the contract.

2.11 **Satellite Communication** :

EDUSAT, a dedicated educational satellite launched by ISRO is being utilized to set up communication and information network throughout the country. Central studio at National Institute of Communicable Diseases with a sub-hub in Nirman Bhawan and 800 Satellite Interactive Terminals (SITs) located throughout the country would be set up connecting all the State and Districts Units, Medical Colleges and premier state and national public health institutions. Proposal has been submitted to the World Bank for clearance. This network will be utilized for distance training programmes, teleconferencing and data transmission. Funds have been sanctioned from IDSP Budget for 2005-06 to ISRO to cover 400 SITs by June 06. Remaining 400 SITs would be covered during 2006-07 and covered by December 2006. Satellite Linkage would be formally launched on 29th March 2006.

2.12 Information, Education & Communication

2.12.1 Guidelines, Operations Manuals and Reporting Formats

For an effective surveillance system, case definitions, operational procedures, reporting formats etc. have been standardized by publishing and disseminating following formats :

- Operations Manual for District Surveillance Units
- Operations Manual for Medical Officers and Private Practitioners
- Operations Manual for Health Workers
- Laboratory Manual on Disease Surveillance
- Training Manual for District Surveillance Teams (Rapid Response Teams)
- Manual on Financial Management
- Standard Reporting Formats and Guidelines for their use
- Guidelines on Utilization of grant-in-aid
- Brochure/Executive Summary on Integrated Diseases Surveillance Project
- National Project Implementation Plan

A manual on Laboratory Techniques has also been developed by National Institute of Communicable Diseases and would be used in the Project. Separate Manuals for Lab Technicians posted at PHCs/CHCs and Manual on Bio-safety have been drafted and would be published and disseminated.

2.12.2. Medical Agency

"Expression of Interest" was sought for selecting Media Agency at the central level. 18 organizations had expressed interest. EOI are being assessed and short-listing would be completed by 15th April 2006.

2.12.3. Alternate approaches of communication

A proposal to capture information through alternate means of communication has been prepared to capture information regarding focal out-breaks in the country through scanning of newspapers and tele-news and by supporting Toll Free telephone services. Details are given at **Annexure 4.**

2.13 PIP from Phase-II States

State PIPs have been received from all Phase-II States/UTs (Haryana, Goa, Gujarat, Chhattisgarh, Rajasthan, Nagaland, West Bengal, Manipur, Orissa, Tripura, Pondicherry, Meghalaya, Chandigarh and Delhi). MOU is awaited from Meghalaya. First instalment of GIA has been released to the states, who have submitted MOUs. Orientation workshops have been organized by Gujarat, Haryana, Chhattisgarh.

A Workshop was organized in October 2005 to orient Phase-III states about preparation of State PIP. It is expected to get PIPs from remaining states early during the year 2006-07.

2.14 Prevention & Control of Avian Influenza

Following the outbreak of Avian Influenza in chickens in Maharashtra and Gujarat, two meetings were held with the officials from the World Bank. A draft Project Implementation Plan on Surveillance Prevention and Control of Avian Influenza in India.

October, 2006

Report of the Working Group on Public Health Services (including Water & Sanitation) for the Eleventh Five-Year Plan (2007-2012)

Ministry of Health & Family Welfare

Nirman Bhawan, New Delhi – 110011

INTRODUCTION

A Working Group was set up by the Planning Commission on Public Health Services (including Water and Sanitation) for the Eleventh Five Year Plan with the following Terms of Reference:

(i) *To review existing scenario of Public Health Services (including Water & Sanitation) in urban and rural areas considering regional & inter district disparities and with a view to provide universal access to equitable, affordable and quality health care which is accountable at the same time responsive to the needs of the people and also achieve goals set under the National Health Policy and the Millennium Development Goals.*

(ii) *To review the goals, objectives, strategies and expected outcomes of the National Rural Health Mission by the end of the eleventh five year period (2012) at all levels.*

(iii) *To review the implementation of major health and family welfare programmes, functioning of infrastructure and manpower in rural and urban areas, and suggest measures for rationalizing/restructuring the infrastructure, strategies for improving efficiency and for the delivery of services with a special focus on women & children.*

(iv) *To review the challenges of the immediate future such as aging population increased disease burden on account of new infections and non-communicable diseases that have the potential to impoverish the poor.*

(v) *To review the mechanism for screening and referral of patients, so that they receive appropriate care at all levels.*

(vi) *To review disease control programmes and disease surveillance mechanism in the country, its capability to provide up-to-date information for effective timely response to prevent/limit disease out breaks and to provide effective relief measures.*

(vii) *Identify year-wise quantifiable goals and specific road map of the NRHM and also suggest method of concurrent evaluation of NRHM.*

(viii) *To suggest modification in policies, priorities and programmes during 11th Plan period in relation to:*

(a) Priority areas of research to investigate alternative strategies;
(b) Mid-course correction of ongoing activities;
(c) New initiatives;

(d) Strategies to improve quality and coverage of services at affordable cost, to cope with existing, reemerging and new challenges in communicable diseases, emerging problems of non-communicable diseases due to increasing longevity, life style changes and environmental degradation;

(e) Provide all these services through NRHM and secondary health care system in an integrated fashion;

(f) Improve disease surveillance, HMIS, effective timely response.

(ix) To indicate manpower requirement and financial outlays required for implementation of these programmes during the 11th Plan period;

(x) To deliberate and give recommendations on any other matter relevant to the topic.

The Composition of the Working Group is at Annexure-I. The meeting of the Working Group was held on 17 August 2006 and the Report is based on the suggestions obtained from Members.

The Terms of Reference (TOR) assigned to the Working Group is wide ranging as it intends to cover not merely the health sector but also services relating to the determinants of health including water and sanitation. As some of these terms are inter-related, the TORs have been merged to facilitate focused analysis and recommendations. In this regard, the TOR at (ii) and (vii) relating to the National Rural Health Mission have been deliberated at one place. In respect of certain other terms of reference, while the salient issues have been discussed, the detailed status including the framework required for the 11th Plan may be referred to in the reports of the corresponding Working Groups. Specific mention of TOR (iii) and TOR (vi) are relevant in this context. In the case of TOR (iii), there is a separate Working Group which has delved into in great detail about the health of women and children, while in the case of TOR (vi), the Working Group on Communicable and Non-communicable Diseases have reviewed the entire gamut of Disease Control Programmes including surveillance and the details of the action plan proposed for the 11th Five Year Plan is contained in that report.

The Working Group had the benefit of the recommendations made in the Mid-Term Appraisal of the Tenth Five Year Plan by the Planning Commission, the Report of the National Commission on Macro Economics on Health and the Framework for Implementation of the NRHM. Additionally, the reports generated by the Task Forces while formulating and implementing the Rural Health Mission have also been available to this Group.

The Report attempts to place in greater focus the lessons learnt from the current experience and draw up an action plan for improving the availability, accountability and affordability of public health services including water and sanitation.

Terms of Reference-1

(i) To review existing scenario of Public Health Services (including Water & Sanitation) in urban and rural areas considering regional and inter district disparities and with a view to provide universal access to equitable, affordable and quality health care which is accountable at the same time responsive to the needs of the people and also achieve goals set under the National Health Policy and the Millennium Development Goals.

Public Health services play a critical role in promoting, restoring or maintaining the health status of a population whether they do so effectively depends on which services are provided and how they are organized. These services basically take the form of healthcare infrastructure, manpower facilities relating to supply of clean drinking water, sanitation and hygiene besides a host of other inter-related activities. In terms of physical infrastructure, there exists a network of 1,46,026 sub-centres, 23,236 PHCs and 3346 CHCs with the sub-centres catering to a population of 1 per 5000 (3000 in the case of tribal areas), 1 per 30,000 population in respect of PHCs (20,000 in tribal and desert areas) and 1 per 1,20,000 in CHCs in general areas (as against 1 per 80,000 population in tribal / desert areas). Availability of medical manpower for the country as a whole shows that for every 1,00,000 population there are 70 doctors. Across rural areas, the public health manpower include 28,930 nurse mid-wives, 1,33,194 ANMs, 61,907 male MPWs, 17,708 pharmacists and 58,752 paramedical staff in addition to non technical staff.

With this infrastructure, significant progress has been achieved in the planning era as evident from the trends in the health sector as given below:

Table 1 : INDIA – SELECT HEALTH INDICATORS

S.No.	Parameter	1951	1981	1991	Current level
1	Crude birth rate (Per 1000 population)	40.8	33.9	29.5	24.8(2003)
2.	Crude death rate (Per 1000	25.1	12.5	9.8	8.0 (2003)
3.	Total fertility rate(TFR) (Per Woman)	6.0	4.5	3.6	3.0 (2001)
4.	Maternal mortality ratio (MMR) (Per 100,00 live births)	NA	NA	437 (1992-93)	407(1998)
5.	Infant mortality rate (IMR) (Per 1000 live births)	146 (1951-61)	110	80	60(2003)
6.	Child (0-4) mortality rate (Per 1000 children)	57.3 (1972)	41.2	26.5	17.8(2002)
7.	Couple protection rate (per cent)*	10.4 (1971)	22.8	44.1	48.2(1998-99)
8.	Life Expectancy at birth 8.1 Male 8.2 Female	 37.2 36.2	 54.1 54.7	 59.7 (1991-95) 60.9 (1991-95)	 63.9(2001-08) 66.9(2001-06)

Note: *** National Family Health Survey** **NA: Not Available**

Source: Economic Survey 2005-06

The health outcomes for India as a whole disaggregated by major States is at Annexure-II.

However, despite a massive public health infrastructure that has been created over the plans, the determinants of health have not been assigned the desired focus limiting the success that could have been otherwise achieved. Alongside another discernible phenomenon is that the public health care facilities have been accessed and utilized differently in the rural and urban areas for purposes of outpatient and inpatient care. According to the NSSO 60th Round, public facilities for outpatient care have been accessed by 22% in the rural areas and 19% in the urban areas. It may be pertinent to note that while % of treated ailments receiving non-hospitalized treatment from government sources registered a slight increase from 19 to 22 during 1995-96 to 2004, it

revealed a marginal decline in urban areas from 20 to 19 during the same period. States showing an increase in this share were Orissa, Kerala, Karnataka and Rajasthan in respect of rural areas and Orissa, Punjab and Rajasthan in respect of urban areas. The States of Bihar and Gujarat showed a decline in the share of public institutions in treatment of non-hospitalized ailments in the rural and urban areas while a significant decline in the share of public institutions in treating ailments can be seen in the urban areas of Kerala, Maharashtra and Tamil Nadu. However between 1986-97 and 2004, outpatient care in urban areas from government services have registered a steep fall from 24% to 19%. A state-wise picture capturing the variations across States and during the last 3 rounds of survey by NSSO over the period 1986-87 to 2004 in respect of both rural and urban areas for outpatient care is given in Annexure III.

As regards hospitalized treatment the picture is even more discouraging (captured in the 60th Round). The private sector has been the main provider of inpatient healthcare both in the rural and urban areas and the roles between the private and public sector seem to have reversed as evident from the table below:-

Table 2 : Per 1000 distribution of cases of hospitalized treatment by type of hospital during 2004, 1995-96 and 1986-87

Type of Hospital	Rural			Urban		
	2004 (60th)	1995-96 (52nd)	1986-87 (42nd)	2004 (60th)	1995-96 (52nd)	1986-87 (42nd)
Govt.	417	438	597	382	431	603
Non-Govt.	583	562	403	618	569	397

Source: NSSO 60th Round-Report 507 on Morbidity, Healthcare and condition of aged.

Reliance on the public sector for hospitalized treatment varied largely between States. The state-wise variations as captured by the 60th Round is at Annexure-IV.

According to the NSSO 60th Round, the proportion of hospitalized treatments received from public sector hospitals varied from 144 in Bihar to 913 in J&K in the rural areas. Besides J&K, 3 other States namely Orissa, West Bengal and Himachal Pradesh reported relatively high proportion of cases of hospitalized treatment from public institutions. The States of Andhra Pradesh, Bihar, Haryana, Maharashtra and Uttar Pradesh showed a high degree of reliance on private sector hospitals. 62% of beds were in government hospitals but the performance in the public hospitals in terms of proportion of hospitalized cases treated falls short of the beds in public institutions.

More than one third of all deaths in India are in the under 15 age group, most of them infants. The regional variation is best highlighted with States like Bihar, Madhya Pradesh, Uttar Pradesh, and Rajasthan reporting more than 40% of all deaths in the under 15 age group as compared to only 6 percent such deaths in Kerala, as recently as 1998. Similarly, more than two thirds die before reaching age 60 in the first category of States, compared to only one third in the case of Kerala and half in the case of Tamil Nadu, Maharashtra and Himachal Pradesh. If this data is analyzed further for gender and social groups, clearly women from poorer households suffer the most. This is well documented in the surveys of NFHS and NSS.

Access to rural and urban water supply, drainage and sanitation equally contribute to good health. Though efforts to address these determinants have been made in the past, a large segment of the population have lived without them. Water is a state subject akin to health and the schemes for providing drinking water facilities are implemented by the States. The efforts of the Central Government are in the nature of financial and technical assistance and merely supplement the initiatives of the State Governments. As of April, 2005, 96.1% or

rural habitations were fully covered and 3.6% were partially covered leaving 0.3% not covered with drinking water facilities.

State-wise data indicate that while in most States, habitations in rural areas have been fully covered, habitations not covered are as high as 2300 in Rajasthan, 803 in Punjab, 660 in J&K and 327 in Maharashtra. A habitation survey conducted in 2003 indicate large incidences of slippage from fully covered to partially/not covered categories due to a number of factors such as: services going dry, lowering of ground water level, systems outliving their lives and increase in population resulting in lower per capita availability. In terms of absolute numbers, according to the Department of Drinking Water Supply, the population under rural water supply programme during 2005-06 is 188.32 lakhs of which SCs constituted 32.85 lakhs, STs 22.17 lakhs and general population 133.29 lakhs.

Sanitation is another factor decelerating Improvements in health status. Data collected in Census 2001 quoted in the National Health Profile 2005 indicates the percentage of households by toilet availability and type of drainage connectivity. The state-wise scenario is at Annexure-V. While households having bathroom facility within the house is abysmally low in rural areas and urban areas in the BIMARU States, NE, J&K and Orissa, the position in respect of connectivity for waste water outlet is even more alarming. While closed drainage is available in the urban areas atleast in the developed States, a large percentage of bathrooms across all States in the country have no drainage system particularly in the rural areas. This percentage is as high as 73.88 in Orissa, 72.69 in Assam and 71.81 in Chhattisgarh. The non-availability of toilets within the house in % terms is as high 71.94 in Bihar, 76.78 in Chhattisgarh and 73.03 in Jharkhand. In urban areas, the % of households not having toilet is marked in the case of Goa (15.26), Maharashtra (17.75), Chandigarh (17.83), Delhi (19.58) and Tamil Nadu (14.84).

The baseline survey data from the PIPs of States compiled from October, 2003 onwards gives the status of household sanitation coverage in terms of toilet coverage and their economic status.

The state-wise sanitation coverage in habitations, anganwadi centres and schools as reported in the State PIPs since 2003 are given in Annexures VI, VII and VIII. The situation is further compounded on account of manual scavenging prevalent particularly in rural areas. Lack of these basic amenities of sanitation has posed a serious health hazard and the recent epidemics of chikunguniya and dengue can be traced to unhygienic living conditions. Absence of safe drinking water combined with lack of proper sanitation have very often been important factors contributing to ill health and morbidity levels in the country.

The public health system in a sense has also not met the principle of equity in its delivery of healthcare services. This may be traced to a series of factors ranging from lack of medical personnel, drugs and equipment, inaccessible facilities or due to a poorly dysfunctional organization of the health system even where in some cases inputs exist and financial support is adequate and well-distributed. The National Health policy 2002 has highlighted the inequity in access to and availing of services by the disadvantaged groups. Infact the differentials in health status among socio-economic groups can be seen from the table below:

Table 3: Differentials in Health status among Socio-economic Groups

Indicator	**Infant Mortality/1000**	**Under 5 Mortality/1000**	**% Children Underweight**
India	70	94.9	47
Social Inequity			
Scheduled Castes	83	119.3	53.5
Scheduled Tribes	84.2	126.6	55.9
Other Disadvantaged	76	103.1	47.3
Others	61.8	82.6	41.1

Source: National Health Policy 2002.

Besides equity between different sections across the board, this has taken a toll on women and gender sensitive interventions not given adequate focus.

The health status and burden of disease in different social groups as documented in the NCMH Report compiled from NFHS-II, 1998-99 is at Annexure-IX.

The key challenge continues to be the prevalence of high levels of inequity in health conditions across and within States and different strata of population. The multi sectoral determinants of health largely explain the variation in outcomes between different region/states. Malnourished children are easily susceptible to diseases and die from them. The environment in which we live particularly if it has no sanitation or poor sanitation provide a fertile environment for transmission of intestinal infections. Growth in vehicular traffic and primitive modes of cooking especially in rural areas give rise to a variety of respiratory diseases.

Inadequacy and ineffective public health services combined with a clear absence of convergence between different programmes and Departments have promoted implementation of a variety of initiatives within and outside the health sector without maximizing outcomes in a holistic and cost effective manner. Community participation is also not always clearly visible in several of our endeavour which is ubiquitous for the success of any intervention.

TERMS OF REFERENCE (II) & (VII)

(ii) To review the goals, objectives, strategies and expected outcomes of the National Rural Health Mission by the end of the eleventh five year period (2012) at all levels.

(vii) Identify year-wise quantifiable goals and specific road map of the NRHM and also suggest method of concurrent evaluation of NRHM.

The National Rural Health Mission (NRHM) has been launched with a view to provide effective healthcare to rural population throughout the country with special focus on 18 States, which have weak public health indicators and/or weak infrastructure. These 18 special focus states include Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu and Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttaranchal and Uttar Pradesh. The Mission seeks to provide universal access to equitable, affordable and quality health care which is accountable at the same time responsive to the needs of the people, reduction of child and maternal deaths as well as population stabilization, gender and demographic balance. Besides it aims at revitalizing local health traditions, mainstream AYUSH and effectively integrate health concerns through decentralized management at the district with determinants of health like sanitation and hygiene, nutrition, safe drinking water, gender and social concerns, In the process, the Mission would help achieve goals set under the National Health Policy and the Millennium Development Goals as also address inter and intra state disparities.

The NRHM, an architectural correction mechanism is envisaged to operate in a mission mode for a seven year period from 2005-2012. The activities to be undertaken alongwith its phasing and timeline over the mission period is captured in the table below:

TIME LINE FOR NRHM ACTIVITIES

	Activity	**Phasing and time line**
1	Fully trained Accredited Social Health Activist (ASHA) for every 1000 population/large isolated habitations.	50% by 2007 100% by 2008
2	Village Health and Sanitation Committee constituted in over 6 lakh villages and untied grants provided to them.	30% by 2007 100% by 2008
3	2 ANM Sub Health Centres strengthened/established to provide service guarantees as per IPHS, in 1,75000 places.	30% by 2007 60% by 2009 100% by 2010
4	30,000 PHCs strengthened/established with 3 Staff Nurses to provide service guarantees as per IPHS.	30% by 2007 60% by 2009 100% by 2010
5	6500 CHCs strengthened/established with 7 Specialists and 9 Staff Nurses to provide service guarantees as per IPHS.	30% by 2007 50% by 2009 100% by 2010
6	1800 Taluka/ Sub Divisional Hospitals strengthened to provide quality health services.	30% by 2007 100% by 2010
7	600 District Hospitals strengthened to provide quality health services.	30% by 2007 60% by 2009 100% by 2010
8	Rogi Kalyan Samitis/Hospital Development Committees established in all CHCs/Sub Divisional Hospitals/ District Hospitals.	50% by 2007 100% by 2009
9	District Health Action Plan 2005-2012 prepared by each district of the country.	50% by 2007 100% by 2008
10	Untied grants provided to each Village Health and Sanitation Committee, Sub Centre, PHC, CHC to promote local health action.	50% by 2007 100% by 2008
11	Annual maintenance grant provided to every Sub Centre, PHC, CHC and one time support to RKSs at Sub Divisional/ District Hospitals.	50% by 2007 100% by 2008
13	Systems of community monitoring put in place.	50% by 2007 100% by 2008.
14	Procurement and logistics streamlined to	50% by 2007

	ensure availability of drugs and medicines at Sub Centres/PHCs/ CHCs.	100% by 2008.
15	SHCs/PHCs/CHCs/Sub Divisional Hospitals/ District Hospitals fully equipped to develop intra health sector convergence, coordination and service guarantees for family welfare, vector borne disease programmes, TB, HOV/AIDS, etc.	30% by 2007 50% by 2008 70% by 2009 100% by 2010
16	District Health Plan reflects the convergence with wider determinants of health like drinking water, sanitation, women's empowerment, child development, adolescents, school education, female literacy, etc.	30% by 2007 60% by 2008 100% by 2009
17	Facility and household surveys carried out in each and every district of the country.	50% by 2007 100% by 2008
18	Annual State and District specific Public Report on Health published	30% by 2008 60% by 2009 100% by 2010.
19	Institution-wise assessment of performance against assured service guarantees carried out.	30% by 2008 60% by 2009 100% by 2010.
20	Mobile Medical Units provided to each district of the country.	30% by 2007 60% by 2008 100% by 2009.

The outcomes under the different activities will be monitored through a mix of several measures that will include annual facility surveys, external assessments, calling for quarterly and annual progress reports.

A review of the progress achieved as of October, 2006 under the Mission reveals the following:

1. Institutional arrangements set up

- *State Health Missions constituted in all States/UTs.*
- *State launch along with orientation of DMs/CMOs completed in 15 focus states.*
- *Merger of Departments of Health & Family Welfare completed in all states except Uttar Pradesh and Goa.*
- *MoU finalised with 28 States.*

2. ASHA

- *Under the approved Framework for Implementation, ASHAs are proposed in NE states and hilly/tribal districts of all other states also.*
- *During 2005-06, 1.21 lakh ASHAs were selected and during 2006-07 (till date) 1.08 lakh ASHAs have been selected in various states.*
- *Till date1.17 lakh ASHA have been trained in the states.*
- *Detailed guidelines for the mentoring of ASHAs in the states and the associated generic funding have been disseminated to the states*

3. Infrastructure

- *Total amount: of Rs. 205.87 crore released during 2005-06 and Rs. 46.82 crores during 2006-07 as Untied funds for local action to all sub-centres in the country.*
- *Indian Public Health Standards have been finalized for CHCs. Similar standards are in final stages of preparation for Sub Centres, PHCs and District Hospitals.*
- *1680 CHCs have been identified by the states for upgradation to IPHS in the first phase. Total amount of Rs. 370 crores was released during 2005-06 and Rs. 326.40 during FY 2006-07 till date for this purpose.*
- *Facility Survey has been completed in 902 CHCs across the country.*
- *6355 Rogi Kalyan Samitis have been set up at various.*
- *The Mobility support being given for outreach programmes in the underserved areas.*
- *108 Integrated District Health Action Plans have been prepared in various states. These plans are sector wide in import and address all aspects of health including the collateral health determinants like nutrition, sanitation, drinking water etc.*

4. Human Resource Development

- *Recommendation of the Task Group on Medical Education has been finalized and are in final stages of consideration by the Ministry.*
- *The Task Group on Identification, training and accreditation of RMPs in in the final stages of deliberations.*
- *Accounts personnel are being positioned in the PHCs to strengthen the accounting of funds in view of the substantially larger number of transactions at that level.*
- *12738 Doctors, ANMs and other paramedics have been appointed on contract by States to fill in critical gaps.*
- *Block pooling of doctors has been started in states so as to ensure that there is at least one functional health facility in each of the block. The other health facilities in the territorial are being serviced through outreach visits.*
- *700 professionals (CA/MBA) appointed for EAG States in the Program Management Units (PMU) to support NRHM. Similar management support is being planned at the level of the Block also.*

5. Training

- *National Health Resource Centre at Central level finalized.*
- *State level Health System Resource Centre for North East States set up at Guwahati.*
- *Additional training initiatives undertaken including :*
    - *Upgradation of State Training Institutes/ANMS Colleges*
    - *Integrated Skill Development Training ANMS/ LHV/MOs.*
    - *Skilled Birth Attendants Training MO/ANMs*
    - *Training on Emergency Obstetrics care for MOs.*
    - *Training on No Scalpel Vasectomy (NSV) for MOs.*
    - *Professional Development Programme for CMOs.*
    - *Specialised skill development programme for MOs.*
    - *Training program for Consultants of Program Management Units*

6. New Programs & Innovations

- *RCH II launched and under implementation*
- *Expanded coverage under Janani Suraksha Yojana approved by the Mission Steering Group.*
- *Sterilization compensation scheme launched by GOI*
- *Integrated Management of Neonatal and Childhood Illnesses (IMNCI) started this year in 16 States namely MP, WB, Jharkhand, UP, Haryana, Maharashtra, Delhi, Mizoram, J&K, Uttaranchal, Bihar, A&N island, Assam, Andhra Pradesh, Chhattisgarh & Karnataka .*
- *With the help of Neonatology Forum completed training on Newborn Care in 140 districts in the country.*
- *Integrated Disease Surveillance Project operationalized.*
- *Legal changes brought about to allow the ANMs to dispense medication and MBBS doctors to administer anesthesia.*
- *Short course for anesthesia being planned.*
- *Risk Pooling and Health Insurance models compiled and shared with the states.*
- *Empowered Procurement Wing set up in the Ministry*
- *Single Purchase Committee set up under DGHS*
- *Involvement of HLL for supply of drugs to EAG/ North East States being finalized.*

7. Immunization

- *Accelerated Routine Immunization (RI) taken up in all EAG states*
- *Catch up rounds taken up in Bihar, Jharkhand, Orissa and Assam and other states.*
- *JE vaccination campaign covered 93.8 lakh children.*

8. Partnership with Non Government Stakeholders

- *225 Mother NGOs appointed for 331 districts in 2005-06.*
- *Providing services, RCH out reach services, Ambulance Services, Mobile Medical Units, Mentoring of ASHA, Management of Health facilities (as in Gujarat, Tamil Nadu etc) , Involvement of Medical colleges, Training programmes, ICCI, Partnership in polio/ immunization programmes etc.*

9. IEC

- *IEC Multi-media campaign on health issues including immunization, Iodized Salt, Save the Girl Child*
- *NRHM New letter*
- *Health Melas organized in different States.*
- *Information booklets disseminated.*
- *Behaviour change workshops being organized for key stakeholders including state IEC representatives.*

By the end of the Mission period i.e. 2007-2012 which coincides with the final year of the Eleventh Plan, the **expected outcomes** to be achieved in quantitative terms are:

- IMR to be reduced to 30/1000 live births by 2012.
- Maternal Mortality to be reduced to 100/100,000 live births by 2012.
- TFR to be reduced to 2.1 by 2012.
- Malaria Mortality Reduction Rate - 50% up to 2010, additional 10% by 2012.
- Kala Azar Mortality Reduction Rate - 100% by 2010 and sustaining elimination until 2012.

- Filaria/Microfilaria Reduction Rate - 70% by 2010, 80% by 2012 and elimination by 2015.

- Dengue Mortality Reduction Rate - 50% by 2010 and sustaining at that level until 2012.

- Cataract operations-increasing to 46 lakhs until 2012.

- Leprosy Prevalence Rate –reduce from 1.8 per 10,000 in 2005 to less that 1 per 10,000 thereafter.

- Tuberculosis DOTS series - maintain 85% cure rate through entire Mission Period and also sustain planned case detection rate.

- Upgrading all Community Health Centers to Indian Public Health Standards.

- Increase utilization of First Referral units from bed occupancy by referred cases of less than 20% to over 75%.

- Engaging 4,00,000 female Accredited Social Health Activists (ASHAs).

Besides the above, the Mission will mobilize the health workers, non government organizations and the community at large in facilitating access to health services, improved outreach services to the underserved areas, its effective utilization and ensuring proper accountability to the citizens. The emphasis will not be on health services per se but also on the major determinants of good health namely water supply, sanitation etc. The Mission will also steer towards promotion of inter-sectoral convergence and forging of a meaningful partnership by the centre with the states and local bodies.

TERM OF REFERENCE – III

(iii) To review the implementation of major health and family welfare programmes, functioning of infrastructure and manpower in rural and urban areas, and suggest measures for rationalizing/restructuring the infrastructure, strategies for improving efficiency and for the delivery of services with a special focus on women & children.

The major programmes under Health are the National Disease Control Programmes that have been designed and are being implemented to arrest the spread of communicable and non-communicable diseases. The individual disease control programmes have been reviewed in detail by the Working Group on Communicable and Non-Communicable Diseases. The salient measures and strategies suggested by the Working Group in respect of the major programmes have been highlighted in this report under Term of Reference (vi) which relate specifically to Disease Control Programmes and Surveillance mechanisms.

Under Family Welfare, the major schemes relate to Reproductive and Child Health, Infrastructure Maintenance, IEC activities and Distribution of Contraceptives, Immunization, Area Projects and Research Institutions. These schemes have been suitably modified in 2005-06 and brought under the overall umbrella of the National Rural Health Mission.

The major constraints in the implementation of programmes and schemes particularly under Family Welfare have been in the realm of physical infrastructure, manpower and other support facilities for an effective healthcare delivery system. Infrastructure where available had not been fully operational due to critical gaps in availability of doctors, para-medics, drugs, diagnostic facilities etc. Non-availability of specialists was another critical factor. There has virtually been very little emergency obstetric care available and health programmes and schemes by and large operating as vertical programmes.

The NRHM launched in April, 2005 has drawn up a detailed implementation framework to ensure that infrastructure created is fully functional backed by adequate manpower and other resources.

In so far as Reproductive Child Health is concerned significant progress has been achieved under RCH. The first phase of the Reproductive Child Health Programme was launched in 1997 by integrating all ongoing fertility regulation and maternal and child health schemes of the Ministry under a single umbrella adopting a holistic target free approach. The first phase of RCH was assessed and taking note of the shortcomings, RCH Phase-II is under implementation since 2005. A review of the RCH Phase-I and the achievements made under RCH-II have been made in great detail in the Report of the Working Group on Health of Women and Children.

The sector level policies governing RCH-II design and implementation as contained in the Working Group Report on Health of Women and Children is given below:

Sector level policies governing RCH-II design and implementation

- Bring about inter-sectoral collaboration through networking at the highest levels and then percolating to the different levels.
- To include public health as a specialization into the medical education curriculum in order to bring out trained public health managers to manage the public health and bringing in public health as a function.
- To revitalize the human resources policy such as district cadres of MOs and block cadres of ANMs and also address the career movement, posting and training issues.
- Open up primary health care to groups of professionals/ individuals willing to take on such service provision functions especially at the primary levels accompanied by appropriate governance mechanisms.

- Activating voluntary level societies/ community level workers for bringing in additional funds into the sector (ZSS, RKS+JSK, ASHA)
- Address adolescent health as an important issue and develop packages for activating this aspect.
- Integrate with the ongoing National AIDS Control Programme (NACP) and establish linkages with HIV prevention programmes.
- Develop separate plans for dealing with the problems of vulnerable groups including a tribal action plan and an action plan for the urban poor.

A number of initiatives have been suggested by that Working Group for improving service delivery which include Public Private Partnerships and systemic approach for meeting the human resource challenges. While efforts to strengthen and optimize existing public facilities with more investment and better management should receive priority, collaborating with the private sector will still be required for meeting the growing demand and utilizing the expertise available with them. Some of the specific suggestions in respect of these have been extracted from the Working Group Report and highlighted in this section.

To expand the network of fully equipped facilities the following have been suggested:

- Ensure district hospital is fully equipped for the FRU services;
- Strengthen midwifery skills of existing ANMs through their attachment to district hospital; add more facilities for skill-development training after they are fully equipped for FRU services,
- Adopt multiskillng as the main strategy for strengthening service delivery, both for doctors as well as the paramedical staff.

Given the crucial role nursing/paramedical manpower play in the delivery of healthcare services the Working Group has suggested:

- A dedicated Nursing and Paramedical Manpower Division/Unit should be established at the National and State levels.
- All medical colleges should be mandated to establish a College of Nursing offering courses in B.Sc Nursing, M. Sc. Nursing and Post-Basic Diploma courses in speciality nursing areas.
- All District Hospitals should be mandated to establish a school of nursing offering ANM and Diploma in General Nursing and Midwifery.
- Smaller hospitals in public sector having at least 30 OBGs beds should be encouraged to start ANM training
- Private sector hospitals having at least 30 OBGs beds should also be allowed to start ANM training programme and the concerned State Government should allow selected public sector rural facilities for their field training.

Other major recommendations made by the Working Group include:

- Revision in the allocation of seats under PG Medical course to provide for more seats in the specialities required in rural areas.

- Treat external assistance with zero debt liability as an additionality to the domestic budget.

- Need to develop a robust MIS by triangulating data and information from routine reporting systems, external programme evaluations and community based assessment of programme implementation.

Term of Reference – IV

(iv) To review the challenges of the immediate future such as aging population increased disease burden on account of new infections and non-communicable diseases that have the potential to impoverish the poor.

Care of the Elderly: Proposed Geriatric Programme

According to the 2001 Census, there are 76.6 million people at or over the age of sixty in India, constituting about 7.7% of the total population. Life expectancy has increased from around 59 years in the 1970s to 63 years currently, and is expected to cross 70 years by the year 2020. The proportion of elderly in India is set to rise dramatically in the next few decades.

One major area of concern in the above context, is the Health of the elderly, which requires a comprehensive care of providing preventive, curative & rehabilitative services. Unlike the developed countries, India does not have a well-structured Geriatric Health service, thus leading to a relatively *ad hoc* system of health care delivery for the elderly. In this scenario, there is a need for a specialized geriatric health service, which recognizes the elderly as being a vulnerable population. The service must educate, to develop and maintain lifestyles, which are healthy. It must provide a counseling and medical care facility to look after the needs of the sick elderly, and an emergency facility to reach those in acute need and transport them to a hospital. This should include acute care, long term care & community based rehabilitation

In the long run, the aim of the program is to provide quality services closest to the homes of the elderly; to keep them functional and to make them return to the community as early as possible after illness. Hence easy accessibility, continuity and good quality of care are essential components of a Geriatric Health Care System.

To improve the access to promotive, preventive, curative and emergency health care among elderly persons a range of services to be provided has been envisaged at three levels under the proposed geriatric programme

Level One: *A Home Health service, which will comprise of a visiting component intended as an early warning system to detect health problems, and as a source of psychological support.*

Level Two: *A community based health centre for the elderly providing a base for educational and preventive activity and an out patient medical service. This would be the base for the home health service, and for the program in general.*

Level Three: *An improved hospital-based support service with focused health care needs at the institute.*

The Working Group on Communicable and Non-Communicable Diseases has looked at the care of the elderly and proposed a roadmap for the 11th Five Year Plan. The Report has recommended the setting up of two national institutes of ageing one in Delhi and one in Chennai supported by regional centres to be spread across 19 States in the first instance.

The national program for health care of the elderly will be a centrally funded program. The eight regional centres will be identified under the control of these two institutes. On an average, each regional centre will be involved in implementing Geriatric Health Care in about 3 to 4 states. These will be at Trivandrum, Bangalore, Hyderabad, Vellore, Kolkata, Mumbai, Jodhpur and Guwahati. The existing geriatric services will be up graded in these Regional centres.

In each state one teaching medical College / Tertiary level hospital will be selected to develop the Geriatric Unit which will include the Outpatient services, Acute care , subacute Care and Long Term Care units. In total 35 such centres will be supported in this programme.

These identified Medical Colleges will be further linked to 5 districts each in their vicinity. In total 175 District Hospitals will be strengthened for providing geriatric care. The Medical colleges will also be responsible for the geriatric care services in the identified urban centres in the adjacent areas.

The health professionals will be trained at the Medical colleges and regional centres to fill in the gap in manpower. They will then be sent to the district level centres for delivery of Geriatric Health Care. The manner in which these institutes in the Centre and States will function has also been spelt out in that Report.

The public health system is already stretched by the co-existence of communicable and infectious diseases and alongside an emerging epidemic of non-communicable diseases. While the national programmes to control communicable diseases are meeting with success, emergence of new infections and non-communicable diseases particularly diabetes, life-style diseases and CVDs need to be effectively prevented as curative care costs fro these diseases are very high. Preventive strategies will vary according to causal factors. The plan of action proposed for controlling communicable diseases and measures for non-communicable diseases has been dealt with comprehensively in the Report of the Working Group on Communicable and Non-Communicable Diseases. The Report also includes a section on operational research that is required in the areas of communicable and non-communicable diseases in the future.

TERM OF REFERENCE – V

(v) To review the mechanism for screening and referral of patients, so that they receive appropriate care at all levels.

The principal challenge in the health sector today is the building of a sustainable healthcare delivery system whereby all citizens including the rural poor and the disadvantaged sections of the society would have access to affordable and appropriate quality healthcare at all levels. In the existing system fragmented strategies and lack of manpower and other resources have made the health system unaccountable and inadequately equipped to meet the health requirements particularly in the rural areas where there is massive public health infrastructure. This physical infrastructure however is not always supported by availability of doctors/para-medics, drugs, equipments, diagnostic services etc. Lack of facilities particularly for emergency obstetric care and non-availability of specialists for anesthesia, obstetric care, pediatric care etc. have either resulted in the needy move towards the private sector or not access healthcare at all. Also the system was not suitably integrated resulting in limiting the outcomes of health through implementation of different programmes and schemes.

The National Rural Health Mission has as its basic objective effecting an architectural correction to the existing healthcare delivery system and has drawn up a plan of action at all levels of healthcare i.e. village, sub-centre, PHC, CHC, district and state. The plan visualized to operationalize this objective is enumerated in the paragraphs that follow.

Village level

- The Mission provides for a trained female community health worker – ASHA- in each village in EAG states who is expected to work very closely within the villages and could contribute directly in a number of health related activities. ASHAs would reinforce community action for universal immunization, safe delivery, newborn care, prevention of water-borne and other communicable diseases, nutrition and sanitation, in close coordination with ANMs/AWWs. This network of female link workers would act as the nucleus for coalescing all forces to empower women in the villages.

- There would be a Health Day every month at the Anganwadi level in which immunization, ante / post natal check ups and services related to mother and child health care including nutrition would be provided.

- One health Unit to be established in every village which would be owned by the community and managed by the Village Health and Sanitation Committee, with the help of ASHA/AWW/SHG group, etc.

- At each Anganwadi there would be a room to serve as focal point for health activities in the village.

- Provision of a revolving fund at the village level to be managed by VHSC for providing referral and transport facilities for emergency deliveries as well as immediate financial needs for hospitalization.

- Identify RMPs and upgrade their skills by specialized training to deliver health care.

- For those villages which are far away from the Sub-Centre, identification of a TBA with requisite educational qualifications for training and upgradation to the level of Skilled Birth Attendant to assist the ANM at the Sub Centre. They are to be paid Rs. 50/- per institutional delivery assisted by them at the Sub Centre.

- Orientation of the members of the VHSC to equip them to provide leadership as well as plan and monitor the health activities as the village level.

- Untied fund to be made available to VHSC for various health activities including IEC, household survey, preparation of health register, organization of meetings at the village level etc.

Sub-Centre level

- The Sub-Centres are currently provided on the population norm of 1 per 5000 population in general areas and 1 per 3000 population in tribal areas. Even by 1991 population norms, against a requirement of 1.34,108, if we ignore the excess sub-centres in some of the states, there is a shortfall of 4822 sub-centres. Going by the population of 2001, the requirement climbs to 1,58,702 and the deficit increases to 21, 983. Of the existing sub-centres, only 63,800 are in government buildings. If we further exclude those buildings which are currently functioning from Panchayat and other voluntary society buildings, buildings need to be constructed for as many as 59,226 of them. The vacancy position at the Sub-Centres is equally discouraging. Against a requirement of one ANM (funded by the GOI) and one MPW (funded by the states) positions of as many as 11,191 and 67,261 respectively are vacant.

- The number of ANMs is proposed to be linked to the caseload and the distance of village / habitations which comprise the sub-centre and not to the population as population density is not uniform resulting in inadequate availability of health services.

- Two ANMs are to be provided for each sub-centre. These ANMs besides fulfilling the laid down criteria will also be a resident of a village falling under the jurisdiction of that sub-centre and not be transferred before completion of 10 years.

- Construction of sub-centres would be taken up in a phased manner over the mission period.

- To bring in greater community control, the sub-centres would be fully brought under the Panchayati Raj framework.

- Besides the usual recurring cost support to the sub-centres, they also would be given an untied support of Rs. 10,000. The fund would be kept in a joint account to be operated by the ANM and the local Surpunch.

- The Sub-Centre building could also be utilized for dispensing OP services by any health provider. Adequate provision of medicines would be made, not only pertaining to RCH but also of other communicable diseases. The availability of AYUSH drugs would also be ensured.

- Two TBAs would be attached to every Sub-Centre without any financial liability. These TBAs would be selected with a view to train them subsequently to the level of SBA by further skill upgradation. They would be paid Rs. 50/- on a case to case basis for an institutional delivery at the Health Sub Centre.

PHC Level

- The PHCs are currently provided on the population norm of 1 per 30,000 population in general areas and 1 per 20,000 population in tribal / desert areas. Even by 1991 population norms, against a requirement of 22,349, if we ignore

the excess in some of the states, there is a shortfall of 1374 PHCs. Going by the population of 2001, the requirement goes up to 26022 and the deficit increases to 4436. Of these PHCs, as many as 1693 do not have their own buildings. The PHCs are expected to have two doctors. However, even if we work out the requirements on the basis of one doctor alone, there are 880 vacancies which clearly imply that many of the PHCs are without doctors.

- The availability of the three staff nurses within the PHC premises would address the health needs of the rural population in a very significant manner. The Government of India would bear the entire capital expenditure for construction/ repair/ innovation/ redesign of the buildings in a phased manner over the mission period, excluding those already taken up under the RCH-II.

- In respect of new PHCs Centre would assist the States with the recurring expenditure on 75:25 basis during the Eleventh Plan and on 50:50 basis during the Twelfth Plan.

- Rogi Kalyan Samiti would be constituted at the PHC level. To encourage the states to do so, a grant of Rs. 1,00,000 is planned to be provided to the states for each PHC for which a RKS has been constituted and where the RKS has been authorized to retain the user fee at the institutional level for its day to day needs.

- The existing staff of disease control programmes would be integrated at the PHC level and the RKS would be encouraged to rationalize the manpower and equipments available under the vertical programmes for greater synergy.
- One AYUSH doctor would be posted at the PHC level. AYUSH drugs would also be made available in adequate quantity.

- The PHC would be managed by the RKS. The entire Budget allocated for the PHC would be provided to the Samiti, which has PRI/Community participation. The Samiti should own the institution.

CHC level

- The CHCs are currently provided on the population norm of 1 per 1,20,000 population in general areas and 1 per 80,000 population in tribal / desert areas. Even by 1991 population norms, against a requirement of 5587, if we ignore the excess in some of the states, there is a shortfall of 2474 CHCs. Going by the population of 2001, the requirement goes up to 6491 and the deficit increases to 3332. Of these CHCs, as many as 318 do not have their own buildings.

- In some places, there are multiple health facilities being controlled by different agencies. As a result, because of the manpower and equipment shortage, none of the facilities function in an optimal manner. The States would be asked to merge these facilities existing at the CHC headquarter for better cohesion.
- The location of the CHCs and the norms would be reexamined by the States while preparing the District / State Plan.

- The Centre would support the entire capital expenditure for the construction of the new CHCs and the renovation of the existing CHC buildings (except those taken up under RCH-II).

- The CHC should be managed by the PRI at the district level through RKS.

- IPHS have been set up for the CHC level. IPHS is a novel concept to fix benchmarks of infrastructure including building, manpower, equipments, drugs, quality assurance through introduction of treatment protocols. All CHCs to be upgraded to the IPHS in a phased manner manner over the Mission period. The Govt. of India would bear the additional expenditure to be incurred by the states on account of the IPHS fully during the Eleventh Plan and in the ratio of 50:50 during the Twelfth Plan.

- A support of Rs one lakh per CHC to be given to the Hospital Management Society through states where those are authorized to retain the user charges at the institution level. Five lakh for similar arrangement at the District Hospital.

- Accountability to public to be enforced through a prominently displayed Citizens Charter (indicating the range of services and the rights of citizens) to be monitored through Hospital Management Society.

- Each district would be supported with one mobile medical unit which would be attached to the district hospital / CHC. The states would be encouraged to devise their own PPP mechanism for running the vehicle. The states would be given flexibility to adopt the model they consider appropriate.

- AYUSH units to be set up in every CHC.

TERM OF REFERENCE – VI

(vi) ***To review disease control programmes and disease surveillance mechanism in the country, its capability to provide up-to-date information for effective timely response to prevent/limit disease out breaks and to provide effective relief measures.***

The Working Group on Communicable and Non-Communicable Diseases in their Report have examined in detail and reviewed the progress achieved in respect of different Disease Control Programmes and the Disease Surveillance mechanisms and suggested the action plan for the Eleventh Plan. In view of this, in the present report the salient findings emerging from the detailed review undertaken by the above mentioned Working Group in respect of some of the major disease control programmes have been highlighted.

ISSUES OF PUBLIC POLICY:

The Working Group on Communicable and Non-Communicable Diseases is of the view that there are two factors of critical importance to public policy which need to be addressed:

(a) For almost all diseases conditions identified and most particularly the National Health Programmes in which government investment was substantial i.e. Malaria and other Vector Borne Diseases, T.B., Leprosy, Reproductive Health and Childhood conditions, there is a paucity of high quality epidemiological information and validated data. In the absence of operational research there was also weak evidence regarding the type of interventions that would be most effective in the different settings of the country and

(b) A literature review has thrown up evidence of a large number of diseases which are considered to be life style related and affecting the rich to be seen to be affecting the poor as well and increasingly so.

1. NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME

During the XI Plan period, the existing strategies for prevention & control of vector borne diseases would be continued and further strengthened with special emphasis on surveillance, human resource development, behaviour change communication, supervision and monitoring, quality assurance and quality control of diagnostics, drugs and operational research. The Programme aims to maintain Annual Blood Smear Examination Rate of over 10% and bring down the Annual Parasite Incidence to 1.3 or less so as to accomplish 25 per cent reduction in malaria mortality by 2010 and 50 per cent by 2012.

Towards elimination of Lymphatic Filariasis, eligible population living in endemic districts will be covered under Mass Drug Administration with single recommended dose of DEC or DEC + Albendazole. For the patients, home based morbidity management and hydrocele operations will be augmented. Towards Kala-azar elimination, the annual incidence will be reduced to less than 1 per 10,000 population at the sub-district level by 2010. Control of Dengue and JE is targeted at reduction of case fatality and frequency of outbreaks. To deal with 50% shortage of MPW (M), it is proposed to fill up 25% of the vacant posts through contractual schemes by Government of India, while the states will be impressed to meet the funds requirement for remaining 25% posts.

2. NATIONAL LEPROSY ERADICATION PROGRAMME

During the XI Plan, the programme will aim at further reducing the leprosy burden in the country while providing high quality leprosy services for all persons affected by leprosy to General Health Care System. Enhanced emphasis will be laid on Disability Prevention & Medical Rehabilitation (DPMR) services for leprosy affected persons. Further advocacy efforts will be continued in order to reduce stigma and stop discrimination against leprosy affected persons and their families. The programme will continue to receive free supply of MDT from

NOVARTIS through the WHO till 2010. Partners in leprosy programme implementation like the WHO and International Federation of Anti-Leprosy Association (ILEP) will continue to provide additional technical and monitoring support to the programme.

3. REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Based on the earlier programme experience, the Project Implementation plan of Phase II of RNTCP intends to strengthen the ongoing TB control activities and support new initiatives viz. management of MDR TB using DOTS Plus, strengthening State level laboratory network to undertake culture and sensitivity testing, pediatric patient wise drug boxes, etc, During the period nearly 30 million TB suspects would be examined, and would help in diagnosing and initiating over 6 million TB patients on treatment, of which nearly 3 million would be infectious sputum positive patients and successfully treat over 85% of new sputum positive registered patients.

4. NATIONAL AIDS CONTROL PROGRAMME

The NACP-III during XI plan period of 2007-2012 has set the goal to halt and reverse the epidemic in India over the next 5 years by integrating programmes for prevention, care, support and treatment. This will be achieved through four strategic objectives namely:

1. Prevention of new infections in high risk groups and general population through:
   a. Saturation of coverage of high risk groups with targeted interventions (TIs)
   b. Scaled up interventions in the general population.

2. Increasing the proportion of people living with HIV/AIDS who receive care, support and treatment.

3. Strengthening the infrastructure, system and human resource in prevention, care support and treatment programmes at the district, state and national levels.

4. Strengthening a nation-wide strategic information management system.

The specific objective is to reduce new infections as estimated in year 1 of the programme by:

- Sixty percent (60%) in high prevalence states so as to obtain the reversal of the epidemic; and
- Forty percent (40%) in the vulnerable states so as to stabilize the epidemics.

Based on the lessons learnt from the previous two phases, the NACP-III will be strengthened during the XI plan period. The priorities and thrust areas will include prevention; care, support and treatment; capacity strengthening; and strategic information management.

Non-Communicable Diseases

Unlike the communicable diseases the NCDs are linked to a cluster of major risk factors such as tobacco use, unhealthy diet, physical inactivity, obesity, high blood pressure, cholesterol and glucose levels that are measurable and largely modifiable. Presently, there are national programmes for Cancer, Blindness, Mental Health and Iodine Deficiency Disorders. Reviewing these programmes and analyzing the kind of ailments/diseases which are emerging, the salient recommendations made by the Working Group in their report on communicable and non-communicable diseases are given below.

National Cancer Control Programme

The National Task Force that had been set up under the programme has made a series of recommendations for cancer control during the XIth Plan. The strategies proposed include prevention and early detection of cancer through District Cancer Control activities, strengthening IEC, promoting centres of excellence in the field of cancer management, augmenting cancer care facilities across the country, development of early diagnostic capabilities and increasing capacity for palliative care in cancer etc. This is to be achieved through encouraging Public Private Partnership, heath advocacy, capacity building and promoting research.

National Programme for Control of Blindness

Prevalence and cause of blindness have undergone a distinctive change since launching of the National Programme for Control of Blindness as shown below:

Year	Prevalance	Remarks
1971-74	1.38%	Cataract leading cause (75%)
1986-89	1.49%	Cataract Blindness increased to 80%, Trachoma and Vitamin A related blindness reduced
2001-04	1.10%	Cataract reduced to 63%, Refractive Error second leading cause (20%), Glaucoma and Diabetic Retinopathy emerging causes
2007	0.8%	Goal for 10th plan
2010	0.5%	Goal indicated in National Health Policy
2020	0.3%	Goal under "Vision 2020 initiative"

The main causes of blindness in this population are as follows: -

A	Cataract	62.6%
B	Refractive Error	19.70%
C	Corneal Blindness	0.90%
D	Glaucoma	5.80%
E	Surgical Complication	1.20%
F	Posterior Capsular Opacification	0.90%
G	Posterior Segment Disorder	4.70%
H	Others	4.19%

There are no nation-wide reliable data on refractive error and low-vision among children in the country except some isolated studies. Among the emerging causes of blindness, diabetic retinopathy and glaucoma need special mention. 2% of India's population is expected to be diabetic. 20% of diabetics have diabetic retinopathy and this number is likely to grow in future. Prevalence of blindness due to glaucoma is estimated to be 4% in population aged 50 years and above.

To intensify and accelerate the present prevention of blindness activities, so as to achieve the goal of eliminating avoidable blindness by the year 2020.

The major focus areas for the XIth Plan are:

- ✓ Refractive Error
- ✓ Low Vision
- ✓ Childhood Blindness including Vitamin A deficiency.
- ✓ Corneal Blindness including Trachoma.
- ✓ Emerging Causes, Glaucoma, Diabetic Retinopathy.

The Working Group has recommended setting up a Eye Care Management Information and Communications Network Project to support access to quality and affordable eye care services for prevention of blindness and sight restoration to the underserved population. The national network will comprise the District Blindness Control Societies, private hospitals, regional institutes of ophthalmology and centres of excellence. The latter centres would provide speciality services under one roof with highly trained and motivated professionals. The new initiatives proposed includes construction of dedicated eye wards and operation theatres in district hospitals in the North-eastern States, Bihar, Jharkhand, Jammu & Kashmir, Himachal Pradesh, Uttaranchal and other States on demand. Telemedicine in ophthalmology is also to be promoted.

National Mental Health Programme

Based on the review of the existing programme, a revised programme is proposed to be taken up with the objectives to empower the doctors in the primary care facilities to be able to offer care to patients at PHCs, improve public awareness and facilitate community participation, upgrade psychiatry departments of medical colleges and improve mental hospitals that offer tertiary care.

National Iodine Deficiency Disorders Programme

It is proposed to bring down prevalence of IDD below 10% in the entire country by 2012 AD and ensure 100% consumption of adequately iodated salt (15 PPM) at the household level through IDD surveys through State Govts./NGOs establish IDD Control Cells, and IDD monitoring labs, quality control of iodated salt at the consumer level, training programme, production and distribution of iodated salt, health education and publicity and pilot programme for the control of micronutrient deficiencies.

New Initiatives:

National programmes are likely to be taken up for prevention and control of diabetes, cardiovascular diseases and a programme for the healthcare of the elderly.

INTEGRATED DISEASE SURVEILLANCE PROJECT

State level workshops in Tamil Nadu, Maharashtra and Uttar Pradesh were held which brought out the following issues on the current disease surveillance activities:-

Primary level

Active or passive data collection is going on for more than 60-90 different conditions in some of the states The peripheral data collection system is over burdened with a substantial percentage of the time of the ANM spent on surveillance related activities Quality of reporting is hampered by absence of clear case definitions Data transmission is affected by poor communication facilities available Absence of formats for reporting diseases adversely affect quality of the data collect. There is no horizontal integration of surveillance activities of existing disease control programs Data is not collected from private practitioners, private laboratories and private hospitals both in rural and urban setting as well as medical colleges. Infrastructure for urban surveillance is very weak in view of the rapid growth in urban populations

There is no system of feedback to the lower levels of the health system. Data collection during emergencies and epidemics is of better quality There is no system of quality control for the data collected and there is very little analysis and action based on the data District level Quality of data collected is poor Analysis of data is inadequate for meaningful interpretation The laid down protocols were not being followed and needed to be activated District level response system is activated only in times of outbreak Non-Communicable Diseases are not included in surveillance even though the burden due to them is high The information is not shared across disease control Programmes There is lack of coordination between departments District administrative system is not able to make use of the health data State level There is need to improve the quality of data in terms of reliability and validity There is problem of timeliness as data is transmitted to state head quarters irregularly and often late. Most of the data received at the state level is not analyzed Data is not used for routine Programme planning There is need to improve human resources

The IDSP taken up as a plan scheme and launched in November, 2004 for improving disease surveillance and response through an integrated approach with rational use of resources for disease control and prevention. Data collected under IDSP would also provide a rational basis for decision making and implementing public health interventions.

Specific objectives of the IDSP are:

- To establish a decentralized district-based system of surveillance for communicable and non-communicable diseases so that timely and effective public health actions can be initiated in response to health challenges in the urban and rural areas
- To integrate existing surveillance activities (to the extent possible without having a negative impact on their activities) so as to avoid duplication and facilitate sharing of information across all disease control programmes and other stake holders, so that valid data are available for decision making at district, state and national levels.

Features of Integrated Disease Surveillance are as follows:

- The district level is the focus for integrating surveillance functions.

- All surveillance activities are coordinated and streamlined. Rather than using scarce resources to maintain vertical activities, resources are combined to collect information from a single focal point at each level.
- Several activities are combined into one integral activity to take advantage of similar surveillance functions, skills, resources and target populations.
- The IDSP integrates both public and private sector by involving the private practitioners, private hospitals, private labs, NGOs, etc and by active community participation.

- The IDSP integrates communicable and non-communicable diseases. Common to both of them are their purpose in describing the health problem, monitoring trends, estimating the health burden and evaluating programmes for prevention and control.
- Integration of both rural and urban health systems as rapid urbanization has resulted in the health services not keeping pace with the growing needs of the urban populace.
- The gaps in receiving health information from the urban areas needs to be bridged urgently.
- Integration with the medical colleges (both private and public) would also qualitatively improve the disease surveillance especially through better coverage.

DISEASES UNDER SURVEILLANCE

Core Diseases

Regular Surveillance:

Vector Borne Disease

Water Borne Disease

Respiratory Diseases

Vaccine Preventable Diseases

Diseases under eradication

Other Conditions

: 1. Malaria

: 2. Acute Diarrhoeal Disease (Cholera)

: 3. Typhoid

: 4. Tuberculosis

: 5. Measles

: 6. Polio

: 7. Road Traffic Accidents

Other International commitments :

8. Plague, Yellow fever

Unusual clinical syndromes :

9. Menigoencephalitis/Respiratory Distress

(Causing death / hospitalization) Hemorragic fevers, other undiagnosed conditions

Sentinel Surveillance:

Sexually transmitted diseases/

Blood borne :

10. HIV/HBV, HCV

Other Conditions :

11. Water Quality

12. Outdoor Air Quality (Large Urban centers)

Regular periodic surveys:

NCD Risk Factors :

13. Anthropometry, Physical Activity, Blood

Pressure, Tobacco, Diet etc.

State specific diseases:

Each State can include up to 5 diseases prevalent in the State.

PROJECT PHASING

The Project would cover the entire country in a phased manner as depicted below:

Phase I (commencing from FY 2004-05) Andhra Pradesh, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Uttaranchal, Tamil Nadu, Mizoram & Kerala.

Phase II (commencing from FY 2005-06) Chhatisgarh, Goa, Gujarat, Haryana, Rajasthan, West Bengal, Manipur, Meghalaya, Orissa, Tripura, Chandigarh, Pondicherry, Delhi & Nagaland

Phase III (commencing from FY 2006-07) Uttar Pradesh, Bihar, Jammu & Kashmir, Jharkhand, Punjab, Arunachal Pradesh, Assam, Sikkim, A & N Nicobar, D & N Haveli, Daman & Diu, & Lakshdweep

Development of Software for Disease Surveillance

A software will be developed for data entry, compilation, analysis and GIS to facilitate Disease Surveillance. Nation-wide web connectivity would be provided under the project. A typical District Surveillance Network is depicted below :

CENTRAL LEVEL

A National Disease Surveillance Committee has been set up at the national level to arrive at

- Major policy decisions in implementing IDSP
- Review Physical and Financial progress in implementing IDSP
- Coordination with all relevant Ministries, Departments and Organizations.

The Central Surveillance Unit (IDSP) will be supported by Surveillance Committees at the State and district levels.

TERM OF REFERENCE – VIII

(viii) To suggest modification in policies, priorities and programmes during 11th Plan period in relation to:

(a) Priority areas of research to investigate alternative strategies;
(b) Mid-course correction of ongoing activities;
(c) New initiatives;
(d) Strategies to improve quality and coverage of services at affordable cost, to cope with existing, reemerging and new challenges in communicable diseases, emerging problems of non-communicable diseases due to increasing longevity, life style changes and environmental degradation;
(e) Provide all these services through NRHM and secondary health care system in an integrated fashion;
(f) Improve disease surveillance, HMIS, effective timely response.

The health scenario in India is at the cross roads at the present juncture. Changing epidemiological profile requires changes in the demand for health service and health promotion measures. The emphasis on changing Disease control priorities have been highlighted in the earlier sections and analyzed in-depth by the Working Group on Communicable and Non-Communicable Diseases. The healthcare delivery system will need to gear up to address the demographic transition, the epidemiological transition, changing risk environment and the consequential widening in the gap between health problems and needs on the one hand and provision of healthcare services on the other.

The demographic transition itself is likely to witness a decline in mortality and fertility rate with the improvements being effected in healthcare prevention and cure and general levels of economic betterment. Alongside the country will also be witnessing an increasingly ageing population. The age pyramid that has been projected indicates that during the period 1996-2016, the following changes are likely to occur:

- Population in the age group less than 15 years is likely to decline from 353 to 350 million

- Population in the age group 15-59 years is likely to increase from 590 to 800 million
- Population in the age group greater than 60 years is projected to increase from 62.3 to 112.9 million.

The increase in the ageing population will bring along with it many chronic diseases like cancer, diabetes, CVDs etc. which will tend to be high in the older age groups. These would require to be addressed through an integrated healthcare plan. The manner in which this is proposed to be done has been outlined under the Term of Reference (iv) discussed earlier.

In the epidemiological transition, communicable diseases particularly AIDS and other life style diseases will require to be addressed. In so far as communicable and non-communicable diseases are concerned, the emphasis will be on operational research for collating impact of interventions already undertaken so that the targeted measures to be taken will be more cost effective and outcome based. Health advocacy and health education promotion would be given renewed emphasis given the present scenario of life style related diseases and the future inroads this is to make in the healthcare delivery system. Risk factors like tobacco abuse have already been addressed and become entrenched in the policy structures with legislative support. Adequate safeguards would need to be taken through promoting exercise, yoga and healthy diets particularly in the younger population as preventive steps for tackling life-style diseases.

The demand for health services in the future is likely to be phenomenal with increases in the health seeking behaviour resulting from better levels of education, income status and urbanization. The National Rural Health Mission in a way addresses issues relating to most of these aspects of healthcare. The priorities are and will continue to be maternal and child health, life style related diseases and healthcare for the aged. Accidents and trauma care will also be another important priority that would be addressed. The Health Policy is veering

towards an integrated healthcare delivery system whereby treatment of a patient is not limited by any disease or ailment but his treatment is visualized in a holistic manner. This is being attempted through the mission approach with the integration of the disease control programmes with the general healthcare system. Community led action with close involvement of Panchayati Raj Institutions and local bodies and setting up of Rogi Kalyan Samitis are likely to enhance accountability and shift the focus of healthcare efforts around the individual. Pooling of resources particularly medical and para-medical support, managerial assistance at the State and the district levels for proper accountability of funds released and a shift from merely curative to preventive and promotive healthcare as being envisaged in the Rural Health Mission are likely to make an impact on the health status profile of the population. Integrating the major healthcare schemes and programmes under a common umbrella is also likely to maximize health outcomes with optimal utilization of resources. Health and Family Welfare programmes by forming an integrated component is likely to pool in medical manpower in most of the rural areas.

The inter-sectoral convergence already initiated under NRHM will need to be strengthened in the future.

In so far as women and children are concerned, the areas of convergence would need to lie in nutrition and women's empowerment. Under the NRHM, the anganwadi is already identified as the hub of action with a health and nutrition day being observed on a monthly basis. Support to the ANM and AWW would be through the untied fund.

On the education front the areas of convergence would be in school health education for promoting primary healthcare and adolescent health. The school health programmes have already been integrated in programmes like Blindness Control and RCH-II and will be given a further boost in the future.

Safe drinking water and sanitation are areas that have been taken up under the NRHM for effective convergence. The Village Health Sanitation Committee will cover all activities relating to drinking water, sanitation etc. ASHA will be associated with the water quality monitoring and surveillance programme and total sanitation campaign. The Panchayati Raj Institutions will be fully involved in this convergent approach so that the gains of integrated action can be reflected in the district health plans. The NRHM would seek to empower PRIs at each level i.e. Gram Panchayat, Panchayat Samiti at Block level and Zila Parishad at District level to assume leadership to control and manage the public infrastructure structure at district and sub district levels. Under the NRHM, it is proposed to build an accountability framework through a process of community based monitoring, external surveys and stringent internal monitoring.

Capacity building of available medical and para medical manpower is also visualized. Besides, training and putting in place 4 lakh ASHA/Community health workers, the Mission will also provide 2 ANMs at each sub-health centre and 3 staff nurses to ensure provision of services round the clock in every PHC. The CHCs are also to be brought at par with Indian Public Health standards to provide round the clock hospital like services. This is to be achieved through 7 specialists as against 4 at present and 9 staff nurses as against 7 at present in every CHC. A separate AYUSH set up would also be provided for in each PHC and CHC. Incentives will also be provided to ensure that doctors do continue to serve in the rural areas by residing in those areas and not by commuting from the nearby towns or headquarters. Medical nursing education will also be revamped to cater to the growing needs of healthcare.

New initiatives in the nature of National Programmes for Diabetes, Deafness and CVDs will be taken up in the 11th Five Year Plan. Besides National Institute for the Aged supported by the regional centres is also proposed.

TERM OF REFERENCE – IX

(ix) To indicate manpower requirement and financial outlays required for implementation of these programmes during the 11th Plan period;

As per the 2001 Census, 741.7 million of India's population resides in rural areas spread over 638,588 villages and more than 10 lakh hamlets and habitations. The challenge of health care in rural areas is to be able to reach out to these widely disbursed and remote habitations in a meaningful way. The approach so far has been to provide a Sub-Health Centre for a population of 5000, a Primary Health Centre for a population of 30000 and a Community Health Centre for a population of one lakh with marginal alterations for hilly and desert areas.

The human resource challenge

The biggest challenge of the public health system is to provide adequate resources along with essential reforms to make it deliver better, with community ownership and accountability. The fundamental issue is to resolve the crisis of the public health system in terms of availability of health and para medical staff in rural areas. New and innovative ways of management of human resources (Clusterized posting at Block/CHC level, incentives, career progression, specialist training, multi skilling, etc.) would have to be evolved in state specific contexts to ensure availability of personnel in remote regions. Priority will also have to be accorded to filling up of vacancies of ANMs, Nurses, Para Medical Staff, Block Medical Officers, key Specialists, etc. It is important to have local residence criteria for remote regions as often outsiders, even if recruited, are found to be absent or seeking a transfer out of such regions. Systems of engaging local women and providing them sustained support to develop as ANMs and Nurses could also be considered.

An analysis of availability of ANMs across States show that in States like Tamil Nadu and Kerala, an individual ANM caters to much fewer villages and population wherein in States like Chhatisgarh, Madhya Pradesh and Uttar Pradesh, the number of villages and population are much larger. To a considerable extent this affects her quality of delivery and maybe it would be desirable to move towards a norm that combines work load, distance, population and community convenience. The high levels of absenteeism among health workers and doctors in rural areas is another factor that needs to be borne in mind. This calls for an approach that improves the accountability framework and also allows development of local residents as health workers.

Public Health System in rural areas

- There are 1,46,026 Sub Health Centres, 23,236 Primary Health Centres, and 3346 Community Health Centres.
- As per 2001 population norm, another 19,269 Sub Health Centres, 4337 Primary Health Centres, and 3206 Community Health Centres should be established to fulfill population norms for SHC/PHC/CHC.

State of infrastructure

- 60,762 existing SHCs, 2948 PHCs and 205 CHCs need buildings. Those that have buildings do not get adequate resources for asset management, maintenance, etc. remaining in a descript shape.
- Community/User groups not involved in construction/maintenance of facilities. Funds are centrally managed in most states.
- Toilets, electricity, drinking water, equipment, medicines, not adequately available in many institutions.

State of staff – I

Staff	Required	In Position
ANM	1,69,262	1,33,194
MPW (M)	1,46,026	61,907
HA (F)LHV	23,236	17,371
HA(M)	23,236	20,181

State of Staff - II

Staff	Required	In Position
Doctors at PHC	23,236	20,308
Surgeons at CHC	3346	1201
Gynaecologists at CHC	3346	1215
Paediatricians	3346	678

State of staff - III

Staff	Required	In Position
Radiographer at CHC	3346	1337
Pharmacist at CHC & PHCs	26,582	17,708
Lab Technicians at CHC & PHCs	26,582	12,284
Nurse Mid Wives at CHC & PHCs	46,658	28,930

Source: Bulletin on Rural Health Statistics in India, 2006

Ministry of Health & Family Welfare

Areas of Concern

- 9869 PHCs are single doctor PHCs.
- 5769 Sub Health Centres are without ANMs.
- Repair and maintenance grants to institutions are centralized, untimely and inadequate, leading and dilapidated structures.
- Contingencies are inadequate leading to lack of cleanliness and quality of services.
- Very high rate of absenteeism of staff.

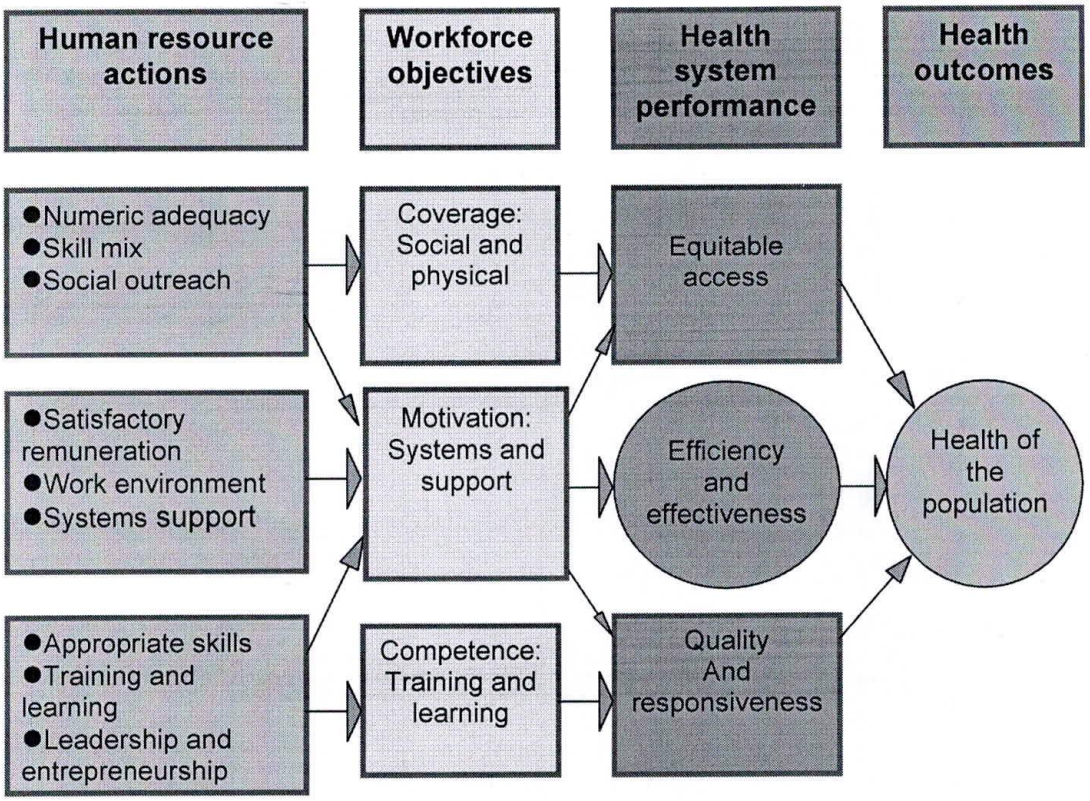
Non-governmental provider in rural areas

- Range of providers – Trusts, NGOs quacks, ISM / Allopathic practitioners, private nursing homes, clinics, etc.
- Round the clock availability in many cases. Can be reached during an emergency.
- Unregulated fee and non standard treatment protocols – the ' saline – syringe syndrome'.
- Leads to high out of pocket expenditures.

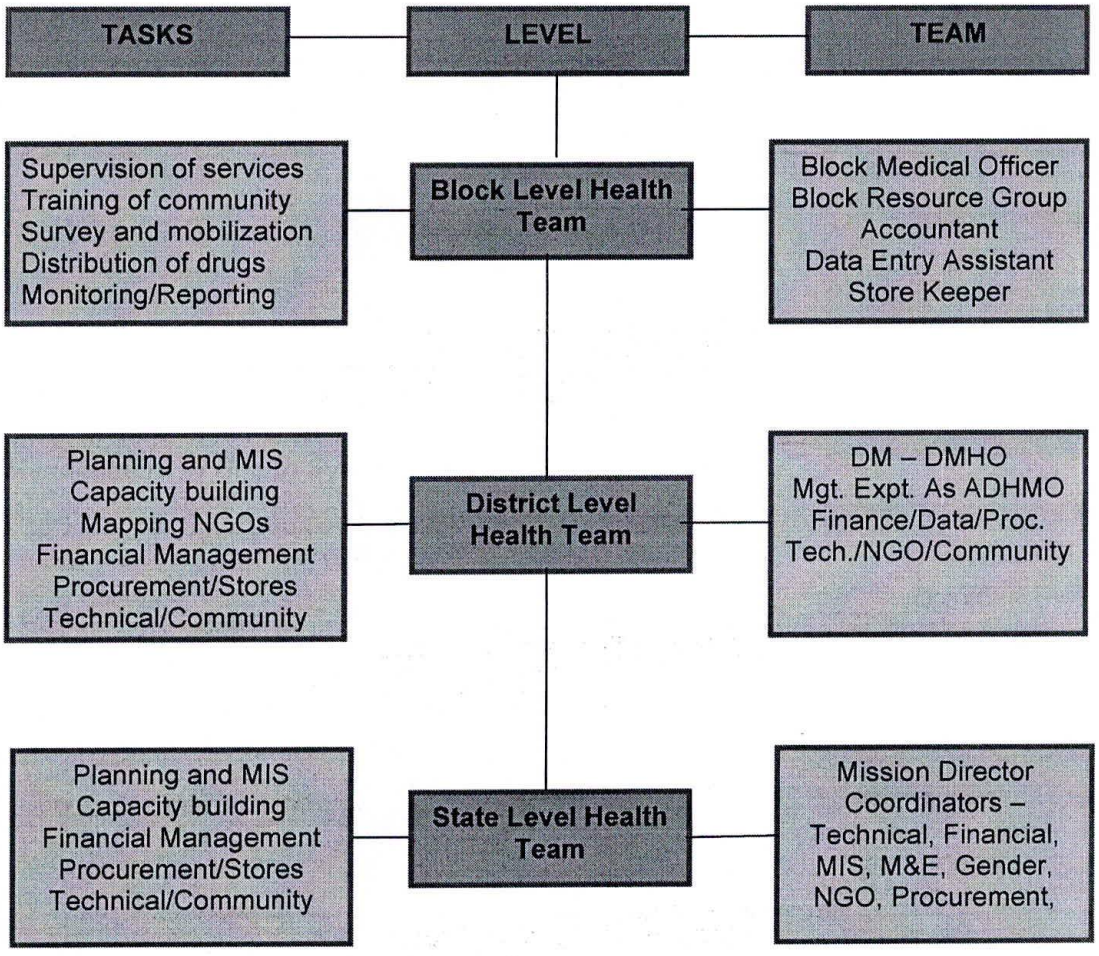
Overhaul of the Public health system

- Calls for 'communitization' of the health system – PRI and user groups at each level.
- Pooling of resources and optimal utilizationy.
- Decentralization for institutional autonomy.
- Decentralized local area planning with household and facility surveys.
- Providing 24 hour round the clock hospital like services in every Block.

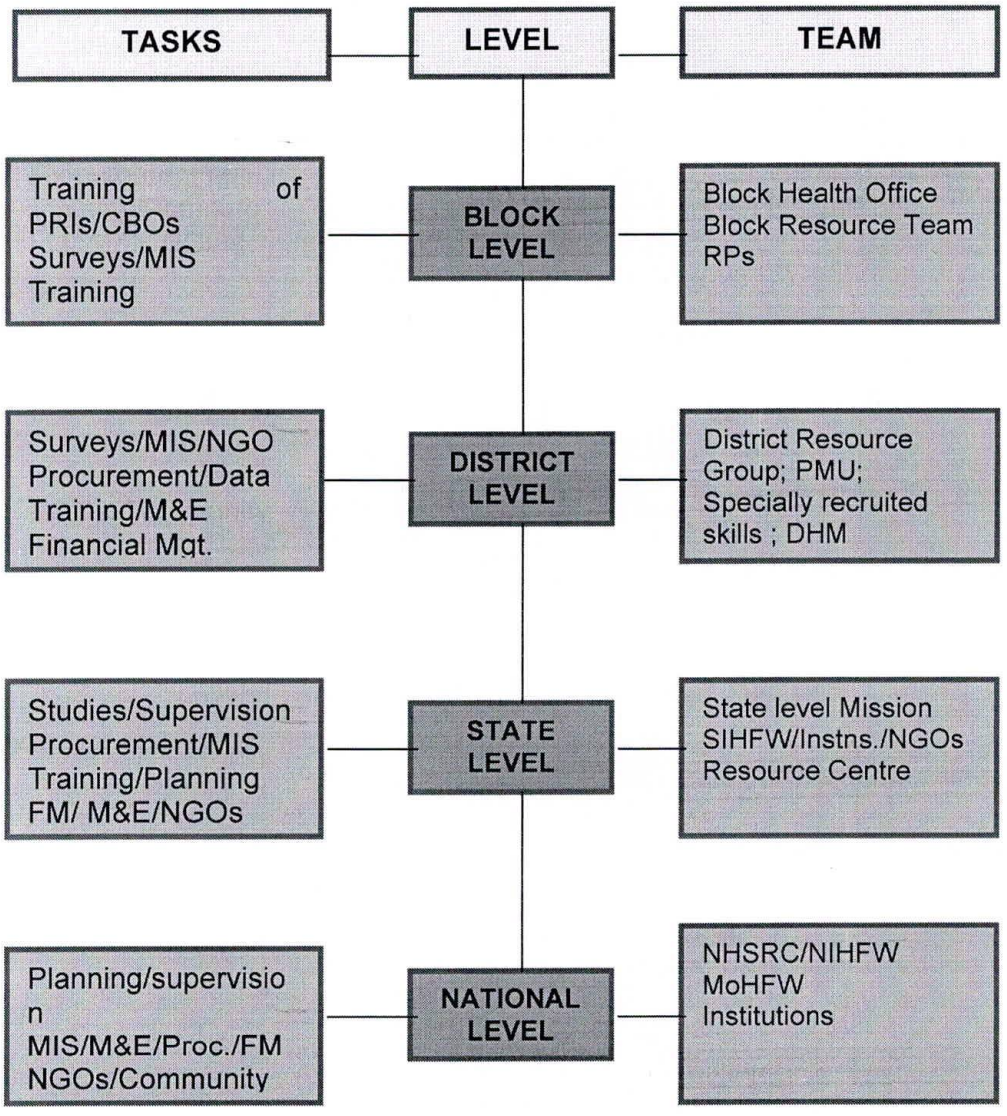
Managing for performance



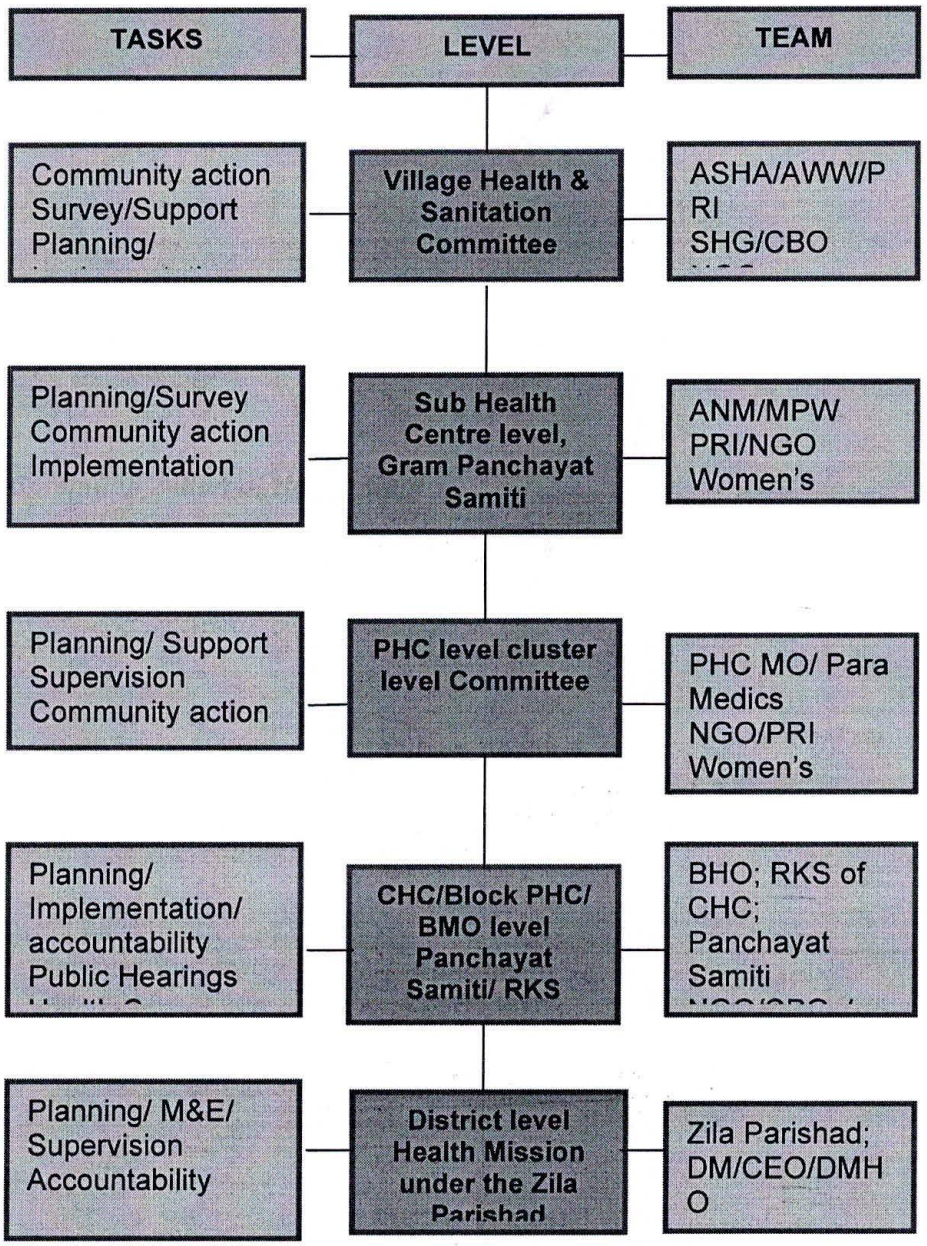
Management of Health System



Building Capacity through Resource Groups



Communitization of Health Care



Under the NRHM, the Public Health System will be strengthened at all levels. In the changed scheme of things, there would be 2 health workers and 1 voluntary work in each sub-centre, a mix of technical and administrative staff numbering 15 in new Primary Health Centres, a strength of 25 Community Health Centres. Besides additional staff would be provided at the different levels for achieving the IPHS standards. At the PHC there would be an additional medical officer and two staff nurses. While at the CHC the supportive staff would be 6-7 consisting of specialists, surgeons, anesthetist etc. The CHC will be additional provided with supportive manpower which will include technical and administrative staff.

The financial outlays required for strengthening manpower has been reflected under NRHM and is given in Annexure-X.

Recommendations

1. Access to clean drinking water will need to be planned for and rigorously implemented.

2. Need to take stock of the habitation survey on Rural Water Supply System that was conducted in 2003 which has indicated large incidences of slippage from fully covered to partially/ not covered categories due to a number of factors such as services going dry, lowering of ground water levels, system outliving their lives and increase in population resulting in global per capita availability. The action plan under drinking water supply would then need to be suitably redesigned and operationalized.

3. Sanitation is another important factor decelerating improvements in health status. The position regarding connectivity for waste water across different States is alarming and would need to be addressed on priority in coordination with the Department of Drinking Water and Sanitation as lack of adequate sanitation is responsible for severe health problems. In fact cholera, dysentery, typhoid, infectious hepatitis and many other diseases can be traced to the unsanitary disposal of human excreta. ASHA should have a bathroom in her house.

4. The social consequences of lack of sanitation has given rise to manual scavenging which is banned. A sanitation movement both in the interest of social equity and prevention of diseases is to be taken up on a priority basis. All dry buckets should be converted to two pit compost flush toilet. All sanitation workers are to be provided with protective gear and medically examined annually.

5. Explore replicating on a large scale the experience of Sulabh Shauchalaya a low-cost sanitation technology.

6. Consider introducing where not already done toilet complexes with biogas plants in respect of district/taluka hospitals and CHCs.

7. Introduce environmental sanitation in all schools in the rural areas/urban slums etc.

8. To promote health education and awareness particularly with respect to drinking water and sanitation, consider the SWAJAL Project of U.P. being implemented with World Bank assistance that not only aims at providing drinking water in rural areas but covering a range of development initiatives including non-formal education, hygiene and environmental sanitation awareness and women's development initiatives.

9. Distribution of key micronutrients and addressing the problem of nutrition and anemia among women and children.

10. Building up an effective health system capacity so as to clearly focus on important health outcomes spelt out in National Health Policy 2002. The outputs to be achieved and outcomes projected to be in line with the Millennium Development Goals.

11. Broader range of drug regimens to be considered. A systematic effort to be made to analyze which approaches work and those which do not.

12. Promote high volume care for lower surgical procedures like cataract surgery where lower level workers could be appropriately trained to substitute for more expensive and difficult cases/surgeries.

13. Promotion of exercise and yoga as stress reducing factors to help in arresting obesity, diabetes and other life-style diseases.

14. Need to bring about a shift from specific project to programme support. Also ensure that releases are performance based with focus on final outcomes as in the case of RCH Phase-II.

15. Focus public resources for revitalizing and strengthening public facilities in disadvantaged areas and consider the feasibility/desirability of purchasing curative care from the private sector.

16. Professionalize service delivery by appropriate measures for increasing the number and quality of medical and nursing colleges.

- Ensure distributive equity across States by encouraging establishment of new medical colleges where there is a shortage.
- Increase public investment in the poor performing States to establish medical/nursing colleges or alternatively provide incentives to the private sector to set them up and regulate them effectively so as to ensure that there is no compromise in the standards and quality of care.
- Draw up an action plan to fill up the vacancies of the teaching faculty in medical colleges.
- Consider reviving the scheme of reorientation of medical education programme for preparing doctors to work in rural communities.
- Improve payment systems and design suitable incentives particularly housing and other facilities for retaining skilled doctors and specialists from moving into the private sector.

17. Better motivation and periodic training for multi-purpose workers and ANMs. Improvements to be also effected in the quality of training for nurses. According to the NCMH in 2004, 61.2% of nursing schools/colleges were found to be unsuitable for teaching. Though these were derecognized by the Indian Nursing Council they have no impact as they continue to function with a permission of State Nursing Council.

18. Uniform system of reporting of data by the State and their validation is very essential for policy making. The format designed for NRHM would be the starting point but efforts will need to be made to monitor data relating to outputs set against the outcomes envisaged. This will involve coordinating with other related Departments as public health services including water and sanitation cuts across different players at the Central and State levels.

19. Availability of timely data on physical progress would have a bearing on the allocations to be made under different services/segments within and outside health. The impact of these changing allocations alongwith expenditure incurred will need to be tracked appropriately through matrices in national health accounts. The National Health Accounts brought out for 2001-02 should be continued on an annual basis and systematically refined to act as a tool to policy makers for making investment decisions and tracking financial flows in the health sector.

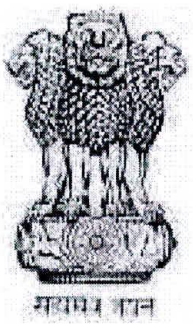
REPORT OF THE WORKING GROUP ON

HEALTH OF WOMEN AND CHILDREN

FOR THE

ELEVENTH FIVE YEAR PLAN

(2007-2012)



GOVERNMENT OF INDIA
PLANNING COMMISSION

NEW DELHI

CHAPTER - 1

INTRODUCTION

This Working Group under the Chairmanships of the Secretary (H&FW) was formed in the context of formulation of the Eleventh Five Year Plan (2007-12) and was to deliberate on issues related to health of Women & Children. The composition of the working Group is given in **Annexure I**. Following were the specific terms of reference for the Group.

i) Assessment of procedures for estimating Mortality/Morbidity in women & children.
ii) Review of ongoing major Reproductive and Child Health programmes.
iii) Review of the functioning of family welfare infrastructure and manpower in rural and urban areas and suggesting measures for rationalizing, restructuring the infrastructure, strategies for improving efficiencies of implementation of the programme and for the delivery of services.
iv) Methods for improving Reproductive and Child Health activities at secondary and tertiary care levels.
v) Projecting financial/ physical requirements for implementation of these programmes during the Eleventh plan.
vi) Other recommendations relevant to the above topics.

2. While deliberating on the tasks assigned to it, the Working Group took note of the strategies and approaches articulated in the National Programme Implementation Plan (PIP) for the second phase of the Reproductive and Child Health (RCH-II), Implementation Framework document for the National Rural Health Mission (NRHM), findings / recommendations made by the National Commission on Macroeconomics and Health (NCMH), 10th Plan Mid-term Appraisal document, Approach Paper (draft) for the 11th Plan prepared by the Planning Commission and documents prepared by other stakeholders.

3. The Working Group noted that the NRHM holds the biggest potential so far for improvement in the health status of women and children, making it possible thereby to achieve the MDG goals. The Broad Framework for Implementation of NRHM is given in **Annexure II.** However, the challenge lies in the implementation of the Mission particularly in tackling the issues identified in the 11th Plan Approach Paper

prepared by the Planning Commission, namely, non-availability absenteeism of doctors/health providers in the rural areas, low levels of skills in medical professionals , inadequate supervision/monitoring of the programme etc.

The Working Group was of view that while NRHM and RCH-II address many critical issues of concern to the health of women and children, the ambit of these programmes needs to be widened in the 11th Plan to address additional concerns. Therefore, an attempt has been made to prepare a self-contained document responding to the issues to be considered, keeping in view the strategies and interventions already included in the RCH-II and the NRHM, however, suggesting what needs to be done beyond these programmes.

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CHAPTER - 2

A REVIEW OF PROCEDURES FOR ESTIMATING MORTALITY AND MORBIDITY IN WOMEN AND CHILDREN

1. Mortality and morbidity indicators in a country provide a broad profile of the status of its health and economic conditions and also reflects the lifestyle of the people contributing to chronic diseases. Such data also reflect the responsiveness of the health institutions in tackling major diseases; and chronic conditions like obesity, malnutrition, eating habits, geriatric conditions etc, the geographical spread of the incidence; and other related factors.. Though such data is typically culled out from available records like death certificates, municipal records, hospital records, etc, it is often corroborated through random surveys of the household. In India, the Registration of Births and Deaths Act, 1969 (RBD) is coordinated and administered by the Registrar General and Census Commissioner of India (RGI) and designated State level authorities in the State Govts. Though the registration of births and deaths is mandatory under the RBD Act, yet the extent of registration of births and deaths is not satisfactory across the states. Consequently, the proportion of births and deaths that are reported and registered through the official machinery, on an average, is only around 58% and 54% respectively. To supplement it, the Sample Registration System (SRS) of the RGI also provides periodic estimates of births, deaths, mortality rates like CDR, IMR etc. cross classified by rural-urban residence status and also by gender. The SRS is a dual record system and involves continuous enumeration of births and deaths in a sample of villages/ urban blocks by a resident part-time enumerator, followed by an independent six monthly retrospective survey by a full-time supervisor. It is perhaps the largest demographic sample survey in the world covering over a million households and six million population. The Vital Statistics Division of the Office of the Registrar General, India at national level, coordinates, looks after implementation of the system, formulates and prescribes requisite standards, provides appropriate instructions and guidance, and undertakes tabulation and analysis of data and its dissemination in the form of SRS Bulletin, Annual Report and Life Tables.

2. The RGI is taking various initiatives to improve the Civil Registration System (CRS). However, these initiatives are mainly related to several provisions of the RBD Act and mainly focus on how to improve administering the RBD Act, 1969, like making people themselves responsible for registration of births and deaths making penalities more stringent etc.. The proposed changes have been circulated to the major stakeholders for their comments before a final shape is given to the RBD Act. Another initiative being proposed is the National Photo-Identity Card (NPIC) System, which is being conceived/evolved and is going to be piloted in a few States. It is however relevant to mention that the success of any RBD activity needs to be linked to the socio-economic life of its citizens. Thus the necessity of a Birth Certificate for School admissions, passport etc; a Death Certificate for property transfer to heirs ; media messages; etc are all such initiatives to improve the CRS.

Mortality and Morbidity Indicators estimated through Surveys carried out under MoHFW programmes

3. **National Family Health Survey (NFHS)** : The main feature of NFHS is to provide important demographic and health database in India covering fertility and family planning, mortality and morbidity, health, health care and nutrition and also prevalence of HIV/AIDs. The first round of NFHS was conducted in 1992-93 and the second round during 1998-99. The current survey of NFHS was undertaken during 2005-06 covering 1.1 lakh households and interviewing about 2.3 lakh eligible men and women. The results of a few states are being disseminated while those at national level are expected during end of 2006-07.

4. **District Level Household Surveys (DLHS)**: Since the indicators estimated through SRS and NFHS are confined to state level only, the concept of providing similar indicators at district level had been perceived through DLHS. While first round of DLHS was undertaken in 1998-99, the second DLHS was undertaken during 2002-04. The results of the second round of the DLHS (2002-2004) were released in March, 2006 to serve as the Base-line survey for the NRHM. The

preparatory work for the third round of the DLHS (2006-2007) is on and would serve as the Mid-line Survey of the NRHM. The DLHS-II covered 1000 households per district and the DLHS-III would have a varying sample size ranging from 1000 to 1500 households in each of 600 odd districts in the country depending on the variability of health parameters. The DLHS-III would yield estimates for ANC and immunisation services, safe deliveries, contraceptive prevalence rate, RTI/STI, HIV Aids, utilisation of services etc.

5. Worldwide, about 500,000 women die every year from pregnancy and childbirth related causes and most of these deaths occur in developing countries (WHO, 1999). Reliable national estimates of maternal mortality are not available for most countries since most of the demographic surveys do not have samples large enough to produce reliable direct estimates of maternal mortality. Both NFHS and SRS suffer from these limitations. However, an attempt had been made by the office of the Registrar General of India to estimate MMR through verbal autopsy and the results are expected shortly.

6. The successful implementation of NRHM and tracking the impact of interventions under it require reliable estimates of mortality and morbidity at the district level. Since none of the existing mechanisms provide district level estimates, there is an urgent need to evolve a system that can provide suitably reliable district level estimates of IMR, MMR, leading causes of death and morbidity.

7. Recently, the National Commission on Population (NCP), chaired by the Hon'ble Prime Minister, desired that an **Annual Health Survey (AHS)** be carried out to prepare a Health Profile of all the Districts in the country. The MoHFW explored the feasibility of involving the machinery of the National Sample Survey Organisation (NSSO) and the Registrar General of India. A Task Force has been set up under the Chairmanship of Addl DG (Stats), MoHFW, to identify the list of indicators that ought to be collected at the District-level, its frequency/ periodicity and also to suggest the infrastructure required for undertaking the Survey. This Task Force has met once and discussed various issues and alternatives as also the

status of the AHS vis-à-vis the DLHS and the machinery required for undertaking the survey.

8. The RGI had submitted a proposal for undertaking the AHS by strengthening the SRS network which was examined by the Task Force and it was of the opinion that the proposal needs to be revised keeping in view the overall data requirements (scope and periodicity) that would be necessary to prepare a District Health Profile which could cover both morbidity and mortality aspects. The Task Force was of the opinion that the major Health Indicators at the District Level do not change that frequently and thus it would be economically and technically desirable to spread out the survey work over a period of 2 to 3 years so that each District is profiled once in 2 to 3 years. A revised proposal from the RGI is awaited. Once the AHS is commenced and the process stabilised, the possibility of phasing out the DLHS can also be explored.

9. The Government of India set up a permanent National Statistical Commission (NSC) on 1st June 2005 and its members are from various fields of specialization on social and environment statistics, population and health etc. The functions of the NSC among others also include evolving standard statistical methodologies and strategies for data collection of core statistics. Therefore the issue of carrying out the Annual Health Survey, including the development of methodologies should be referred to NSC.

Problems in making estimates – remedial suggestions

10. In India, as brought out elsewhere, the data reporting machinery under the RBD Act does not capture all the births and deaths, except those that occur in Health Institutions. Further, the social aversion towards performing autopsy, except per force in medico-legal cases, makes the information on causes of death weak and susceptible to errors. Thus the data reporting system being weak, the causes of death, as ascertained from the official records also fail to be flawless and the position is dismal for deaths occurring in private health institutions and for deaths at home.

In view of the incomplete coverage from the data reporting system under the Civil Registration System (CRS) and the inadequacies of the Sample Registration System (SRS) in terms of its coverage and scope, it is necessary to explore the feasibility of capturing this information through periodic surveys till such time the CRS can be strengthened.

11. Village Health Surveys

The Implementation Frame work approved by the Union Cabinet includes a proposal for having periodic village level (Health) household surveys to be conducted by ASHA (Accredited Social Health Activist) the Community Worker with the support of village Health & Sanitation Committee. If this can be strengthened it would provide for a system of reporting & collection of data at the village level, facilitate development of village block & District Level Health Action Plans under NRHM.

12. **Suggestions :** The Working Group made the following suggestions in this regard:-

Improve the record keeping system in hospitals and health institutions (both public and private) by specifying mandatory records and registers to be maintained and regularly updated, inter-alia specify formats and periodicity of statutory returns. The steps involved in this would include:

- Amendment of RBD Act – to make registration of births and deaths mandatory while also making it more ***citizen-friendly***. Using Health Workers as a medium for providing information on incidence of births and deaths; and as a medium for delivery of birth and death certificates as an ***outreach activity***. This would aim to improve the coverage of the CRS and SRS. However, it may not be able to capture the detailed cause of death vis-à-vis the ICD-10.

- Computerization of births and deaths including making the process on-line/web-based through e-governance initiatives.
- Promulgate a Health Information Act that would make it mandatory for registered Health Institutions and medical practitioners, both Private and Public, to provide

periodic information on specified returns. This aims to capture information from births and deaths that are attended to in registered institutions and by medical practitioners.

- The States prepare an Eligible Couple Register (ECR) for the Health and Family Welfare interventions on the basis of a household survey in the villages undertaken by the Health Workers (ANMs etc). While some States update the ECR each year, the position varies in other States. However, as the record keeping process of the household survey is by and large manual, it is susceptible to the errors of manual updation including omissions and duplication. Some States like Andhra Pradesh have undertaken a Household Survey and have given unique FW numbers to each household, which is updated each year and the ECR is computerised at the PHC level. If expanded, this could form the ***frame for tracking births and deaths*** that could then be followed up by focussed surveys.

- Strengthen the Monitoring of Information and Evaluation System (MIES) for NRHM and to explore the possibilities of enacting a Health Information Act.

- Concurrent Monitoring through Medical Colleges. The State of Uttar Pradesh has piloted a scheme of concurrent monitoring and evaluation through the Medical Colleges. This protocols developed under this pilot could be used as a model for evolving an independent mechanism to monitor the RCH indicators along with the causes of death [see **Annex-III** for a more detailed description].

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CHAPTER – 3

REVIEW OF MAJOR REPRODUCTIVE AND CHILD HEALTH PROGRAMMES

RCH Project, Phase-I

1 The first phase of Reproductive and Child Health (RCH) Programme was launched in 1997 by integrating all on-going fertility regulation and maternal and child health schemes of the Ministry under a single umbrella, adopting a holistic target free approach[1].

The specific objectives for the RCH I project were set as assisting the National Family Welfare Programme (NFWP) to:-

(a) improve management performance by nationwide implementation of policy change referred to as the "participatory planning approach,"' and institutional strengthening for timely, coordinated utilization of project resources;
(b) improve quality, coverage and effectiveness of existing FW services;
(c) progressively expand the scope and content of existing FW services to include more elements of a defined package of essential reproductive and child health (RCH) services; and
(d) in selected disadvantaged districts and cities, increase access by strengthening FW infrastructure while improving its quality.

Impact of RCH-I: An assessment

2 Conceptually, RCH-I was designed to promote decentralization and offer a broad-based financial envelope to the States. However, the project came to represent a stream of schemes, each having its own norms and reporting requirements, which called for very strong capacities in the Directorates of Health & Family Welfare in the States. Since the States' capacities varied, the results have not been uniform (Table-3.1). The following weaknesses were identified in the program :

- There was limited involvement of States in designing the Project and, therefore, limited ownership of the programme by the States.
- The pace of implementation was slow.

[1] Adoption of the so-called Target Free Approach, which was positioned as the 'USP' of the Programme, actually meant to re-orient the fertility regulation interventions so that the services are rendered according to the clients' choice. This was the central theme under lying the Community Needs Assessment Approach.

- Low utilization of public health facilities.
- Infrastructure (that was planned) was not completed within the project timeframe.
- Limited management capacity at various levels.
- Weak financial management systems.
- Project lacked vision and policy guidelines.
- RCH-I was implemented as a project; there was a need to incorporate well defined outcome indicators.
- RCH-I had a "one size fits all" design.
- RCH-I suffered from "stand alone" project approach with little focus on sector management and reform and strengthening of systems.
- RCH-I focused almost exclusively on the supply side.

Table-3.1: Targets and achievements under RCH-I (selected indicators)

Impact /outcome Indicator	Base line estimate	Target	Actual / latest estimate
Infant Mortality Rate	74 (SRS, 1995)	60	63 (SRS, 2002)
Contraceptive Prevalence Rate	47.7% (RHS-I, 1998-99)	60 %	52% (RHS-II, 2002-03)
Institutional Deliveries	35% (RHS-I, 98-99)	60%	40% (RHS-II, 2002-03)
% of children fully immunized	52% (RHS-I, 98-99)	60%	44.6% (RHS-II, 2002-03)
Unmet needs for family planning services [% of couples wanting to limit or space but not currently using any FP method]	19.5% (RHS-I, 98-99)	Less than 10%	15.9% (RHS-II, 2002-03)

3 One of the key goals of the project was to reduce the disparities in RCH between the regions, socio-economic groups, etc. However, comparison of RHS data for EAG states[2] for both the rounds of Rapid Household Surveys indicate no reduction in disparities in RCH status (3.2). Home visit by outreach workers have declined everywhere but more sharply in rest of the country than the EAG states.

[2] Bihar, Chhatisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh, Uttaranchal

Table-3.2: Comparison of EAG States with All India Performance

	RHS I 1998-99		RHS II^ 2002-03		Gap (India - EAG)	
Indicator	India (%)	EAG (%)	India (%)	EAG (%)	1998-99	2002-03
CPR any method	48.6	33.7	49.0	41.4	11.0	7.6
Unmet Need	25.3	31.6	18.6	21.9	-6.0	-3.3
Full ANC	31.8	18.1	20.1	8.4	13.7	11.7
Instl. Delivery	34.0	19.7	46.9	24.1	14.3	22.8
Safe Delivery	40.2	26.7	62.1	39.4	13.5	22.7
Full Immunization	54.2	41.8	49.5	36.6	12.4	12.9
Home visit*	14.8	9.8	6.4	4.7	5.0	1.7
^ Based on 50 % of districts covered in Phase I of Round II * Any Health Worker during 3 months prior to survey						

Sector Investment Programme

4 In 1997, GoI and European Commission signed a Financing Agreement for channeling latter's financial and technical assistance to the National Family Welfare Programme. Called the Sector Investment Programme (SIP), the objectives of the partnership was to promote systems development and sector reforms. Under the original Financing Agreement, a grant assistance of 200 million Euros was pledged over a 5-year period. Following a devastating earthquake in Gujurat (January, 2001), the Financing Agreement was amended to provide for an additional amount of Euro 40 million to support the post-earthquake re-construction / re-development work in the State. The programme period has also been amended (current end date of the Financing Agreement is December, 2006).

5 The SIP began with implementation of State and district plans in the 11 participating States. Over time, more States joined taking the number of participating States to 22 consisting of the 8 most backward States (termed EAG States)[3], 8 North-Eastern States and the States of Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Kerala and Maharashtra.

[3] The GOI had set up an Empowered Action Group (EAG) in year 2000 for focussed attention to improve population stabilization issues in the States of Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and Uttaranchal. These States are, therefore, collectively referred to as EAG States.

6 A major weakness of the programme design was that while the overall EC contribution to GOI was known, the programme coverage was not pre-defined in geographical terms, either in terms of the number of States or, within a State, in terms of districts. As a result, while the planning process was emphasising more efficient use of existing resources, the districts and States were appearing to focus on maximising their share under the programme. This led the MoHFW to introduce the so called MoU based financing of sector development activities in the States. Introduction of the MoU mechanism was adopted from a similar concept introduced by the Planning Commission[4] and consisted of following features:

- A pre-announced allocation of funding, taking due account of the degree of backwardness of the state. Thus, 50% of the remaining programme funding at the date of introduction of the system (end of March 2002) was ear-marked for the EAG states, 10% for the north-eastern states, 10% for national activities and 30% for the non-EAG states admitted to the programme;
- A mutually agreed health sector reform agenda. A series of milestones (often consisting of 2 or more sub-milestones) were agreed which would indicate the degree of progress towards implementation;
- An agreed spending plan for the allocation. The valuation of the milestones was calculated on the basis of a rough estimate of the implementation cost of the state's proposed reform agenda as well as other expenditure purposes.
- Advance but performance based funding. Estimated requirement of funds was released upon MoU execution. However, subsequent releases required, besides achievement of agreed milestones, minimum 50% utilization of previous releases.

7 The key elements of the reform processes formalised under the MoUs were drawn from the national level policy documents such as 9th / 10th Five Year Plan, National Population Policy (2000), National Health Policy (2002) etc. and included, among others, the following:

- re-structuring /re-organisation of primary health care delivery infrastructure,
- strengthening of planning and programming skills,
- decentralisation,

[4] Rashtriya Sam Vika Yojana.

- community participation, including establishment of autonomous hospital management societies (Rogi Kalyan Samitis or equivalent) and involvement of Panchayati Raj Institutions (PRI)
- improved logistics and warehousing of drugs and medical supplies,
- strengthening of secondary hospitals for improved access to basic health care services, including emergency services,
- horizontal integration of vertical structures,
- human resource development through cadre re-structuring, multi-skilling, development of training / transfer policy
- re-structuring and strengthening of health management information systems,

A total of 15 MoUs were executed between June, 2003 and February, 2005[5]. The financial performance under the programme has witnessed an acceleration in funds disbursement and utilization after the introduction of the MoU mechanism. The final evaluation of the programme, conducted in July, 2006, has highlighted the use of MoU as a key 'driver' of programme. Facilitation by an independent technical assistance team has been cited as another contributing factor[6].

RCH-II

8. Planning process for RCH-II started in year 2002 with a detailed consultation process involving the States, Development Partners, the civil society and other stakeholders.

The main issues identified during the consultation / preparation processes have been responded to through the design of RCH-II which represents the mid-course correction in the 10th Plan. The specific issues identified during mid-term review / consultations and the measures to address the same under the RCH-II are listed in **Annex- IV.**

The vision underlying RCH-II is to bring about outcomes as envisioned in the Millennium Development Goals, the National Population Policy 2000 (NPP 2000), the Tenth Plan document, the National Health Policy 2002 and Vision

[5] Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, MP, Maharashtra, Orissa, Rajasthan, UP, Uttaranchal and West Bengal. Remaining 9 States were allowed to continue with their existing State plans.

[6] European Commission Technical Assistance (ECTA) consists of a full time team located at New Delhi, another full time team based at Gandhinagar to assist the post-earthquake re-construction work in Gujarat and ECTA State Facilitators in Assam, Bihar, MP, Rajasthan, UP and Uttaranchal.

2020 India, minimizing the regional variations in the areas of reproductive and child health and population stabilization through an integrated, focused, participatory program, meeting the unmet demands of the target population and provision of assured, equitable, responsive quality services.

Table-3.3: RCH-II goals vis-à-vis MDGs, NPP and 10th Plan

Indicator	Tenth Plan Goals (2002-2007)	RCH Phase II Goals (2005-9)	National Population Policy 2000 (By 2010)	Millennium Development Goals
Population growth	16.2% (2001-11)	16.2% (2001-11)	-	-
Infant Mortality Rate	45/1000	35/1000	<30/1000	-
Under 5 Mortality Rate	-	-	-	Reduce by 2/3 from 1990 levels
Maternal Mortality Ratio	200/100000	150/100000	<100/100000	Reduce by ¾ by 2015
Total Fertility Rate	2.3	2.1	2.1	-
Couple Protection Rate	65%	65%	Meet 100% needs	-

The principles underlying the design of RCH-II are as follows:

- Improving health outcomes is a shared responsibility of providers, local governments, households and communities.
- There should be no discrimination in access to essential quality health services.
- The poorest have the right to get value for money being spent by government or out of pocket.
- Service providers should be responsible for outputs and outcomes, suitably empowered, and made accountable within the principle of subsidiary.
- Female children have an equal right to health, emergency medical aid, and to live with human dignity.
- The program would include voluntary and informed choice in administering family planning services. Responsibilities of service providers would be clearly outlined with careful regard for human resources. Clear tasks would be laid out for service providers to provide quality services to meet unmet needs of family planning and spacing methods in desirable quantities.

- The strengths of public and private sectors should be harnessed to achieve the RCH program goals.
- The RCH program will protect people in accordance with the statutes.
- The RCH program efforts will consistently focus on the most vulnerable.

9. The RCH-II also represents another step towards adoption of the so-called *Sector Wide Approach(SWAp),* a process that began with Sector Investment Programme and taken further along under the NRHM. The 'sector' level policies articulated under national Programme Implementation Plan (PIP) have been subsumed and further refined under the NRHM.

Box-3.1: 'Sector' level policies governing RCH-II design and implementation

- Bring about inter-sectoral collaboration through networking at the highest levels and then percolating to the different levels.
- To include public health as a specialization into the medical education curriculum in order to bring out trained public health managers to manage the public health and bringing in public health as a function.
- To revitalize the human resources policy such as district cadres of MOs and block cadres of ANMs and also address the career movement, posting and training issues.
- Open up primary health care to groups of professionals/individuals willing to take on such service provision functions especially at the primary levels accompanied by appropriate governance mechanisms.
- Activating voluntary level societies/ community level workers for bringing in additional funds into the sector (ZSS, RKS+ JSK, ASHA)
- Address adolescent health as an important issue and develop packages for activating this aspect.
- Integrate with the on going National AIDS Control Program (NACP) and establish linkages with HIV prevention programs.
- Develop separate plans for dealing with the problems of vulnerable groups including a tribal action plan and an action plan for the urban poor.

10. The RCH-II is being implemented through State Programme Implementation Plans (PIPs) prepared within broad parameters of national PIP, allowing the States the freedom to choose their own programmatic / management interventions for the

national objective of reducing TFR, IMR and MMR. Funding of the State PIPs is done through Annual Work Plans.

11. The Technical Strategies and interventions relating to Reproductive, Maternal and Child Health envisaged under RCH-II programme are detailed at **Annex-V**.

12. In keeping with the SWAp principles, the programme will be jointly evaluated by the MoHFW, Development Partners and the State Governments on a six-monthly basis. The second Joint Review is scheduled to be completed in mid-October, 2006)[7].

Promoting Institutional delivery

13. Encouraging the pregnant women to deliver in heath centers /institutions has been one of the core strategies for reducing infant and maternal mortality. At the national level, institutional delivery rate prior to the RCH Phase I, as per the NFHS-II (1998-99) was only around 33.6 %. Several new initiatives were taken during RCH-I for improving safe motherhood. The rate of institutional deliveries as per the DHS-II (2002-04) was only 41.5 %. Inter state variations and variations among the different income groups have been quite significant. Though, results of 12 states as per the NFHS-III **(at Annexure- IX)** conducted in 2005-06 are showing an increasing trend too, a large number of women, especially from the poor families living in the weak states still deliver at home. Even among the weaker states, there is significant differential in institutional deliveries between rural and urban areas.

14. The NPP goal aims to achieve overall 80 % institutional deliveries by 2010. The NRHM envisages reducing the MMR and IMR to 100 per 100,000 live births and 30 per 1000 live births by 2012, respectively.

15. As a strategy to change the behavior of the community to access heath institutions for delivery, the Ministry has modified the **National Maternity Benefit Scheme**

[7] The First Joint Review took place in February, 2006.

(NMBS), from that of nutrition improving initiative to that of addressing the entire aspect of maternal health.

JANANI SURAKSHA YOJANA (JSY) – under the XI Five Year Plan (2007-2012)

16. The Hon'ble Prime Minister launched Janani Suraksha Yojana (JSY) on 12th April 2005. The scheme has the dual objectives of reducing maternal and infant mortality by promoting institutional delivery among the poor women.

17. Though the JSY is implemented in all States and UTs, focuses especially in states having low institutional delivery rate. In states where the institutional delivery rate is abysmally low, namely in the states of Uttar Pradesh, Uttaranchal, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam and Jammu and Kashmir have been categorized as Low Performing States **(LPS)**. The remaining states have been named as High performing States **(HPS)**. The institutional delivery rates in key States is given at **Annexure VI.**

18. The scheme is a 100 % centrally sponsored and integrates cash assistance with maternal care. It is funded through the RCH flexi-pool mechanism. The JSY scheme targets -

- All pregnant women in the low performing States (LPS).
- All BPL pregnant women of age 19 years or above, in High performing states (HPS)
- All ST and ST pregnant women from both LPS & HPS states,

19. Scale of Cash Assistance per delivery:

Category	**Rural Area**		Total	**Urban Area**		Total
	Mother's Package	ASHA's Package	Rs.	Mother's Package	ASHA's Package	Rs.
LPS	1400	600	2000	1000	200	1200
HPS	700		700	600		600

- **In LPS states**: Mother's package is available to all women **including all SC and ST women**, delivering in any public or accredited private institutions. No age or

BPL certification would be insisted upon. Similarly, restriction on number of childbirths has also been removed.

- **In HPS states:** Mother's package is available to all BPL pregnant women including all **SC and ST women,** aged 19 years and above, up to 2 births, delivering in any public or accredited private institutions.
- In addition, all BPL pregnant women aged 19 years or above **preferring to deliver at home** will receive cash assistance @Rs.500/- per delivery, up to 2 live births.

20 ASHA package available in LPS and NE states consists of transport assistance to the mother and compensation assistance to the ASHA in the rural areas. In the urban areas, the money is only for ASHA to meet her transactional cost of accompanying the pregnant women for delivery. In addition, the scheme has **other benefits:**

(a) If hospitalization for delivery is followed immediately by Tubectomy / laparoscopy, the beneficiary would get compensation money available under the existing Family welfare scheme at the hospital itself.

(b) Where Government specialists are not available in the Govt's health institution, for managing complications, assistance up to Rs. 1500/- per case is being given to the health institution **for hiring services of experts** in a Government medical facility. **If a private medical expert is not available,** expert doctors working in the **other Government set-ups** may even be empanelled, provided his/her services are spare.

21. Under the **Tenth plan,** a sum of Rs. 500.00 crores was allocated for NMBS of which around Rs.212.00 crores was released to the states. It is anticipated that around Rs.200.00 crores would be expended this year. Due to the recent modifications approved by the Mission Steering Group in the meeting held on 22.9.2006, the estimated cost of implementation, as per the existing parameters is anticipated as follows:

Year	Estimated Requirement of fund **(In crores)**
2007-08	250.00
2008-09	300.00
2009-10	350.00
2010-2011	400.00
2011-12	450.00
Total	**1750.00**

Reivew of the Universal Immunization Programme. (UIP)

X Plan

Immunization Programme in India was introduced in 1978 as Expanded Programme on Immunization with limited reach mostly in urban area. The programme was universalized in 1985-86 to cover six vaccine preventable diseases under Universal Immunization Programme in phased manner and covered all districts in the country by 1989-90. The reported coverage data from 1990 to 2005-06 is at **Annexure VII**. In 1986, the programme became part of the Technology Mission and monitored under 20 point programme by Prime Minister's Office. From 1992, the programme formed a part of the CSSM programme and subsequently under RCH programme from 1997.

The district level survey conducted in 2002-04 (**Annexure-VIII**) indicated that the immunization coverage has decline in the country when compared to 1998-99 district level survey. This decline has been more pronounced in the EAG States, NE States. Under the NRHM immunization has been the thrust areas and more focus has been given to improve the coverage. Some of the intervention carried out for the first time to improve coverage are as under

Introduction of AD syringe : In the immunization programme glass syringes were used after sterilization for injection. The INCLEN study revealed that 17% of the injections were due to immunization and 2/3 of the injections given were unsafe. In order to address to injection safety and increase efficiency in the programme the Ministry of Health and Family Welfare introduced Auto Disable (AD) syringe in the immunization programme in the last quarter of 2005. The AD syringe is now been universally available for use in the immunization programme across the country.

The Multi year plan is the basis for strengthened routine immunization. Under this plan the States have made their State specific project implementation plan (PIP) ie PIP part-C of NRHM. The PIPs covers area for strengthening the Service delivery component of Routine immunization. These are:

i. **Alternate vaccine delivery:** The last storage point of vaccine is PHC. For this purpose every PHC and above has been provided with twin set of Ice Line Refrigerator (ILR) and Deep Freezer (DF). Every district has been provided with one vaccine van. The vaccine is being transported from the State HQ to PHC with the help of these vaccines Van. However, there was no support for transportation of vaccine from PHC to village session site, as a result ANM used to collect and transport vaccine to session site thereby consuming lot of valuable time which otherwise could have been use for conducting immunization session. In order to bring in efficiency and fidelity to the program, support has been provided to deliver the vaccine in the village and other outreach session site as per microplan. The flexibility has been provided to use the available local means of transport. However, there has to be appropriate maintenance of record for transparency.

ii. **Alternate Vaccinators**: It was observe that most of the plan sessions are not held as the vaccinator is not available. In order to ensure that every plan session as per microplan is held, a provision has been made for alternate vaccinators who are not

part of the system by providing honorarium @ Rs 350 per session conducted. Therefore, such session will be conducted either at Urban Slum, Un-served or under-served areas. In order to operationalised the alternate vaccinator each district should have list of such vaccinator prepared well in advance so that these worker could be pressed for conducting sessions at the short notice.

iii. **Social Mobilization** : Social mobilization of beneficiaries by the ASHA (Accredited Social Health Activist) / Link Worker / Aanganwari worker (AWW) / local RI mobilizer etc is one of the important activity to improve coverage. The social mobiliser should be assign specific task of mobilising (i) all children who dropped out the last session. For this purpose ANM will prepare list of defaulter using Tickler boxes/bags/other methods and hand over one copy to the mobililiser. (ii) Social mobiliser to prepare a list of all new born delivered in between two sessions mobilised them for vaccination. (iii) Besides this she would also inform all other beneficiaries the next date of vaccination and mobilised them. For this purpose ASHA or link worker is provided Rs 150 per session in ASHA State and Rs 100 in non ASHA state.

iv. **Strengthening Supportive supervision** : Each district has been provided a sum of Rs 50,000 for mobility support to carryout supportive supervision. In bigger State a sum of Rs 1,00,000 has been provided at the State level for the mobility support of the State officials for supporteive supervision. Each such visit should be followed by a written report of the visit and feedback to all other sessions on the observations.

v. **Half yearly meeting at State with districts :** Support has been provided for organisiting half yearly meeting with district officials at the State. A central government representative must be invited in such meeting.

vi. **Support for POL :** In order to run genset some State has been provided support of POL.

vii. **Printing :** Printing of Immunization card, Immunization register, temperature chart, tickler box etc must be carried out by the State. There will be no further supply from the center. However, to maintain universality of these immunization cards, immunization register, State will stick the design and format of the center.

viii. **Downsizing BCG vaccine vial :** The BCG vaccine vial has been down sized from 20 dose to 10 dose to ensure that the vaccine is available in every session site.

ix. **Computer assistant** : for e-reporting and e-monitoring

x. **Miscellaneous** Support for POL etc to run gen-set for maintenance of cold chain

Hepatitis B vaccination : The Hepatiotis B vaccine has been introduced as a pilot project in 33 district and 15 cities with support from GAVI. With the successful implementation of the pilot project in has been decided to expand the Hepatitis B vaccination in the 11

good performing States were the evaluated coverage of DTP 3rd dose is more than 80% with plans to expand in the remaining States.

Japanese Encephalitis (JE) vaccination : JE vaccination using SA-14-14-2 vaccine has been carried out in the 11 high risk district covering children between 1 to 15 years of age starting from May 2006 and approximalely 9.03 million children received JE vaccine during this campaign. It is planned to cover the remaining high risk district in phase manner.

SURVEILLANCE OF VACCINE PREVENTABLE DISEASES

Although reporting of VPDs is a component of the CNAA reporting format, the Department of Family Welfare has to resort to the data made available by CBHI since the CNAA reporting is neither regular nor complete.

In order to further strengthen the VPD surveillance certain new initiatives have been taken.

Measles Surveillance has been integrated with the existing AFP surveillance in three states of Tamil Nadu, Karnataka and Andhara Pradesh and there are plans to expansion to other States.

Neonatal tetanus (NT) elimination

NT is a global goal; elimination is defined as an annual rate of less than 1 case of NT per 1000 live births in every district in the country.

The Government of India (GOI), Universal Immunization Program (UIP) is planning to demonstrate elimination of Maternal & Neonatal Tetanus in the country by 2009. Already in seven States (Andhra Pradesh, Kerala, Tamil Nadu, Karnataka, Maharashtra, Haryana, and West Bengal) this validation exercise has been carried out. It is planned to validate the remaining States in the next three year. For this purpose 6 to 7 states are identified each year. The Union Territories and smaller states will be clubbed for validation purpose.

The validation process involves collection of district wise data for the last three year for TT pregnant women coverage, Institutional delivery rate, NNT cases etc. The said data is used for identification of worst performing district where chances of finding NNT higher compared to other district. The identified district is then surveyed for Lot Quality Assessment Cluster Sampling surveys (LQA-CS.) Through LQA all death of IMR are subjected to verbal autopsy for identification of NNT death.

Recommendations after validation of NNT elimination:

(i) maintaining high TT vaccination coverage to pregnant women,
(ii) improve institutional delivery practices
(iii) Strengthen surveillance of NNT.

Polio Eradication Programme:

10th Plan Period

During the 10th plan period remarkable progress has been made in controlling the transmission of polio virus in India. Compared to 1600 cases detected in year 2002, only 66 cases were reported in 2005 throughout the country. The geographical spread also declined from 159 districts in 2002 to 35 districts in year 2005. Of the three main types of virus causing polio, type 2 was eliminated in 1999 (with the last case identified in western Uttar Pradesh). The type 3 virus is only circulating in Moradabad district of UP. The type 1 polio virus, the main cause of disease in India, had been eliminated from all but parts of two states – western Uttar Pradesh, and northern Bihar. Of the 14 genetic families of type 1 virus circulating in 2002, 12 genetic families have become extinct and only 2 are in circulation.

This year has seen an outbreak of disease in Moradabad, western UP which now threatens the substantial gains made over the last few years. Data on the pulse polio vaccination campaign coverage showed that in late 2005 and early 2006, increased numbers of children did not receive the polio vaccine. This gave an opportunity to the polio virus to maintain its circulation and infect and paralyse the susceptible children This polio virus from UP has now re-infected other districts in UP and other states which had previously eliminated the polio virus circulation. During this year so far 352 cases have been reported from the country out of which 312 are from UP, 20 from Bihar, 5 each from Haryana and Uttaranchal, 2 each from MP and Maharashtra and one each from Delhi, Chandigarh, Punjab, Gujarat, Jharkhand and West Bengal.

A new scheme of **corrective surgery and rehabilitation of polio affected children** was approved for undertaking corrective surgery of 20,000 affected children in the age group of 3-18 years during 2006-07 and 2007-08 as pilot for which a provision of Rs.20cr. have been made. A scheme for its implementation has already been prepared by a committee under the Chairmanship of Additional Director General Health Services. The same has also been examined by the IFD and concurred. The scheme is being disseminated initially to the States having high incidences of polio in the past for undertaking corrective surgery at the district / state hospitals by involving NGOs already in the for mobilization and other supports. Funds for this scheme will be routed through State Health Societies under NRHM.

11th Plan Period:

The current strategy of pulse Polio Programme of vaccinating the children between 0-5 years of age during NID and SNIDs will be implemented during the 11th Plan period to achieve zero transmission and obtaining polio free certification. To get certification, the country will sustain the zero transmission status for consecutive three years.

The Scheme of corrective surgery may also be undertaken during 11th plan period to provide facility of corrective surgery to cover the remaining polio affected children in the age group of 3-18 years.

XI Plan

- Continuation of the existing programme
- Continue expansion of Hepatitis B vaccine in the country
- Phase expansion of JE vaccination to high risk districts
- Introduction of newer vaccine in the immunization programme based on disease burden or recommendation by the experts.

Interventions under the NRHM

The Implementation Frame Work under NRHM (Annexure II) as approved by the Union Cabinet takes a holistic view of Primary Health Care in the country especially in relation to its goals of reduction of IMR, MMR and TFR. The infrastructure/logistical support for providing drugs and equipments and availability of manpower,r requirements, for making facilities fully functional, leading to service guarantees and clear health outcomes have been fully taken care of under the Mission. However, some of the additional issues as noted above need to be fully addressed to improve the health status of women and children under the Five Year Plan.

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CHAPTER – 4

REVIEW OF THE FUNCTIONING OF THE FAMILY WELFARE INFRASTRUCTURE.

State of Public Sector Service Infrastructure

1. When the Family Welfare Programme was initiated in the early 1970s, the infrastructure for providing maternal and child health and family planning services was inadequate at the primary health care level, and sub-optimal in the secondary and tertiary care levels. In order to quickly improve the situation, the Department of Family Welfare, Government of India created and funded post-partum centres, urban family welfare centers/health posts and provided additional staff to the then existing block level facilities (usually block PHCs). In addition, the posts of ANMs in the sub centres, created after the initiation of the Family Welfare Programme, were also funded by the Department. The Department of Family Welfare also created state and district level infrastructure for carrying out the programmes and setting up training institutions for pre/in-service training of personnel. All these activities were being funded through Plan funds.

2. Over the last three decades, there has been considerable expansion and strengthening of the health care infrastructure by the States. Family welfare services are now an integral part of services provided by primary, secondary and tertiary care institutions. The staff funded by the Department of Family Welfare under the scheme of rural family welfare centres and post partum centers are state health services personnel functioning as part of the state infrastructure. In view of this, the Ninth Plan recommended that the funding should be taken over by the state Department of Health. States have since taken over the responsibility of funding post-partum centers and rural family welfare centers from 1 April 2002.The fact remains, however, that service delivery network remains extremely weak both in terms of physical infrastructure as well as human resources. Resource mismatch makes the matters worse: specialists are posted to a facility not meant / equipped to provide specialist services and vice versa[8].

[8] Planning Commission report on *Evaluation of Functioning of Community Health Centres.*

3. Although 8th, 9th and 10th Plans have been emphasizing that infrastructure planning requires equal emphasis on reorganizing / re-structuring various types and kinds of health facilities, most planning exercises by the States have treated the primary health care infrastructure to consist only of Sub-centres, Primary Health Centres and Community Health Centres; ISM dispensaries and hospitals and the public health facilities outside the administrative control of the health department are most often than not ignored.

4. There have been two large scale facility surveys during RCH-I period, both conducted by International Institute of Population Sciences, Bombay. The first survey was conducted in 1999 covering 221 districts, followed by another survey in 2003 covering the remaining 370 districts.

5. The findings of the first facility survey (1999), covering 210 district hospitals, 760 FRUs, 866 CHCs and 7,959 PHCs indicated acute shortage /inadequacy of basic physical infrastructure at the PHC and CHC levels (Table 4.1).

4.1: Summary of findings of the facility survey 1999

Sl. No.	FACILITY	Availability in FRU	Availability in CHC	Availability in PHC
1.	Own buildings	98%	96%	92%
2.	O T	93%	86%	----
3.	Labor room	36%	28%	28%
4.	Over head water storage tank & pump	82%	71%	----*
5.	Blood bank / BSF / Linkage with D BB	17%	9%	----
6.	Diesel Generator	71%	52%	----
7.	Telephone	80%	62%	20%
8.	Computers	2%	2%	----
9.	Functional vehicle	73%	61%	29%

*62 % of the PHCs surveyed are having water supply facility only but not having storage tanks & pumps, etc.

6. The 2003 survey, which covered a much larger number of facilities, including the AYUSH facilities[9], confirmed the findings of the first survey (Tables 4.2, 4.3 and

[9] Survey covered 370 district hospitals, 1882 First Referral Units, 1625 CHCs, 9688 PHCs, 18385 Sub-centres, 2151 AYUSH Hospitals and 7064 AYUSH dispensaries.

4.4). However, the second survey also revealed the huge latent potential for improved access through reorganizing /re-structuring exercise (Table 4.5).

Table 4.2: Functional adequacy of District Hospitals, FRUs and CHCs

	District Hospital	FRU	CHC
Proportion (%) of facilities having....			
Separate aseptic labor room	44.4	33.3	31.0
Telephone facility	96.7	74.8	62.2
OPD facility for RTI/STI	56.4	24.9	16.0
Linkage with district blood bank	67.5	27.2	15.8
Regular blood supply	60.5	27.7	10.5
Quarters for obstetrician / gynecologist	40.1	28.5	21.0
Facility adequately equipped in terms of ...			
Infrastructure @	93.0	76.0	63.0
Medical Staff @@	80.0	37.0	14.0
Paramedical Staff (*)	32.0	37.0	41.0
Supply(**)	45.0	32.0	24.0
Equipment #	84.0	61.0	46.0
Referred delivery cases attended during last three months ##	37.0	39.0	46.0

@ Overhead tank and pump facility, electricity in all parts of the hospital, availability of generator, telephone, functional vehicle, laboratory, operation theatre, separate aseptic labour room

@@ Includes obstetrician / gynecologist, pediatrician and anesthetist.

(*)Include staff nurse, ANM, pharmacist, laboratory technician, PHN, health assistant male and female.

(**)Includes tubal ring, set of standard surgical kits, emergency obstetric care kit, new born care kit, RTI/STI kits and delivery kit 1

Includes Boyle's apparatus, shadow-less lamp and oxygen cylinder.

Calculated from the number of health facilities which have conducted delivery.

Table 4.3: Proportion of Primary Health Centres adequately equipped

Proportion (%) of PHCs having ……..	
Own building	89.2
Labour room	48.4
Telephone	19.8
Staff quarter for MO	52.0
Proportion (%) of PHCs adequately equipped (at least 60%) in terms of ……	
Infrastructure @	31.8
Staff@@	48.2
Supply $	39.9
Equipment $$	41.3
Training #	19.9
@ Includes tap water, regular supply of water, electricity, telephone, toilet, functional vehicle and Labour room available @@ Includes Medical officers male, female and paramedical staff $ Includes IUD kits, delivery kits, mounted lamp supply of OP, measles, IFA large and ORS $$ Includes deep freezer, BP instrument, autoclave, labour room equipment, MTP suction and oxygen cylinder # Includes only medical officers who are currently in position	

Table 4.4: Adequacy of inputs at the Sub-centres

Proportion (%) of Sub-centres having ….	
Own (govt) buildings	45.2
Electricity	43.2
Health Worker (Female) in position	95.1
Health Worker Male in position	67.7
Paramedical staff trained in IUD insertion	1.2

Table 4.5: Availability of infrastructure under AYUSH network

Proportion having	AYUSH Hospital	AYUSH dispensary
Own Building	16.7	30.0
At least one Bed	92.8	Not applicable
Medical Officer in Position	76.8	83.2
Sisters in Position	72.4	62.0
Staff Nurse in Position	76.0	87.2
Pharmacist in Position	84.4	77.1

7. Following issues emerge from the above data generated through the facility surveys:

- A very significant part of the so-called infrastructure shortage – number of PHCs, number of doctors, nurses and pharmacists can be met through the re-organization exercise. This is particularly so as a large proportion of AYUSH hospitals / dispensaries and PHCs are operating from rented premises.
- Non-availability of asceptic labour rooms and lack of access to safe blood are the leading barriers to access to emergency services.
- Technical skills of providers are extremely weak or inadequate with less than 2% ANMs having received IUD insertion training and less than 20% of PHC medical officers having received adequate training.
- The NRHM initiatives addresses the infrastructure gaps. The associated institutional reforms [functional autonomy to Rogi Kalyan Samiti] will also contribute to improving efficiencies. However, the delivery network will remain sub-optimal unless the investments are preceded by a district specific health infrastructure development plan based on a resource mapping exercise. This is a specialized task calling for a steering role for the Ministry of Health & Family Welfare. The working group noted that facilities surveys have been under taken by the States prior to their taking up their upgradaion to IPHS. While under the RCH-II all Community Health Centers in the country are being converted to First Referral Units (FRUs) their upgration to IPHS has also been taken up under NRHM. IPHS is being finalized by the task force for PHCs and Sub-centers. The Implementation Framework of NRHM approved by the Union Cabinet fully takes the entire infrastructure issues under consideration. A few States [e.g. UP and Chhattisgarh] have developed GIS based tools which can be used for this exercise.

8. *Public - Private Partnerships : Issues and options*

Public – Private Partnerships can be used as an effective instrument for achieving public health goals and a number of initiatives have been introduced by the States with positive results. Some recent examples are:

- Establishment of diagnostic services and CT-scan units in West Bengal; positive results led the State to expand the arrangement to rural hospitals / block PHCs in the year 2004.
- Management of 133 ambulances by NGOs for emergency transport in rural areas of West Bengal.
- Outsourcing of ambulance services, diet, laundry, cleaning, installation and management of X-ray /pathology services in Bihar

- Contracting-out of PHCs in Arunachal Pradesh, Bihar, Karnataka and Gujarat
- The "Chiranjivi" scheme in Gujarat for delivery care of BPL women.

While efforts to strengthen and optimize existing public facilities with more investment and better management should receive priority, collaborating with non-government stake holders will still be required due to the Governments' limitations in mobilizing the required capital for meeting the growing demand and more importantly, the expertise and skill base that the private sector attracts. Collaboration must, however, be funded on a regulatory framework and insurance system licensed by the GoI to ensure that there is no adverse selection and risk-sharing is facilitated.

Evidence and good practice from several developed countries show that protocols exist that can be usefully adopted and adapted to address quality and appropriateness of care, measurable against volumes delivered at different levels of the system from hospital to outpatient and ambulatory care. The single most effective way of managing the sector and speeding the restructuring process of provider markets is though standards and treatment protocols and having a system for enforcing them. Standard-based payment systems help in enforcing provider accountability and also check unethical practices and conflicts of interest. However, they need intensive and extensive training and capacity building aiming at deploying controllers and assessors who are conversant with new techniques of technical and financial audit and evaluation. There is also a need to establish parameters and system for remuneration of outsourced accredited providers, based on health accounts that are currently lagging in the health system

9. The Challenge of human resource requirements Health being a human resource intensive sector, it is imperative that a long term perspective plan is developed and adopted to ensure that adequately trained and effective health providers are available in sufficient numbers at all levels. While this issue has been debated in the past, the distribution of medical colleges, nursing and paramedical training institutions have come up in different parts of the country without any relationship with the geographical needs [**Annex-IX (a)**] development of specialties in different disciplines have not kept pace with the actual requirement of specialized services, particularly in public health field and in rural areas. The total annual intake for specialists related to maternal care, for example, is highly insufficient [**Annex-IX (b)**]

10. The nursing education sector is characterized by a similar skewed distribution: UP has only 30 ANM training centres for 70 districts and Bihar only 27 whereas Andhra Pradesh has 30 ANM training schools, 182 institutions recognized for GNM course and 107 recognized for B.Sc. Nursing course [**Annex-X (a)**]. Although there has been a sharp increase in the nursing training institutions in the last couple of years [**Annex-X (b)**] indicating number of institutions existing as on 31st March, 2004), the network will need to be expanded on a much faster rate to be able to catch up with global doctor-nurse ratio.

11. Nursing *Educational Institutions*

Independent Nurse Practitioner: The Indian Nursing Council developed a new nursing course / discipline called the *Independent Nurse Practitioner(INP)*. The INP course is an 18 month post basic diploma in midwifery[10] and imparts all skills necessary to handle obstetric emergencies (including blood transfusion). The INP is authorized to and can establish her own, independent practice. The course has been piloted by INC in West Bengal and 2 of the 4 trainees have been assigned to a CHC to manage obstetric cases.

The Sri Lanka experience quoted in the 10th Plan MTR indicates that the IPNs, whose skill levels would be equivalent to that of the Sri Lankan Public Health Midwife (PHM), would be a more suitable choice for MCH care at the community level, that is, the Sub-centre. Given the limited training capacity, such large numbers can not be trained in the immediate future. As such, this option can not be exercised till the training capacities has been expanded. However, the INP training must be started in as many places as possible and the States should consider sponsoring suitable candidates who are willing to establish their private practice in rural areas. The Hospital Management Societies should also be encouraged to engage the INPs on the basis of a monthly retainer-ship basis plus payments linked to cases handled.

12. Following other suggestions are made with regard to Nursing Educational Institutions:
    - A dedicated Nursing and Paramedical Manpower Division / Unit should be established at the National and State levels.

[10] In INC terminology, Diploma in General Nursing and Midwifery (GNM) and B.Sc. Nursing are called basic nursing course.

- All medical colleges should be mandated to establish a College of Nursing offering courses in B.Sc. Nursing, M. Sc. Nursing and Post-Basic Diploma courses in specialty nursing areas.
- All District Hospitals should be mandated to establish a school of nursing offering ANM and Diploma in General Nursing and Midwifery,
- Smaller hospitals in public sector having at least 30 OBG beds should be encouraged to start ANM training

- Private sector hospitals having at least 30 OBG beds should also be allowed to start ANM training programme and the concerned State Government should allow selected public sector rural facilities for their field training.

13. Deployment of AYUSH practitioners for MCH services: The availability of AYUSH doctors is far better in the rural areas. The hospital management societies should be encouraged to engage these personnel for conducting deliveries of the training in the hospitals. The compensation package should be on similar lines as that suggested above for the INPs if their midwifery skills can be upgraded through their attachment to district hospital.

14. Medical Education Institutions

The Ministry under the NRHM had setup a task force on medical education. The recommendations made by the task force are far reaching. The Ministry needs to examine them early for the purpose of adopting them to meet the manpower requirements in the rural areas.

15. A contributing factor for poor access levels in the rural areas is that the States have not sanctioned sufficient staff / specialist positions for the rural areas. On an overall basis, for example, the States had sanctioned only 7582 posts of specialists till September, 2005, as against the requirement of 13384 posts for the 3346 CHCs (1 surgeon, 1 OBG specialist, 1 physician and 1 pediatrician for each CHC)[11].

16. The NRHM has adopted a set of revised staffing norms for the Sub-centres, PHCs and CHCs which will add to the human resource needs in the rural areas. For the ANM, the requirement has doubled as 2 ANMs have been sanctioned for every Sub-centres. The Sub-centre will continue to be the critical facility for the

[11] Rural Health Statistics, 2006 (Ministry of Health and Family Welfare)

delivery of health care of women and children in rural and remote areas where no other facility exists. The objective of making 2000 facilities as fully functional FRUs will require at least 2000 specialists in OBG, anesthesia and pediatrics (each) and 20,000 staff nurses. The objective of making 10,000 PHCs as 24/7 facilities equipped for institutional delivery implies an additional requirement of 30,000 Public Health Nurse Practitioners / General Nurse and Midwives (GNMs). The NRHM provides for additional manpower at CHC, PHC & Sub-Center levels. The NRHM provides for additional manpower at CHC, PHC & Sub-Center levels. A number of strategies and interventions have been proposed to overcome the shortage of manpower in rural areas including compulsory rural postings using interns, using NGOs, multi skilling of doctors, pre service training for medical graduates in anaesthetic skills, training in Obstrectic Care and Skilled Birth Attendance, providing for local recruitment of nurses/ANMs, contractual appointment of doctors, training of Rural Medical Practitioners. Given the capacity constraints, it is unlikely that these numbers will become available in the immediate future. Therefore, a systematic, district specific approach will be required to expand the network of fully equipped facilities. Following suggestions are made in this regard:

- Ensure that the district hospitals are fully equipped for the FRU services,
- Strengthen midwifery skills of existing ANMs/Nurses through their attachment to district hospital; add more facilities for skill-development training after they are fully equipped for FRU services,
- Involvement of non-govt. stake holders in running facilities. Scale up the training of doctors/ANMs in Skill Birth attendance.
- Training of RMPs.
- Setting up of a nursing cadre in all States.

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CHAPTER - 5

METHODS OF IMPROVING REPRODUCTIVE & &CHILD HEALTH SERVICES AT THE SECONDARY AND TERTIARY LEVELS.

A separate Working Group has been set up by the Planning Commission to look into the different aspects of service delivery at the Secondary and Tertiary levels. The group, therefore, did not go into the details of this issue.

CHAPTER – 6

FINANCIAL AND PHYSICAL REQUIREMENTS FOR IMPLEMENTATION OF RCH PROGRAMMES UNDER 11th PLAN.

The RCH-II carries an approved outlay of Rs 40,000 crore over a 5-year period FY 2005-06 to FY 2009-10. As the NRHM has since been approved for implementation over a 7-year period starting FY 2005-06 including 11th Plan period and its outlays subsume the same for RCH-II, the base cost of extension of RCH-II till the end of 11th Plan period appears to have been covered under NRHM outlays, as indicated in Table 6.1 (assuming an annual growth of 10% for sustaining on-going technical interventions).

Table 6.1: Budgetary requirements for RCH-II during 11th Plan (Rs crore)

Year	Total NRHM budget			RCH-II budget			Balance for other NRHM activities
	Non-recurring	Recurring	Total	DBS	EAP	Total	
2005-06			6500	2507	3693	6200	300
2006-07	500	9000	9500	2771	3729	6500	3000
2007-08	1350	11000	12350	2949	4551	7500	4850
2008-09	4290	13000	17290	3137	6363	9500	7790
2009-10	8000	16206	24206	3312	6988	10300	13906
2010-11	10000	23884	33884	*3650*	*7690*	*11340*	*22544*
2011-12	5000	42439	47439	*4015*	*8460*	*12475*	*34964*
Total –NRHM duration			151169			*63815*	*87354*
Total -11th Plan period			135169			51115	
No separate budget approved; figures are estimates assuming 10% nominal enhancement							

The Working Group recommends following two suggestions keeping in view the integration of RCH-II with NRHM :

- Allow the external grant assistance (with zero debt liability) mobilized by the Ministry of Health and Family Welfare as an additionality to the domestic budget, as recommended in the 10th Plan Mid-Term Evaluation Report.

- Develop a year –wise, activity wise detailed expenditure plan for the NRHM, integrating RCH-II [and other schemes which are subject to international negotiations / agreements] but retaining their separate 'financial' identity within the same.

The NRHM Implementation Frame Work approved by the Union Cabinet has projected the financial and physical needs to fully operationalise the mission to meet its stated goals based on the projections made by the National Commission on Macroeconomics and Health in its report. The group felt that this projections fully cover the requirements of the Maternal and Child Health programmes.

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CHAPTER - 7

RECOMMENDATIONS

Some of the important issues concerning women and children's health and welfare which requires special and immediate attention during the 11th Plan are listed below, on the basis of the recommendations made by the Group.

- *Gender Based Violence*

Large-scale datasets indicate that one in every four women has experienced spousal violence at least once in her marital union. From an epidemiological view point the violence results into unwanted pregnancy, pregnancy complications, miscarriages and other maternal morbidities. Besides impacting reproductive health, violence also results in variety of medical and psychological problems, which may assume serious consequences requiring access to treatment and counseling facilities.

The Eleventh Five-Year Plan should consider public health interventions so as to prevent gender-based violence in community and also address screening and management of violence through the network of public health institutions.

- *Pre-natal Sex Selection – Need for stabilising sex ratios*

While family size has become smaller, with more and more families wanting only two children, the desired family composition in terms of the sex of the children has not changed. The preference for at least one son is evident. This further puts daughters at risk, as families want to ensure that one out of the two children is a son. This finding is further reaffirmed in the recent NFHS 3 study. Low ratios further lower women's status – violence, movement of 'brides', resurgence of negative cultural practices such as polyandry.

Both the mid-term appraisal of the tenth and the eleventh plan approach paper emphasise the need for stabilising the child sex ratios and for ensuring effective implementation of the Act accompanied by efforts to influence behaviour change. The Ministry is actively addressing the issue. To improve the implementation of the Act it has recently constituted a National Support and Monitoring Cell. The inspection committee of the Ministry is undertaking routine visits to district for assessment of records and full

compliance of the providers with the provisions of the Act. Computerisation of the records is underway to facilitate close monitoring and timely action against defaulters. Other steps for integration of the issue of pre-natal sex selection in the ministry's initiatives and programmes include the following:

- Community awareness through ASHAs,
- integration of the issue in training modules and programme and in IEC/BCC material,
- adding information on sex selection to the medical curriculum,
- including indicators on improvement in sex ratios and birth registration as a part of monitoring target/indicators under RCH 2/NRHM
- inclusion of the issue in district level programme planning and implementation processes,
- promoting greater convergence with other departments of ministries such as DWCD, Panchayati Raj, Youth affairs for a comprehensive service side and community level response to address the issue

Additional strategies that can be addressed through the Eleventh Plan include:

- Developing targets and monitoring : Develop clear targets of natural **sex ratio at birth** (SRB) which is 105 males per 100 females and give financial benefits to states that have improved SRB. The Annual Health Survey should also include estimating the SRB at the district level from 2007 on wards. Planning Commission could also consider obtaining independent estimates of the SRB at the district level each year. The states should be encouraged to monitor the SRB of the institutional deliveries by parity for each of the facility and for the districts.
- Resource transfers: Improvement in SRB should be included as one of the indicators for arriving at decisions on planned assistance to states.

- Data for tracking: Improve data availability, access and quality, especially on sex ratio at birth. The option of PHC level enumeration can be considered to monitor the sex ratio at birth on a routine basis. Adequate financial resources should be programmed for capacity building, awareness generation and strict enforcement of PC & PNDT Act. The PNDT Act should be amended to provide for the independence of the Appropriate Authorities at the district level from the district health administration and their accountability to the National Board under the Act. The amendment should also provide for the National Appropriate Authority to supervise the functioning of the state and district level authorities..

- **Promoting institutional deliveries**

(a) As per the demand from the HPS states, enhancement of cash assistance to mother to be brought at par with that of the LPS states. This would raise the cash benefit from the existing scale of Rs.700/Rs.600 per delivery to Rs.1400/Rs.1000/- per delivery in rural and urban areas, respectively.

(b) Considering that the poor families whether in LPS or HPS states, avoid going to institutions mainly due to lack of financial support, and that non availability of BPL certificates impedes access to the benefits of the scheme in many states, like in the LPS states, all pregnant women in the HPS states, accessing public or accredited private health institutions should be brought under the fold of JSY.

(c) Considering that obtaining age certificate is difficult specially in the rural areas due to low rate of registration of births, like in LPS states, age restrictions should be removed in HPS states.

(d) Considering that women with high fertility and parity are at grater risk of mortality and that the JSY is mandated for safe motherhood, restrictions on number of child, like in LPS states, should be removed for HPS states.

(e) The annual estimated cost of the implementing the JSY would be around Rs.500.00 crores.

- *Infertility*

Nearly 5-8 percent couples report infertility in India. The social consequences of infertility are disaster to women, as "female sex" is invariably blamed for not producing children. She may be abandoned and husband may remarry. Prevention and management of infertility in primary health care setting should be included in service package delivered in the NRHM, especially in the states with performing well on programme delivery indicators.

- *Problems of older women*

  Though reproductive life span ceases at 50 years, many women continue to suffer with health problems related to reproductive systems. Community based studies have indicated significant burden of diseases attributable to chronic reproductive morbidities such as obstetric fistula, pelvic organ prolapse, and osteoporosis.

- *Reproductive cancers*

  Data from cancer registry in the country suggest high prevalence of cervical and breast cancer amongst women. In the XI FYP attempt should be made to introduce HPV (Human Papilloma Virus Vaccine) in the programme especially in the states with high prevalence. Similarly centre of excellence should be developed to screen, diagnose and manage reproductive cancers in women.

- *Mental Health problems of the women*

  Burden of diseases attributable to mental health problems amongst women is also high. The range of mental health problems includes anxiety disorders, depression and psychosis. Considering limited access to qualified mental health professionals, primary mental health care should be an integral component of NRHM. Several evidence based interventions such barefoot counselors (may be ASHAs) could be considered as a first point of care.

- *Occupational health problems of women*

  The proportion of women (15-59 yrs) in terms of workforce participation has gone up in the last census to 40 percent. Most women are in the unorganized sectors and are not covered for safety provisions. Health hazards to women working in agriculture include exposure to pesticides, injuries due to mechanized farm equipments and snakebites etc. Women are employed in hazardous occupation such as mining, chemical industries and plantations as well. Similarly women are also exposed to indoor air pollution especially in rural areas, where clean fuels are still not available for cooking purposes. Indoor air pollution is also linked with causation of Acute Respiratory Infections amongst under-five children.

- *Women and Children' health in Disaster situations*

  Pregnant women are susceptible to trauma in disaster situations and high incidence of spontaneous abortions in the post disaster period is very well documented. Women are also more vulnerable to violence during these situations. Similarly, children invariably bear the brunt, as they are unable to run away from the disaster sites. Since mobility is restricted during disasters, programmes should focus on addressing health care needs of women and make provisions for supply of reproductive health commodities including sanitary kits.

Other recommendations:-

(a) The Working Group noted that the strategies and interventions proposed under the NRHM and RCH-II are extremely relevant and hold the biggest potential for improvement in the health status of women and children. The thrust on implementing these strategies must receive the highest priority during the 11th Plan.

(b) There is a need to enlarge the ambit of NRHM and RCH-II technical interventions to include issues such as gender based violence, pre-natal sex selection, infertility, problems of older women, reproductive cancers, mental health problems, health related ability issues occupational health problems of women and women and children's health in disaster situations.

(c) Both NRHM and RCH-II need to adopt a life cycle approach towards the health of women and children and in doing so convergent action in association with related programmes of the health sector as well as of associated Ministries needs to be taken and reflected in the women and child health programme of the Ministry. This amongst others will require specific components to be built in for women and children in the HIV / AIDS, Communicable (T.B., Malaria, Leprosy etc.) and Non-Communicable Diseases (Cancer, Diabetes, Circulatory diseases etc.) programmes. Similarly nutrition including anemia, substance abuse (tobacco, alchohol, drug dependence), sanitation, drinking water and other issues having a bearing on the health of children and women would need to be attended by developing effective linkages so as to ensure a holistic approach towards the health care of women and children.

(d) The issues identified in the Approach Paper to 11th Plan like absenteeism of doctors/health provides, low levels of skills, inadequate supervision/monitoring and callous attitude are critical issues and must be

attended to with all seriousness at both the Central Government and State Government levels.

(e) The working group is concerned that there is no accurate methodology for estimating Maternal Mortality Rates at State and District levels. Steps must be initiated by the RGI to ensure 100 percent registration of births and deaths need to be implemented quickly. ASHAs/Health Workers should be fully utilized. In the registration of births and deaths at the village level.

(f) Despite all the investments made till now the service delivery network remains extremely weak both in terms of physical infrastructure as well as human resources. The development of appropriate crucial technical manpower resources has to be in the long term matched with the field requirements of various specialties considered crucial for saving lives of women and children. The group recommended the up scaling of the trainings initiated by the States to ensure availability of Skilled manpower to enable operationalisation of First Referral units in the Community Health Centres to deal with Obstetric emergencies and childhood illness.

(g) While efforts to strengthen and optimize existing public facilities with more investment and better management should receive priority, collaborating with the private sector, especially the NGO network will still be required due to the Governments' limitations in mobilizing the required capital for meeting the growing demand and more importantly, the expertise and skill base that the private sector attracts. Collaboration must, however, be funded on a regulatory framework and insurance system licensed by the GoI to ensure that there is no adverse selection and risk-sharing is facilitated.

(h) Organisational set up and structure of State Health Departments / Directorates differ widely. While there should be no objection to this, Central Government must insist on clearly defined roles and responsibilities at least where it is making financial contribution.

(i) The Block with the block hospital as the apex technical and administrative unit has been rightly positioned as the basic unit for organizing service delivery. There is need to have atleast one CHC functional per block in the first phase of RCH-II. However, in order to make the block health system optimally functional, there is a need to develop model organogram and job description for each functionary. This is necessary for functional integration of the various technical interventions including TB, Malaria and HIV /AIDS.

(j) There is an urgent need for developing model protocols for realizing the communitisation objective defining the processes and procedures involved.

(k) Health Worker Schemes taken up by some States to cover urban slums under RCH-II needs to be expanded to all the States. They should be linked to health posts and hospital to establish a referral chain.

(l) Considering that a rapid expansion in infrastructure manpower is envisaged under NRHM, there is a need for involving the district level institutions in training and skill upgradation. Therefore, a systematic, district specific approach will be required to expand the network of fully equipped facilities. Following suggestions are made in this regard:

- Ensure district hospital is fully equipped for the FRU services,
- Strengthen midwifery skills of existing ANMs through their attachment to district hospital; add more facilities for skill-development training after they are fully equipped for FRU services,
- Adopt multiskilling as the main strategy for strengthening service delivery, both for doctors as well as the paramedical staff.

(m) Nursing / paramedical manpower will have a crucial role in delivery of health care services and for achieving the MDG goals. The Group strongly feels that investments in this area will provide more returns in terms of impact and therefore makes following suggestions:

- All states should take action for having a nursing cadre set up in the State.
- A dedicated Nursing and Paramedical Manpower Division / Unit should be established at the National and State levels.
- All medical colleges should be mandated to establish a College of Nursing offering courses in B.Sc. Nursing, M. Sc. Nursing and Post-Basic Diploma courses in specialty nursing areas.
- All District Hospitals should be mandated to establish a school of nursing offering ANM and Diploma in General Nursing and Midwifery,
- Smaller hospitals in public sector having at least 30 OBG beds should be encouraged to start ANM training
- Private sector hospitals having at least 30 OBG beds should also be allowed to start ANM training programme and the concerned State Government should allow selected public sector rural facilities for their field training.

- The cadre of Independent Nurse Practitioner developed by the Indian Nursing Council needs to be rapidly expanded through sponsorship.

(n) The internship period in medical colleges is mostly utilized for preparing for the post graduate courses at the cost of actual field training. This is the major reason for the doctors posted to rural areas not being in tune with the realities of health care in field setting. Ways have to be found to arrest this phenomenon.

(o) The allocation of seats under PG medical courses needs urgent revision to provide for more seats in the specialties required in the rural areas.

(p) The recommendations made by the Task Group on Medical Education setup by the Ministry need to be examined and finalized quickly to revamp medical education in the country to match the needs of NRHM.

(q) Rural Medical practitioners should be trained and utilized in providing improved quality of service to the rural population.

(r) A robust MIS needs to be developed by triangulating data and information from routine reporting systems, external programme evaluations and community based assessments of programme implementation.

(s) The National Statistical Commission should approached to guide on the modalities for undertaking the Annual Health Survey at the district level.

(t) The PNDT Act should be amended to provide for the independence of the Appropriate Authorities at the district level from the district health administration and their accountability to the National Board under the Act. The amendment should also provide for the national Appropriate Authority to supervise the functioning of the state and district level authorities. ASHAs/Health Workers should be fully involved at the village level for advocacy and tracking of cases.

(u) The NGO Sector should be revitalized and Strengthened to the support activities under NRHM. The MNGOs selection for all districts in the country should be completed and they be fully utilized for a variety of delivery of services under various national programmes.

(v) The IMNCI (Integrated Management of Neonatal and Childhood Illnessess) needed to be extended to all the districts phase-wise. Home based New born care, which is envisaged for ASHAs under NRHM should be taken up on priority.

(w) All interventions for Maternal and Child Health need to be closely monitored component-wise by the ministry.

(x) Managerial Support as envisaged under the RCH-II/ NRHM should be extended to the block & PHC level to track funds and monitor the programmes.

(y) Organization of monthly health day by integrating ICDS and health activity should be closely monitored and every level and periodically evaluated to provide women and children all essential services and monitor and implement nutritional intervention.

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Annexure I (a)

No.2(10)/06-HFW
Government of India
Planning Commission
(Health, Family Welfare & Nutrition)

Yojana Bhawan
Sansad Marg
New Delhi
25th May 2006

ORDER

Subject: **Constitution of Working Group on Health of Women & Children for the Eleventh Five Year Plan (2007-2012)**

In the context of formulation of the Eleventh Five Year Plan (2007-12) it has been decided to set up a Working Group on Health of Women & Children under the Chairmanship of Secretary, Department of Health & Family Welfare, Government of India. The composition of the Working Group is as follows:

1	Secretary(HFW), Ministry of Health and Family Welfare, New Delhi.	Chairman
2	Secretary/Representative, Ministry of Women & Child Development, New Delhi.	Member
3	Director Genera, ICMR, Anasri Nagar, New Delhi.	Member
4	Representative, DGHS, New Delhi.	Member
5	Secretary(Health), Government of Tamil Nadu	Member
6	Secretary(Health), Government of Hamachal Pradesh	Member
7	Secretary(Health), Government of Kerala	Member
8	Secretary(Health), Government of Maharashtra	Member
9	Secretary(Health), Government of Uttar Pradesh	Member
10	Shri A.Kumar, Director(H&FW), Planning Commission, New Delhi	Member
11	Shri K.M.Gupta, Director, Ministry of Finance, New Delhi.	Member
12	Representative, WCD Division, Planning Commission, New Delhi.	Member
13	Dr.S.Menon, Faculty, NIHFW, New Delhi.	Member
14	Dr.F.Ram, Professor, IIPS, Mumbai	Member
15	Dr.Dileep Mavalankar, Professor, IIM, Ahmedabad	Member
16	Dr.V.a.Pai Panandiker, New Delhi.	Member
17	Dr.Saswati Swain, NIAHRD, Cuttack	Member
18	Ms.C.P.Sujaya, New Delhi.	Member
19	Dr.H.Helen, CEPHAD Foundation, Hyderabad	Member
20	Ms.Sundari Ravindran, Hon.Prof.RCH, Achuta Menon Centre for Health Sciences, Thiruvananthapuram.	Member
21	Dr.Enakshi Thakural, Centre for Child Rights, Mumbai	Member
22	Dr.Nerges Mistry, FRCH, Mumbai	Member
23	Dr.Hanif Lakrawala, Sanchetna, Ahmedabad	Member
24	Ms.Ena Singh, Assistant Representative, UNFPA, New Delhi	Member
25	Ms.Sudha Tewari, Pariwar Sewa Sansthan, New Delhi.	Member
26	Shri Shikhar Agarwal, Udaipur, Rajasthan	Member
27	Joint Secretary, Department of Health & Family Welfare, New Delhi.	Member Secretary

2. The Terms of Reference of the Working Group will be as under:

1) To assess the procedures for estimating mortality / morbidity in women and children with respect to:
   a) Sources of data
   b) Accuracy, reliability and geographical distribution
   c) Problems in making estimates
   d) Suggested remedial measures in ongoing programmes
   e) Assessing the achievement in reproductive and child health vis-à-vis targets set in the National Population Policy 2000 & NRHM.
   f) Initiatives during Eleventh Plan to obtain better estimates.

2) To review ongoing major reproductive and child health programmes with respect to:

   a) Objectives, strategies, targets and achievements, outlays and expenditure during 10th Plan period
   b) Problems identified, midcourse corrections made during the 10th Plan
   c) Proposed strategies, objectives, programmes, targets and outlays during the Eleventh Plan
   d) Health manpower-current status, projected requirements, initiatives to achieve required number and type of manpower.

3) To review the functioning of family welfare infrastructure and manpower in rural and urban areas and suggest measures for rationalizing, restructuring the infrastructure, strategies for improving efficiency of implementation of the programme and for the delivery of services.

4) To suggest methods for improving reproductive and child health activities at secondary and tertiary care levels through:

   a) Improving NGO / private sector / organized sector involvement in reproductive and child health services;
   b) Increasing financial resources available for reproductive and child health;
   c) Improving utilization of existing facilities

5) To project financial / physical requirement for implementation of these programmes during the Eleventh Plan.

6) To deliberate and give recommendations on any other matter relevant to the topic.

3. The Chairman may form sub-groups and co-opt official or non-official members as needed. The Working Group will submit its report by 31st August, 2006.

4. Smt. Radha R.Ashrit, SRO (H&FW), Room No.343, Planning Commission, New Delhi-110001 will be the nodal officer for all further communications. (Tel.No.23096666-2383. Email ID: radha-pc@nic.in)

5. The expenditure on TA/DA in connection with the meetings of the Working Group in respect of the official members will be borne by the parent Department / Ministry to

which the official belongs as per the rules of entitlement applicable to them. The non-official members of the Working Group will be entitled to TA/DA as per permissible to Grade I officers of the Government of India under SR 190 (a) and this expenditure will be borne by the Planning Commission.

Sd/-
(Ambrish Kumar)
Director (H&FW)
Tel No.23096530
(ambarish.kumar@nic.in)

To Chairman and Members of the Working Group.

Copy to:

1. PS to Deputy Chairman/MOS(Planning)/ Members (KP)/(AS)/(VLC)(BLM)/SH/(BNY)(AH)/Member Secretary, Planning Commission, New Delhi.
2. All Pr.Advisers/Advisers/HODs in Planning Commission
3. Prime Minister's Office, South Block, New Delhi.
4. Cabinet Secretariat, Rashtrapati Bhawan, New Delhi.
5. US(Admin.I)/Pay & Accounts Officer/Accounts-I Section, Planning Commission/ DDO, Planning Commission
6. Information Officer, Planning Commission.

(Ambrish Kumar)
Director(H&FW)

Annexure I (b)

Composition of the Sub Group

Sl.No.	Name & Designation	Sub Group Status
1	Mr.S.S.Brar, JS, MoHFW	Chairperson
2	Dr.Ranjana Kumar, DFID	Member
3	Mrs.Sudha Tewari, Parivar Kalyan Sansthan	Member
4	Dr.Vinod Paul, Professor of Pediatrics, AIIMS	Member
5	Dr.I.P.Kaur, DC (MH)	Member
6	Dr.N.Namshum, DC (Trg.)	Member
7	Dr.M.S.Jayalakshmi, DC (RSS)	Member
8	Dr.Manisha Malhotra, AC(MH)	Member
9	Mr.A.P.Singh, Director(DC)	Member
10	Dr.Rattan Chand, Director (PNDT)	Member
11	Mr.K.D.Maiti, Director (MH)	Member
12	Mr.Sanjeev K.Gupta, Dy.Director(DC)	Member
13	Mrs.Sushma Rath, US (ID & PNDT)	Member
14	Dr.H.Bhushan, AC (MH)	Convenor

Annexure-II

NRHM : BROAD FRAMEWORK FOR IMPLEMENTATION

A. Action at the Central level

1. For development of an effective health system, a broad overview of the current health status, and development of appropriate policy interventions is necessary. Regulations and setting standards for measuring performance of public/private sector in health, issuing guidelines to help the states, development of partnership with non governmental stakeholders, developing framework for effective interventions through capacity development and decentralization including transfer of schemes and financing in the states are areas where the Central Government would continue to play a role. Effective monitoring of performance, support for capacity development at all levels, sharing the best national and international practices, and providing significantly more financial resources to drive reforms and accountability, disease surveillance, monitoring & evaluation will be the thrust of the Central Government's interventions.

B. Leadership of States

2. The NRHM is an effort to strengthen the hands of States to carry out the required reforms. The Mission would also provide additional resources to the States to enable them to meet the diverse health needs of the citizens. While recognizing the leadership role of the states in this regard, it is proposed to provide necessary flexibility to the States to take care of the local needs and socio-cultural variations. In turn, States will decentralize planning and implementation arrangements to ensure that need based and community owned District Health Action Plans become the basis for interventions in the health sector. The States would be urged to take up innovative schemes to deal with local issues. Keeping in view the decentralization envisaged under the NRHM, the States would be required to devolve sufficient administrative / financial powers to the PRIs. At the same time, the States are also required to take action to increase their expenditure on health sector by at least 10% every year over the Mission period. The States would also be expected to adhere to mutually agreed milestones which would be reflected in a MOU to be signed with each State. It may be mentioned here that even though under RCH-II, an effort has been made to integrate a number of schemes, there still exists many schemes for which the funds flow to the States is in a tied manner thus hampering flexibility and presenting difficulties in monitoring them. Verticality of the programmes has also led to

duplication of efforts and thereby wastage of scarce resources. The Central Government on its part would decentralize most, if not all of the schemes to the states. The States would also be supported in their endeavor to build capacity for handling the complex health issues.

C. Institutionalizing community led action for health

3. Nearly three fourth of the population of the country live in villages. This rural population is spread over more than 10 lakh habitations of which 60% have a population of less than 1000. If the Mission of Health for All is to succeed, the reform process would have to touch every village and every health facility. Clearly it would be possible only when the community is sufficiently empowered to take leadership in health matters. The Panchayati Raj institutions, right from the village to district level, would have to be given ownership of the public health delivery system in their respective jurisdiction. Some States like Kerala, West Bengal, Maharashtra and Gujarat have already taken initiatives in this regard and their experiments have shown the positive gains of institutionalizing involvement of Panchayati Raj institutions in the management of the health system. Other vibrant community organizations and women's groups will also be associated in communitization of health care.

4. The NRHM would seek to empower the PRIs at each level i.e. Gram Panchayat, Panchayat Samiti (Block) and Zilla Parishad (District) to take leadership to control and manage the public health infrastructure at district and sub district levels.

- The Village Health and Sanitation Committee (VHSC) will be formed in each village (if not already there) within the over all framework of Gram Sabha in which proportionate representation from all the hamlets would be ensured. Adequate representation to the disadvantaged categories like women, SC / ST / OBC / Minority communities would also be given.
- The Sub Health Centre will be accountable to the Gram Panchayat and shall have a local Committee for its management, with adequate representation of VHSCs.
- The Primary Health Centre (not at the block level) will be responsible to the elected representative of the Gram Panchayat where it is located. All other Gram Panchayats covered by the PHCs would be suitably represented in its management.
- The block level PHC and CHC will have involvement of Panchayti Raj elected leaders in its management even though Rogi Kalyan Samiti would also be formed for day-to-day management of the affairs of the hospital.

- The Zilla Parishad at the district level will be directly responsible for the budgets of the health sector and for planning for people's health needs.
- With the development and capacities and systems the entire public health management at the district level would devolve to the district health society which would be under the effective leadership and control of the district panchayat, with participation of the block panchayats.

5. To institutionalize community led action for health, NRHM has sought amendments to acts and statutes in States to fully empower local bodies in effective management of the health system. NRHM would attempt to transfer funds, functionaries and functions to PRIs. Concerted efforts with the involvement of NGOs and other resource institutions are being made to build capacities of elected representatives and user group members for improved and effective management of the health system. To facilitate local action, the NRHM will provide untied grants at all levels [Village, Gram Panchayat, Block, District, VHSC, SHC, PHC & CHC]. Monitoring committees would be formed at various levels, with participation of PRI representatives, user groups and CBO / NGO representatives to facilitate their inputs in the monitoring planning process, and to enable the community to be involved in broad based review and suggestions for planning. A system of periodic 'Jan Sunwai' or 'Jan Samvad' at various levels would empower community members to engage in giving direct feedback and suggestions for improvement in Public health services.

D. Promoting Equity

6. This is one of the main challenges under NRHM. Empowering those who are vulnerable through education & health education, giving priority to areas/hamlets/households inhabited by them, running fully functional facilities, exemption for below poverty line families from all charges, ensuring access, risk pooling, human resource development / capacity building, recruiting volunteers from amongst them are important strategies under the Mission. These are reflected in the planning process at every level. Studies have revealed the unsatisfactory health indicators of socially and economically deprived groups and NRHM makes conscious efforts to address this inequity. The percentage of vulnerable sections of society using the public health facilities is a benchmark for the performance of these institutions.

E. Promoting Preventive Health

7. As stated earlier, the Health System in the country is oriented towards curative Health. The NRHM would increase the range and depth of programmes on Health Education / IEC activities which are an integral part of activities under the Mission at

every level. In addition it would work with the departments of education to make health promotion and preventive health an integral part of general education. The Mission would also interact with the Ministry of Labour for occupations health and the Ministry of women and child for women and child health to ensure due emphasis on preventive and promotive health concerns.

F. Dealing with Chronic Diseases

8. India has one of the highest disease burdens in the world. The number of deaths due to chronic diseases are expected to rise from 3.78 million in 1990 (40-47% of all deaths) to 7.63 million by 2020 (66.7% of all deaths). Tobacco, cancer, diabetes and renal diseases, cardio vascular diseases, neurological diseases and mental health problems and the disability that may arise due to the chronic diseases are major challenges the Mission has to deal with. The already over stretched health system has to absorb the additional burden of chronic diseases, especially in the rural areas. Both preventive and curative strategies along with mobilization of additional resources are needed. It is proposed to integrate these with the regular health care programmes at all levels.

G. Reducing child and maternal mortality rates and reducing fertility rates – population stabilization through quality services

9. NRHM provides a thrust for reduction of child and maternal mortality and reduce the fertility rates. The approach to population stabilization is to provide quality heath services in remote rural areas along with a wide range of contraceptive choices to meet the unmet demand for these services. Efforts are on be to provide quality Reproductive Health Services (including delivery, safe abortions, treatment of Reproductive tract infections and Family Planning Services to meet unmet needs, while ensuring full reproductive choices to women). The strategy also is to promote male participation in Family Planning. Reduction of IMR requires greater convergent action to influence the wider determinants of health care like female literacy, safe drinking water, sanitation, gender and social empowerment, early child hood development, nutrition, marriage after 18, spacing of children, and behavioral changes etc. Within the health sector, the thrust is on promoting Integrated Management of Neo natal and child care (IMNCI). The main strategy for maternal mortality focuses on safe/institutional deliveries at functional health facilities in the governmental and non-governmental sectors. Efforts to develop competencies needed for Skilled Birth Attendants (SBAs) in the entire cadre of Staff Nurses and ANMs as also in select medical officers will also be undertaken. Regular training of select Medical Officers to administer anesthesia has been taken up. Also multi skill training

of Medical Officers, ANMs and Para-medics will be initiate to close specialist skill gaps. Intensified IEC would be pursued to ensure behavioral changes that relate to better child survival and women's health i.e. breast feeding, adequate complementary feeding of the young child, spacing, age at marriage, education of the girl child. Adolescent health is another area of action under the NRHM. CHCs are being upgraded to FRUs for providing referral services to the mother and child and taking care of obstetric emergencies and complications for provision of safe abortion services and for prevention, testing/counseling in respect of HIV AIDS. Reduction in IMR/MMR will also be closely monitored through social audit, which is being introduced at the Panchayat level.

H. Management of NRHM activities at State / District / Sub district level

Block Level Pooling

10. The success of decentralization experiment would depend on the strength of the pillars supporting the process. It is imperative that management capacities be built at each level. To attain the outcomes, the NRHM would provide management costs upto 6% of the total annual plan approved for a State/district as has been introduced under the RCH-II programme. Apart from medical and para-medical staff, such services would include skills for financial management, improved community processes, procurement and logistics, improved collection and maintenance of data, the use of information technologies, management information system and improved monitoring and evaluation etc. The NRHM would also establish strong managerial capacity at the block level as blocks would be the link between the villages and the districts. At the district level the Mission would support and insist on developing health management capacities and introducing policies in a systematic manner so that over time all district programme officers and their leadership are professionally qualified public health managers. Management structures at all levels will be accountable to the Panchayati Raj institutions, the State Level Health Mission and the National Level Missions/Steering Group.

11. The amount available under the management cost could also be used for improving the work environment as such improvements directly lead to better outcomes. The management structure holds the key to the success of any programme and efforts to develop appropriate arrangements for effectively delivery of NRHM with detailing, will be a priority. Clarity of tasks, fund flows, powers, functions, account keeping, audit, etc. will be attempted at all levels.

12. Based on the outcomes expected in NRHM, the existing staff of Health Departments at SHC, PHC, CHC, Block, District, State and National levels are being carefully assessed to see how structures can be reoriented to deliver more efficiently and effectively. States will constantly undertake review of management structure and devolution of powers and functions to carry out any mid course correction. Block Level Pooling will be one of the priority activity under the NRHM. Keeping in view the time line needed to make all facilities fully functional, Specialists working in PHCs would be relocated at CHCs to facilitate their early conversion to FRUs. Outreach programmes are being organized with "block pooled" CHCs as the nodal point. NRHM will attempt to set up Block level managerial capacities as per need. Creation of a Block Chief Medical Officer's office to support the supervision of NRHM activities in the Block, would be a priority. Support to block level CHCs will also aim at improving the mobility and connectivity of health functionaries with support for Ambulances, telephones, computers, electric connection, etc.

I. Human resources for rural areas

13. Improvement in the health outcomes in the rural areas is directly related to the availability of the trained human resources there. The Mission aims to increase the availability through provision of more than 4 lakh trained women as ASHAs / Community Health Workers (resident of the same village/hamlet for which they are appointed as ASHA). The Mission also seeks to provide minimum two Auxiliary Nurse Mid-wives (ANMs) (against one at present) at each Sub Health Centre (SHC) to be fully supported by the Government of India. Similarly against the availability of one staff nurse at the PHC, it is proposed to provide three Staff Nurses to ensure round the clock services in every PHC. The Out-patient services would be strengthened through posting/ appoint on contract of AYUSH doctors over and above the Medical Officers posted there. It will be for the States to decide whether they would integrate AYUSH by collocation at PHC or by new contractual appointment. GOI support will be for all new contractual posts and not for existing vacancies that States have to fill up. The Mission seeks to bring the CHCs on a par with the Indian Public Health Standards (IPHS) to provide round the clock hospital-like services. As far as manpower is concerned, it would be achieved through provision of seven Specialists as against four at present and nine staff nurses in every CHC (against seven at present). A separate AYUSH set up would be provided in each CHC/PHC. Contractual appointment of AYUSH doctors will be provided for this purpose. This would be reflected in the State Plans as per their needs.

24. Given the current problems of availability of both medical as well as paramedical staff in the rural areas, the NRHM seeks to try a range of innovations and

experiments to improve the position. These include incentives for compulsory rural posting of Doctors, a fair, transparent transfer policy, involvement of Medical Colleges, improved career progression for Medical / Para Medical staff, skill upgradation and multi-skilling of the existing Medical Officers, ANMs and other Para Medical staff, strengthening of nursing / ANM training schools and colleges to produce more paramedical staff, and partnership with non governmental stakeholders to widen the pool of institutions. The Ministry has already initiated the process for the upgradation of ANMs into Skilled Birth Attendants (SBA) and for providing six month anaesthesia course to the Medical Officers. Convergence of various schemes under NRHM including the disease control programmes, the RCH-II, NACO, disease surveillance programme, would also provide for optimum / efficient utilization of all paramedical staff and help to bring down the operational costs.

J. National and State level Resource Centres for capacity development

15. Decentralized Planning, preparation of District Plans, community ownership of the health delivery system and inter-sectoral convergence are the pillars on which the super-structure of the NRHM would be built. The implementation teams particularly at district and state levels would require development of specific skills. Even at the Central level, the program management unit within the MOHFW would need technical and management support from established professionals in the field. The institutions like National and State Institutes for Health and Family Welfare which were primarily conceived as research and training organizations may not fit the bill for this purpose. The National Health System Resource Centre (NHSRC), which is envisaged as an agency to pool the technical assistance from all the Development Partners, would be ideal for this purpose. Mandated as a single window for consultancy support, the NHSRC would quickly respond to the requests of the Centre/ States /Districts for providing technical assistance for capacity building not only for NRHM but for improving service delivery in the health sector in general. It is proposed to have one NHSRC at the national level and another Regional Centre for the North Eastern region. State level Resource Centres will be provided for EAG States on a priority to enable innovations and new technical skills to develop in the health system. In addition to the above a number of already existing reputed bodies with national caliber may be strengthened and facilitated to mentor state health resource centres and district resource groups so that they are able to support the state level planning efforts.

16. The NRHM would also require a comprehensive plan for training at all levels. While efforts are being made to strengthen the NIHFW, the States have been asked to closely examine the training infrastructure available within the state including State

Health & Family Welfare Institute, ANM Training Centres, Medical Colleges, Nursing Colleges etc. and identify the investment required in them to successfully carry out the training/sensitization programmes. Comprehensive training policy is being developed to provide support for capacity building at all levels including PRIs/Community. NRHM will particularly encourage involvement of Medical Colleges and Hospitals to strengthen systems of capacity building in the rural health care set up.

K. Drug supplies and logistics management

17. Timely supply of drugs of good quality which involves procurement as well as logistics management is of critical importance in any health system. The current system in most states leaves much to be desired. However, there are a few notable exceptions like Tamil Nadu which has developed a very effective system of supplies and logistics. Under most of the Centrally Sponsored Programmes, it is the Central Government which does the procurement of equipments and medicines on behalf of the States. Most States are reluctant to take responsibility for procurement primarily because they lack the capacity to take up large scale procurement of goods and services.

18. At the level of the Central Government, with the support of the World Bank and the DFID, an Empowered Procurement Wing (EPW) has been set up which would be the nodal agency for all procurement matters. While as an interim measure, till such time that the capacities are built in the States, the EPW would get rate contracts for drugs, quality testing etc. with the assistance of public sector agencies like HLL, HSCC prepared and share them with the States for their use. In the long run, NRHM would like the procurement to take place in a decentralized manner at the district level. It would take up the capacity building exercise for this purpose in right earnest. It supports State led initiatives for capacity building and setting up State Procurement Systems and Distribution Networks for improved supplies and distribution. In order to take informed procurement decisions, market intelligence is of utmost importance. The EPW is getting a market survey done to collect information about the drugs and vaccines which are procured under the RCH-II. This database, which this market survey would generate, would be updated through annual market surveys. These would be shared with the states to help them in taking informed procurement decisions.

L. Monitoring / Accountability Framework

19. The NRHM proposes an intensive accountability framework through a three pronged process of community based monitoring, external surveys and stringent internal monitoring. Facility and Household Survey, NFHS-II, RHS (2002) would act as the baseline for the mission against which the progress would be measured.

20. While the process of communitization of the health institutions itself would bring in accountability, the NRHM would help this process by wide dissemination of the results of the surveys in a language and manner which could be understood by the general population. It would be made compulsory for all the health institutions to prominently display information regarding grants received, medicines and vaccines in stock, services provided to the patients, user charges to be paid (if any) etc, as envisaged in the Right to Information Act. The community as well as the Patient Welfare Committee would be expected to monitor the performance of the health facilities on those parameters. Health Monitoring and Planning Committees would be formed at PHC, Block, District and State levels to ensure regular community based monitoring of activities at respective levels, along with facilitating relevant inputs for planning. Organisation of periodic Public hearings or dialogues would strengthen the direct accountability of the Health system to the community and beneficiaries. The Mission Steering Group and the Empowered Programme Committee at the Central and the State level will also monitor progress periodically. The NRHM is committed to publication of Public Reports on Health at the State and the district levels to report to the community at large on progress made. The Planning Commission will also carry out periodic monitoring and concurrent evaluation of NRHM. The Mission will also appoint Special Rapporteurs to carry out field visits and supervision of programmes. The NRHM would involve NGOs, resource institutions and local communities in developing this monitoring arrangement. The Mentoring Group on ASHA, the National Advisory Committee on Community Action (which have been constituted with the leading NGOs as their members) and the Regional Resource Centres would provide valuable inputs to the Mission. A wide network of MNGOs, FNGOs / SNGOs would also be providing feedback to the Mission.

21. The periodic external, household and facility surveys would track the effectiveness of the various activities under the NRHM for providing quality health services. Beside these surveys, Supervision Missions would be conducted twice in every state to help monitor the outcomes. A computer based MIS would be developed using the network being set up by the IDSP for rigorous monitoring of the activities.

22. The requirements of audit will apply to all NRHM activities. The National, State and District Health Missions will be subject to annual audit by the CAG as well as by a Chartered Accountant and any special audit that the Mission Steering Group may deem fit. Special audit by agencies like the Indian Public Auditors of India could also be undertaken. Every State will also be supervised by one or more research and resource institutions who may be contracted for this purpose. All procedures of government regarding financial grants including Utilization Certificates etc. would apply to the State and District Health Societies.

23. For the accountability framework to be truly community owned, the effort will be to ensure that at least 70 percent of the total NRHM expenditures are made by institutions and organizations that are being supervised by an institutional PRI/community group.

Monitoring outcomes of the Mission

- Right to health is recognized as inalienable right of all citizens as brought out by the relevant rulings of the Supreme Court as well as the International Conventions to which India is a signatory. As rights convey entitlement to the citizens, these rights are to be incorporated in the monitoring framework of the Mission. Therefore, providing basic Health services to all the citizens as guaranteed entitlements will be attempted under the NRHHM.
- Preparation of Household specific Health Cards that record information on the following - record of births and deaths, record of illnesses and disease, record any expenditure on health care, food availability and water source, means of livelihood, age profile of family, record of age at marriage, sex ratio of children, available health facility and providers, food habits, alcohol and tobacco consumption, gender relations within family, etc, (by ASHA/AWW/Village Health Team).
- Preparation of Habitation/Village Health Register on the basis of the household Health Cards. (By the Village Health Team)
- Periodic Health Facility Survey at SHC, PHC, CHC, District level to see if service guarantees are being honoured.[By district /Block level Mission Teams/ research and resource institutions].
- Formation of Health Monitoring and Planning Committees at PHC, Block, District and State levels to ensure regular monitoring of activities at respective levels, along with facilitating relevant inputs for planning.
- Sharing of all data and discussion at habitation/ village level to ensure full transparency.
- Display of agreed service guarantees at health facilities, details of human and financial resources available to the facility.

- Sample household and facility surveys by external research organizations/NGOs.
- Public reporting of household and health facility findings and its wider dissemination through public hearings and formal reporting.

M. Convergence within the health department

24. The Ministry of Health & Family Welfare [MOHFW] has a large number of schemes to support states in a range of health sector interventions. Many of these programmes pertain to disease specific control programmes. Many others relate to programmes for Family Welfare. Special programmes have been initiated as per need for diseases like TB, Malaria, Filaria, HIV AIDS etc. While the disease specific focus has helped in providing concerted attention to the issue, the weak or absent integration with other health programmes has often led to lack of coordination and convergent action. All central programmes have worked on the assumption that there is a credible and functional public health system at all levels in all parts of the country. In practice, in many parts of the country, the public health system has not been in a satisfactory state. The challenge of NRHM, therefore, is to strengthen the public health institutions like SHC/PHC/CHC/Sub Divisional and District Hospitals. This will have positive consequences for all health programmes. Whether it is HIV/AIDS, TB, Malaria or any other disease, NRHM attempts to bring all of them within the umbrella of a Village/District/State Health Plan so that preventive, promotive and curative aspects are well integrated at all levels. The intention of convergence within the Health Department is also to reorganize human resources in a more effective and efficient way under the umbrella of the common District Health Society. Such an integration within the Health Department would make available more human resources with the same financial allocations. It would also promote more effective interventions for health care. To help the States achieve inter sectoral convergence, appropriate guidelines would be issued to the districts.

25. The pandemic of HIV/AIDS requires convergent action within the health system. By involving health facilities in the programme at all stages, it is likely to help early detection, effective surveillance and timely intervention wherever required. The NACO has presence only from district level upwards. The NRHM would enable the NACO to provide necessary investment and support to the programme at district and sub district levels. While NACO will provide Counsellors at CHCs and PHCs as also testing kits as a part of the NACP – III, it would also help to integrate training on HIV/AIDS to Medical Officers, ANMs, para medicals and lab technicians. Common programmes for condom promotion and IEC are also planned. NRHM seeks to

improve outreach of health services for common people through convergent action involving all health sector interventions.

N. Convergence with other departments

26. The indicators of health depend as much on drinking water, female literacy, nutrition, early childhood development, sanitation, women's empowerment etc. as they do on hospitals and functional health systems. Realizing the importance of wider determinants of health, NRHM seeks to adopt a convergent approach for intervention under the umbrella of the district plan. The Anganwadi Centre under the ICDS at the village level will be the principal hub for health action. Likewise, wherever village committees have been effectively constituted for drinking water, sanitation, ICDS etc. NRHM will attempt to move towards one common Village Health Committee covering all these activities. Panchayti Raj institutions will be fully involved in this convergent approach so that the gains of integrated action can be reflected in District Plans. While substantial spending in each of these sectors will be by the concerned Department, the Village Health Plan/District Plan will provide an opportunity for some catalytic resources for convergent action. NRHM household surveys through ASHA, AWW will target availability of drinking water, firewood, livelihood, sanitation and other issues in order to allow a framework for effective convergent action in the Village Health Plans. The Ministry has constituted an inter Departmental Committee on convergence with the Mission Director as Chairman. This Committee reports to the EPC. Convergence is also envisaged at the level of the MSG which has representation of all the concerned Ministries. Similar mechanisms are available at the State level. Convergence with the Department of Women and Child Development and with AYUSH has been clearly outlined and shared with States. Necessary guidelines on inter sectoral convergence are being issued by the Ministry.

27. The success of convergent action would depend on the quality of the district planning process. The District Health Action Plans will reflect integrated action in all section that determine good health – drinking water, sanitation, women's empowerment, adolescent health, education, female literacy, early child development, nutrition, gender and social equality. At the time of appraisal of District Health Plan, care would be taken to ensure that the entire range of wider determinants of health have been taken care of in the approach to convergent action.

O. Role of Non Governmental Organizations

28. The Non-governmental Organizations are critical for the success of NRHM. The Mission has already established partnerships with NGOs for establishing the rights of households to health care. With the mother NGO programme scheme, 215 MNGOs covering nearly 300 districts have already been appointed. Their services are being utilized under the RCH-II programme. The Disease Control programmes, the RCH-II, the immunization and pulse polio programme, the JSY make use of partnerships of variety of NGOs. Efforts are being made to involve NGOs at all levels of the health delivery system. Besides advocacy, NGOs would be involved in building capacity at all levels, monitoring and evaluation of the health sector, delivery of health services, developing innovative approaches to health care delivery for marginalized sections or in underserved areas and aspects, working together with community organizations and Panchayti Raj institutions, and contributing to monitoring the right to health care and service guarantees from the public health institutions. The effort will be to support/ facilitate action by NGO networks of NGOs in the country which would contribute to the sustainability of innovations and people's participation in the NRHM.

29. A Mentoring Group has already been set up at the national level for ASHAs to facilitate the role of NGOs. Grants-in-aid systems for NGOs will be established at the District, State and National levels to ensure their full participation in the Mission.

P. Risk pooling and the poor

30. Household expenditure on Health Care in India was more than Rs.100, 000 crore in 2004-05. Most of it was out of pocket and was incurred during health distress in unregulated private facilities, leading to the vicious circle of indebtedness and poverty. As a matter of fact, in a country of over a billion people, barely 10 million are covered under the private health insurance schemes. Even if we take into account Social Health Insurance Schemes like CGHS, ESIS etc., the coverage increases only to 110 million of which only 30 million are poor. In order to reduce the distress of poor households, there is therefore an imperative need for setting up effective risk pool systems. Involvement of NGOs and community based organizations as insurance providers and as third party administrators can help to generate more confidence in the risk pooling arrangement being pro-people and in the interests of poor households. Innovative and flexible insurance products need to be developed and marketed that provide risk pooling from government and non governmental facilities.

31. While setting up of effective health insurance system is clearly a very important mission goal, it is realized that the introduction of such a system without the back up of a strong preventive health system and curative public health infrastructure would not be cost effective. Such a venture would only end up subsidizing private hospitals and lead to escalation of demand for high cost curative health care. The first priority of the Mission is therefore to put the enabling public health infrastructure in place.

32. While the private insurance companies would be encouraged to bring in innovative insurance products, the Mission would strive to set up a risk pooling system where the Centre, States and the local community would be partners. This could be done by resource sharing, facility mapping, setting standards, establishing standard treatment protocols and costs, and accreditation of facilities in the non-governmental sector.

33. Primary health care would be provided without any charge. However, in the case of need for hospitalization, CHCs would be the first referral unit. Only when the CHC is not in a position to provide specialized treatment, a patient would be referred to an accredited private facility/teaching hospital. The patient would have the choice of selecting any provider out of the list of hospitals accredited by the District Health Mission. Reimbursement for the services would be made to the hospitals based on the standard costs for various interventions decided by the experts from time to time.

34. It is envisaged that the hospital care system would progressively move towards a fully funded universal social health insurance scheme. Under such a system, the government facilities would also be expected to earn their entire requirement of recurring expenditure including the salary support out of the procedures they perform, while taking care that access to those who cannot pay is not compromised. This system would obviously work only when the personnel working in the CHCs are not part of a state cadre but are recruited locally at the district level by the District Health Mission on contract basis. Since evolving such a system is likely to take some time, at the first instance, it is proposed to give control of the budget of the CHC/ Sub Divisional and District Hospitals to the Rogi Kalyan Samitis or equivalent public bodies set up for efficient management of these health institutions. Efforts to develop risk pooling arrangements as partnerships of the Central, State and local Governments along with community organizations, will be attempted. A possibility of two thirds of the resource support coming from government and one third to be collected from those who can afford to run a public health system based risk pool arrangement would also be experimented with, in partnership with states.

Q. Reforms in Medical/Nursing Education

35. The need for trained human resources, medical as well as para medical for rural areas has already been brought out. The medical / para medical education system would require a new orientation to achieve these objectives. While the existing colleges would require strengthening for increased seat capacity, a conscious policy decision would be required to promote new colleges in deficient states. A fresh look also needs to be given on the norms for setting up new medical colleges under the regulations framed under Indian Medical Council Act to see whether any relaxation is necessary for such areas. The viability of using the caseload at district hospital for setting up Govt / private medical colleges would also be examined. Apart from creating teaching infrastructure at the district level, it would also promote much needed investment and improvement in tertiary care in the district hospitals.

36. The curriculum in the Medical Colleges perhaps give undue emphasis on specialization and tertiary care which is available only in large cities. In the syllabus, the primary health care as well as preventive aspects of health are largely ignored. It is therefore natural for the students to aspire for a career in a big hospital in urban setting. In the process the health care in the rural areas suffers. The Mission would look at ways and means to correct the situation.

37. The NRHM also recognizes the need for equipping medical colleges and other suitable tertiary care centres – including select district hospitals, select not for profit hospitals and public sector undertaking run hospitals for a variety of special courses to train medical officers in short term courses to handle a large number of essential specialist functions in those states where medical colleges and postgraduate courses are below recommended norms. This includes courses from multi skilling serving Medical Officers, specially for anesthesia, emergency obstetrics, emergency pediatrics especially new born care, safe MTP services, mental health, eye care, trauma care etc. Further short term progammes are needed to upgrade skills of nurses and ANMs to that of nurse-practitioners for those centres/regions which potentially have adequate nurses, but a chronic shortage of doctors over at least two decades.

38. The Mission would support strengthening of Nursing Colleges wherever required, as the demand for ANMs and Staff Nurses and their development is likely to increase significantly. This would be done on the basis of need assessment, identification of possible partners for building capacities in the governmental and non governmental sectors in each of the States/UTs, and ways **of financing such support**

in a sustainable way. Special attention would be given to setting up ANM training centres in tribal blocks which are currently para-medically underserved by linking up with higher secondary schools and existing nursing institutions.

39. Efforts to improve skills of Registered Medical Practitioners would also be introduced. The NRHM recognizes the need for universal continuing medical education programmes which are flexible and non threatening to the medical community, but which ensures that they keep abreast of medical advances, and have access to unbiased medical knowledge, and adequate opportunity to refresh and continuously upgrade existing knowledge and skills.

R. Pro-people partnerships with the non-governmental sector

40. The Non-governmental sector accounts for nearly 4/5 of health expenditure in India. In the absence of an effective Public Health System, many households have to seek health care during distress from the Non-governmental sector. A variety of partnerships are being pursued under the existing programmes of the Ministry, especially the RCH-II and independently by the States with their own resources with non governmental partners. Under NRHM, Task Forces are set up with experts, institutional representatives and NGOs. The RCH-II has development partners, including UN agencies. Under this the States are trying contract in, contract out, out sourcing, management of hospital facilities by leading NGOs, hiring staff, service delivery, including family planning services, MTP, treatment of STI/RTI, etc. Franchising and social marketing of contraceptives are already built into the FW programmes. The Immunization and Polio Eradication Programmes effectively make use of partnerships with WHO, UNICEF, the Rotary Internationl, NGOs etc. The Janani Suraksha Yojana (JSY) has also factored in accreditation of private facility for promotion of institutional delivery. The Disease Control programmes make use of NGO partnerships in a big way. The Ministry also has strong relations with FOGSI, IMA, IPHS etc. which are professional Associations for dissemination of information, advocacy, creating awareness, HRD etc.

41. The Non-governmental sector being unregulated, the rural households have to face financial distress in meeting the costs of health care. The NRHM attempts to provide people friendly regulation framework that promotes ethical practice in the non-governmental sector. It also encourages non-governmental health providers to provide quality services in rural areas to meet the shortage of health facilities there. Such efforts will involve systems of accreditation and treatment protocols so that ethical practice becomes the basis for health interventions. NRHM encourages training and up-gradation of skills for non-governmental providers wherever such

efforts are likely to improve quality of services for the poor. Arrangements for demand side financing to meet health care needs of poor people in areas where the Public Health System is not effective will also be attempted under the NRHM. The NRHM recognizes that within the non-governmental service there is a large commercial private sector and a much smaller but significant not for profit sector. The not-for-profit centres which are identified as setting an example of pro-poor, dedicated community service would be encouraged used as role model, benchmark, site of community centered research and training to strengthen the public health system and improve the regulatory frameworks for the non governmental sector as a whole.

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Annexure-III

CONCURRENT ASSESSMENT AND TECHNICAL SUPPORT TO DISTRICTS IN UTTAR PRADESH

Goal and objectives

The main goal of ongoing Concurrent Assessment and Technical Assistance to districts (CATA), under the European Commission supported Sector Investment Programme (SIP) in the state of Uttar Pradesh, is to asses continuously the system of health care delivery in relation to National Family Welfare Programme and suggest interventions for improving the service delivery, bring about a quantitative improvement by removing weaknesses of the system and build the capacity of state and district level health managers in order to meet the challenges by involving medical and health teaching institutions of the state of Uttar Pradesh.

The activity has following major objectives.

a) To develop a health intelligence information system at the state and districts' level for National Family welfare Programme and other health programmes.
b) To use this system for ongoing assessment and mid course correction in the programmes at different level.
c) Formulation and development of long-term planning and policy, based on information collected under the system.
d) To make the system available for research and development in the area of public health management.
e) To get profile of state, districts and large cities, separately.
f) Technical Assistance to district health & family welfare authorities, which has been reconstituted as District Health Society and District Health Mission under the NRHM .
g) Capacity building of Medical Colleges and District Health & Family Welfare Authority/ District Health Mission/ District Health Society.

Implementation arrangement

The Programme is being implemented by a network of institutions working in the area of public health, community medicine and programme evaluation. The Directorate General of Family Welfare, Government of Uttar Pradesh has executed a Memorandum of Understanding (MoUs) with King George Medical University Lucknow and a number of participating institutions for organizing and carrying out the study and providing technical support outlined as under.

Coordinating Agency: The CATA is being coordinated by the Upgraded Department of Community Medicine, KG Medical University, Lucknow. Among others, this involves overall coordination and supervision of the programme, strategy formulation, liaison with DG Family Welfare Govt. of UP and all participating institutions, selection of sample of clusters for participating institutions, qualitative monitoring of the work undertaken by the participating institutions, collation of district / city level data / results through partners, preparation of integrated reports for submission to the Government and other agencies, release of funds to the participating institutions, auditing and submission of expenditure reports.

Participating Institutions: The initial list of participating institutions includes all Medical Colleges in the State, Central Universities' Medical College/ institute in the state, Population Research Centre, University of Lucknow and Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow.

Core Technical Team: The Technical, administrative and financial protocols have been developed by a core team headed by an officer from the Directorate General of Family Welfare with the representatives of Coordinating agency (KGMU, Lucknow) and selected participating institutions and SIFPSA. The core technical teal is responsible for following functions

(a) finalizing the survey instruments methodology, including the lay out and format for the reports to be generated by the participating institutions

(b) determine the qualification and selection process for surveyors and supervisors as well as to make arrangements for their training.

(c) qualitative monitoring, and

(d) collating the data received from the participating institutions to generate consolidated reports and its comparative analysis vis-à-vis results of the surveys commissioned by GOI and other agencies.

Concurrent Assessment process: Every participating institution is assigned a number of districts. The first choice for surveyors was the students from the participating institutions and/or other teaching institutions and the district and sub-district level staff. However, later on, professional surveyors had to be engaged and trained because the students could not remain available round the year due to their academic schedule and most of the districts have significant shortage of staff. Every participating institution also employs at least one supervisor for each district for local

coordination and ensuring qualitative monitoring. The institution also attempts to develop a network of local supervisors in the districts for hands-on training.

The members of Core Technical Team visit at least 10% of clusters during the survey, for qualitative monitoring. The assessment survey is conducted as per the standard 30-cluster methodology (WHO recommended). However, the core committee recommended some adaptations and modifications with a view to build a database, meeting qualitative monitoring of the RCH programme.

Every participating institution prepares a district wise report and submits to the coordinating institution for validation. After the report has been finalized, the participating institution presents the report in a meeting of departmental officers at the district headquarters, so that they get a first-hand account of their districts. The presentation also dwell into probable interventions to improve the situation.

Study Design and Methodology

Study area: The survey covers the urban and rural areas of all the seventy districts of Uttar Pradesh. The districts are divided into two categories (a) districts with major cities/urban areas (total no. 12), and (b) districts with minor cities/urban areas (total no. 58). In category (a) districts, rural and urban areas are considered as separate units for the survey and report generation, whereas in category (b) districts rural and urban areas combined together will form an unit of study and report generation.

Sampling Technique: The sampling technique of this study is based on the WHO thirty cluster methodology. The thirty clusters are selected from the districts of category (a) described above, separately for rural and urban areas. From districts of category (b), thirty clusters are selected from rural and urban areas combined together. Sampling unit (cluster) for rural area is a revenue village and for urban area, it is a municipal ward. The selection is based on systematic sampling scheme with population proportional to size.

Sampling Procedure: For selecting rural clusters in a district, all revenue villages are listed with their total population according to census 2001. The villages are arranged in the same order as they appear in the census list. A random number, less or equal to sampling interval, is selected. The village, corresponding to cumulative population equalled or exceeded the random number, is selected as the first cluster. The sampling interval is added to the random number and a new number is obtained. Subsequent village corresponding to cumulative population equalled or exceeded to new number is selected as second cluster. Similarly the third, fourth and subsequent clusters are selected by adding the sampling interval to the obtained numbers. For selection of clusters in urban areas of category (a) districts, municipal wards are taken as clusters.

For category (b) districts, revenue villages and urban wards are combined together to form the sampling (list) and thirty clusters are selected using the above procedure.

Sample size: To provide district level estimate of reproductive and child health indicators, RHS-I & II required about 1000 household per district. Considering a design effect of 1.5, the CATA covers about 1,500 households per district. Each sample includes (a) 7 households having at least one mother who had a live-birth or stillbirth during previous 12 months, preceding the date of survey, (b) all married women in the reproductive age in the all households are interviewed, (c) 7 children in the age group 12-23 months and 7 children in the age group 24-35 months.

Termination of survey in a cluster: The visit to subsequent households is terminated after achieving the above numbers. If last selected household has more such member than needed to reach the target, the information on all such members is collected before terminating the survey. It is estimated that the above targets will involve a visit to at least 40-45 households in each cluster. Thus, a minimum of 1200 households are expected to be covered from each district in one round.

Data management and analysis

Data collection is done on pre-designed questionnaires, which are common for all participating institutions. Each participating institution is allotted a unique code for data management. All selected clusters also have a structured location code provided by the apex-coordinating centre. The data are managed by computers, using a common data acquisition software, which has been especially developed for this purpose. This facilitates inbuilt error and inconsistency checks in the data. The district level analysis is carried out at each centre and sent to apex-coordinating centre in hard and soft copies. The apex centre pools the data and undertakes final analysis at regional level. A web based dissemination system is being developed for easy and quick exchange of information.

Survey Tools.

During the survey, the information is collected at sub-centre, village, household and individual levels. The set of instrument developed under the project is described below.

A. **Sub Centre Profile**: This instrument collects information about infrastructure available at sub-centre, knowledge and skills of the ANM, and information on service delivery at subcentre level. This instrument is administered, if a sub-centre is present in the village, which have been selected as a cluster. If sub-centre is not present in the selected cluster/village, then, this section is skipped.

B. **Village Profile**: This instrument collects information on indicators of villages facilities like distance from pucca road, availability of post office, bank, local market, health facilities, education, transportation system and presence of village level institutions, if any. This is administered in each selected rural cluster.

C. **Household Profile**: This schedule is administered in all selected households, starting from the first selected household in the cluster till the completion of the target irrespective of the fact whether the household has an eligible member or not. This collects information about age, gender, marital status, occupation etc. of each member of the household and socio-economic status, current morbidity and mortality in the household.

D. **Eligible couple profile:** This questionnaire is administered to all currently married females in the reproductive age group, found in the selected/ visited households. The collected information pertains to age, education, age at marriage, complete reproductive history child mortality and current use of family planning methods by the female.

E. **Recently Delivered Mothers Profile**: This instrument is administered to seven mothers, who have given a live birth or stillbirth during preceding 12 months from the date of survey. Information pertaining to last childbirth is collected, which pertains to antenatal care, delivery practices, postpartum care, newborn care, etc.

F. **Child immunization Profile**: This instrument is used for children aged 12-23 months and records status of immunization and related information like age at which the immunization was given, the service provider and reason if not immunized.

Indicators being measured

The indicators being measured under the survey include morbidity (in last 15 days), mortality (in last one year), non- Iodised Salt users, fertility (mean number of children ever born to women age 40-44 years, total fertility rate, birth order), current users of family planning methods, unmet family planning need, maternal health care (ANC check-up, TT injection during pregnancy, IFA tablets during pregnancy, full ANC, Safe delivery) and child care (percentage babies bathed immediately after birth, percentage of babies weighed, percentage distribution of baby weight, percentage of infants discontinued breast feeding at age of 1 to 5 months, immunization status).

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Annexure-IV

Problems identified (in RCH-I) and mid-course corrections made (in RCH-II)

Problems Identified	Mid course correction made during the 10th Plan under RCH-II Programme
1. Limited involvement of states and limited ownership by states of RCH Phase I	The design process started with national consultation with all states. The RCH Phase II Program Implementation Plan (PIP) is designed to set out broad strategic direction, define a core minimum service package and estimate national resource requirements. Within this broad evidence-based strategic direction, states will prepare five-year plans linked to clear outcomes after assessing their own priorities, allowing a needs-based state-specific plan to be developed. States will be encouraged to form a multi-disciplinary planning team, involving local stakeholders and resources with a view to *prioritizing* state needs. States have been offered a wide choice of sector reforms and improvements that they may include in the MoUs to increase accountability and establish linkages between performance benchmarking and fund flow. States themselves will plan and select their outcome and process indicators and reform areas or improvements to achieve the indicators.
2. Pace of implementation to be made faster	The core service package is defined and will be included in all state's plans for implementation. The MoU will be used as a performance benchmarking/ mutual monitoring mechanism and also ensure accountability. Bottlenecks to fund flows will be removed by simplifying processes.
3. Enhancing utilization of public health facilities	This has been diagnosed as being due to perceptions of low quality among the users, frequent service unavailability and low acceptability of some services. This will be addressed through pre-service and in-service training, with a particular focus on provider attitudes and making services more user friendly. Contracted staff will be engaged and their performance monitored to ensure continued availability of services. The core services will include quality standards. Demand side stimulation activities will be an important part of state plans. BCC activities will be focused on improving the image of public health facilities, promoting new services and improving health- seeking behavior. Facility norms will be reviewed and altered using multiple criteria to

Problems Identified	Mid course correction made during the 10th Plan under RCH-II Programme
	effectively match needs of users.
4. Infrastructure to be completed within the project time frame	The core service package will ensure the availability of essential infrastructure. Outsourcing will be undertaken with agreed institutional mechanisms to manage infrastructure and to ensure accountability and delivery of reliable and quality services. The processes of managing construction of infrastructure will be simplified.
5. Management capacity limited	There will be lateral infusion of skilled personnel to improve management capacity structure at national, state and district levels, with clearly defined functional responsibilities and roles. A system will be established to ensure continuity of tenure of key posts and positions. States will review the roles of different cadres and restructure them to strengthen public health and user needs orientation of services as a part of MoU.
6. Need to incorporate the system of smooth flow of funds	A study of financial management had been undertaken to identify and understand the bottlenecks in the current system and design mechanisms to remove them and simplify the flow of funds. The recommendations of the study, after suitable validation, have been examined for improved financial management. The MoUs will clearly define the central government's responsibilities regarding the flow of funds and the state governments' responsibilities on performance and associated expenditure. Accounting procedures for reporting and the process of review will be simplified through an accounting and financial manual which has been prepared by the center. Financial management systems will be built into the program management structure. Professionals/chartered accountants are being inducted in the area of financial management.
7. Need to have a vision and policy guidelines in RCH	A clear vision statement has been developed (section 1.1) A strategic plan has been agreed and strategic direction is laid out in the short, medium and long term (section 1.4). Strategic objectives and policy options are well articulated (section 1.3). Outcome indicators have been identified from various policy documents and commitments at international summits (section 1.2)
8. RCH Phase I was implemented as a project without well-	RCH is visualized as a long-term program oriented towards achieving ambitious but realistic health outcomes and improvements in CPR and TFR. The 5-year period is looked upon as a 'project' within this larger time frame but with definitive outcomes moving towards the long term goals.

Problems Identified	Mid course correction made during the 10th Plan under RCH-II Programme
defined outcome indicators.	The national level program framework is the overview, whilst state level planning will be oriented towards a more limited timescale (5 years) and linked to specific health outcomes relevant to the state that will cumulatively lead towards achieving the goals of national health outcomes. State PIPs will be refined on an ongoing basis as the experience of implementation and results from studies feed in to the state planning process, recognizing that state capacity varies widely. The planning and design will be a dynamic process and the national and state PIPs, Log Frames and MoUs will be live documents.
9. RCH Phase I had a "one size fits all" design	States will have different requirements, levels of performance and capacities and will be able to take these into account when designing their state PIPs. Such a differential approach may be extended to district level depending upon the performance of districts. The BCC, though centrally designed, will also be state-specific. The state PIPs will ensure the equitable availability of quality RCH services designed taking into account the needs of local communities and state capacities. Equity issues especially towards the poor and vulnerable will be addressed through the M&E system and community monitoring.
10. Need to move away from "stand alone" public health approach	RCH Phase II will adopt a program approach, bringing in key elements of sector management and reform and systems strengthening. Partnerships with PRIs, ULBs, the private sector, the NACP and the ICDS program will be built during RCH Phase II.
11.RCH Phase I focused almost exclusively on the supply side	Whilst RCH Phase II necessarily includes supply side strategies, these will be complimented by an integrated and robust strategy to stimulate demand for services. One part of the demand side strategy will be a comprehensive and coordinated BCC plan which specifically addresses issues such as the perceived low quality of services, the availability of services and promoting health seeking behavior. A study specially commissioned on the demand supply nexus has been taken into account in the design. The family planning initiatives will also be integrated in RCH.
12. RCH Phase I was centrally designed with little consultation	RCH Phase II has been designed after wider consultation. EAG states will be assisted in formulating their PIPs. MoH&FW accepts that the national PIP is an operational framework.

ANNEXURE-V

RCH II TECHNICAL STRATEGIES FOR WOMEN AND CHILD HEALTH

1.1.1 GUIDING PRINCIPLES FOR MATERNAL HEALTH

The following principles will guide the planning and implementation of maternal health strategies in RCH II:

- **Equity.** The focus would be on the poor and the vulnerable sections of the society.
- **Evidence-base.** Interventions included in the program would be evidence-based.
- **Continuum of care.** The maternal health strategy would be a complementary mix of community and facility-based interventions.
- **Health system approach.** Strengthening of health system will be at the core of maternal health strategy.
- **Integrated services.** Maternal health interventions will be integrated with other components of the RCH program, including newborn and child health and family planning.

1.1.2 OBJECTIVES

- **Improve access to skilled care and emergency obstetric care**
- Improve coverage and quality of antenatal care
- Increase coverage of post-partum care

1.1.3 STRATEGIES

a) **Enhance Coverage of Facilities for Institutional Deliveries and Emergency Obstetric Care (EmOC)**

Expansion and strengthening of facilities for institutional deliveries and EmOC will be given the highest priority in RCH II. Two levels of institutions will be targeted, namely, i) PHCs & CHCs for *basic* EmOC and ii) FRUs for *comprehensive* EmOC.

b) **Operationalize** ***All CHCs and at Least 50% PHCs for Providing 24 Hour Delivery Services And Basic EmOC***

By 2010, all CHCs and at least 50% of PHCs will be providing 24 hour delivery services and basic EmOC.

These facilities would also provide services for newborns and children, family planning,. safe MTP and RTIs/STIs as described in relevant sections.

c) In RCH I, the strategy of instituting 24 hour delivery services in PHCs was mooted, but only a few states, such as Tamilnadu and Andhra Pradesh, were able to implement the scheme at a limited number of PHCs. A UNFPA project in 7 districts in Rajasthan has demonstrated a rise in met need for EmOC from 8.8% in 2000 to 14.3% in 2003 (increase of 62%). These experiences will be built on, replicated and scaled-up nationwide.

d) Suitable PHCs and non – FRU CHCs will be identified by the state government. Those with good access, transportation link and some existing infrastructure would be chosen. Equity consideration will be addressed by ensuring that underserved areas including the backward, tribal, difficult-to-reach ones are well covered.

e) Infrastructure will be strengthened to an optimum level. Basic equipment for labor/delivery room and for newborn care will be provided. A newborn care corner will be developed. Enough supplies of essential drugs would be ensured. An ambulance (outsourced or otherwise) would be available round-the-clock for transportation of sick mothers and children to and from community and referral centers as needed.

f) Norms and guidelines for these PHCs will be developed. These would pertain not only to infrastructure, staff, drugs and supplies, but also to functional standards. A certification system would be instituted. This will include criteria for criteria for no third delay, gender sensitivity, and uninterrupted services. The essential criteria would be the availability of uninterrupted services 24 hours a day, 365 days a year.

g) The team at PHCs would consist preferably of 2 MOs, who would be assisted by LHV and nurses for round-the-clock services. Nurses would be the key functionaries who would provide 24 hour midwifery cover under the

supervision of MOs. The CHCs may have specialists in addition. Group D staff (nurse aid / helper) would also be engaged to provide support for asepsis, housekeeping and waste disposal. Wherever necessary, staff including doctors, nurses etc. could be hired on contractual basis. If nurses are not available, ANMs could be deployed. A laboratory attendant would be provided for hemoglobin testing, urine examination, blood grouping and making etiological diagnosis of RTIs/STIs.Training will be provided for selected skills to each category of the staff as per the training needs assessment.

h) Patient care guidelines for care of women, newborn, and children would be provided. Evidence-based interventions such as use of partogram and active management of the third stage will be implemented. Suitable job-aids and manuals will be provided.

[A group will prepare detailed guidelines by October 2004].

1.1.4 Operationalize Comprehensive *Emergency Obstetric Services at 2000 First Referral Units*

a) By 2010, a total 2000 FRUs will be made operational to provide *comprehensive* EmOC services 24 hours a day, 365 days a year.

b) In RCH II, the unfinished agenda of providing comprehensive emergency obstetric care services at the sub-district level will be completed. This would meet the UN norm of one such unit for 5,00,000 population taking also into account the difficult-to-reach and backward areas. The FRUs will complement facilities in the private sector.

c) Recently the DoFW has prepared guidelines for Operationalization of FRUs. States are being approached to develop FRUs accordingly. A certification process would be instituted to accredit the FURs on the basis of infrastructure, staff, drugs, supplies, as well as quality of services.

1.1.5 Ensure access to blood bank at all district hospitals and blood storage facility at FRUs

Blood transfusion is a life saving measure for a woman with hemorrhage and a anemia. Provision of blood transfusion is an essential component of comprehensive EmOC. Hence, it is essential that all FRUs and district hospitals, have access to blood round the clock. Recently, the DoFW has developed guidelines for blood storage facilities. This has paved way for establishing blood storage facilities at FRUs. In addition, it is recommended that each district hospital has a blood bank or access to one from where blood could be procured in less than half hour.

1.1.6 Train MBBS medical officers in anesthesia for EmOC

DoFW has developed a 14-weeks course an anaesthesia training for MBBS doctors. The first batch has completed training at AIIMS last year. Administrative formalities have nearly been completed. It is recommended that by 2010, a total of 4000 MBBS doctors be trained in this course to meet the acute shortage of anesthetists that has hitherto seriously hampered Operationalization of FRUs.

1.1.7 Train MBBS doctors in conducting cesarean sections

In view of the non-availability of obstetricians for manning the FRUs, the FOGSI (Federation of Obstetrics and Gynecological Societies of India) has developed a course on basic obstetric care including cesarean deliveries for MBBS doctors. This important step in capacity building in comprehensive EmOC and operationalisation of FRUs will be implemented in a step-wise manner. A pilot phase would be followed by evaluation before scaling up.

1.1.8 Provide emergency obstetric care services to BPL families at recognized private facilities

There is an urgent need to devise mechanisms for BPL families to avail of EmOC in the private sector. This is extremely important because presently, and for some more time to come, EmOC in the government sector would not be fully operational. Yet, in many parts of the country, in cities and towns, a vibrant private sector is well established. Ways need to be found to provide the poor access to these facilities. This could be on the basis of a voucher or insurance system, or by any other innovative method. This issue pertains also to the broader

theme of public-private partnership in RCH II dealt with in other sections of the PIP.

1.1.9 Other strategies

- Shift specialists (obstetricians/ anaesthetists/ pediatricians) from dispensaries and PHCs to FRUs and CHCs where they can contribute to emergency care of women and children.
- Involve general surgeons in providing EmOC, wherever possible.
- Use telecommunication means (call phones/ emails) for making referral system efficient.
- Provide ambulances at PHCs/CHCs/FRUs (outsourced or otherwise)
- Provide incentive to doctors and other staff to work at PHCs/CHCs/FRUs providing round the clock services. Improve living quarters and working conditions; recognize good work.
- Provide imprest money to ANMs and MOs to run SCs/PHCs/CHCs/FRUs smoothly (to undertake minor repairs, ensure upkeep of premises at, purchase drugs/ supplies from market in emergency, hire transport to shift a sick mother etc.)
- Encourage establishment of maternity hospitals / nursing homes in small towns in private sector.

1.1.10 Behaviour Change Communication and Community Mobilization Strategies

1. Janani Suraksha Yojana (JSY)

Janani Suraksha Yojana is the modified version of the National Maternity Benefit Scheme. Its twin objectives are : a) reduce maternal and infant mortality through promotion of institutional deliveries, and b) protecting the female fetus and child. Pregnant women belonging to BPL (below poverty line) would be eligible. Some of the draft provisions of the JSY include the following :

a) Pregnant woman who opts for institutional delivery would receive financial assistance that would be more for the girl child.
b) An assistance of Rs. 1500/- will be provided in the event of a cesarean delivery.

c) A transport assistance of Rs. 150/- will be provided to a rural woman for travel to a health centre for delivery.

d) The TBA who mobilizes and assists women in antenatal care, institutional delivery and post-natal care will be provided a financial compensation.

2. Provisions have been made to widely disseminate the information regarding the scheme in the community. The scheme would help mobilize poor families for skilled care at birth and other reproductive health services available at government facilities.

3. Equally importantly, the scheme is also an attempt to reorient the role of TBAs as agents of change for positive community behaviors that save pregnant women from morbidity and death.

4. In RCH II, this demand-side strategy will be vigorously implemented to enhance utilization of RCH services at PHCs/CHHs/FRUs.

1.1.11 Other measures

- Educate communities about danger signs of pregnancy, labor and post-partum period. Use media and other IEC/IPC strategies to enable individuals, families and communities to recognize signs of obstetric emergencies.

- Launch a sustained social mobilization effort for institutional deliveries with the help of panchayati raj institutions, opinion leaders, NGOs, self help groups as well as AWWs, link volunteers, ANMs and other stakeholders; reward villages that achieve high rates of institutional deliveries, and save mothers with obstetric emergencies through timely action.

- Promote referral transport for routine deliveries and emergency obstetric care. Make referral transport funds available with AWW/ANM. Map facilities; plan transport options; encourage innovative solutions by communities.

Provide Skilled Care To Pregnant Women At The Community Level

- Promote deliveries by skilled births attendants at Sub-centres and in the community

- In some states, many ANMs conduct deliveries at sub-centres and at homes. In RCH II, efforts will be made to enable more ANMs to provide skilled care in these settings. States would be encouraged to include sub-centre strengthening for deliveries as a priority fro their PIPs.

- A new cadre of Community Skilled Birth Attendants (C-SBAs) is proposed to be introduced. After a training of one-year, a C-SBA would provide midwifery care as a 'practitioner' in the community. The training of the first batch of C-SBA is on the anvil. The scheme is, thus, in early stage of pilot implementation. For the RCH II period, the initiative should be seen as an experiment – the results of which would decide its future scaling-up.

1.1.12 Permit ANMs to administer obstetric first-aid

ANMs are the front-line workers of the health system in India. Many of them conduct deliveries in the sub-centre and home settings. All of them are likely to come across situations when a woman with obstetric emergency such as post-partum bleeding, eclampsia, or puerperal sepsis would be brought to her for advice and treatment.

At present, ANM is not permitted to administer injection oxytocin or misoprestol (for post-partum bleeding), injection magnesium sulphate (for eclampsia) or an antibiotics (for puerperal sepsis) that may be life saving even as she arranges referral of the patient. Lack of mandate to the ANM to provide obstetric first aid using these drugs is a serious missed opportunity and a lacuna in the system.

It is therefore strategised that in order to save lives of women with obstetric emergencies in the community, the ANM is permitted to use the following drugs:

- Inj. Oxytocin
- Inj. Magnesium sulphate
- Misoprestol oral
- Inj. Ampicillin

It is important to ensure that a systematic training is provided to ANMs prior to granting permission to use these drugs. Safeguards need to be provided to ensure that the drugs are administered only after ascertaining the clinical need. Once the decision is taken to grant right to ANMs to use there drugs appropriate supplies should be ensured.

1.1.13 Improve Coverage and Quality of Antenatal Care (ANC)

Antenatal care is important for not only the mothers but also the newborn. There is a need to enhance coverage and quality of ANC in the program. The aim would be to raise the proportion of pregnant women receiving 3 ANC checks to 80% from the present level of 44% (NFHS II).

1.1.14 Improve equity-driven coverage of ANC

- Make special efforts to reach women of BPL, SC/ST and other marginalized groups.
- Target primigravida and adolescent mothers.
- Ensure fixed – day ANC activity/clinic in the community and the facilities.
- Involve AWWs, women's groups, TBAs and other community partners to reach out to each pregnant woman, especially the above mentioned groups.

1.1.15 Improve quality of ANC

- Ensure:
    - first check up in first trimester
    - total 3 check ups or more
    - two doses of TT
    - ingestion of 100 tablets of IFA
- Ensure that antenatal check includes all the recommended elements (history, abdominal palpation, BP, looking for edema, urine examination etc.) at all levels; and, in addition, blood grouping at facility level).
- Improve counseling at ANC sessions focusing on:
    - Promotion of institutional deliveries.
    - Danger signs of obstetric emergency.
    - Birth preparedness: deciding about place and attendant at delivery, where to go if emergency arises, how would transportation be arranged, arranging money for emergency situation.
    - Early care of the baby, including initiation of breastfeeding, drying and wrapping, delaying bath etc.

  Strengthen skills of ANMs in improving quality of ANC, especially for counseling.
- Introduce sticks-based rapid estimation of hemoglobin and urine examination.

- Provide mother-baby linked card to all, depicting key messages apart from clinical information.

1.1.16 Strengthen Post-partum Care at the Community Level

a) Post-partum care will be improved significantly in RCH II. It would be combined with newborn care. The emphasis would be in the home setting. A large proportion of births, especially among the poor, may continue to occur at homes. But even the institutionally- delivered mothers and babies are likely to discharged within a day or so after the delivery.

b) Home-based newborn care will be combined *with home-based post-partum care.*

c) The **IMNCI** protocols are being modified to include algorithms and advice on post-partum care. AWWs would visit neonates and mothers on days 1,2,7,14 and 28 with particular emphasis on the first two visits. They would use the modified IMNCI charts to identify problems (serious problems such as puerperal sepsis, and minor problems such a breast conditions), counsel and refer, if necessary.

d) Provide mother-baby linked card to all, depicting key messages apart from clinical information.
The *key messages* for the mothers would be on:
   - Danger signs
   - Nutrition
   - Iron-folic acid supplementation
   - Birth spacing
   - Newborn care

1.1.17 STRATEGIES FOR NEWBORN AND CHILD HEALTH IN RCH II

In RCH II, a comprehensive newborn and child health package of interventions will be implemented in the country with the aim of achieving a decisive breakthrough in neonatal, infant and child mortality. The knowledge about what saves the lives of children in a cost-effective manner is available to the nation and the world at large. The mission in RCHI II is to translate this knowledge into action and usher in the second child survival revolution in the country.

a) **Guiding principles**

The following principles will govern the planning and implementation of newborn and child health strategies:

- Evidence-based interventions
- Integrated approach in sync with family planning and maternal health components of the program
- Equity-driven implementation and monitoring
- Rational mix of family-centered (home level), population centered (outreach) and individual-centered (clinical) interventions
- Decentralized priority setting and phasing at the state and district levels
- Participation of the private sector

b) **Newborn and Child Health Strategy: The IMNCI Plus**

Objectives of the newborn and child health strategy are:

1. Increase coverage of **skilled care at birth** for newborns in conjunction with maternal care
2. Implement, by 2010, a newborn and child health package of preventive, promotive and curative interventions using a **comprehensive IMNCI** approach
   2.1 At the level of <u>all</u>
   - Sub-centres
   - Primary health centres
   - Community health centres
   - First referral units

   2.2 At the household level in rural and poor periurban settings in at least 250 districts (through AWWs / LVs)
3. Implement the **Medium-term Strategic Plan for the UIP** (Universal Immunization Program)

- Increase coverage of skilled care at birth for newborns in conjunction with maternal care
- Implement by 2010, a newborn and child health package of preventive, promotive and curative interventions using a comprehensive IMNCI approach at the level of all Sub-centres, Primary Health Centres, Community Health Centres and First

Referral Units as well as at household level in rural and poor periurban settings in atlest 125 districts (through AWWs/LVs/ASHAs).

- Implement the medium-term strategic plan for the UIP (Universal Immunisation Programme)
- Strengthen and augment existing services in areas where IMNCI is yet to be implemented

c) Why IMNCI 'Plus'

IMNCI adapted and under early implementation in India takes the generic IMCI approach much further - by including 0-6 days of age group, by having a health worker module, and by incorporating the home-based approach for newborn care. But there is a need to add the inpatient care component for facilities to ensure effective care of sick neonates and children who require hospitalization. This will be done by adapting WHO and local guidelines and tools. Even in this comprehensive form, IMNCI package would still not cover the vital care of the neonates at birth in home and facility settings. Further, the IMNCI approach includes counseling for immunization, but the implementation of immunization in India is largely a periodic outreach activity and that cannot be adequately captured by the IMNCI contacts alone. Therefore, a comprehensive immunization plan will be an additional pillar of the newborn and child health strategy. Health system inputs and community level activities are germane to the effectiveness of not only IMNCI, but also that of care at birth, as well as successful immunization strategies.

It is in the light of the above reasons that the newborn and child health strategy for RCH It is named as 'The IMNCI Plus' strategy to connote the wider, comprehensive range of interlinked interventions that form the newborn and child health component of RCH II program.

d) Skilled care at birth

This component is linked intimately to maternal care intervention of the program, and thereby a continuum of antenatal and intrapartum interventions.

The underlying principle of effective care at birth is that wherever an infant is born, home or facility, she is provided clean care, warmth, resuscitation, and exclusive breastfeeding. She is weighed and examined, and if her clinical needs are not manageable at the place of delivery, she is referred and managed at an appropriate facility. RCH II program aims at promoting institutional deliveries. Newborn care is

relatively easy to implement in facilities because of the presence of skilled birth attendants (doctor/ nurse/ ANM/LHV), and an enabling/ supporting environment. However, a large proportion of deliveries would continue to occur at homes by the TBAs for some more years to come, especially in the EAG sates. It is therefore, considered desirable to continue to impart newborn care skills to TBAs in areas with high rates of home deliveries, in order to enable them to contribute, as much as possible, towards newborn survival and health in partnership with the families and the AWWs/ ANMs/LVs. They will also be provided clean delivery kits. At the same time, overall effort would be to promote childbirth by skilled attendants and in institutions, both in the public and private sector.

Skilled care at birth everywhere

Level	Provider	Key input
Institutions* 24 hour functioning PHCs / CHCs	MOs, ANMs, LHVs, nurses	Delivery room Resuscitation equipment Newborn Care Corner/Unit
FRUs, District hospitals	MOs, specialists, nurses	Maternity OT & delivery room Resuscitation equipment Newborn Care Corner/Unit
Home *(wherever institutional deliveries not possible)*	*Skilled birth attendants* ANMs, nurse practitioners, Community-SBAs	Clean delivery kit Resuscitation equipment
	Trained TBAs (if access to skilled attendants is not possible)	Clean delivery kit

Private institutions should have the same or better norms

e) **IMNCI**

The IMNCI approach will be the centre-piece of newborn and child health strategy in RCHI II. A comprehensive model of IMNCI will be implemented (Fig.4). It would include the home and community-based component (through ANMs and AWWs/LVs) and the facility-based outpatient care component, as is being piloted in UNICEF's border district project. In addition, a component on management of sick neonates and children in the inpatient setting at PHCs/ CHCs/ FRUs, and in private facilities will be added. Health system strengthening and community components will be addressed effectively to ensure effective implementation.

IMNCI implementation at different levels

Level	Approach	Sites / strategy	IMNCI module	Provider(s)	Key inputs
Home and Community	Home-based newborn care	Home visits on day 1,2, 7,14 & 28; more visits for LBW and sick babies	Basic Health Worker (AWW/LV) module	AWW/ LV Supervised by ANM. Assisted by TBA	IMNCI medications Referral funds
	Community management of newborn and childhood illness	Neonates and children brought to AWW or sub-centre; and those seen at field/home visits and at immunization sessions	Basic Health Worker (ANM) module	AWW / LV ANM	IMNCI drugs as per norms Referral funds
Facility*	Outpatient care at PHCs, CHCs, FRUs, DHs	Outpatient care of neonates and children reporting with illness	Physicians' module	MO; ANM , LV, nurses under supervision	IMNCI drugs Educational materials Observation area Referral transport
	Inpatient care at 24-hour functioning PHCs, CHCs, FRUs, DHs	Inpatient care of sick neonates and children	Care of sick neonates and children+	MO with nurses/ ANMs/ LHVs	Newborn care corner/unit Inpatient area for sick children Requisite drugs and supplies Referral transport

*To be replicated also at private facilities of corresponding levels +Module to be adapted / developed

It is emphasized that the above strategies will be built on the existing skills of the care providers, and the existing structures and systems. Several activities and approaches of RCH I would be continued with enhanced quality and coverage. There will, however, be significant additionalties to encompass unattended interventions such as home-based newborn care.

The proposed phasing for coverage of IMNCI is shown in the Table below:

Cumulative operationalization of IMNCI (Suggestive)

Level	Providers	By 2006	By 2007	By 2008	By 2009	By 2010
Sub-centres /	ANMs	10%	30%	50%	75%	100%
PHCs / CHCs / FRUs	MOs, LHVs	10%	30%	50%	75%	100%
Village	AWW LV	25 districts	50 districts	100 districts	175 districts	250 districts

f) **Training for IMNCI**

Training load

The tentative number of providers at different levels to be trained are shown in Table below:

Training for IMNCI: Levels and providers to be targeted (2005-2010)

Level	Providers	
	Cadre	Number (approx.)
Health System		
All sub centres	ANMs	1,30,000
All PHCs	MOs	30,000
All FRUs	MOs	
50% PHCs / allFRUs	Nurses	To be determined
ICDS System		
Villages in 250 districts	AWWs	250,000
Private Sector		
Small towns and villages	Private physicians	To be determined in consultation with states and processional bodies.

g) *In-service* training

Table below shows outline of in-service training program for different workers.

In-service training for IMNCI and Skilled Care at Birth

Provider	Content & duration (tentative)	By whom (suggested)
Health system		
ANMs/ LHVs	IMNCI* (8 days)	NIHFW network
Nurses	Care of inborn neonates Lactation skills Outpatient and inpatient care of sick neonates and children (6 days)	Medical and nursing colleges/NNF/TNAI (AIIMS module on neonatal nursing recommended)
MOs	IMNCI (Newborn & young infant module only) and Inpatient care of sick neonates Newborn resuscitation Inpatient care of sick children Lactation/IYCF skills (4+1+1+1=7 days)	IMNCI training network (to be established) NNF district training system program with improvements
ICDS system		
AWWs	IMNCI* & lactation and young infant feeding counseling (8 days)	ICDS/ NIPCCD network
Private sector		
Private physicians	As for the MO	IGNOU (Distance education)
TBAs		
TBAs	Clean and safe delivery, home care of neonates including care at birth, breastfeeding, warmth, small baby care, detection of danger signs (3 days)	NGOs/district centres

* Will include post-partum care of mothers

As far as possible, the training of different providers will be done in such a manner that a district develops the team at all levels simultaneously. This would ensure simultaneous operationalization of the entire district health and ICDS system.

The RCH II training workplan is being developed by a core group. The available training materials and modules are being reviewed. The above outline including the duration of courses is suggestive, and would be finalized by this group. There will be an overarching organization/group/ institution to ensure that the quality of training is ensured for all cadres. The guidelines for this and other organizational issues are being developed.

h) **Pre-service training**

The IMNCI Plus training packages as outlined above for different categories of workers will be incorporated into the pre-service curricula of physicians, nurses, ANMs, LHV,s, community skilled birth attendants, AWWs and link volunteers, after suitable adaptations. The experience gained from the ongoing WHO project on IMNCI in MBBS curriculum in 5 medical colleges will be built on while planning this initiative.

Lactation and feeding counseling is also an important area for skills strengthening among all cadres of health workers/professionals.

The Common Minimum Program calls for expansion of ICDS through out the country. It is a unique opportunity to train all the new AWWs in the IMNCI skills as a part of the pre-service training. Likewise, many new ANMs will be trained and deployed in many states. Hence, IMNCI should become a part of the ANM curriculum nationally.

1.1.18 Health System Issues

Strengthening facilities for care of newborn infants and children

All PHCs will provide the outpatient level IMNCI. A minimum of 50% PHCs countrywide (that are being developed into 24 hour delivery institutions) will provide, in addition: (i) care of inborn neonates, (ii) inpatient care of sick neonates brought from outside, and (iii) inpatient care of sick infants and children. Suitable norms, standards and guidelines will be developed, and integrated with those for reproductive

and maternal health services at this level. The norms for the facilities will pertain to: infrastructure, equipment, human resources, drugs/ supplies, referral system, etc.

CHCs and FRUs will be strengthened. Draft guidelines for newborn and child health services at the CHCs/FRUs have been developed alongwith those for reproductive and maternal health services. Based on these norms, 2000 FRUs will be operationalized for providing integrated maternal, child and family planning services in RCH II.

A system of certifying and monitoring the operationlization of facilities will be implemented. While operationalizing the facilities geographical equity will be borne in mind to ensure that underserved areas get adequate coverage.

1.1.19 Ensuring referral of sick neonates and children

Referral funds made available with AWW/ANM would be utilized for transport of sick neonates and children. PHCs, CHCs and FRUs will have ambulances (outsourced or otherwise) to cater to the referral transport of sick neonates and children. Communities would be educated about the availability of referral funds/ transport, and BPL/SC/ST families would, in particular be encouraged to avail of these resources. Community based organizations (PRIs, women's groups, youth groups etc.) will be mobilized to innovate local solutions and mechanisms to ensure transport of sick neonates and children.

1.1.20 Permitting ANMs and AWWs to administer selected antibiotics

To ensure that the life-threatening conditions of sick neonates and children are managed quickly and effectively, it is of fundamental importance that the providers closest to the communities have the necessary skills and the mandate to mange these killer diseases. This is particularly critical for the poorest who cannot seek care away from homes due to lack of resources.

At present ANMs cannot manage newborn babies with sepsis because they are not permitted to administer gentamicin injection. And AWWs cannot treat diarrhea or pneumonia with ORS and co-trimoxazole.

Therefore, the ministry will take steps to ensure that:

- ANMs be permitted to administer injection gentamicin to neonates. The same would apply to community-SBAs.

- AWWs be permitted to administer ORS and cotrimoxazole as per the IMNCI algorithms. This strategy, would go a long way in improving access to treatment by critically sick neonates and children, especially those of the poorest families.

Skills-based training and supportive supervision will be instituted to ensure acquisition and retention of skills by the workers to administer the specified drugs. Injection safety norms will be followed strictly for gentamincin injections. Disposable or AD syringes will be provided.

1.1.21 Other health system issues

The success of IMNCI Plus strategy will depend on the strength and efficiency of the following ingredients of the health system in addition to those covered above:
Deployment of providers with the desired motivation, commitment and competence

- Strengthening of health infrastructure
- Uninterrupted availability of drugs and supplies
- High quality supervision and monitoring
- Ownership of the state and district level program managers.
- Efficiency of administrative/ financial system

Strengthening neonatal care services and education infrastructure at medical/ nursing teaching institutions.
Newborn services are often inadequately developed at government teaching institutions. This hampers training of the medical/ nursing students, and limits the potential of these institutions to play the desired range or role in training, research and referral care in the program. Therefore, it is proposed to strengthen newborn and child health services of medical colleges. Likewise, nursing and ANM schools will be strengthened to improve their training expertise, capacity and quality.

1.1.22 Community-based Interventions

- **BCC and community mobilization are cross-cutting areas in RCH II.** Inputs for ensuring effective demand for and utilization of services for newborn and child health gains will be systematically woven into the overall BCC and community mobilization strategy. Following is the outline of key

themes that would be promoted through all possible channels and mechanisms:

- **Mobilize families for institutional deliveries in government/ private facilities.** Launch a sustained social mobilization effort with the help of panchayati raj institutions, opinion leaders, NGOs, self help groups and other stakeholders; mobilize communities for Janani Suraksha Yojana.

- **Promote healthy home care practices for newborn care.** Promote warmth, early and exclusive breastfeeding, cord care and hygiene; avoid harmful practices including early bathing, colostrum discarding, pre-lacteals and cord applications etc.

- **Promote healthy home practices in diarrhea:** Educate families and communities in: use of home fluids, continuing breast feeding and solid feeds in diarrhea, for early introduction or ORS to prevent dehydration.

- **Make ORS readily/ freely available.** Make ORS packets available with all primary care providers (AWWs, ANMs, male workers, link volunteers, teachers etc.) and at all anganwaris, sub centres and facilities (PHCs, FRUs, CHCs, hospital); use alternative approaches for making ORS readily available (public distribution system, social marketing).

- **Widen the net of persons who can treat diarrhea.** Involve male workers, community volunteers, and village practitioners among others to treat diarrhea with ORS.

- **Promote early recognition of neonatal and childhood illness.** Educate, families regarding of signs of sickness ('danger signs') among neonates and children, enable families to seek care early and from trained providers.

- **Improve referral of sick neonates and children who cannot be managed at home.** Educate families, facilitate transport, make referral funds available with AWWs & ANMs, focus particularly on BPL/SC/ST families.

1.1.23 Other strategies

- Promote use of the more effective low osmolality ORS as recommended by WHO

- Ensure 100% registration of births as envisaged in the National Population Policy (2004)

1.1.24 Newborn and child health in urban areas

The principles of newborn and child health services in urban areas would be the same as outlined above. Because of the unique features of urban setting and the multiplicity of the actors and agencies, adaptation of the above approaches would be necessary. While developing the urban RCH component the states are being encouraged to build on the existing systems to plan most suitable delivery models to take interventions to the poorest neonates and children.

1.1.25 Promoting care for sick neonates and children of BPL families in private sector

Private-public participation is being addressed in RCH II design. Options and mechanisms are being examined to explore how families of BPL families can access life-saving care for obstetric or pediatric emergency in the private sector. States are being encouraged to develop innovative approaches towards this objective. The issues of quality standards and accreditation of facilities that would be compensated from public funds in lieu of care of BPL mothers/ children are also being examined.

1.1.26 Operations Research

- Develop system to monitor cause-specific burden for neonatal and childhood mortality on population basis.
- Develop models of primary care newborn service delivery in rural and periurban settings.
- Assess role micronutrient supplementation in reducing morbidity and mortality among LBW neonates.
- Track burden of low birth weight neonates, and epidemiology thereof.
- Undertake surveillance of pneumonia and dysentery-causing bacteria and their antimicrobial sensitivity.
- Access effectiveness of Rotavirus, H. influenzae and Preunmococcal vaccines.

1.1.27 Work in progress

- A detailed *action plan for IMNCI Plus strategy* is being developed (including organizational schema, phasing and indicators etc.)

- A core group on Training for RCH is engaged in formulating the training action plan for RCH II.

1.1.28 Infant and young child feeding (IYCF)

Child nutrition is a wide and cross-sectoral issue. RCH II program activities will complement activities of ICDS and other departments in regard to promotion of breastfeeding and appropriate complementary feeding practices.

Objective
The objective of RCH II strategy on IYCF will be to contribute towards attainment of the national goals in nutrition in partnership with the Department of Women and Child Development and other departments

A National Breastfeeding Partnership has been announced recently in recognition of the importance of breastfeeding as the crucial child survival intervention.

Following strategies will be implemented:

Implement a nation-wide behavior change effort to promote breastfeeding. Involve all grassroots workers: TBAs, AWWs, ANMs, village practitioners, male workers, link volunteers etc.; involve panchayats, self help groups, agents of change, opinion leaders, NGOs ; employ mass media; use all health-related contacts to promote improved feeding ; give standard unambiguous messages (' exclusive breast feeding for six months').

Augment AWW's contacts with mothers. Promote home visiting by AWWs in the antenatal, and post-natal periods as a part of IMNCI Plus activities.

Use all ANM / male health worker contacts for IYCF counseling. Use immunization sessions, field visits of ANMs and male health workers for IYCF counseling.

Strengthen breastfeeding promotion efforts at facilities. Promote ten steps of successful breastfeeding at facilities including PHCs, CHCs, FRUs and district hospitals.

Improve IYCF counseling skills of providers. Train TBAs, AWWs, ANMs, LHVs, male workers, link volunteers, as well as physicians (government, private; general, specialist; modern, ISM) and nurses in lactation and feeding counseling techniques through pre-service and in-service training and education.

Implement the IMS (Infant Milk Substitutes, Feeding Bottles and Infant Food: regulation, supply and distribution) Act more effectively by educating providers at all levels about the key provisions of the Act.

Promote appropriate and adequate complementary feeding. Strengthen AWW's role through supportive supervision and monitoring, use all health related contacts to counsel regarding solid foods; emphasize portion size and calorie density; promote culturally acceptable, low cost, balanced, locally available infant foods (prepare local lists for counseling).

Launch a National Breastfeeding Partnership with clear mandate, resources, networking mechanisms and roadmap. The aim is to bring all stakeholders together to raise the profile of this key agenda in the country and, not only converge their own programs, but to run a sustained high profile breastfeeding movement in the country jointly.

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Annexure VI

Comparative statement on statewise information on the institutional delivery rates as per the NFHS-III (2005-06) and NFHS-II (1998-99)

Name of the state	Institutional delivery Rate	
	NFHS-III (2005-06)	NFHS-II (1998-99)
Uttar Pradesh	22.0	15.2
Chhattisgarh	15.7	13.8
Gujarat	54.6	46.3
Maharashtra	66.1	52.6
Punjab	52.5	37.5
Orissa	38.7	22.6
Andhra Pradesh	68.6	49.8
Assam	22.7	17.6
Delhi	60.7	59.1
Rajasthan	32.2	21.5
Meghalaya	29.7	17.3
West Bengal	43.1	40.1

Annexure – VII

UNIVERSAL IMMUNIZATION PROGRAMME
ESTIMATED TARGETS AND REPORTED COVERAGE IN PERCENT
1990-91 TO 2005-06

Year	Target (in lakhs)		Coverage levels (%)				
	Infants	P. Women	DPT	OPV	BCG	MSL	TT(PW)
1990-91	223.39	252.66	100.72	101.50	103.00	90.90	79.70
1991-92	233.34	261.31	90.90	91.30	92.90	85.00	77.60
1992-93	242.90	270.08	90.60	91.00	96.60	85.90	79.40
1993-94	247.89	275.55	93.20	93.60	97.20	88.50	82.60
1994-95	247.65	275.25	94.50	95.20	99.80	87.20	83.80
1995-96	248.61	275.30	90.70	91.60	97.10	82.60	80.40
1996-97	254.01	281.08	91.50	92.70	98.10	83.20	81.80
1997-98	255.45	282.87	92.90	93.90	99.50	85.80	82.60
1998-99	251.17	277.47	93.70	95.30	97.70	88.10	83.90
1999-00	247.22	292.41	95.30	95.90	101.60	89.80	81.30
2000-01	240.53	284.92	102.70	104.10	108.20	97.00	86.00
2001-02	245.24	272.06	100.80	100.40	106.10	93.70	86.80
2002-03	249.31	294.46	96.60	97.00	102.50	91.80	82.90
2003-04	256.79	302.83	91.20	92.50	100.20	85.60	77.90
2004-05	256.26	301.79	93.60	94.20	99.90	90.30	78.60
2005-06*	257.93	303.08	96.90	95.60	103.60	92.90	80.20

Coverage Evaluation Surveys by UNICEF for all antigens -1998-20005 at All India Level

Year	DPT-3	OPV-3	BCG	Measles	Full Immunization
1998-99	68.6	68.6	73.2	55.2	51.0
1999-2000	46.4	58.8	67.5	50.2	37.8
2000-01	63.6	70.7	72.8	55.6	52.8
2004-05	67.3	61.3	83.4	68.1	54.5

Annexure VIII

District Level Household Survey 2002-04

S. No.	State	BCG	DPT 3	POLIO 3	Measles	Full Immunization	Two or more TT (preg)
1	Andaman & Nicobar Islands *	98.4	86.3	51.5	90.4	47.7	86.4
2	***Andhra Pradesh***	92.5	78.7	82.2	74.4	62.9	84.5
3	**Arunachal Pradesh**	56.1	36.0	32.1	39.3	22.5	43.6
4	**Assam**	62.7	39.5	30.0	39.1	19.3	57.6
5	**Bihar**	46.8	35.0	34.3	28.2	24.4	71.0
6	***Chandigarh***	89.9	78.6	62.8	79.0	53.3	64.0
7	***Chhatisgarh***	87.8	70.5	70.6	70.2	60.9	67.8
8	***Dadra & Nagar Haveli ****	95.7	92.1	92.1	87.0	85.2	84.1
9	Daman & Diu *	94.0	77.7	67.6	78.6	57.3	81.1
10	***Delhi***	90.9	71.1	71.9	76.4	61.0	75.0
11	Goa	96.6	87.7	87.9	93.1	81.5	76.2
12	***Gujarat***	86.6	68.9	71.2	69.4	57.7	73.2
13	**Haryana**	83.3	75.7	75.0	69.2	62.9	77.5
14	Himachal Pradesh	96.1	91.2	86.5	89.7	79.4	58.1
15	***Jammu & Kashmir***	94.6	48.1	55.9	83.0	38.6	73.6
16	**Jharkhand**	52.0	39.3	38.4	34.5	29.3	64.2
17	***Karnataka***	92.5	84.5	83.7	80.4	74.1	79.5
18	Kerala	98.0	90.7	89.6	90.0	81.2	87.5
19	Lakshadweep *	99.7	86.9	74.5	91.8	67.6	89.3
20	**Madhya Pradesh**	72.6	43.9	47.2	50.1	32.5	64.5
21	Maharashtra	95.9	88.5	82.3	88.0	74.3	79.4
22	**Manipur**	83.4	48.8	50.6	55.6	37.0	67.6
23	**Meghalaya**	64.9	31.2	26.1	30.3	14.1	30.3
24	**Mizoram**	79.0	48.7	46.1	61.6	35.3	47.8
25	**Nagaland**	67.7	32.5	26.7	40.2	14.4	43.5
26	***Orissa***	88.5	70.0	69.3	69.9	55.1	76.6
27	Pondicherry *	99.3	93.8	94.8	95.8	89.4	97.2
28	Punjab	88.0	82.8	82.7	79.1	75.3	84.4
29	**Rajasthan**	60.6	36.4	36.8	36.8	25.4	59.1
30	Sikkim	91.4	74.0	60.0	82.6	50.2	77.5
31	Tamil Nadu	99.0	96.8	95.5	95.7	92.1	86.3
32	***Tripura***	75.0	47.9	35.2	44.7	26.7	68.3
33	**Uttar Pradesh**	57.8	37.9	36.9	37.7	28.1	61.5
34	**Uttaranchal**	72.8	57.7	57.3	56.9	47.2	64.4
35	West Bengal	86.4	69.8	67.0	67.6	54.4	86.2
	INDIA	**74.7**	**59.0**	**58.2**	**58.0**	**47.6**	**71.8**

Annex-IX (a)

Distribution and annual intake in the MBBS course in medical colleges

S.No.	State	No. of colleges			Annual Intake
		Govt.	Other	Total	
1.	Andhra Pradesh	9	5	14	1975
2.	Assam	3	-	3	391
3.	Bihar	6	2	8	510
4.	Chandigarh	1	-	1	50
5.	Chhattisgarh	1			100
6.	Delhi	4	-	4	460
7.	Goa	1	-	1	100
8.	Gujarat	8	2	10	1405
9.	Haryana	1	-	1	150
10.	Himachal Pradesh	2	-	2	115
11.	Jammu & Kashmir	2	2	4	350
12.	Jharkhand	3	-	3	190
13.	Karnataka	4	18	22	2955
14.	Kerala	5	1	6	800
15.	Madhya Pradesh	5	-	5	620
16.	Maharashtra	18	17	35	4010
17.	Manipur	-	1	1	100
18.	Orissa	3	-	3	364
19.	Pondicherry	1	2	3	275
20.	Punjab	3	3	6	520
21.	Rajasthan	6	-	6	650
22.	Tamil Nadu	11	5	16	1865
23.	Uttar Pradesh	9	2	11	1212
24.	Uttaranchal	-	1	1	100
25.	West Bengal	7	-		905
	Total	**113**	**61**	**174**	**20172**

Annexure -IX (b)

Annual Intake in the specialties related to maternal care

S. No.	State	MD (OBG)	MS(Gen. Surgery)	MD (Anes-thesiology)	Diploma in Anes-thesia
1.	Andhra Pradesh	55	76	49	51
2.	Assam	16	20	7	12
3.	Bihar	9	30	11	8
4.	Chandigarh	1	7	3	-
5.	Delhi	24	28	23	10
6.	Goa	4	4	3	4
7.	Gujarat	68	78	81	25
8.	Haryana	9	-	5	8
9.	Himachal Pradesh	5	4	2	3
10	Jammu & Kashmir	-	28	19	6
11.	Jharkhand	9	12	-	2
12.	Karnataka	86	141	71	110
13.	Kerala	17	42	18	22
14.	Madhya Pradesh	16	53	18	19
15.	Maharashtra	102	137	93	70
16.	Manipur	6	8	3	4
17.	Orissa	22	26	6	4
18.	Pondicherry	10	8	6	-
19.	Punjab	39	40	61	23
20.	Rajasthan	24	-	1	6
21.	Tamilnadu	33	-	-	62
22.	Uttar Pradesh	-	-	-	17
23.	Uttaranchal	-	-	-	3
24.	West Bengal	-	-	-	24
	Total	**555**	**742**	**480**	**493**

Annexure-X (a)

Number of Nursing Education Institutions as on 31st March, 2004

Sl. NO.	States and Union Territory	Total No. of Nursing Educational Institutions in India recognized by INC									Registered nurses in respective State Nursing Registered Council		
		A.N.M.	G.N.M.	DNEA	B.SC. (N)	P.B. B.SC(N)	M.Sc(N)	Short Term	M. Phil	PhD	A.N.M.	G.N.M.	HV/FHA
1	Andhra Pradesh	22	91		39	1					94395	84306	2480
2	Assam	9	12		2			1			12589	10321	
3	Bihar	23	13								7501	8883	511
4	Chattisgarh		2		2						93	179	
5	Delhi	1	12	1	5	2	1				355	2594	
6	Gujarat	2	18			1					35840	85796	1352
7	Haryana	9	12		1						13112	15821	694
8	Himachal Pradesh	1	5								9087	7920	411
9	Jharkhand*							1			15	10	
10	Karnataka	1	154		67	15	15		1		47407	54762	6836
11	Kerala	12	74	1	5	1	1				27612	71589	7797
12	Mahakoshal	7	16	2	7	3	1				25344	92331	998
13	Maharashtra	16	47	1	2	5	1	2			25690	81983	551
14	Mizoram	1	3		1						1441	1301	
15	Orissa	15	4								30213	46090	110
16	Punjab	27	55		11	1					17389	43470	2584
17	Rajasthan	8	38		2						22239	35482	850
18	Tamil Nadu	8	54		36	5	12		1	1	52819	159525	11083
19	Tripura		1								969	641	79
20	UP &Uttarachal	30	24		2	1					26956	17479	2763
21	West Bengal	16	22		2	1		1			55858	44652	11294
22	Chandigarh				1	1	1						
23	MIB	3	4										
24	SIB	3	17		2	1	2						
25	AFMS		6										
	TOTAL	**214**	**684**	**5**	**187**	**38**	**34**	**5**	**2**	**1**	**506924**	**865135**	**50393**
* Registration Started from August 2004													

Assam = Assam+Arunachal Pradesh+ Manipur+Meghalaya+Nagaland	ANM: Auxiliary Nurse Midwives
Maharashtra = Maharashtra+Goa	GNM: General Nursing and Midwives
Punjab = Punjab+J & K	DNEA: Diploma in Nursing Education and Administration
Tamil Nadu = Tamil Nadu + Andaman & Nicobar Islands + Pondicherry	B.Sc(N): Bachelor in Nursing,
West Bengal = West Bengal+ Sikkim	M.Sc(N): Master in Nursing
	PBBSc.(N): Post Basic Bachlor in Nursing

Annexure-X (b)

Distribution of Nursing Educational Institutions Recognized by India Nursing Council [as on 31st March, 2006]

S. No.	States	A.N.M.	G.N.M.	B.Sc.	M.Sc.	P.B. B.Sc.
1	Andaman & Nicobar	1	1	0	0	0
2	Andhra Pradesh	30	182	107	2	1
3	Arunachal Pradesh	1	2	0	0	0
4	Assam	6	11	3	0	0
5	Bihar	27	15	0	0	0
6	Chandigarh	0	0	1	1	1
7	Chattisgarh	1	1	9	1	0
8	Delhi	1	17	5	2	2
9	Goa	1	2	2	0	1
10	Gujarat	3	28	5	1	1
11	Haryana	10	25	3	0	0
12	Himachal Pradesh	2	6	0	0	0
13	Jharkhand	3	2	0	0	0
14	Jammu & Kashmir	1	2	0	0	0
15	Karnataka	4	392	237	25	22
16	Kerala	14	137	59	3	5
17	Madhya Pradesh	13	24	23	3	4
18	Maharashtra	22	71	23	2	6
19	Manipur	3	4	0	0	0
20	Meghalaya	2	5	1	0	0
21	Mizoram	2	4	2	0	0
22	Nagaland	1	1	0	0	0
23	Orissa	16	20	8	0	1
24	Pondicherry	1	1	5	0	0
25	Punjab	34	92	19	2	6
26	Rajasthan	10	74	5	0	0
27	Sikkim	0	0	1	0	0
28	Tamilnadu	11	102	49	33	9
29	Tripura	1	3	0	0	0
30	Uttar Pradesh	30	50	6	0	1
31	Uttaranchal	0	0	2	0	0
32	West Bengal	20	38	5	2	2
	Grand Total	**271**	**1312**	**580**	**77**	**62**