

# *Summary of the Report on Workforce Management Options & Infrastructure Rationalisation of PHC*

## **Summary**

### **Introduction**

Health is a common theme in all cultures and all communities have their concepts of health as a part of their cultures. Health is today considered an integral part of human development. The definition of health as given by the World Health Organisation (WHO), describes health as a state of complete physical, mental, social and spiritual well being and not merely as absence of disease or infirmity. The modern medical facilities are striving towards achieving this multi-faceted concept of health for the population. This broad concept of health on the one hand is highly personal responsibility and on the other a major public concern.

The National Health Policy (NHP, 1983) envisaged a three-tier structure of primary, secondary and tertiary health-care facilities to bring health-care services within the reach of the rural population. Under the primary tier, three types of health-care institutions are covered: (1) a Sub-Centre (SC) for every 3000–5000 population, (2) a Primary Health Centre (PHC) for every 20000–30000 population and (3) a Community Health Centre (CHC) to serve as a referral centre for every four PHCs covering a population of 80,000–1,20,000. The district level hospital serves as a secondary tier for rural health care and provides primary health care services for urban areas. Tertiary health care is provided by institutions in urban areas, which are often well equipped with state-of-the-art technology for diagnostic and investigative facilities.

In pursuance of this policy, over a time, a vast network of health-care institutions has been created in the rural and urban areas of the country. Substantial resources, though inadequate, have gone into planning and implementing the health and family welfare programmes. Increased availability of health care and its utilization has contributed to the improved health status of the population as reflected in the improved life

expectancy and decline in mortality and a fall in the birth rate. However, these achievements have not been uniform across the various states and districts or between rural and urban areas in the country. By virtue of being a signatory to the International Conference on Population and Development, the Government of India is committed to pursue the goal of providing health care to all its people. After Independence, through the setting up of the Department of Health and Family Welfare both at the Central and State levels, the government established a multi-tier health infrastructure network across the nation and engaged health functionaries at different levels with varying facilities.

Keeping the various policy objectives in view, regular monitoring and evaluation of the efforts to achieve these objectives are necessary to suggest corrective measures. The present study provides an assessment of the public health-care delivery system by addressing the issues related to workforce management options and infrastructure rationalisation.

## **Study Objectives**

The primary objectives of the study relate to the following issues:

1. **Workforce Planning:** assessment of mismatches, if any, between the demand for and the supply of the quantum of manpower, type and quality of delivery of services, contemporary training needs, improving the equity in the distribution of services, promoting public-private partnerships to dispense with essential services.
2. **Infrastructure Management:** assessing the interstate differentials in the availability, use and maintenance of infrastructure, including consumables, at different levels, and to suggest a framework and action plan for improving the referral mechanism.

## **Methodology**

This study was conducted in eight states, viz., Gujarat and Rajasthan in the west, Karnataka and Tamil Nadu in the south, West Bengal and Orissa in the east and Madhya Pradesh and Uttar Pradesh in the north. Based on composite indices related to health status of the population, two districts from each state, one from the upper half of performance scale and another from the lower half, were selected.

In each district, along with the district hospital, two CHCs, four PHCs (two falling in the jurisdiction of each selected CHC) and two SCs falling under each of the PHCs were selected randomly to examine the functioning of these institutions. The CHCs were identified from the selected districts on the basis of bed occupancy ratio.

Further, 29 government-run Training Institutions (TIs) were selected to assess their performance and efficiency. As part of the same exercise, a few trainees and trainers were interviewed from each Training Institution to elicit their views on the indicators such as the course content, stipend/remuneration, utility of the training programme and career development opportunities for trainers.

Supply-side information was complemented by the demand side information by interviewing randomly selected 500 households in each state from the vicinity of the selected health institutions to elicit information on the choice of facility, reasons for choosing a facility, satisfaction level, and so on.

Above all, before the field study was initiated, in-depth discussions were held with State Health Officials to understand the rationale behind health sector reforms in their respective States. It may be relevant to mention here that throughout the report, State-level analysis refers to the eight selected States and district-level analysis refers to the sample districts only.

In addition to these efforts at collecting relevant information for analysis, Jalaun district of Uttar Pradesh and Sidhi district of Madhya Pradesh were subsequently taken up for an in-depth study in the form of case studies.

The district of Jalaun is situated in the southern part of Uttar Pradesh. According to the Census 2001, the population size of this district is 14.56 lakh and its annual growth rate is 1.9 per cent. The overall literacy rate of this district is as high as 66.14 per cent compared to 57.36 per cent of Uttar Pradesh as a whole. District Jalaun is divided into nine administrative blocks with 942 inhabited villages.

The district of Sidhi is situated in the eastern part of Madhya Pradesh. It has a population of 18.31 lakh and an annual growth rate of 3.3 per cent. The overall literacy rate of this district is 52.8 per cent compared to 64.1 per cent of Madhya Pradesh as a whole.

## People's Perspective on Public Health Care Services

- Quality of care plays a significant role in the choice of a health facility as is evident from the household survey findings. Thus, 87.2 per cent and 93.4 per cent of the users of public and private health facilities across all States, respectively, expressed their satisfaction with the facility they had utilised.
- Inter State variations in the utilisation were noticed. The utilisation of only public facilities ranged from as high as 74 per cent in Karnataka to just 11.7 per cent in Uttar Pradesh. Similarly, the utilisation of only private facilities was the highest in Madhya Pradesh (42.8 per cent) and the lowest in Karnataka (6.4 per cent). However, it is interesting to note that a larger proportion (63.4 per cent) in Tamil Nadu utilised both public and private facilities, followed by Uttar Pradesh (52.9 per cent) and Gujarat (46.3 per cent).
- The main reasons reported for dissatisfaction with public health facilities were 'not recovering fully from illness' (41.18 per cent in Gujarat), followed by 'non-availability of medicine' (28.57 per cent in Orissa). A people-centred approach with effective monitoring, together with better management of logistics (drugs and consumables) would significantly improve the system. On the other hand, those who visited private health-care facilities reported their preference because of the better care (39 per cent in Gujarat). However, private health facilities were the compelling choice among a large number of respondents in Gujarat, Madhya Pradesh, Tamil Nadu and Uttar Pradesh simply because of the complete lack of public facilities.
- The post of Lady Medical Officer (LMO) is almost non-existent in rural PHCs in almost all the States, except Tamil Nadu. There is no sanctioned LMO post in PHCs in Gujarat, Rajasthan and Uttar Pradesh. The findings also show that even though some PHCs in Karnataka, Madhya Pradesh and West Bengal have sanctioned posts for LMOs, the positions are lying vacant. Only one sample PHC in Orissa, seven in

Tamil Nadu and one in West Bengal had LMOs against sanctioned posts. The survey revealed that rural women feel more comfortable approaching women doctors. The presence of LMO in the PHC was seen to pull in more patients who would otherwise go elsewhere.

- An analysis of the data reveals that private alternatives are justifiably sought where existing public infrastructure is deemed inadequate. However, Karnataka has successfully demonstrated that public infrastructure can be suitably strengthened to offer a similar or better choice to people compared to private facilities.

## **Workforce Management Issues**

### ***Existing Staffing Pattern, Vacancy and Recruitment Policy***

- At the Sub-Centre-Level, as per the published data for 2001, about 4.8 per cent and 18.1 per cent of the SCs function at the national level without Family Health Worker (FHW)/Auxiliary Nurse Midwife (ANM) or Male Health Workers (MHW) respectively. During field investigations, it was learnt from health supervisors that they, sometimes, open SCs just to administer routine immunisation. Since the norms vary in different States, it was thought wiser to analyse the situation of SCs functioning without FHWs or MHWs. Karnataka showed the highest shortfall of FHWs/ANMs, which is 14.5 per cent, followed by 10 per cent in Madhya Pradesh. Similarly, with respect to MHWs, the deficit was the highest in Uttar Pradesh at 50.7 per cent, followed by Gujarat at 25.7 per cent and Madhya Pradesh at 19.2 per cent.
- The scenario of Jalaun district of Uttar Pradesh demonstrates that as per the norms for FHWs/ANMs, one of each functionary is to be posted in every Sub Centre, Family Planning main centre and Post-partum centre. As far as MHWs are concerned, the norm is for one in each SC. There are no fixed norms for Supervisors. In almost all categories there are vacancies as well as shortages. Comparatively, there are less vacancies at FHW/ANM level. There is a high percentage of vacancy in the Male Health Worker posts in this district. Over the years the workload of FHWs\ANMs has increased manifold, because a number of new tasks have been added to their existing duties and responsibilities. The absence of a MHW at the SCs only adds to the workload of FHWs/ANMs.

- Overall, there is a deficit in sanctioned posts relative to the norms of paramedical staff in SCs and PHCs put together. The deficit in the SCs and PHCs, with respect to MHWs was 48.3 per cent and 16.2 per cent, respectively, whereas for FHWs it was 14.2 and 7.3 per cent respectively. Intra-state variations of staff positioning at the SC are clearly reflected in the sample districts. Madhya Pradesh had the highest shortfall of FHWs (23.5 per cent). The situation was relatively better in the case of MHWs (6.0 per cent) in MP compared to a shortfall of 94 per cent in Orissa, which was the highest among all the states under study.
- The case studies further highlight the variations in the staffing levels across the country. In Sidhi district of Madhya Pradesh, as per the SC staffing norms, there should be one MHW and one FHW in every SC. The percentage of vacant posts for MHWs and FHWs in this district is, respectively, 22 and 29. Interestingly, in this district, there are more MHWs than FHWs posted at the SCs. In addition to MHWs, there are 29 other male field-level staff called Non-Medical Assistants (NMA) working under the leprosy and malaria programmes (25 in the former and 4 in the later). In comparison to the overall picture for the states, the SCs in this district are fairly well staffed. By a re-allocation of the staff, it is possible to fill the existing 20 to 30 per cent of vacant posts of MHWs and FHWs without putting any burden on the government exchequer.
- The MHW/FHW ratio, expressed as MHW per FHW, is low in Barmer district of Rajasthan, Bareilly district of Uttar Pradesh and Chickmagalur district of Karnataka at 0.13, followed by Jalaun (Uttar Pradesh) with 0.29 and Bijapur (Karnataka) with 0.38. This ratio was found to be the highest in Rajkot district of Gujarat and Thanjavur district of Tamil Nadu at 0.88, followed by the less developed district of Sidhi in Madhya Pradesh and Tirunalveli in Tamil Nadu, at 0.75. It appears that there is a declining emphasis on fresh recruitment and replacement of field-level functionaries and extension workers and those involved in doorstep delivery of services across the States. Practically all states are phasing out the post of MHWs as these are still identified through their affiliation to the line programmes. It is strongly recommended to accelerate the recruitment of MHWs and retrain the existing MHWs for integrating them into ‘two-worker SCs’.

- At the PHC level, while the norm is to have at least one Medical Officer (MO), it is often seen that in most States the sanctioned posts are higher than the norm as is evident from the official records. There are 22,842 PHCs functioning in the country and the number of sanctioned posts of MOs (29,689) is nearly 30 per cent more than this number. The number of MOs in position is 11 per cent higher than the norm. But this does not necessarily imply that all the PHCs have MOs posted. While 25.9 per cent of them have more than one doctor in place, 5.6 per cent have no MO in position. Of the 22,842 PHCs 24.2 per cent, 9.2 per cent and 89.3 per cent have no laboratory technician, pharmacist and LMO respectively. Wide inter State variations were also observed. With respect to MOs, Uttar Pradesh showed the maximum shortfall of 40.6 per cent, followed by Madhya Pradesh (13.1 per cent) in contrast to Tamil Nadu where the MOs were 84.4 per cent above the norm. Despite the huge shortfall of MOs in Uttar Pradesh, it was observed that 11.6 per cent of the PHCs had more than one MO posted, implying that the posts are concentrated in some PHCs at the cost of the others. For example, in Madhya Pradesh, while 23.1 per cent of the PHCs are functioning without a doctor, at the same time 23.9 per cent are functioning with more than one doctor. It is recommended that irrespective of political, bureaucratic or other compulsions, at least one MO be made available in each PHC.
- As mentioned earlier also, the primary survey revealed that LMOs are almost non-existent in rural PHCs in all the selected States except Tamil Nadu. In fact, in some States like Gujarat, Rajasthan and Uttar Pradesh, LMO posts are not sanctioned at all. Within a State, too, the sanctions of LMO posts are only few. However, the question remains whether these sanctions are need-based or otherwise. During the household survey, it was found that rural women feel more comfortable approaching lady doctors. The presence of a lady doctor in PHCs will attract more patients who would otherwise seek health services elsewhere. In extreme cases, an LMO should be made available for a fixed time of the day or a few days in the week to reach out to the rural women- who are reluctant or prohibited from approaching male MOs.
- It was learnt from the case studies in Uttar Pradesh and Madhya Pradesh that a relatively significant pool of Indian System of Medicine & Homeopathy (ISM&H) practitioners are available or already working

in the modern health-care system. These practitioners should be used at the PHC level wherever shortage of doctors is found. Means of re-training them to perform at least rudimentary work in PHCs should be formulated.

- Surprisingly, the number of sanctioned posts of MOs in PHCs also varies across States. Orissa has sanctioned four MOs in each PHC whereas in Uttar Pradesh two MO posts are sanctioned. However, in the other States the number of sanctioned posts is as per the norms.
- One of the major concerns is the frequent transfer of MOs. Punishment transfers for MOs are common and done abruptly. This also contributes to vacancies in PHCs and as a result service delivery suffers seriously. Another administrative lacuna is that the higher authorities are unable to retain key medical personnel at headquarters. It is recommended that frequent transfers of MOs be stopped and ways found to retain key health functionaries at headquarters.
- An acute shortage of specialists in CHCs is a major hurdle in effective service delivery. This was found to be as high as 92 per cent in Madhya Pradesh. The specialists should not only be posted to the CHCs on an urgent basis but the supporting staff should also be posted appropriately.
- The two Case Studies of Jalaun of Uttar Pradesh and Sidhi district of Madhya Pradesh, show that although there are population-based norms for establishing different types of Rural Primary Health-care Centres, there is no population-based norm for the requirement of doctors or paramedical staff. In this context, it is worth mentioning that the National Health Policy- 2002 has stressed the urgency for introducing minimum statutory norms for the deployment of doctors in medical institutions under the provisions of the Indian Medical Council Act. As the government has prescribed the manpower requirement in different types of medical institutions, the population norm for doctors based on the existing infrastructure can be indirectly established.
- In the district of Sidhi, the gross requirement of the different public health-care institutions based on the Census- 2001 population for rural areas shows that there is a considerable shortage of institutions. The

extent of the shortage would be still higher if the requirement was calculated taking the proportion of the tribal population in this district into consideration. On the other hand in Jalaun district, at present at least one Block Primary Health Centre (BPHC) or CHC is located in each block. The location of existing public health-care institutions shows that there are sufficient number of such institutions and, therefore, there is no need for additional institutions of the level of BPHC or above at the moment. There is more than one institution of this type in three blocks.

- The Case Studies also point to the variations in the structure of health care institutions relative to the overall national pattern. The structure of PHCs in Jalaun district was found to be different from the overall pattern leading to some administrative problems. There are two types of PHCs here –one at the block level (PHC), covering more than one lakh population and another at the village level covering 30,000 population. Additional Primary Health Centre (APHC) satisfies the national norms of establishing a PHC for every 30,000 population. These two types of institutions operate differently. APHCs do not have outreach activities and only provide clinical services. BPHCs/CHCs, functioning with Supervisory staff, are responsible for outreach activities. However, according to the population criterion, there would still be a shortage of 17 APHCs in this district. As far as SCs are concerned, there is a shortage of 53 SCs.

## **Workforce Responsibilities and Role Definition**

- Newly appointed personnel are often unaware of their work responsibilities. They acquire knowledge of their responsibilities from their peers, which means that only those functions that are generally considered important by a local-level institution or/by supervisory-level personnel are performed.
- Over a period of time a number of new tasks have been added to the existing duties and responsibilities of health functionaries, including those imposed by the community need assessment approach. Hence, there is an urgent need to review and update the job description of key functionaries at all levels.

- If we look at the Sidhi district report, shortage of medical staff is an acute problem in this district. Simply filling up the vacant posts may provide moderate coverage of the population by a doctor, but it sometimes results in the under utilisation of the staff if they are not recruited according to the requirements. A proper matching of skills with the other support staff and necessary infrastructure is required for optimum utilisation of the staff as well as of the available infrastructure. For example, a surgeon cannot perform if he or she is posted in a hospital, which does not have an OT and/or the services of an anaesthetist.
- In-service training at the district level to cope with the changed job description needs to be strengthened. For instance, in several states the workload of FHWs has increased manifold due to the absence of Multi-Purpose Workers (MPWs) and the increased activities of family welfare services. Also, with the accepted need for integrated 'two worker SCs', male health workers, who are at present performing limited tasks mainly in the SCs, should be trained along with their female counterparts to share the workload.
- Most line programmes are integrated at the SC level and FHWs have to perform all tasks related to these programmes. Besides, temporal programmes of prime importance, like the national polio eradication programme (pulse polio immunisation programme), leprosy week, etc., are conducted at the expense of routine work such as mother and child immunisation, family planning, etc. These programmes declare one-week drives either for awareness campaigns or for disease eradication and regular personnel are diverted to this effort. As a result, routine programmes suffer during this period.
- There is a widespread need to ensure adequate supervision by MOs of MHWs and FHWs rather than getting them engrossed in administrative work. There should also be periodic skill up gradation programmes to enhance job-definition and responsibilities of FHWs and MHWs.
- The case study of Jalaun district provides an indication of the potential for re-allocation of existing resources for better staffing of the facilities. Given the current status of the functioning of ISM&H as well as of allopathic practitioners in Uttar Pradesh, it would be possible to integrate the ISM&H into the mainstream at the 30,000 population PHC

level. As has been pointed out, ISM&H doctors are already working as medical officers in additional PHCs. The ISM&H has its own line of institutions throughout the district. The possibility of a merger of these two types of institutions may be looked into as both are functioning as day-care units and performing sub-optimally. At this level of health-care services, two categories of staff are important—one of the doctor and the other of the compounder/pharmacist. All 30,000 population APHCs in Uttar Pradesh are already sanctioned with two doctors—one from the allopathic system of medicine and the other from the ISM. As far as the national programmes under public health are concerned, doctors from both systems can handle APHCs effectively. For curative services they can prescribe medicines according to their system.

## **Workload Assessment and Supervision**

- The survey revealed that compared to the norm of 5000, the average population covered by a SC is higher in the less developed districts (5656) and less in the developed districts (4692) in the sample districts. To make it worse, it was found that often the area is also spread out making it difficult for health functionaries to reach out to all the villages covered by the Sub Centre. Lack of proper commuting facilities further aggravates the problem in the desert and forest areas of Rajasthan and Madhya Pradesh. The SCs surveyed in Bareilly district of Uttar Pradesh showed the highest population coverage of 10313 followed by districts in West Bengal (6595 in Bardhaman and 5947 in Cooch Behar). In the tribal district of Sidhi, the average population covered is worked out to 5588, which is nearly 86 per cent higher than the norm of 3000 in such areas. This increased the burden of the SC staff even more thus affecting their supervision work in far-off villages. Large population or wide area/village coverage affects grassroots level workers, such as FHWs, MHWs and Supervisors.
- Since one SC may come under several panchayats, they may be accountable to more than one Sarpanch/ Panchayat Head. Differences in demands from different panchayats make SCs less productive. There is a strong case for synchronising the area and population under a panchayat with that under one PHC or ward of an SC.
- Task and performance/expectations are often not met by the SCs. From their weekly work schedules, it was found that other than routine work,

FHWs have to work for the school health programme in Tamil Nadu, and the leprosy survey in West Bengal and Tamil Nadu. However, from the group discussions with FHWs, it was learned that in all the states they feel they are over burdened. The FHWs came out with complaints like 'too much paperwork' (16 registers being maintained in Orissa as against 10 on an average), which hampers their routine work schedule, 'hectic field visits' and 'several meetings and camps' because of the introduction of the new programmes. In the absence of pre-planned work schedules generally being the norm, certain particular days of the week are planned for immunizations and clinics.

- As far as the workload of male workers is concerned, divergent views emerged from the group discussions. In Gujarat, MHWs complained of the need to cover a larger area extending beyond the SC due to large deficit of male workers in the State. For example, in one case, there were seven SCs in a PHC but only two MHWs were in position. A similar situation was found in West Bengal. Tamil Nadu also faces similar problems but according to the MOs in the PHCs and the district medical officials, even the existing male workers are underutilised.
- An MHW is expected to participate in malaria screening, community visits for spraying activities, distribution of ORS packets, conducting school health programmes, blood smears collection for all fever cases and identification of leprosy and TB cases. Often, many of these activities are jointly performed by FHWs and MHWs which further increase the workload of ANMs/FHWs. In fact, it is partly with the intention of sharing the workload of ANMs which in some States MHWs are keen to be trained in family welfare activities. If this is pursued, minimum necessary services can be ensured to the users as in the absence of the FHW the MHW can take care of the SC. The survey revealed that very few job responsibilities are undertaken by MHWs in Rajasthan. The collection of blood smears through door-to-door visits is much below expectations in most States except Gujarat. This job is not performed at all by MHWs in Rajasthan. No sanitation related activities are performed by MHWs in Rajasthan. In all the other states, although they do perform this task, their performance is below par. The number of MHWs in the health service is very low and no recruitment initiative was found during visits and discussions with health managers. Therefore, important activities are being overlooked or are being imposed on FHWs.

- The weakest link in the whole health-care network is the lack of supervision at the district and lower levels of health institutions. A large number of positions of male and female health Supervisors at the PHC level are vacant. Even the post of Block Health Educator (BHE) who performs education and communication activities and plans field-related programmes has been abolished (as in Rajasthan) or phased out. Lack of supervision seems to be the most disturbing feature of the health sector. Since supervision is one of the major components of primary health care, it is recommended that it be strengthened at all levels. It may also be noted that poor or ineffective supervision is also due to the non-availability of vehicles, which restricts access to larger areas by the PHC Medical Officers and the district-level Officers.
- As regards the workload of MOs, it was found that more than 70 per cent of MO's time is spent on curative activities and 10 per cent on administrative work, thus leaving only about 10 per cent for promotional and preventive health care. However, most of the MOs reported that administrative and curative activities are done simultaneously, which may mean that they only sign papers prepared by the office staff. It was noticed that relatively more time is spent on preventive activities in developed districts and on promotional activities in less developed districts. It was also noticed that very little time is spent on training and sometimes MOs do not participate in training activities at all.
- The work schedules of administrative medical officers of CHCs reveal that MOs in Orissa and Tamil Nadu spend more than half their time on administrative work. From the sample observation, it was found that very little time is spent in the Outpatient Department (OPD) by CHC MOs in Orissa and Uttar Pradesh, especially in the less developed districts.

### ***Poor Inter-institutional Linkages***

- One of the greatest failures in health system management is the lack of a clear inter-institutional linkage and referral network. This is often due to the lack of facilities, under-utilisation of capacity, inadequate personnel, insufficient information back-up or a different administrative chain of command. Lack of mobility support is another reason for poor

referral support even for Below Poverty Line (BPL) families. This results in people being pushed around and discourages them from using government hospitals and they ultimately end up using the nearby private facilities. These issues need serious consideration, to see if a proper referral system with adequate institutional and mobility support can be designed and run with the participation of the Panchayat Raj Institutions.

- The non-availability of referral manuals at any level of institution is another serious problem. Patients who need to be sent to district/rural hospitals for specialised services are entered in a register at the First Referral Unit (FRU) with an indication that they have been referred to a higher level hospital. However, no referral records are sent along with the patients in a standard format which can be verified. Though patients do reach a hospital, it is not necessarily the one they were referred to, and so they are often treated as fresh cases.
- Another example of weak inter-institutional linkages is the different supervisory pattern. It is evident from the Case Studies of Uttar Pradesh and Madhya Pradesh that CHCs or block PHCs are directly monitoring the activities of SCs without giving due importance to PHCs. This would be clear from the fact that in Sidhi district of Madhya Pradesh, the activities of the SCs are monitored and supervised by the CHCs through sector offices where health Supervisors are located. When SC activities are monitored from CHCs, physical accessibility becomes a problem. To establish a proper referral linkage, it is also essential to make the PHC responsible for the working of the SCs. Similar is the case with the Jalaun district of Uttar Pradesh. The activities of the SCs are monitored and supervised by BPHCs/CHCs. When SC activities are monitored by BPHCs/CHCs, bypassing the APHCs, physical accessibility becomes a problem. To establish a proper referral linkage, it is essential to involve APHCs in the supervision of SC activities. Adoption of the proposed structure at the all-India level would enhance the monitoring and supervisory mechanism and provide a common system for the flow of information.
- Though it is difficult to maintain proper referral records for each patient as they proceed to progressively sophisticated institutions of health-care, extensive capture of data in electronic format for easy storage and

retrieval across diverse physical locations should be a goal worthy of emulation.

- It is important to realize that the same vehicles used for carrying supplies to the PHCs can be used for transportation of poor patients to more sophisticated health-care centers provided proper customer focus is brought into practice. Otherwise, there is a need to ensure some level of accountability among workers in PHCs particularly drivers and other attendants.

## **Infrastructure Rationalisation**

- It is difficult to imagine a situation where health care facilities have to be provided in the absence of physical space. It was observed that some sanctioned SCs in selected States, except Tamil Nadu and West Bengal, do not have any physical space (either rented or owned). This makes it difficult to run a general clinic or conduct clinical examinations. As a consequence of the above, the survey records that the number of beds available per thousand population are much below stipulated norms in all States apart from Karnataka (PHC:- 6 beds /30,000 and CHC:- at least 30 beds). Over a third of the 64 surveyed PHC's have no bed facilities at all and function only as day-care units. Almost all CHCs, except those in Orissa and West Bengal are abysmally under-utilized. The availability of beds in CHCs ranges from six in one CHC in Orissa to 122 in a CHC in Karnataka. The Bed Occupancy Ratio (BOR) is very low in all CHCs in Uttar Pradesh. Some of the CHCs were found to have a BOR nearing zero.
- Due to the relative decline in the importance of extension activities, the PHCs have also become OPD counters/day-care units. In fact, the Gujarat government's permission for private practice after office hours is misused as permission to undertake (private) practice at all times within the confines of public health facilities.
- Residential accommodation for health staff at all levels seems to be a problem. It is either not available, or if available, it is not conducive for habitation or it is located in an isolated area (particularly for PHCs or SCs) or the basic facilities are not provided. Many SCs are not safe for FHWs to live in due to proximity/access and poor security. More than half the FHWs in the selected states do not live at SC quarters. While it

is 44% in Orissa, it is as high as 87% in West Bengal. Such a scenario makes it difficult to ensure physical presence of health-care workers in their respective institutions during working hours, which is further compounded by inadequate monitoring. West Bengal has gone to the extent of stipulating the presence of FHW's in their institutions only twice a week during working hours. Loss of HRA in not being able to stay in Government provided accommodation is another sore point among many health-care workers.

- The physical absence of infrastructure has proved to be a serious deterrent in the availability of quality man-power; to the extent of affecting the basic functionality of these institutions. Normally expected to have four doctors with various specialisations, they are usually manned by only general physicians with basic qualifications. However, many of the decisions about the running of CHCs can only be taken by post-graduates and specialists. In such a scenario, the enforcement of the referral mechanism and the degree of compliance among the target population with low awareness levels is woefully inadequate.
- A study of availability of physical infrastructure reveals that while almost all PHCs had access to electricity (with the developed districts reporting inadequate supplies of less than 8 hours) and refrigerators, only 22 out of 64 PHCs had telephones. Water supply in toilets and wards are about 44% and 34% in the sample PHCs. While half of the sample PHCs have labour rooms and laboratory facilities, only a third have Operation Theatres (OTs). Of these, many OTs in the States including Karnataka have no availability of running water.
- The mismatch between manpower and infrastructural facilities, in terms of positional mismatch, technical mismatch and managerial mismatch is a serious concern (See also PEO study on CHC, 1999). While Tamil Nadu and West Bengal report the fewest mismatches, Rajasthan and Madhya Pradesh report the highest mismatches. Positional mismatches like the absence of specialists in CHCs strikingly appear in the number of gynaecologists and paediatricians responsible for complicated ante-natal cases and infant/child mortality. There is only a little more than 50% availability in all the CHCs. Technical mismatches like operation theatre vs surgeon or anaesthetists were glaringly close to 86% across all CHCs in all the selected States. Managerial mismatches relating to

incompatibility in equipment supplies and lack of standardization is another major stumbling block. Around 30 per cent of CHCs are facing mismatches like no training in the use of some instruments, lack of supportive materials and equipment to operate, etc.

- Infrastructure facilities such as buildings, residential accommodation, beds, vehicles, operation theatres, laboratories, x-ray machines, etc., and supplies such as day-to-day consumables are necessary to successfully execute primary health-care services at any level. There are serious lacunae in these areas in the States selected for study. These being essential components of a composite health delivery package, a shortage or the absence of any one or more items is bound to affect the smooth functioning of the facility. For example, about 20 to 40 per cent of the patients across the selected states showed their dissatisfaction with public health-care facilities due to the non-availability of medicines. Medicines are not supplied regularly in Gujarat, Madhya Pradesh, Rajasthan and West Bengal. Irregular supply of family planning materials have been reported from all States except Karnataka, Uttar Pradesh and West Bengal. Even Immunisation vaccines are supplied irregularly in Gujarat, Madhya Pradesh, Orissa and Rajasthan. The demand and supply chain of procuring drugs and supportive material at a flat rate on the basis of a quota system and immediately distributing them in the absence of proper storage facilities need to be radically overhauled. A proper analysis has to be made to understand the recurring and non-recurring patterns of usage and SC's should not become the dumping ground for consumables with short expiry dates. This is not only a tremendous wastage of money perpetuated by the necessity to show that the system is in running condition but also a failure in actually serving those who really need it most.
- It was found that the most of the equipment available in the SCs are not in use (See also PEO Report No. 182 on Social Safty Net, 2001). A haemoglobin meter was not being used due to the non-availability of the reagent or for lack of training. Among the selected states, the under utilisation of equipment in SCs was found to be the highest in Tamil Nadu. Each CHC should be equipped with an Ice-lined Refrigerator (ILR), x-ray machine, ECG machine, baby care unit, etc. Some of the selected CHCs, except those in Gujarat, are functioning without an x-ray machine, or if they have a machine it is not in working condition or

the technicians are unavailable. The study team found that most CHCs do not have ECG machines and baby care units.

- The SCs of the developed districts reported more logistic problems than the less developed districts. More specifically, FHWs in Karnataka reported fewer logistic problems. PHCs and sometimes CHCs act as logistical distribution centres for all SCs. However, even vaccines are not being supplied regularly to PHCs in Gujarat, Madhya Pradesh, Orissa and Rajasthan. The supply of medicines with a short expiry date to SCs is also a problem according to FHWs. This problem is more pronounced in Gujarat, Orissa and Tamil Nadu. District Health Officers mentioned that they have insufficient storage facilities and are therefore unable to provide supplies at regular intervals.
- The availability of transport facilities is essential for PHCs and CHCs to provide good referral services, outreach services and field supervision. There are no vehicles in any of the selected PHCs in West Bengal and Tamil Nadu. Even where they are available, they are often not in working condition or there are no motorable roads or the driver is not readily available.
- The maintenance of buildings and instruments is also a problem as reported by health managers. District health officers say the lack of funds and the absence of financial autonomy make maintenance operations difficult. It is observed that a foolproof system of maintenance (corrective as well as preventive) is not in place in the public health scenario in the states under study. It is recommended that financial autonomy for petty maintenance be provided to all heads of institutions.

## **Training Institutions**

- As far as the proficiency of the teaching staff in training institutions is concerned, it has been reported that the majority of the selected TIs have a well qualified faculty. The heads of TIs expressed their unhappiness with the centrally designed curriculum as the course content does not always suit local needs, even though the faculty seems not to have used its initiative to adapt the curriculum to local needs. The training being imparted is on limited areas of Reproductive and Child Health (RCH), but there is a need for training on Reproductive Tract

Infection (RTI)/ Sexually Transmitted Infection (STI), adolescent health, etc. It was also felt that Training of Trainers (ToT) is also required in these areas.

- Regarding the curriculum and the performance of the teaching staff, trainees in Madhya Pradesh and Uttar Pradesh showed dissatisfaction. Trainees in Tamil Nadu and Madhya Pradesh felt that the training was beneficial mainly for promotion and to get monetary incentives. They want the overall training programme to provide more practical training and less classroom training, more clinical training and the use of more audio-visual tools. It was also felt that the duration of the training should be extended. As far as the utilisation of training institutions is concerned, it was observed that TIs in Rajasthan are considerably under utilised.
- Most of the selected training institutions do not have useful equipment like overhead projectors, slide projectors, TVs and VCRs, slides, films, etc. and wherever these are available they were found to be out of order. Some of the trainees said that outdated instruments were being used in the TIs. This shows poor planning, poor budgeting and poor maintenance of training equipment.
- It was observed that one-fourth of the faculty positions are lying vacant in the selected training institutions. This shortage of Trainers was found in all the selected states. As for the requirement of specialised Trainers, the States expressed specific needs. Gujarat, Karnataka, Orissa, Rajasthan and Tamil Nadu want ToT on health management, communication and administration. There is a dire need to identify and effectively use visiting faculty. A system of trainee evaluation of Trainers may be considered. But the need of a core faculty is paramount.
- The role of training institutions assumes paramount importance when one talks about integration of the ISM&H department. For instance, it was learnt from the case study of Uttar Pradesh (Jalaun district) that the ISM&H department takes part in public health-care activities in this district through its network. The point highlighted by the Ayurvedic doctor in the district Ayurvedic hospital is the exclusion of this cadre from the mainstream, i.e. the modern system of medicine. According to him, ISM&H doctors regularly send family planning and MCH cases to

PHCs and CHCs. They also participate in malaria eradication programmes by sending blood smear slides for investigation. It was also learned that the services of ISM&H doctors are being called upon during national programmes like pulse polio, etc., but not for the planning of regular public health-care activities. On the one hand there is a shortage of health-care institutions as well as of manpower in the modern system of medicine and on the other, there is a huge network of the Indian System of Medicine, which provides health-care services independently. Therefore, the possibility of integrating the ISM&H into the mainstream should be considered to alleviate the manpower shortage after equipping them with necessary training skills. This holds true also for the field-level male workers who are not integrated into the multi-purpose scheme in this district. Male Health Workers and Male Health Supervisors exist only through the vertical programmes (malaria and leprosy). Therefore, there is a scope for multi-skilling and integrating them into the multi-purpose scheme by providing appropriate training. These calls for review of the training programme and adopting appropriate training curricula.

## **User-fee System in Public Health Facilities**

- Since the latter half of the 1990s, user charges on public health-care services have been initiated in several states in the country as an additional source of financing. Barring Gujarat and Tamil Nadu, user financing of services has been initiated in all the other selected States. Karnataka was the first state to introduce user charges on hospital services in 1996, followed by Orissa in 1997, Madhya Pradesh in 1998, Uttar Pradesh in 2000 and West Bengal and Rajasthan in 2001.
- The basic form of user-fee administration and the broad categories of user charges were found to be similar across the States. Each hospital has set up Committees and laid down guidelines to manage the funds. A State-level body is supposed to monitor the hospital level Committees.
- The pattern of usage of funds collected is more or less uniform. The funds are being utilised to improve the day-to-day operations and maintenance of hospitals, thereby increasing the efficiency of hospital infrastructure and resources. Three broad categories of user charges have been defined: registration, bed, transportation, meal charges;

various diagnostic services and rates for different medical procedures and surgeries.

- It was also evident from hospital records that user fees contribute only a small proportion of total hospital revenues in most states; for example, less than 10 per cent in Karnataka and about 20 per cent in Uttar Pradesh. Hundred per cent control over the collected amount is retained by the collecting institutions in most of the states, with the exception of Uttar Pradesh where only half is retained by the institution. The remainder is transferred to the state treasury. Uttar Pradesh hospitals collect the highest amount but get to retain only a part of it.
- On the issues of equity and access to services by the poor and vulnerable, the interviews reveal that there are a number of ways to identify the poor but an administratively simple method is to issue BPL cards for the eligibility. But in practice, identifying the poor who come for treatment is often based on the discretion of the attending health official.
- The Case Studies conducted at the various hospitals suggest that much more needs to be accomplished to increase the effectiveness and improve the equity of the user-fee system. User-fee administration and the assessment procedure for exemption from user fees are poorly designed and implemented at this stage.
- While the funds raised through user fees have given greater autonomy and flexibility to health-care institutions to finance operation and maintenance to improve the efficiency of hospital resources, interviews with officials reveal that not all gains are being put to use. The management and administration of user fees remain important areas of concern for hospital officials.
- Another area of grave concern is the exclusion of the poorest and most vulnerable users from the public health-care system. Interviews with users demonstrate a lack of effective information dissemination regarding accessibility by those who need the services most. BPL persons should be exempted from any kind of charges and free services should be provided on the production of the BPL card.

## Suggestions

This study underlines the fact that the public health-care system is unable to deliver the intended services due to the misalignment of the workforce relative to the need and improper utilisation of the infrastructure. The following suggestions for the improvement of public health-care services emerge from the findings of the main report and the in-depth Case Studies.

- The availability and accessibility of good quality health-care services need to be extended to a larger population. The shortage of CHCs and PHCs and their sub-optimal functioning are the major constraints in improving the access to quality health care services for the rural population. While in the long run, new infrastructure (CHCs, PHCs) need to be created to make quality services available to a larger population, it is possible to restructure and rationalize the existing health care institutions to improve their service delivery and enhance outreach in the short-run.
- As brought out clearly in the PEO report on CHC (No. 176, 1999), the different types of mis-matches that exist in the existing health care institutions can be at least removed to a certain extent through redeployment of existing personnel and through addressing the issues relating to facilities for staff and meaningful monitoring. Other suggestions that emerge from the study are presented below.
- There is a need to retrain Male Multi-purpose Workers (MMWs) and integrate them into the 'two-worker SC' system. Since the ongoing Reproductive and Child Health (RCH) services also require the involvement of male workers, existing male workers posted exclusively to leprosy and malaria programmes should be retrained and given the additional responsibility of working in SCs. Posting at least one FHW and one MHW at the SC level should be the aim of a viable national- and state-level policy. This could be learnt from Sidhi district, Madhya Pradesh where one good feature of this district is the presence of FHWs and MHWs, along with leprosy and malaria workers.
- All vacant posts should be filled up with the appropriate staff. The Jalaun district, case study reveals that the requirement of doctors has been assessed through the population-based requirements of institutions

although there is a shortage of CHCs and PHCs in this district. As per this gross requirement of institutions, there should be 97 doctors (including specialists) for the CHCs and PHCs of Jalaun district. However, if we consider the requirement of doctors for the existing institutions, the number of required doctors is only 78. No requirement norms have been found for block PHCs, although two doctors are sanctioned for each block PHC. It is to be noted that this will not be an added burden for the government exchequer because it is assumed that all sanctioned posts carry a budgetary provision.

- If a State finds it difficult to fill up vacant specialist positions in CHCs, simple medical graduates should be recruited so that the people get at least minimum services.
- The shortage of doctors in PHCs should be met by using the large pool of Indian System of Medicine & Homeopathy (ISM&H) practitioners. In July 2000, the Madhya Pradesh government initiated a programme to train untrained health practitioners and rural educated youths under the *Swastha Jeevan Seva Yojna*, to deal with the dismal health-care scenario in the state. Given the shortage of doctors in the rural areas, the Chief Minister of Madhya Pradesh hoped to provide a doctor and a midwife to every village by June 2003. This type of experiments should be evaluated for suitability and sustainability and then undertaken to combat the problem of acute shortage.
- After assessing the workload of grass-roots level health workers, it is recommended that an SC be earmarked in such a way that it comes under one panchayat. Similarly, the population coverage should be redistributed in such a way that the population coverage for an SC will be serviceable and accessible.
- The supervision and monitoring system needs to be strengthened. As has been observed in the case of Sidhi district of Madhya Pradesh, the supervisory chain is very weak because of its administrative structure. In fact, for this district better monitoring would be possible only after the decentralisation of control of the supervisory staff from the CHC to the PHC.
- A clearly written referral manual must be made available in all health-care institutions and all referred patients should carry a referral card

and maintain referral protocol. Initial diagnostic features and treatment must be recorded in the referral card so as to avoid confusion and repetition of treatment.

- A regular supply of consumables needs to be ensured and it should be according to the needs of the institutions.
- Convenient and standard residential accommodation needs to be provided for at least the key staff as a motivation for them to stay on so as to ensure the availability of services to the people.
- The mismatch between manpower and infrastructural facilities should be minimised so as to enhance efficiency as a whole.
- To strengthen the effectiveness of training, the academic proficiency of the Trainers needs to be upgraded to include the new areas that are in demand, such as HIV/AIDS/STI/RTI, adolescent health, administrative management, etc. Also, it is necessary to provide trainers with opportunities for career development.
- It is recommended that user fees **be introduced in all CHCs and higher level hospitals**. The charges should be kept at a minimum and should be different for different levels of institutions. This should be according to the level of the socio-economic status or paying capacity of the people of a particular area. The money collected should be used by the hospital which generated it, with particular emphasis on the **3-Ms**, namely, maintenance, medicine supply and mobility.

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