

## Training for effective delivery of health services

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UMAN RESOURCES ARE CRITICAL FOR EFFECTIVE IMPLEMENTATION OF HEALTH programmes and delivery of quality health care to achieve the national health policy goals in India. The availability of an adequate number of health personnel to effectively and efficiently manage and implement health programmes cannot be overemphasized. However, numbers alone may not necessarily lead to the desired changes in the health status and outcomes. It needs high levels of concern, commitment and competence among the health personnel responsible for the management and delivery of health care, especially health care providers at the grassroots level. Human resource needs have been increasing, with new health programmes being added to the package of health services over the past few decades, along with the growth of health infrastructure and expanding scope of the health services. Several new health programmes have been introduced and the strategies of existing programmes have been revised. These changes in health services and strategies have led to an increased need for developing new competencies and skills among health personnel, in addition to the increasing need for more human resources at various levels. There has been a phenomenal growth in human resources in the health sector, especially peripheral health functionaries and supervisors, who are directly responsible for implementing the interventions aiming at reducing maternal mortality, infant and child mortality, as well as reducing morbidity and mortality due to communicable diseases.

There have been major gains in India's health status since Independence. Life expectancy has gone up from 36 years in 1951 to 64 years in 2000. The infant mortality rate (IMR) has come down from 146 in 1951 to 70 in 1999. The crude birth rate has been reduced from 40.8 in 1951 to 26.1 in 1999, and crude death rate from 25 to 8.7 during the same period. One of the major reasons for these gains has been the development of an impressively vast, three-tiered system of rural health infrastructure, with a subcentre for 5000 population, a PHC for 30,000 population, and a CHC for about 100,000 population. Immunization for the control of communicable diseases has made a major contribution to these gains; success stories include smallpox eradication, the near elimination of leprosy, and the extraordinary social mobilization for polio eradication. Over the past few decades, the support of UN agencies and other multilateral agencies contributed to Indian health system significantly. However, their focus and initiatives were limited to a select few areas:

- Transition from the so-called 'Family Planning' to 'Reproductive Health' strategy
- Targeting a few communicable diseases (e.g. polio and leprosy) for eradication
- Controlling diseases such as malaria, tuberculosis (TB), HIV/AIDS
- Strengthening the State-level health delivery system (9 States)
- Facilitating the health sector reform process
- Prioritizing health interventions according to need and disease burden

Achievements notwithstanding, much more improvement is required in the health status of Indians. This becomes evident when one focuses on the progress made in the past decade. The problem of major communicable diseases remains unsolved and there is no significant progress in controlling TB, water-borne diseases and respiratory infections. Concurrently, epidemiological transition has set in and the burden of non-communicable diseases is increasing. Most of the health outcomes remained stagnant during the past decade while new challenges, such as HIV/AIDS, have surfaced to further stress the overstretched health care system. The situation in many

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Indian States is grave. Several States lag behind with respect to key indicators at the national level, especially regarding maternal mortality ratio (MMR) and IMR. It is also to be noted that there has been no significant increase in public expenditure on health in recent years. The per capita public investment on health is one of the lowest in the world.

The continuing gaps in the health status of the people may be attributed to several factors, mainly related to systemic issues, such as poor access and availability, inequity of distribution of health care, poor financing and management of the health systems. The health system's performance is seriously affected by poor human resource development, especially the competence and skills.

This paper focuses mainly on the issues related to human resource development with a focus on training. The current status of competency and skills raises several questions. Do health care givers at the peripheral level lack the competency and skills to implement interventions correctly? Does the system have the potentiality to build the capacity of these health functionaries? Is the quality of training appropriate? Is there a preparedness embedded in the system to develop the requisite skills in providing health services effectively?

## Approach and methodology

We adopted systems framework approach to analyse and understand the various factors and constraints in training for capacity building and skills development in the health sector. The systems framework has typically three dimensions—inputs, process and outcomes, and a review and analysis of training has been undertaken in each of these dimensions (Fig. 1).

A multipronged procedure was used to collect data. A triage in the form of a combination of asking questions, making observations and reviewing relevant records and reports was adopted. As the demographic transition is under way in most of the States in India, the case of Andhra Pradesh and Rajasthan have been of great interest. The level of socioeconomic development is not high enough to justify the kind of mortality

decline and behaviour changes in health, nutrition and development that States have been experiencing. The differences and differentials in population health and development programmes prompted our attention to these States for the study. One district in each State, Khammam in Andhra Pradesh, and Udaipur in Rajasthan were identified for detailed discussion and fieldwork.

A step-wise approach was adopted. The following were main steps:

### Step I: Review of training documents and records

Published material and policy documents of the Government were reviewed. The materials available at the State Institutes of Health and Family Welfare (SIHFWs) and other institutions of the two districts were referred to and reviewed.

### Step II: Rapid assessment and field visit to the SIHFW

The SIHFWs of Andhra Pradesh and Rajasthan were visited. The performances of the regional Health and Family Welfare Training Centres (HFWTC) and District Training Centres (DTC) were reviewed. The PHCs of two districts were surveyed. The following procedure was used to undertake rapid assessment:

- Personal interview with health functionaries (structured questionnaires were developed to record the information from the functionaries available at the health centre)
- Group discussions with health personnel using checklists
- Record/document scrutiny using checklists
- Observation

All existing relevant documents and reports were consulted and field visits made to obtain first-hand knowledge of issues, problems and concerns. Deliberations were held at the national, state, district and block levels with current and former policy-makers, health administrators, training coordinators, executives of training institutes and leading researchers. Interviews

**Fig. 1**

### The systems framework

#### Input

Infrastructure Institution  
Manpower (Training  
faculty/trainees) Training  
material and aids Financial  
resources



#### Process

Identification of training load  
Training needs assessment  
Training approaches  
Persons who attended the  
training  
Post-training follow-up  
Faculty development and  
growth  
Type of training conducted  
Training in quality assessment  
Training in impact assessment  
Enabling environment



#### Output

Persons trained and able to  
achieve the goal Reduction  
in maternal and child  
morbidity and mortality  
Impact assessment

and group discussions with important officials of various multisectoral programmes with RCH components were conducted at the levels of the PHC, Mandal PHC and District with selected administrators, project officers, district medical and health officers and medical officers.

In the process, nearly 150 individuals—programme functionaries, administrators, training coordinators, trainers, project officers, civil surgeons, medical officers, pharmacists, auxiliary nurse-midwives (ANMs), multipurpose health workers (MPHWs), supervisors, laboratory technicians and others—were engaged in lengthy sessions.

The team members collated the relevant information generated in the field and the documents collected from the State headquarters in Jaipur and Hyderabad for finalizing the report. There is ambivalence, confusion and differences in points of view on various facets of training. However, the deliberations were guided by the utmost objectivity, avoiding any bias in our analysis and keeping in view the overall interest of the programme.

The following health functionaries were interviewed to assess the perceived knowledge of their skills and actual gaps in their knowledge (Table 1). The effort was more on eliciting qual-

itative information rather than being distracted or overwhelmed by magical statistical significance.

## Training policy, infrastructure and system

### Training policy

Despite increasing realization of the importance of training in human resource development, no serious efforts have been made to develop an effective and comprehensive training policy at the National and State levels in the health sector. A training policy is needed that identifies priorities and training needs, types of training, processes and mechanisms, training institutions and cadre, quality assurance, and monitoring and evaluation of effectiveness. The States had no such training policy, mainly due to the low priority assigned to training and a wrong perception of training being a time- and money-wasting intervention that has failed to enhance performance and improve effectiveness of health care services in achieving the desired goals of reducing mortality, especially maternal and infant mortality.

However, Rajasthan has made efforts to develop state training policies, although the implementation of these remains questionable. The training policy has been at the draft stage for the past eight years. The draft training policy could not see the logical end of acceptance and approval by the Government. Andhra Pradesh did not even start initiatives in this direction. The States do not have a manpower policy or training policy. The manpower planning and human resource development process is ad hoc and generally follows the national norms based on population ratio.

### Training infrastructure and system

There is no separate manpower planning division in the State Directorate of Medical and Health Services in the study state of Rajasthan. However, Andhra Pradesh had a system in place. Both the States have an elaborate training infrastructure, but there is no well-functioning training system. There is now a vast training infrastructure in the States with significant growth in training capacity. There are well-established training institutions at various levels. These institutions mainly include the State Institutes of Health and Family Welfare (SIHFW), Health and Family Welfare Training Centres (HFWTC), District Training Centres (DTC) and ANM Training Centres (ANMTC). There are also some other types of training institutions in the states in addition to these.

### State Institutes of Health and Family Welfare

These were envisaged as state-level institutes that would provide leadership to all other training institutions in the respective States. The administrative and technical control of all training institutions in the State would be vested with the SIHFW, which would perform a higher role by providing training of trainers, coordinating the entire training network and system, and organizing in-service training for senior health professionals.

**Table 1**

### Distribution of health functionaries interviewed (in numbers)

Health functionaries	Rajasthan	Andhra Pradesh
<b>At PHCs</b>		
Doctors	17	6
Clinical nurse	—	5
ANMs	20	22
MPHW (M)	—	7
Staff nurse	8	4
Laboratory technician	8	4
Pharmacist	4	4
Supervisor	8	6
<b>At Mandal PHC</b>		
Doctors		2
ANMs		2
Staff nurse		1
Laboratory technician		1
Pharmacist		1
Supervisor		2
<b>At District Level</b>		
Doctors	2	2
Staff nurses	4	3
Laboratory technician	2	2
CMHO	1	1
<b>At private institution/programme personnel</b>		
Project officer of District	—	
Training Team cum District Immunization Officer		1
Senior assistant (clerical)	—	2
NGOs/Institutes (course coordinators)	12	16

In Rajasthan, the SIHFW has been created under IPP-IX to ensure autonomy and flexibility. While the SIHFW is expected to play a crucial role in planning, designing and coordinating training in the State, it is in a pathetic condition. There has been no regular director for about four years. There is no regular faculty available and most of the faculty positions are lying vacant. There is physical infrastructure but it is yet to be developed to the desired level. The SIHFW did not have its own field practice area for hands-on practical training and for undertaking operational research in the health systems as well as training interventions. As such, there is no training budget in the State and for the Institute. Funding from the World Bank has come to an end, thus bringing uncertainty in staff salary and continuation of training programmes. There was no training software development activity, such as designing new training programmes and curricula, developing materials and new training pedagogy. The present situation of the premier training institute reflects not only its apathy to training but also the level of priority accorded to capacity development in the State.

In contrast, the Andhra Pradesh SIHFW has established itself as a national-level institution, named the Indian Institute of Health and Family Welfare (IIHFW) and has made an effective contribution to the capacity-building process in the State. While it has developed an excellent training infrastructure and trainers/faculty, it has also developed training software. Further, the AP SIHFW is financially self-sustaining through generating revenue from operational research, projects and programme evaluation and consultancy.

With some exceptions, the SIHFWs in most States in India have not performed well, to the disappointment of policy-makers, administrators, programme managers and funding organizations. These institutions are not prepared to undertake quality training and overall human resource development. The SIHFWs are struggling for funds; leadership is not regular; qualified and experienced faculty is not available; no training of trainers is conducted; and they are not involved in and entrusted with the planning and development process for the training of health personnel.

### Health and Family Welfare Training Centres

HFWTCS were established as per the standard norms of the Ministry of Health and Family Welfare, Government of India. These would conduct in-service training of medical officers and trainers of DTCs. These HFWTCS have their own field practice areas but scarcely visit and utilize them for training in the field. The HFWTCS suffer from gaps in infrastructure, training equipment and aids, training material, and lack of qualified and experienced trainers. The libraries are ill-equipped and are virtually non-functional. However, the HFWTCS are not starved of funds. Funding is done by the Government of India.

### District Training Centres

The DTCs are responsible for organizing regular in-service training programmes for health workers as well as basic training programmes. Each DTC is responsible, on an aver-

age, for two districts. These DTCs work under the supervision and control of the SIHFW. Though DTCs have their own building, these are used for other purposes. A large part of the DTC building houses the CMHO offices or stores and warehouses. They suffer from the chronic problems of lack of effective trainers, training software and equipment. The situation is better in Andhra Pradesh.

ANMTCs conduct basic training for ANMs/Health Workers (female). They still follow the old curriculum prescribed by the Nursing Council of India. Efforts to revise the curriculum to meet the changing training needs have failed so far. The physical condition of the ANMTC buildings is pathetic and hostel facilities are severely limited. Training is usually conducted in district hospitals, and community-based training of ANMs is neglected. Skills to implement interventions that would reduce maternal and infant mortality are lacking.

### Training process

The training processes are not streamlined and systematic. The process of organizing a training programme is as follows: Decisions are taken to provide training under the funded project or programme; training plans are laid down in the form of training load for various categories of health personnel and types of training, keeping in view the target number; and the calendar is prepared for conducting training. The first training course has to start without delay. The syllabus is developed in a hurry by the faculty. Opinion may be taken from other resource persons, which ensures that the subject 'gets covered'. A curriculum is finalized and resource persons may be identified.

Circulars are issued to the district officials to nominate staff of the particular category (generally the circulars are not received in time and information often reaches the prospective participant after the start of the programme, resulting in their joining the programme late) (Box 1). Circulars generally contain instructions to nominate participants without explaining the purpose, objectives and contents of the programme. No criteria for selection are mentioned. Hence, anyone is nominated.

Box 1 shows that some directives are simply too ambitious in their goal, and are often not feasible for field implementation. As observed in various Government orders/reports, lack of implementation of the existing directives—from record-keeping to motivation, service delivery, training, supervision, monitoring and evaluation—makes many strategies and planning exercises redundant as far as actual operations are concerned. In the absence of clear-cut mechanisms for efficient execution, one would be doubtful whether new strategies, if any, would produce better results than their predecessors. For operational purposes, it would be important to distinguish between problems at the policy level and those purely at the execution level and, with respect to the latter, intra-, as against interdepartmental/directorate levels. Issues of policy order do need the attention of State Administrators/policy-makers and perhaps it is time-consuming to solve. Interdepartmental/directorate coordination can, however, be worked out reasonably fast through clearly established mechanisms. As far as interdepartmental/directorate problems are concerned, there

**Box 1****How training processes are carried out**

For instance: A government directive No... states to CM & HO, AP, '... It decided that under IPP (VI), we would like to train 30 ANMs and MPHWs in the forthcoming Integrated Skill Development Programmes at Hyderabad. Please nominate the staff within 10 days of this notice'.

Counter-discussion with higher authority at the district level, revealed that

'... we have received the letter (directives) only yesterday... that means, we have literally five days left to nominate the staff... Secondly, it is not at all possible to send 30 staff from the district at one point of time... We would be sending only 4 or 5 staff for training. Now we need training on dengue fever related issues as 126 cases were registered in the last two months... This is what is happening'.

Interaction with the authority who issued the directives to district officials revealed the following

:'...they (district officials) always say like that only... They don't do the job and facilitate the process in time...'

When a researcher posed a question to the authority, 'Why did you send the directive to district officials in the last minute to nominate the staff?' the authority replied,

'...as per the government order, I directed... And now fund is available and the Government wanted to initiate the training programme...'

is no acceptable reason why they should be allowed to remain unanswered and no initiatives taken to provide need-based training/human resources development.

Generally the number of participants is low, some fail to report for various reasons. The method of 'training' is mostly dominated by lectures by the faculty or resource persons with little respect to continuum of the theme and the overall perspective of the programme (Box 2). Random simulation exercises are developed and used. Group work, which is now a commonly used approach, is unstructured and unguided, and is used as a time filler. The focus is on knowledge rather than on competencies for action. Trainers feel that the participants will at least be 'exposed' to the subject or 'oriented'. The programme is over within the stipulated time period. The new batch arrives and the same process is repeated.

The above paragraphs succinctly summarize the whole process of training, and the implicit assumption that generating knowledge rather than building competencies may empower the health care provider to deliver services effectively. There is no effort to build an appropriate training environment that is conducive to learning, raising concerns and enhancing the commitment of health personnel. At the end, there is no behaviour change and participants leave for their respective places of work with the perception that it was yet another training of no use to them. There is no monitoring and follow-up to assess change in performance and effectiveness of the programme. The training programmes are

**Box 2**

All those who expressed the need for training stated that the training programme should be practice-oriented. In other words, training should be provided with hands-on experience. More than four-fifths of the respondents emphasized the skills development aspects of training.

One suggestion came from the participants:

'As the needs of each category of health and non-health functionaries are different, exclusive modules could be produced catering to each category.'

'A supervisor strengthens the above case-notes by adding, '...complicated issues like conducting deliveries, high-risk pregnancies, concepts like supportive supervision, syndromic case managements, etc. which are to be highlighted in skills training can easily be understood and put to practice if they are taught with the help of video films and hands-on experience with field exposure.'

'In contrast, most of the doctors do not like training or orientation or refresher training, as they are aware of all aspects. Laboratory technicians and pharmacists do not know whether they will be upgraded or not due to their specified nature of jobs. For instance, a laboratory technician said,

'I have completed 17 years as malaria lab technician and am able to diagnosis diseases (100%) successfully. I do not want to learn further as I have specialized.'

'Another laboratory technician added,

'Even if we learn, our profile will not change now because it is too late.'

'A pharmacist echoed,

'I learnt all aspects during my Diploma in Pharmacy Course and that is sufficient to handle the amount of the job I have at the PHC.'

'This reflects that in general no need-based study has been conducted to organize refresher-training programmes. This further reinforces the need to strengthen training materials to improve the quality and maintain the uniformity and quality of training activities across PHCs. Review of records with the DM&HO office indicated that in a majority of the cases staff stayed in a particular PHC for more than a decade without any change in their job profile.'

It was observed that the level of participation of staff was not equal in the PHCs. Generally, just one or two were active and took a lead role in providing services, meeting the targets and getting involved in various issues. Most played a passive role. More than two-thirds participants belonged to this latter category.

overwhelmed with the assumptions that participants' acquisition of knowledge means greater competence; learning is a simple function of the capacity of participants to take in and the ability of trainers to teach; and individual improvement leads to improvement in the organization.

**Views on public-private partnership in training**

Private institutions involved in providing training to health professionals and health care providers were contacted for their views on partnership between them and government

institutions for organizing training and capacity-building programmes. Institutional heads, course coordinators and other related officials in 16 institutions in AP and 10 in Rajasthan were interviewed. They unanimously stated that there was no organic link between private and government institutions for training. No systematic and innovative efforts have been made to understand the training needs of the clients. They stated that:

- The training programme at public health institutions is last leg work.
- Delay in nomination which further delayed the programme.

One of the private institutions interviewed added, 'At the year end, the PHS requests us to conduct a training programme for about 9500 PHC staff within a two-month time period.'

In addition to these, often due to paucity of funds, the Government pruned down the budget and reduced the total duration of training modules. The whole exercise of revisiting the list of topics, duration, and categories was redone after several rounds of discussions. This resulted in considerable loss of time and slackened the progress of the project. Because of these reasons, formal processes that solicit and identify the gaps between the current and required outputs were not worked out. Due to these, the following issues were not addressed at all (i) whether training is relevant, (ii) whether training will make a difference, (iii) whether focusing training needs of organizational problems should be done along with skills development issues, and (iv) whether an improved role should be linked with training goals and the bottom line.

A private training institute stated categorically that '...we stopped doing training programmes for the Government of AP due to its attitudes in reducing funds, last minute patch-work and using pressure tactics on us...'

### Perceived knowledge and training needs

Are the training programmes designed to address the competency needs required to perform specific tasks? An analysis of the knowledge and training needs perceived by the key functionaries was highly revealing. A questionnaire was administered to all health care personnel to assess their knowledge on health and diseases of public health importance, their role, and related aspects. It revealed that the level of knowledge regarding national health programmes such as immunization was almost 100%. However, their knowledge of the other national programmes such as TB control, AIDS control, malaria eradication, leprosy eradication and others was very limited. Only medical officers had knowledge of these aspects. The ANMs and male MPWs, who are entrusted with the implementation of health programmes at the subcentre and village levels, did not possess adequate knowledge of national programmes that have been executed in their areas. Almost all pharmacists and laboratory technicians were not aware of the national programmes.

Even knowledge of the basic antenatal care process was limited. Though medical officers and ANMs described the process

### Box 3

Almost all ANMs who participated in the study revealed that '...The training modules should be pre-tested in tune with each category of the staff job responsibilities and field situations. At the same time, the training approaches which failed to produce satisfactory results should be dropped...'

'Interestingly, MPHWS (male) who are in less number, said,

'The training module for male health workers should be aimed at increasing male participation in family welfare programmes...'

'The above case studies reflect that the training modules should be based on actual field situations, and location and characters should, as far as possible, be close to the actual nature to project ground realities and objectivity. The training coordinator should involve the concerned trainer or expert team members at every stage of preparation and editing of training materials and during the training programme and review the material on a time-to-time basis. Based on the suggestion, the changes should be incorporated in the next training session itself.'

correctly, the majority of supervisors (LHVs) could not (Box 3). Only 60% of the ANMs and supervisors were confident of their skills in screening risk factors during pregnancy. Furthermore, interaction with health functionaries revealed that only doctors had adequate skills in recording blood pressure, while none of ANMs and LHVs had skills in measuring blood pressure, which is a very important procedure for assessment of risk (Table 2).

Further, the majority of the PHC staff was not aware of their job responsibilities as compared to their counterparts who are at Mandal PHCs and District Hospitals.

A further analysis of skills specifically needed to avert maternal and child deaths was also undertaken with key staff members. The skills needed and the current levels of knowledge are presented in the following matrix.

Table 2 shows the main causes of maternal deaths and essential interventions to avert these. The next column shows the current levels of skills to undertake the recommended interventions. It clearly shows that the ANMs and LHVs did not possess these skills. How can one expect reduction in the maternal mortality rates in the country? ANMs and LHVs are expected to learn these skills during their nursing training. Given the quality of nursing training on the one hand and the poor emphasis on community-based obstetrics during the course on the other, one cannot expect them to perform. Practically no in-service training of these health care providers is conducted to develop their clinical skills (Box 4). The effectiveness of the recent in-service clinical training of ANMs and LHVs under the RCH Programme is questionable as no serious efforts were made to give on hands-on clinical practice.

A similar analysis of skills was undertaken with respect to neonatal mortality, which accounts for almost two-thirds of infant mortality (Tables 3a and 3b). The causes of neonatal death and required interventions are well known. Neonatal death is closely associated with the obstetric process; therefore, it would require effective obstetric skills among ANMs and LHVs.

**Table 2****Perceived knowledge about skills and actual gap**

Area	Staff interviewed	Perceived awareness (%)	
		AP	Rajasthan
National Programme on Women and Child	Doctors	50	47
	ANM	5	10
Malaria, TB, AIDS and leprosy, etc.	MPHW/LHV (M & F)	16	25
	Staff nurse	37	13
	LT/Pharmacist	10	8
Maternal Health Enumerate the process correctly for providing ANC	Doctors	93	94
	ANM	94	90
	MPHW/LHV (M & F)	72	62
	Staff nurse	100	87
	LT/Pharmacist	25	—
What do you do in ANC?			
Screen for risk factors and medical conditions	Doctors	100	100
	ANM	55	60
	MPHW/LHV (M & F)	72	62
	Staff nurse	100	100
Record BP*	Doctors	86	88
	ANM	55	0
	MPHW/LHV (M & F)	0	0
	Staff nurse	100	100
Weight and height	Doctors	64	80
	ANM	67	0
	MPHW/LHV (M & F)	32	0
	Staff nurse	100	100
Screen for anaemia	Doctors	71	88
	ANM	55	70
	MPHW/LHV (M & F)	0	75
	Staff nurse	100	87
Give tetanus toxoid	Doctors	100	100
	ANM	100	100
	MPHW/LHV (M & F)	0	0
	Staff nurse	100	100
Provide education for nutrition	Doctors	43	70
	ANM	67	90
	MPHW/LHV (M & F)	68	87
	Staff nurse	62	87

\*Only weight taken

Furthermore, for improving neonatal outcomes, these functionaries are expected to possess skills of essential newborn care. Birth asphyxia and birth injuries are very important causes

of neonatal death, which can easily be avoided by efficient obstetric care and subsequent newborn care including aspiration of mucus and amniotic fluid. Simple interventions are available for acute respiratory infection (ARI), diarrhoea and neonatal tetanus. However, health functionaries and supervisors had limited skills in prevention and management. Hypothermia, an important cause of neonatal death, was not considered a priority by these functionaries.

These findings are not new and this is not the first time they have been reported. The need for training was positively perceived by all the members interviewed, irrespective of their titles and level of functioning. They stated that the idea of training is good and expressed the need for training in essential and emergency obstetric care and essential newborn care. Need for training was also identified for communicable and infectious diseases, diagnosis of syndrome-based diseases, sanitation and control of epidemics, methods and measures of eliciting cooperation and coordination of the community, and sexually transmitted infection (STI) and HIV/AIDS counselling and their first-aid treatment. These findings also underscore the need for enhancing communication skills.

All those who expressed the need for training stated that the training programme should be practice-oriented. In other words, training should be provided with hands-on experience with field exposure. The

majority of respondents emphasized the skills development aspects of training.

**Box 4**

It was observed that the greatest problem for the MPHW (F) in Khammam was that while the approach lacked good communication abilities that are essential for dialogue delivery, the professional trainer lacked the required technical skills such as explaining complicated delivery.

The researcher asked the Trainer a question,

Researcher: 'What are the measures to be taken for a pregnant woman with malaria?

'Trainer: 'I suggest that not medicines should be given; please refer the pregnant woman immediately to the PHC.

'Researcher: 'As I am coming from a non-medical background, (to a pregnant woman with severe malaria and not able to move from her village) what type of first-aid measures would be given?

'Trainer: 'Give a paracetamol tablet and better refer her to a nearby medical centre and not take risk.

'This question was specifically asked by the researcher during his visit to the MPHW (F) training at Khammam district, AP as there were 13 pregnant women who had died due to malaria in September 2004.

The investigation reports of CM & HO regarding these 13 deaths said that these were due to '...the negligence of PHC and District Hospital...

'This revealed that the technical training sessions are conducted without the concerned specialist/expert who can provide better suggestions (than the trainer) to improve the services.

**Table 3a****Maternal deaths: Select causes, main interventions and skill levels**

Causes of maternal death	Interventions	Current levels of skills of ANMs and LHV's
Antepartum haemorrhage (APH)	<ul style="list-style-type: none"> <li>• Early identification of bleeding during pregnancy</li> <li>• Counselling</li> <li>• Continued risk assessment</li> <li>• Referral</li> </ul>	<ul style="list-style-type: none"> <li>• Poor knowledge of APH</li> <li>• Poor APH management skills</li> </ul>
Postpartum haemorrhage (PPH)	<ul style="list-style-type: none"> <li>• Prevent and treat anaemia in pregnancy (prophylactic and therapeutic)</li> <li>• Early identification and risk assessment</li> <li>• Skilled attendant at birth</li> <li>• Manual removal of placenta</li> <li>• Prevent/treat bleeding with appropriate drugs</li> <li>• Replace fluid loss by IV drip/transfusion, if severe</li> <li>• Early referral and transport</li> </ul>	<ul style="list-style-type: none"> <li>• Poor knowledge of PPH</li> <li>• Poor skills to diagnose and manage PPH including manual removal of placenta</li> <li>• Poor skills of blood/IV transfusion</li> </ul>
Puerperal sepsis	<ul style="list-style-type: none"> <li>• Skills in aseptic delivery</li> <li>• Clean practices during delivery</li> <li>• Administration of antibiotics</li> </ul>	<ul style="list-style-type: none"> <li>• Poor knowledge of puerperal sepsis and its management</li> </ul>
Pregnancy-induced hypertension (PIH) Eclampsia/toxaemia	<ul style="list-style-type: none"> <li>• Early identification of risk in pregnancy</li> <li>• Counselling</li> <li>• Treat eclampsia with appropriate anticonvulsive drugs</li> <li>• Urgent delivery-Caesarean section if needed</li> </ul>	<ul style="list-style-type: none"> <li>• Poor knowledge of PIH</li> <li>• Poor counselling skills</li> <li>• Poor management skills</li> </ul>
Obstructed labour	<ul style="list-style-type: none"> <li>• Pelvic assessment</li> <li>• Referral</li> <li>• Assisted delivery or caesarean section as per indications</li> </ul>	<ul style="list-style-type: none"> <li>• Poor pelvic assessment</li> <li>• Poor management skills of obstructed labour</li> </ul>
Complications of abortion	<ul style="list-style-type: none"> <li>• Identify and diagnose complications</li> <li>• Treat sepsis-antibiotics</li> <li>• Fluid replacement if necessary</li> <li>• Referral</li> </ul>	<ul style="list-style-type: none"> <li>• Poor knowledge and skills in managing complications</li> </ul>

**Table 3b****Infant (neonatal) deaths: Select causes, main interventions and skill levels**

Cause of death	Interventions	Current levels of skills of ANMs and LHV's
Birth asphyxia	<ul style="list-style-type: none"> <li>• Safe delivery practices</li> <li>• Proper newborn care</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate skills for obstetric care</li> <li>• Lack of skills in newborn care</li> </ul>
Birth injury	<ul style="list-style-type: none"> <li>• Safe delivery practices</li> <li>• Newborn care</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate skills for obstetric care</li> <li>• Lack of skills in newborn care</li> </ul>
Prematurity	<ul style="list-style-type: none"> <li>• Proper antenatal care</li> <li>• Supplementary nutrition (IFA)</li> <li>• Proper newborn Care</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate skills to assess foetal growth</li> <li>• Inadequate newborn care skills</li> </ul>
Congenital malformation	<ul style="list-style-type: none"> <li>• Proper counseling</li> <li>• Screening during ANC</li> <li>• Newborn care</li> </ul>	<ul style="list-style-type: none"> <li>• Poor counselling skills</li> <li>• Inadequate newborn care skills</li> </ul>
Neonatal jaundice	<ul style="list-style-type: none"> <li>• Proper newborn care</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate newborn care skills</li> </ul>
Neonatal tetanus	<ul style="list-style-type: none"> <li>• Aseptic delivery</li> <li>• TT immunization of mother</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate skills in aseptic delivery</li> </ul>
ARI-pneumonia	<ul style="list-style-type: none"> <li>• Proper management of ARI</li> </ul>	<ul style="list-style-type: none"> <li>• Poor diagnostic and assessment skills for severity of ARI</li> </ul>
Diarrhoea	<ul style="list-style-type: none"> <li>• Proper diarrhoea management</li> </ul>	<ul style="list-style-type: none"> <li>• Poor assessment skills for severity of diarrhoea</li> </ul>

IFA: iron-folic acid; TT: tetanus toxoid; ANC: antenatal care; ARI acute respiratory infection

**Constraints in training for better performance**

The review process revealed glaring inadequacies in the human resource development process and training of the health personnel. Some salient observations are summarized here:

- Training institutions and training have received a low priority. There is a generalized apathy towards training and capacity building. Training is not recognized as an intervention to improve performance. Owing to lack of nominations, programmes are frequently cancelled.
- The function of training is seen in isolation. There is no proper

planning and implementation of training programmes. In the development of training programmes, the training needs and expectations of participants are not considered. Most of the programmes are lecture-based and didactic in nature. There is no focus on practical skills development. Even in clinical skills development programmes for ANMs and LHVs, scant attention was paid to giving practice to the participants.

- The morale of trainers is low. There is no training cadre in the States. There is no system for appointing trainers. Normally, persons are posted or deputed to training institutions as trainers rather than regularly selected. There is no career stream in training. There are no facilities for regular professional development of trainers.
- The SIHFWs, HFWTCs and DTCs are poorly equipped with hostels, training infrastructure and libraries. The physical facilities at ANMTCs are appalling.
- Various training programmes are offered under various Programmes and a health worker is nominated more than once to attend different training programmes. The multiplicity of training was a constraint in work performance.
- Incompetent trainers and lack of technical guidance to training institutions has resulted in poor quality training, thus lowering the credibility of training institutions.
- Trainers of various training centres feel that there are no formal linkages among these institutions and they feel left out.
- There are financial constraints. The payment of TA/DA to participants, procedures/facilities for inviting guest faculty and lack of funds for developing good-quality training material are major problems.
- Training is not taken seriously by the trainees as it has no relationship with career development of health professionals. The current appraisal system does not take into account the training received in placement or promotion.
- There is no system of nomination for training. It is highly centralized and, more often than not, based upon personal fancy or preference of the concerned officers.
- There are no norms for in-service training. Some health personnel attend training programmes frequently irrespective of their utility in their job.
- The training is not seen as an intervention for improved job performance by most trainers. This is because there is a mismatch between organizational and personal goals.
- The need for management training is seldom felt by functionaries and health administrators. It is thrust upon them.
- There is no linkage between service providers and trainers. Training is viewed as a constraint in achieving programme objectives rather than facilitating them.
- There is no training or personnel information system in the States. As result, there is no proper planning.
- There is no thinking on operational research in training institutions.

### Way to go in the future

Over the past five decades, the emphasis has been more on the quantity, and the quality of human resources has taken a back seat. As a result, the indicators of access and avail-

ability of health manpower have improved, but the productivity and performance have remained poor. There is a need to reposition training, which should be accorded a high priority. There is a need for rethinking. Is it a knowledge-building process or skills development intervention for better performance, or both? The experience of the previous decades suggests that current training approaches have not yielded the desired changes in health status or performance of the organization. There is a need for better workforce management and improving the working conditions to enhance potential and improve performance. Training should be seen as a part of the overall process of human development. There is a need to consider changing the current training paradigm from knowledge- and competence-building to organizational transformation. The time has come to seriously consider training as an intervention. While training should emphasize skills development to perform tasks effectively, training designs should be re-oriented to ensure a change in the attitude and mindset of health care providers at all levels to achieve high organizational and professional commitment.

### Develop HRD and training policy

There is an urgent need to develop a health manpower policy at the national level as well as in the States, clearly stating the priorities, future projections of manpower needs in different categories, policies for recruitment, transfer and promotions of the health cadres. The health manpower policy should also consider the creation of a public health cadre. The emphasis should be on creating a climate for independent and interdependent work rather than dependency. Adequate salary, good working conditions, job security, physical facilities, good human relations and the quality of supervision contribute to job satisfaction of the employees. Factors such as recognition of work done, opportunity for growth, nature of work, responsibility and the challenges of the task have been found to play an important role in creating motivation to work. These need to be considered to improve employee productivity.

The roles and responsibilities at each level, from the Directorate to the subcentre level, should be clearly identified and documented. This is necessary for enhancing accountability and achieving the desired goals and outcomes.

A clear training policy should be developed and implemented. The training policy should identify:

- Priorities and training needs
- Types of training
- Criteria for nomination for training
- Mechanism for linking training with promotion
- Mechanism of integration of various training activities
- Management of training institutions
- Training cadres, especially for trainers
- System for quality assurance in training
- Mechanism for monitoring and evaluation of training
- Support to the health system

Emphasis should be given to develop an effective and

functional training system, a system that works. Some the guiding principles include:

- Decentralization of planning, monitoring, evaluation and decision-making
- Autonomy to all training institutions
- Accountability in terms of training effectiveness and efficient utilization of resources
- Synergy with the client system
- Linking the training function with HRD, especially the career system
- Openness to continuous feedback, new ideas and developments

## Strategy for improving training

The following key strategies are suggested to strengthen training:

### Strengthen training institutions

Strengthening of the training institutions is quintessential to enhance the effectiveness of training. The SIHFWs should be seen as apex training institutions for planning, development and research. These institutes should be adequately supported for infrastructure and faculty development. Continued funding of SIHFWs should be ensured. SIHFWs should also be entrusted with coordination and control of other training institutions. These training institutions should develop close collaborative linkages with district hospitals and the district health administration.

### Identify trainers and build their capacity

Qualified and experienced trainers are critical for quality training. A system of identification and recruitment of the faculty for training institutions should be developed. A search should be conducted to identify health professionals who are interested in training and wish to take it up as a career. They should be given good trainers' training and exposure to the training process. Additional financial incentives should be considered and career development opportunities should be created for trainers. A regular programme for training of trainers and refresher courses should be organized.

### Develop and design need-based training programmes

Designing appropriate curricula and pedagogy for training are prerequisites for addressing the competency needs of health care providers. A needs assessment as perceived and expressed by the health care providers should be undertaken vis-à-vis programme goals and objectives and interventions thereof. Brainstorming sessions with trainees and programme managers may be carried out to identify needs. Further, evaluation of training programmes and participants' feedback would be very useful to improve the programme design. Practical sessions and hands-on experience would be very useful for improving skills.

An elaborate training strategy and curriculum have been developed (and implemented!) for orientation of staff at various levels of the health system. These include managerial as well as clinical training. Medical officers, LHVs and ANMs undergo a three-day to one-week clinical training programme in district hospitals or medical college hospitals. The duration of clinical skills training is abysmally small and little effort is made to provide hands-on practical skills development opportunities. There is a need to re-design these training programmes for a longer duration focusing on clinical skills development. The trainees may be attached to hospitals for the appropriate time duration with clear objectives and tasks to be achieved.

### Develop learning resource materials

Availability of appropriate learning material (course material) is crucial. The training institute should develop the requisite training material and its uniformity should be ensured. Several training manuals have been developed which can be updated and modified. Unfortunately, the modules are not updated and adapted to the needs. Further, such material is not available to the participants.

### Develop alternate training approaches

Distance learning programmes should be designed for ongoing training programmes for various categories of health personnel with an accountability system and compulsory requirement. Recent developments in the IT sector must be harnessed.

Recent developments in the use of satellite technology must be explored to deliver training programmes uniformly with high quality in a very short time. Pilot projects (GRAMSAT) undertaken in collaboration with Indian Space Research Organization (ISRO) have been found to be very successful in conducting training programmes effectively. More recently, ISRO has launched EDUSAT for education and training. Application of these technologies in developing training programmes in health care will prove to be cost-effective and have a high level of efficiency without displacing health personnel from their workplace.

### Develop a functional field practice area

The SIHFW and HFWTC should develop a field practice area for the purposes of demonstration and exposure to field situations. These field practice areas could be used for testing new interventions and conducting operations research. It would need designated staff and required mobility. At present, field practice areas are adopted by the HFWTCs but these are non-functional and practically redundant for various reasons.

### Develop monitoring and evaluation systems

Training should be accountable. A regular monitoring system should be developed and critical indicators should be identified with emphasis on measuring training effective-

ness in terms of performance and improved programme implementation. There should be a mechanism for regular interaction with the trainees, and providing feedback to them.

### System's support for training

Training cannot be seen as a part of the overall system. There is a need to improve the working conditions of health workers and the facilities where services are delivered.

Continuous supervisory support is critical for improving the performance and quality of services. While supervision should be regular with a feedback system, the supervisory skills and mechanisms must be strengthened.

There should be serious thinking on absenteeism and appropriate interventions may be considered. One of the most important interventions is to increase the motivation levels and help develop ownership and accountability through effective OD interventions. Efforts should also be made to analyse the reasons for absenteeism and low performance.

### Estimated cost

Training is a highly resource-intensive activity, though the costs are apparently not visible and realized. It would always be difficult, if not impossible, to justify the cost of training vis-à-vis results achieved. Generally, the visible part is the direct cost, i.e. cost incurred in developing, designing and implementing training programmes. The hidden costs such as participants' time away from work and salaries for those

days are taken into account.

However, costing of a training programme is not without risk of being overestimated or underestimated. The scale of training, levels of the participants and duration of training determine the overall cost. The cost may be divided into two major heads: fixed cost, which would include money spent on programme development, faculty, venue, administration and logistics; and variable cost, which would include money spent on course material, lodging and boarding, and travel.

A typical one-week programme for 20 mid-level professionals would cost about Rs 200,000 with the additional travel cost of Rs 50,000 within the State. This cost would meet the programme development cost, administration, logistics, board and lodging, course material and instructions. About 50% of this is the fixed cost and the remaining is the variable cost. The proportion of the fixed cost would decrease with an increasing number of course participants.

Similarly, the cost of a one-week programme for 20 health care providers (at the district level) would cost about Rs 50,000-60,000, all expenses inclusive.

A detailed costing of strengthening training infrastructure, faculty development, distance learning programme and satellite-based programme needs to be done after extensive review of the system.

The cost estimates provided are based on the norms proposed under various training programmes for donor-assisted projects. However, it would need a detailed costing study and resource-mapping exercise to arrive at an appropriate estimate.