

HEALTH SYSTEMS RESEARCH

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ABSTRACT

In this paper the evaluation of the concept of the Health Systems Research, its definition, essential characteristics, determination of the scope of its coverage, selection of researchable problems, setting up of priorities and national mechanisms for its implementation have been briefly discussed. Primarily, it is intended for stimulating further discussions in this subject. Also critical issues for undertaking studies in this important area have been highlighted.

Over the past few decades commendable advances have been made in several areas of basic sciences resulting in spectacular developments in medical care technology for the relief of human sufferings, prevention of diseases and prolongation of life - *e.g.* the discovery and development of antibiotics, anti-cancer chemotherapy, open heart surgery, biotechnology, contraceptive technology, genetic engineering and others. In developed countries full advantage has been taken of these scientific developments for promoting human welfare. Unfortunately, despite the advances in science and technology, health conditions of the majority in developing countries are highly unsatisfactory and are causes of deep concern.

Although biomedical sciences are same all over, relative developments and their application vary from country to country. The health practices are vastly different between the countries and within the same country. This has been due to differences in socio-economic development status and culture. There is ignorance, apathy, superstitions and taboos leading to lack of sense of positive health. Further, medical care had been concerned more with the curative aspects with little or no attention to preventive and promotive measures.

The health system has to be comprehend the close interactions between the genetic background, acquired behavioural styles and the environment - the socio-economic and cultural milieu and the available technology. The evolving concepts and dimensions of health were crystallised in the Alma Ata declaration of Health for All (HFA) to be achieved through primary health care approach. The principles and strategies for HFA, the characteristics and essential components and supportive activities needed for implementation of primary health care have been clearly defined.

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The need for Health Services Research has long been recognised, but there has been lack of conceptual clarity and common understanding, and this area had been variously described even in the history of the WHO as stated below:

- a. Health Practice Research (1972).
- b. Health Services Research and Development (1975)
- c. Health Services Research (1977)
- d. Health Systems Research (WHO'S Seventh General Programme of Work)
- e. Health Behaviour Research
- f. Health Economic Research

The main purpose of Health Services Research (HSR) is to help to improve the health of the people through improvement of conventional health services and other related services which contribute to health. It is not purely a technology problem, but it is concerned with the solution of human problems through synthesis and translation of research results. Therefore, HSR is to be directed to better understanding of health problems, to more rational formulation of policies and strategies, better programme planning, and more effective and efficient use of resources. It has to focus special attention to the disadvantaged and underprivileged groups.

The HSR is intended for continuous tuning of health policies and practices, to bridge the wide gap between the knowledge and action, and it has to serve as the main tool for developing operational guidelines.

DEFINITION

Health Services Research (HSR) has been defined a number of ways. Some have defined it as research on medical care services, other definitions are either too broad or too restricted. The WHO (Geneva) definition which has considerable merit is as follows:

"Health Services Research is the systematic study of the means by which biomedical and other relevant knowledge is brought to bear on the health of individuals under a given set of conditions."

This definition focusses on health which is the outcome, rather than the services or the processes. According to Veney (1981), it is inclusive but lacks power to discriminate.

There has been no clearcut definition of health systems research. A WHO study group on Research for Reorientation of Health System' (1982) attempted to clarify the meaning and purposes. Although the meeting was intended to discuss the methods to be used and national infrastructure required for health systems research, it devoted specifically to the substantive content of research - the nature and type of the problems to be investigated. This group identified nine subjects

areas which were considered most important for health systems research, but no clearcut definition emerged.

WHO (SEARO) has also produced a working definition of HSR, which goes in greater detail and approximates more in defining health systems research. This is reproduced below:

"Health Services Research is the systematic investigation of all, one or more of the factors related to the evolution, implementation and/or evaluation of health service systems at all levels with the objective of maximizing their quality, efficiency, effectiveness and coverage within the economic social and political situations. This would involve identifying obstacles and constraints as well as success factors in the system or sub-system, relating them to their causes and to other systems, and developing alternative strategies".

ESSENTIAL CHARACTERISTICS

1. Results must find application in the programme so as to bring out the desired changes.
2. Identification of researchable problems, planning and designing of research should be in close consultation/collaboration with programme planners and administrators and the users/beneficiaries.
3. Usually such research projects should be short and time bound so that results can be quickly communicated to all concerned.
4. Others.

DETERMINATION OF SCOPE

Since it is intended to bring about necessary changes in relevant areas of the Health System to help achieving HFA with primary health care as the key approach, one needs to consider the following:

- a. What constitute the Health System?
 - b. What are the main basic principles, values and strategies for HFA?
 - c. What are the essential components of primary health care?
 - d. What supportive activities are needed for successfully implementing the programmes for HFA through primary health care approach?
 - e. Health Systems Research should encompass all the areas which have been considered under health services research, health behaviour research and health economics research.
- A. **Health System:** When different disciplines/sectors are linked

together to achieve a common objective, it may be called a system. If we apply this definition to the existing situation prevailing in the developing countries in the region, the health system may be quite narrow, as the desired linkages have not been established. Ideally, which at least every country should strive for, the health system should consider linking together all the disciplines/sectors, currently existing and also others which have potential and are essential for the promotion of HFA through primary health care. There is a need for having conceptual clarity and common understanding on the issue - what constitute the health system.

B. Basic Principles and Strategies for HFA: Following the Alma Ata declaration in 1978 almost all countries have framed policies, formulated strategies and initiated actions for achieving the HFA goals. However, there have been a growing realisation that great gaps exist between the policy laid down and strategies drawn out, and the actions required to implement these. The main reasons for these gaps are:

- a. Lack of appreciation of the HFA values which include: (i) ensuring equity, (ii) participation of the people, (iii) promotion of self-reliance and self-determination, and (iv) emphasis on considering health as an important developmental input;
- b. Incomplete understanding of the issues and processes for implementation of HFA strategies;
- c. Failure to motivate commitment;
- d. Failure to take initiative to guide national health processes to HFA;
- e. Failure to take this issue as a matter of urgency.

Recognising the need to narrow the existing gap, a new initiative called Health for All Leadership Development has been launched by the Director-General; World Health Organization in January 1985.

In view of the above as well as for determining the functional areas for inclusion under Health Systems Research, recapitulating basic principles, values and strategies for HFA would be in order. The main areas are enumerated below:

1. The HFA is to be attained in a spirit of social justice and as an integral part of social and economic development of the community.
2. An acceptable level of health cannot be attained through the health sector alone, but it would require the coordinated efforts of the health sector and relevant activities of other social and economic development sectors. Therefore, for achieving the ultimate social goals the strategies of the health and other developmental sectors should be mutually supportive.
3. There is a great need for a strong political will at all levels for promotion of health and health development must be considered as a positive investment for socio-economic development.

4. There should be an equitable distribution of health resources, and preferential allocation of resources to those in greatest social need. The health system should cover all segments of the population.
5. HFA development is to be based on self-determination and self-reliance of the individual and the community. Active community participation, encouraging the people to assume greater responsibility for their own health, would be crucial for success.
6. Social orientation of different categories of health workers to serve the people properly would be important. They should also be properly reoriented to HFA principles and strategies, and should receive adequate technical training.
7. The emphasis should be on preventive and promotive aspects of health well integrated with curative, rehabilitative and environmental measures.
8. The primary health care would be the key to the success of HFA, and it has to be an integral part of the country's health system, of which it should be a central function and the main agent for delivering health care. For attaining the desired level of health, every individual must have access to primary health care and through it to all levels of comprehensive health system. The concept of primary health care should be the driving force behind determining policies and the basis for formulating strategies and plans of action.

C. *Essential Components of Primary Health Care.* Primary health care is the first level of contact of the individuals, the family and the community with the national health system bringing health care as close as possible to where the people live and work. It constitutes the first element of the process of continuing health care, and this should get full support from the rest of the health system. This support would be required in the following areas: (a) consultation on health problems; (b) referral of patients to local or other specialised institutions; (c) supportive supervision and guidance; and (d) logistic support and supplies.

For achieving success in HFA development, at least the following eight essential components of primary health care need to be properly implemented:

1. Education of the people about prevailing health problems and methods of preventing and controlling them.
2. Promotion of food supply and proper nutrition.
3. Adequate supply of safe water and basic sanitation.
4. Maternal and child health care and family planning.
5. Immunization against major infectious diseases.
6. Prevention and control of locally endemic diseases.
7. Appropriate treatment of common diseases and injuries.
8. Provision of essential drugs.

It is evident from the above that for successful implementation of these, the cooperation and support of other social and economic development sectors, such as education, social and women's welfare, food and agriculture, animal husbandry, water resources, housing, rural development, energy, environmental protection, industry, communication, etc. would be vital.

D. Supportive Activities Needed for Successful Implementation of HFA Through Primary Health Care: A number of supportive activities essential for successful implementation of primary health care are enumerated below:

1. Community involvement and participation.
2. Intra- and inter-sectoral coordination.
3. Development of effective referral support.
4. Development and mobilisation of resources.
5. Involvement of managerial processes.
6. Health manpower development.
7. Medical and Health Services Research including innovative approaches.
8. Development and application of appropriate technology.

E. Areas Covered by HSRIHBRIHER and Health Systems Research: Since Health Systems Research (H. Sys. Res.) is a more holistic approach, all the areas covered under Health Services Research (HSR), Health Behaviour Research (HBR), and Health Economic Research (HER) should be included in H. Sys. Research. The HBR is not only concerned with the promoting and deterring factors that determine the health behaviour and health practices of the people, but also with the interactions of the health cultures of the professionals and the lay people. The HER should be concerned with economic dimensions of health which include economic values of health/or remaining healthy and economic consequences of becoming sick. These types of information become helpful for procuring greater resource allocation. HER will also include studies for determination of cost-effectiveness and cost-benefit of various health programmes.

It is evident from the above that the scope of coverage for health system research would be quite vast. Naturally, considering the constraints of resources (including manpower, finances and time), one needs to be selective and priorities are to be set.

HOW TO BE SELECTIVE AND HOW TO SET PRIORITIES

1. What approach one is to take to make the selection? Is it to pick and choose from one or other aspects from the areas mentioned earlier?
2. Since health system research has to have a holistic approach, it has to address to all the areas mentioned above and it should not be restricted.
3. Obviously, to carry out such research would need multi-disciplinary inputs.

4. Since the state of development in these areas vary from country to country, the quantity and quality of resources would vary and the nature and magnitude of the problems in relation to all these areas would be different, the priority areas for research would naturally be different and be country specific and locality specific.
5. Although on the basis of available information it should be possible to draw up a list of potentially fruitful areas of research which are likely to be relevant to all or most of the countries in the region, each country has to prepare its own priority list.

CRITERIA FOR SETTING PRIORITY

1. Identification of problem areas which need urgent solution and are amenable to researchable questions.
2. Consideration of likely answers to such questions and its possible utilisation to resolve some problems.
3. Timeliness, duration and financial requirements for carrying out such studies.
4. Whether the needed, often multi-disciplinary, expertise and manpower for such study are available in any organisation/organisations and the required coordination thereof.
5. If proper organisational and manpower base is not available, is it feasible to strengthen these?
6. Others.

EXAMPLES OF SOME FRUITFUL AREAS FOR RESEARCH

1. Non-utilisation of service facilities provided.
2. Ineffective implementation of different national health programmes.
3. Health culture of different population groups *vis-a-vis* health culture of the service providers.
4. An assessment of management training needs of different categories of health personnel with the object of preparing management training modules and training programmes and organisation of Management Development Workshops etc.
5. Active community participation in different health programmes.

6. Development of practical models for referral support for primary health care.
7. Scope and mechanisms for inter-sectoral linkages and coordination at grassroot levels.
8. Involvement of practitioners of indigenous system of medicine in primary health care.
9. Involvement of the voluntary organisations/NGOs as partners in the delivery of health care.
10. The nature and status of development of the concept and functioning of the health system in different countries.

Many of these studies are to be undertaken with operations research approach.

NATIONAL MECHANISM FOR IMPLEMENTATION

The whole process of organisation and implementation of Health Systems Research and utilisation of research findings in the national health programmes is a complex one. It has been stated above that the identification of researchable problems, and planning and conduction of the study should be in close cooperation/collaboration with the policy planners, programme administrators, service providers and the beneficiaries of the programme *i.e.* the community. These steps are likely to ensure proper utilisation of research findings. Although it may be an ideal procedure to follow, in reality it is difficult to practice. It is easier said than done. Firstly, let us take the case of collaboration and cooperation with the policy planners, administrators and beneficiaries for identification, designing and conduction of the study. In many situations the planners and administrators are not able to identify researchable problems and often they do not have time to wait for the results of the research. Their main interest is for short-term results and they often do not have a long-term perspective. In many situations the beneficiaries are not able to articulate. It is generally the professional investigators/researchers who have the long-term as well as short-term perspectives, and they are to act as 'think tanks'.

Now coming to the problem of utilisation of research results, usually the evaluative studies sponsored by the programme administrators have got good scope for ready application. But that does not always happen. In other types of research, utilisation of the research cannot be expected on one-to-one basis. Furthermore, implementation of the findings of a commissioned study, without proper scrutiny and validation by others may also be risky. Normally, the findings of the research studies contribute to the cumulative body of knowledge which the enlightened programme administrators should be able to draw upon. There should be a proper mechanism through which these research findings could be analytically reviewed for programme implications on a regular and continuous basis.

At this stage it may be worthwhile to review the lessons that may be drawn from the experiences in the field of biomedical research.

- a. Even though the tools or methodology employed in biomedical research are much more exact, the findings by a single individual or a group do not establish a scientific truth. These findings have to be validated by other investigators. Furthermore, the observations made may be only one facet of the truth, and the convergent efforts and contributions from other investigators help in getting more holistic picture.
- b. The practical application of research findings flows from cumulative body of knowledge.
- c. Admittedly, the observations of biomedical research have more or less universal application, and therefore there are greater chances of sharing of experiences.
- d. On the other hand, the tools employed in social sciences research are less exact, and the findings are liable to variations depending upon socio- economic, cultural, environmental and behavioural factors. Therefore, practical application of the findings of the commissioned research on one-to- one basis *i.e.* without validation by other investigators may be risky.

Obviously, under the conditions stated above the nature and the type of Health Systems Research and the results thereof would vary. Some research findings, particularly from the evaluative studies and action research projects, may be readily utilised, whereas other with potential practical applications would contribute to the cumulative body of knowledge. Better dividends may be obtained, if intervention phase based on research leads is built in the original research design itself.

These statements may be further elaborated and illustrated from the experiences in the actual field.

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इस लेख में स्वास्थ्य-पद्धति-अनुसंधान की अवधारणा के मूल्यांकन, इसकी परिभाषा, विशेषताओं, इसके प्रसार क्षेत्र के निर्धारण अनुसंधान योग्य समस्याओं के चयन, प्राथमिकताओं के निर्धारण तथा राष्ट्रीय स्तर पर इसके क्रियान्वयन संबंधी प्रक्रियाओं आदि के बारे में संक्षिप्त रूप से चर्चा की गई है। मूलतः इसका उद्देश्य इस विषय पर विचार प्रक्रिया को बढ़ावा देना है। इसके साथ-साथ इस विषय-क्षेत्र में अध्ययन कार्यों के संचालन से जुड़ी महत्वपूर्ण समस्याओं पर भी प्रकाश डाला गया है।

**STRENGTHENING MANAGEMENT TRAINING FOR PRIMARY
HEALTH CARE IN INDIA**

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ABSTRACT

This paper highlights the review of Strengthening Management Training for Primary Health Care in India. The need for training of health functionaries at various levels; block, district and State, has been discussed in the light of strengthening their managerial skill. This paper also lays adequate emphasis on reorganisation of training curricula of professional training institutions like medical colleges, nursing colleges and para-professional training institutes. The author also suggests need-based educational material for various categories of health personnel.

The World Health Organization, Geneva, with the approval of the Government of India provided some seed money in 1980, for initiating a project on 'Strengthening of Management Training for the Delivery of Primary Health Care in India' at NIHF. The project was formulated by the NIHF in consultation with the officials in the Ministry of Health and Family Welfare and other experts in the country. A Multi-disciplinary Core Faculty Group has been constituted in the NIHF and a consortium comprising two health institutions and two Institutes of Management has been formed for organising and implementation of this project. The participating institutes are: National Institute of Health and Family Welfare, New Delhi and Gandhigram Institute of Rural Health and Family Welfare Trust, Gandhigram, two Institutes of Management at Ahmedabad and Bangalore (All-India Institute of Hygiene and Public Health, Calcutta dropped out for some problem). Subsequently, the Institute of Management, Calcutta and the Administrative Staff College, Hyderabad have also been associated with some of the activities of this management training project. Director, NIHF is the Chairman of the Core Faculty Group at NIHF and is the Coordinator of the Project and of the Consortium.

In addition to the above, the Institute has been organising various in-service training courses, which have relevance and are complementary to the newly developed management training activities. These courses are: (a) Hospital Administration and Medical Care; (b) Materials Management in Hospitals; and (c) Staff College Course for senior health officials, etc.

During 1985 and 1986-87, additional funds have been made available to the Director, NIHF under the WHO Country Project MPNHD 002 for accelerated development and speedy implementation of the programmes in this field.

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HEALTH AND FAMILY WELFARE INFRASTRUCTURE IN INDIA

In India, there are 22 major States and nine Union Territories. The country is divided into 412 administrative units known as Districts which are further divided into Community Development Blocks. Each Block having a population of 100,000 or more, has got a Primary Health Centre (PHC) and there are about eight to ten sub-centres under each Primary Health Centre. Each sub-centre caters to the health needs of about 10,000 population covering several villages of varying sizes. There are about 600,000 villages, more than 60,000 sub-centres and 6,000 Primary Health Centres. Size of the districts vary and may have a population ranging from one to several millions. It is aimed that by the year 1990, there will be one sub-centre per 5,000 population and one PHC per 30,000 population.

The health functionaries at the village level *i.e.* the Health Guides and the Dais (TBAs) as well as the Multipurpose Health Workers (male and female) are trained at the Primary Health Centres (PHCs). Health personnel working at PHC level *i.e.* the Medical Officers (MOs), Block Extension Educators (BEEs) and Health Assistants (male and female) who are supervisors for Health Workers and village level health functionaries are trained at Health and Family Welfare Training Centres (HFWTCs). Seven Central Training Institutions (CTIs) have the responsibility of providing guidance and help to the 47 HFWTCs. The key-trainers of HFWTCs also get orientation/training at CTIs. National level institutions organize various types of training programmes, workshops etc. for higher level health personnel including programme officers, administrators and policy-makers.

NEED FOR ORIENTATION/TRAINING OF HEALTH PERSONNEL AT DIFFERENT LEVELS IN MANAGEMENT

For strengthening of national health care delivery system, the application of different components of managerial processes will vary with different categories of personnel working at different levels. Functioning at different levels would also require blending of varying degrees of managerial and technical skills. The higher the level in the organisation, the greater is the need for managerial function and lesser the need for technical skills. Conversely, the lower the level in the organisation the lesser is the need for managerial functions and higher the need for application of technical skills. However, even at the grassroot level the development of well coordinated and systematic style of functioning by various categories of personnel would be very important for proper management of the programme. Furthermore, in participatory management the principles and different components of managerial processes should be well understood by all concerned.

While considering the need for management training for different categories of health personnel, it was decided that the following types of programmes/activities would be required:

<u>SPECIALIZED INSTITUTIONS</u>	<u>HEALTH & FW INFRASTRUCTURE</u>	<u>PROFESSIONAL EDUCATIONAL INSTITUTIONS</u>
I. NIHFW (NEW DELHI)	URBAN NATIONAL LEVEL MINISTRY OF H&FW STATE DEPTS. OF H&FW (22+9) DIST. HEALTH CENTRES (412) CMO/DMO/DMEIO/DHE/ PHN & OTHERS COMM. HEALTH CENTRES (351) (1/100,000) ALL SPECIALTIES PH. CENTRES (5739) (1/1,00,000 1/30,000) MOs/BEE/H. ASST. (SUPERVISORS - M&F) HEALTH WORKERS & OTHERS SUB-CENTRE (59511) (1,10,000 1/5,000) H. WORKER (M) - 1 H. WORKER (F) - 1 VILLAGE (575,936) (1/1000) H.Gs 1 DAI/TBA 1 PEOPLE (730 MILLION) RURAL	I. MEDICAL COLLEGES (106)
II. NICD (NEW DELHI)		II. NURSING COLLEGES (286)
III. AIH&PH (CALCUTTA)		III. LADY HEALTH VISITORS
IV. IIPS (BOMBAY)		SCHOOLS (HA - F) (31)
V. MANAGEMENT INSTTS. (4)		IV. HA (M) TRG. INSTT. (21)
VI. CENTRAL TRAINING INSTTS. (7)		V. ANM TRAINING SCHOOLS (346)
VII. STATE ADMINISTRATIVE INSTTS.		
VIII. HFWT CENTRES (47)		
(REGIONAL)		

A. In-service orientation and training

- i. Management training for block level health functionaries.
- ii. Management training for district' health officials.
- i. Orientation/Training of State and Central level health administrators, policy-makers, etc.

B. *Reorganisation of training curricula and incorporation of management training in the basic curricula of professional training institutes:*

- i. Medical Colleges
- ii. Nursing Colleges/Schools.
- iii. Para-professional training institution.

C. *Development and/or collection and dissemination of need-based educational material for various categories of health personnel*

**MANAGEMENT TRAINING FOR BLOCK
LEVEL HEALTH FUNCTIONARIES**

Keeping in view of the crucial role required to be played by the Medical Officers and other health functionaries at the Block level, it was decided to give priority to the management problems and managerial requirements at the block level. A study was conducted in four States in different regions of the country by the four participating institutes under the overall coordination of the NIHFV. The following four approaches were adopted for identifying the management training needs:

1. Job analysis of different categories of personnel to find out the managerial components.
2. Interviewing health personnel at different levels for finding out the problems and the pattern of their functioning.
3. Participatory observation of health personnel to determine their role play and style of functioning.
4. Workshop involving health personnel at different levels, including administrators and grassroot level workers to discuss various problems, constraints etc. and to find out their possible solutions.

Following these approaches, managerial requirements and management problems at different levels were identified. On careful analysis it was found that certain management problems were amenable to change through management training while others were not, but the latter required specific policy decisions and/or

administrative actions. On the basis of the findings of the above four approaches, the main areas of managerial functions and the nature of activities required for fulfilling these functions were identified. The specific knowledge and skill required and the attitude to be developed were defined. Based on these, training curricula for strengthening managerial skills were formulated. For facilitating the teaching-learning processes, these have been given modular shape.

Five draft Management Training Modules have been prepared for the following categories:

- a. Medical Officers of Primary Health Centres;
- b. Health Assistants (Male and Female);
- c. Health Workers (Male and Female);
- d. Health Guides; and
- e. Dais (Trained Birth Attendants).

These modules are primarily trainer-oriented. However, the training module for Medical Officers of PHC is structured in such a way that even the trainees can be encouraged to use this for self-learning. To a great extent, the same applies in the case of the module developed for Health Assistants (Male and Female).

Two consultants from the Medex Group at Hawaii, USA were invited at the courtesy of the USAID to assist the Core Faculty Group at NIHFV in revising the module for Management Training of PHC Medical Officers. As a result, the Module for Management Training for Medical Officers (Primary Health Centre) has been recast and appropriate practical exercises and field exercises have been worked out under each sub-module and its sub-sections. Two pilot courses using these modules for Medical Officers have been conducted in North India at Lucknow (Uttar Pradesh) and in South India at Gandhigram (Tamil Nadu), in collaboration with the faculties of the Population Centre, Lucknow and the Health and Family Welfare Training Centre of the Gandhigram Institute of Rural Health and Family Welfare Trust, respectively. In both these pilot courses, the faculties of the Regional Health and Family Welfare Training Centres (HFWTCs) were actively associated with a view to get a first hand feedback on the operationalization of training programme based on the module. The evaluation of each module and its sub-sections including the classroom sessions, field exercises by the participants *{i.e. the Medical. Officers}* and the trainers *{i.e. the participants from HFWTCs}* gave a very useful feedback. Based on these experiences, the Medical Officer's module has been finalised, and it is under print for wider distribution. Two consultants from the Medex Group have been associated with these trial courses.

Similarly, the draft Module for the Management Training of Health Assistants (Male and Female) has been revised and an improved version of the module for Health Assistants has been prepared. In order to test out the feasibility and operational aspects of different components of the Module and their sub-sections in terms of the classroom sessions and field exercises, a pilot course using this Module for Health Assistants (M&F) has been organised at Shimla in collaboration with the faculty of the Health and Family Welfare Training Centre, Parimahal, Shimla

(Himachal Pradesh) and Bangalore (Karnataka). The Module has been found to be satisfactory and some changes have been incorporated in the light of the feedbacks received. A similar trial course has later on been organised at the Health and Family Welfare Training Centre, Bangalore. South India by associating the faculty of the HFWTC, Bangalore. Based on these experiences and the feedback from the participants and the trainers, the Module for Health Assistant (M&F) has been finalised. After editing, it will be printed for wider distribution.

On the similar lines the draft Modules for Health Workers (Male and Female), Health Guides and the Dais (TBAs) have been revised. One task group of experienced personnel drawn from the different HFWTCs in the country has reviewed the Module for Health Workers and submitted their observations and suggestions to be incorporated in the modules. For preparing an improved version of the modules for Health Workers (M&F) two trial courses have been organised, using the revised module, in September-October, 1985 at Calcutta (West Bengal) and at Ahmedabad (Gujarat), in collaboration with the HFWTCs in these two States. The feedbacks from these courses have been incorporated for finalization of the module, which will now be printed after editing.

Similarly, two trial courses using the draft module for the Health Guides and the modules for the TBAs (Dais) have been organised at Jabalpur (Madhya Pradesh) and Agra (Uttar Pradesh) in collaboration with the faculty of the Health and Family Welfare Training Centres at Jabalpur and Agra. These modules have been revised and finalised in consultation with the Core Faculty Group at NIHF, New Delhi and Mr. Patrick Dougherty, Consultant from Medex Group, Hawaii, USA. The experiences in conducting trial Management Training Courses for the Medical Officers, Health Assistants, Health Workers, Health Guides and Dais have been documented bringing out the process and procedures involved in organising such Management Training Courses. The process development in conducting Management Training Courses for Block Level Health Functionaries have been documented in separate reports in respect of each trial course conducted using the modules. These reports provide useful guidance to the HFWTCs to operationalise the Management Training for the health functionaries working at the block level.

INTERACTIONS AND SHARING OF EXPERIENCES IN HEALTH MANAGEMENT DEVELOPMENT WITH ORGANISERS OF AREA DEVELOPMENT PROJECTS

For strengthening the health and family welfare programmes in programmatically weaker areas, the Government of India have undertaken five Area Development Projects with the financial assistance of five international agencies covering 56 districts in 12 States. These Projects are designed for intensive development and strengthening of facilities and manpower for improved delivery of health and family welfare services. It has been felt in the Ministry of Health and Family Welfare as well as at NIHF that this Institute can play an important role in sharing of experiences, particularly in the field of Management Training. The NIHF

has already organised two workshops for this purpose. The processes that were developed by the NIHFW and the consortium for determining the management training needs and preparing need-based training curricula for various categories of personnel, as well as the findings of areas for strengthening knowledge and managerial skills were found to be very useful by the participants. The participants were also provided with draft Management Training Modules prepared by the Consortium, which they could use in their own activities even at the draft stage. It was further emphasised by all concerned that organisation of similar workshops in future will be very helpful.

It is very heartening to note that in a recent review meeting in the Ministry it was informed that management training of all health personnel in the Area Project was being carried out using the modules prepared at NIHFW.

It would be pertinent to mention that Prof. Abdel Salam from Sudan and Dr. G.P.C. Fernando from Sri Lanka also participated in this workshop. Both were members of the 'WHO Task Force on Collaboration Between Training Institutions for Strengthening Management Training in Primary Health Care.

MANAGEMENT TRAINING FOR DISTRICT HEALTH OFFICERS AND ORIENTATION OF STATE LEVEL HEALTH OFFICIALS

For the development of activities for the above mentioned purpose, the following two types of approaches have been made:

- a. Adopting somewhat similar approaches as mentioned earlier management problems and managerial requirements for district level health officials have been identified. A large number of issues have been identified in the interviews with selected health officials and in the workshop on Health Management Training Needs of District Level Health Officials for Strengthening Primary Health Care (November 28-30,1983). These issues and the job descriptions have been analysed to determine the training needs. The training areas so identified have been grouped and organised into seven modules. The training areas within these modules are as follows:
 1. Improving role effectiveness
 2. Mobilizing community and creating demands
 3. Planning, monitoring and evaluation
 4. Increasing performance through human resources
 5. Managing finances and logistics
 6. Networking of health related organisations
 7. Improving effectiveness of District Health System

A draft Module on Management Training of Health Officers at District Level has been developed in collaboration with the Indian Institute of Management,

Ahmedabad (Gujarat). This draft has been reviewed in the light of the suggestions received from the members of the Consortium and has been finalized in consultation with the Consultant from Medex Group, Hawaii. Two trial courses on Management Training of Health Officers at District Level are being planned to be held in the States of Maharashtra, Madhya Pradesh/Uttar Pradesh in collaboration with the CTIs and the HFWTCs and State Management/Public Administration Institutes of these States. These trial courses are proposed to be held during September-December 1986 and the Modules for the Management Training of District Officers would be finalised and printed in early 1987.

b. The second approach is for the sensitisation and orientation of the senior level officers. A gradual change is envisaged to be brought about by involving them in the management development workshops which will be focussing on the identification of the problems, prioritising these keeping in view the constraints and then developing Actions Plans for the solution of the problems identified. It is with this objective in view that the NIHFW had planned and has conducted six workshops in 1985-86 on Management Development-cum-Action Programmes in different States (*i.e.* Gujarat, Madhya Pradesh, Orissa, Andhra Pradesh, Imphal (North East Region - Mizoram, Manipur, Nagaland) and Bihar) of India. Eight to ten districts were chosen from each State and the district level and State level officials participated.

Following the first workshop in a State, the Action Programme will be implemented and monitored in each district over a period of about eight to ten months, and the results will be reviewed and evaluated in a second workshop to be organised subsequently.

Some of the broad areas in which the proposed action plans were prepared and would be implemented by the participating district health officials in each State over a period of eight to ten months are as follows:

1. Improvement in the Family Planning Programme through correction of the prevailing delayed acceptance; giving greater attention to resistant community; correcting lack of community/public participation; motivation-for spacing methods by younger couples with low parity; achievement of family planning targets.
2. Improving communication of appropriate messages in health care and family planning through mass media.
3. Improving the Tuberculosis Control Programme through improvement of methods/approaches for detection of cases; prevention of high drop out rates for treatment.
4. Control of gastroenteritis and diarrhoeal diseases.

5. Eradication of guinea-worm infestation.
6. Improving the current low registration of pregnant mothers for ante-natal care.
7. Continuity of treatment of leprosy cases.

It is expected that following participation in these management development workshops, the district level health officials will acquire experience and skill in identifying problems of management of health care in their own areas, categorising these according to the priority, formulating action plans for solving the problem, implementing the action plans, and developing a system of monitoring and evaluation. These will ultimately enable them to learn and apply better management techniques and to function more effectively and efficiently as middle level managers. Furthermore, involvement of the State level health officials will ensure proper sensitization and orientation of higher level officials in the State which would contribute to bringing about the desired changes in the health care system for its improving management.

In addition to the above, two more similar Management Development Workshops for district level health officials are planned to be organised in the State of Rajasthan and Himachal Pradesh. The detailed reports in respect of the Six Management Development-cum-Actions Plan Workshop conducted in six States during 1985-86 have been prepared to highlight the process development and the experiences gained.

The Mid-Review Meetings are being held in the respective States (where the Management Development Workshops have taken place during 1985-86) to monitor and evaluate the progress made in implementing the District Action Plans. This also permits reprogramming and needed corrections in Action Plans.

Upon specific request from the Government of Madhya Pradesh, two courses on Health Management were conducted at NIHFV for the State and District level officers of the Area Project district of Madhya Pradesh.

INTER-COUNTRY COURSE ON LOGISTICS AND SUPPLY MANAGEMENT

NIHFV conducted an Inter-country Course on Logistics and Supply Management in February 1984 for the participants from three countries of this region namely Nepal, Bangladesh and India in collaboration with experts from CDC, Atlanta and University of Hawaii. This has been funded by the USAID. Subsequently, a similar course has been organised at the national level. Requests for organising two more courses are pending with the NIHFV.

REORIENTATION AND STRENGTHENING OF PROFESSIONAL EDUCATIONAL INSTITUTIONS

- a. These institutions are providers of manpower for health services organisation. The Medical Colleges, Nursing Training Schools and Colleges, Health Assistants Training Institutions and Auxiliary Nurse and Midwives Training Centres need to change their teaching/ training curricula in accordance with the changing needs, approaches and emphasis in the health care delivery through Primary Health Care principles.
- b. The management components are also to be incorporated for their proper Orientation and sensitization.
- c. The type of the changes needed may be determined through the organization of workshops, consultation meeting etc. Appropriate training curricula are also to be developed.
- d. For implementing such training/teaching programmes in the professional educational institutions, the teachers are to be reoriented and the faculty may require strengthening.
- e. Proper linkages and collaboration with specialised institutions and training centres at different levels would be desirable.

With the above considerations in view, it has been planned to review the medical curricula at the undergraduate level and holding workshops with the Deans and Principals of Medical Colleges and representatives of Medical Council of India for bringing about a change in the syllabus of the medical curriculum and for incorporation of instructions in the area of management. Similarly, it is proposed to review the curricula of nursing colleges and schools at the undergraduate and postgraduate levels in collaboration with the Deans and Principals of Nursing Colleges and Schools and the representatives of the Nursing Council of India for incorporating suitable changes in the curricula including instructions on management. These activities will be undertaken during the period 1986-87.

NEED FOR EDUCATIONAL MATERIAL FOR STRENGTHENING MANAGEMENT TRAINING

One of the major constraints for the development of Management Training Programmes is a lack of appropriate need-based educational and training materials. In view of this, well planned actions are needed for the development of such need-based material as well as for identification, collection and documentation of these. There is also an urgent need for selective dissemination of such material to various educational and training Institutions/Centres and health personnel at different levels.

- a. Information support for health management - Activities pertaining

to documentation and selective dissemination of educational material on Health Management to various HFWTCs, CTIs and other sister institutions in the country have been carefully worked out. The HFWTCs and CTIs have to play an important role in the development of health manpower and in imparting the necessary management skills and knowledge to the trainees. In this context proper library facilities are essential for enrichment of management skills and training capabilities of the trainers. Activities have been initiated to strengthen the library facilities of the HFWTCs and CTIs. Accordingly, selected books on management and equipment have been supplied to each HFWTC and the CTI through the aegis of WHO. An Orientation Training Programme on Information Support for Health Management has been conducted at NIHFW in June 1985 for the HFWTCs and CTIs in the Northern Region. Two such Orientation Training Programmes for the Southern and Eastern Region have been held by the end of December 1985. One more course will be organised in early 1986.

- b. WHO/SEARO had assigned the NIHFW a task for preparation of annotated bibliography for management training for middle level managers. The NIHFW has collected materials for bibliography from various sources which included information not only from published literature but also from draft training modules, reports of various workshops, meetings, conferences etc. This bibliography includes the abstracts from 334 documents and these have been grouped under major sub-heads relevant to the field of management. It is hoped that this compilation will be helpful for dissemination of knowledge with the object of strengthening management training.
- c. The Inter-country Conference on Primary Health Care held in WHO/SEARO Office, New Delhi in January-February, 1985 recommended development of network system with clearing house activity for promoting and sharing of primary health care information. It has been further suggested that National Institute of Health and Family Welfare, New Delhi and Asian Training Centre on Primary Health Care, Bangkok should be developed as resource centres for regional clearing house activity for primary health care information. These two Information Resource Centres will collect, collate, score and disseminate information on primary health care. With some seed money received from WHO/SEARO, activities have been initiated at NIHFW for establishing information network to serve as a base for clearing house.
- d. Case studies in health management - Realizing the importance of case studies in training particularly management training, efforts are being made to develop case studies in Health Management on training materials for Health Management training at various levels. Two workshops on case studies were conducted in the months of May and August/September, 1985, as a result of which 37 cases were submitted by different case writers on various aspects of health and family welfare management. The Review Committee of Case Studies has finally selected 23 cases for further development and implication.

The Draft Case Studies are in the process of being published. These will provide useful teaching resource material to the HFWTCs/CTIs and other Training Institutions to improve Management Training to the health and family welfare functionaries. Similarly, efforts are on for the development of Case Studies to be used as teaching material for the Management Training at District Level Officers. It is planned to conduct Regional Workshops to develop case study material by the middle of 1987.

FURTHER ACTIVITIES FOR FACILITATING THE USE OF MANAGEMENT TRAINING MODULES

A number of steps have been envisaged for promoting and spreading the use of Management Training Modules. A few of these are mentioned below:

- a. Two courses to be conducted for the State level health officers and key- trainers of the HFWTC and CTI in different regions.
- b. Five workshops are planned for the PHC level staff in sensitizing the modular training concept for the lower functionaries.
- c. Two trial courses are planned for the district health officers on the basis of the modules which are under preparation.

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बस लेख में भारत में प्राथमिक देखरेख सेवाओं संबंधी प्रबन्धकीय प्रशिक्षण के सुदृढीकरण के बारे में समीक्षा की गई है। प्रबन्धकीय क्षमताओं को सुदृढ करने के संदर्भ में विभिन्न स्तरों, अर्थात् ब्लाक, जिला तथा राज्य स्तर पर कार्यरत स्वास्थ्य कार्मिकों की प्रशिक्षण संबंधी आवश्यकताओं पर भी प्रकाश डाला गया है। इस लेख में विभिन्न प्रशिक्षण संस्थानों जैसे मेडिकल कालेजों, नर्सिंग कालेजों तथा पैराप्रोफेशनल प्रशिक्षण संस्थानों द्वारा अपनाये गये प्रशिक्षण पाठ्यक्रमों की पुनरसंरचना करने की आवश्यकता पर भी विशेष बल दिया गया है। लेखक द्वारा विभिन्न वर्ग के स्वास्थ्य कार्मिकों के लिए आवश्यकता पर आधारित, शैक्षिक सामग्री तैयार करने संबंधी सुझाव भी दिए गए हैं।

DEVELOPMENT OF CURRICULUM - THE JAGATSINGHPUR EXPERIENCE

Saraswati Swain*

ABSTRACT

The steps undertaken by one of the medical colleges of the country to develop a need based curriculum for the medical officers and supervisors of primary health centres in its rural training centre have been described in this paper. The results have been extremely rewarding and the conclusions arrived at needs to be considered by the education planners in the larger interest of the country.

India, being one of the signatories to the Alma Ata Declaration, accepted the concept of Health for All by 2000 AD and accordingly both Government of India and Government of Orissa were keen on implementing primary health care in the country. One of the important areas which needed immediate attention was the development of the existing health manpower personnel working at the grassroot level in the country/State. The various Five Year Plans stressed on the need but the Seventh Five Year Plan categorically emphasised on augmenting the educational facilities to meet the health needs of the country. The model plan of action, developed at the national level, laid equal emphasis on teaching and service in the medical and health field.

But unfortunately, the health personnel, specially the medical officers, working at the grassroot level, were found to be inadequately equipped to deliver the goods. Having been trained in the most sophisticated Western model hospitals, working with the most modern equipments, spending time in the best equipped libraries, the young graduates now much different when they were asked to work in rather primitive conditions of a primary health centre settings. Further, their major task at the grassroot level was managerial and supervisory. But the undergraduate curriculum did not include any training in such activities.

Medical teachers both inside and outside the State had realised this and had attempted a change in the under-graduate curriculum at individual level on *ad hoc* basis, but were not successful due to a variety of reasons. One of the major bottlenecks was the ingrained psychological fear of uncertainties which prevented them from resorting to 'push in' a change. The problems including the constraints of working under a rigid bureaucratic system had further added to the fear.

Hence, it was decided to introduce a system of continuing education for both the medical officer, primary health centres and the supervisors (health assistants)

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which would be need based, less radical but outside the medical college setting. The training at the grassroot level was felt extremely urgent as they were the group who were primarily responsible for the delivery of health care services in the rural areas. Updating their knowledge and skills was felt extremely important. This strategy was also considered useful as the medical officer, primary health centres and health assistants had already worked in the field situation and were very well aware of the problems including the gaps in their knowledge. It was also possible to send them in batches to the training centre for a short duration. Finally, a decision was taken to utilise the situation as a learning experience for further use.

With the assistance of the Government of India and O.D.A. (U.K.) at that time which was working in Orissa, the Government of Orissa proposed a training programme to meet the requirement. The rural training centre, which was the field practice area of the Department of Social and Preventive Medicine, S.C.B. Medical College, Cuttack. It was planned to identify the training needs of the Medical Officer, Primary Health Centres and supervisors and to translate them into learning objectives.

Keeping this in view, the first Teacher Training Workshop with 13 participants was organised. It was an unique experience since it had a very good mix of Medical Officers, Health Assistants and Block Extension Educators. They were all very senior personnel having wide and varied experience in the field situation. After a preliminary discussion they were divided into three batches and were deputed to the field for an on-the-spot analysis of the health needs of the community and the various socio-economic-cultural factors influencing them. Because of the rich past experience of the participants the workshop became extremely lively and was an exciting learning situation for every one.

The workshop was followed by a few discussion sessions. The participants, who had contributed very effectively, were retained to help in the development of the curriculum. In the light of their newly acquired experience, they undertook further extensive field studies, observed, workers on the job, consulted textbooks and manuals, discussed with the officials to identify the health problems of the community. The learning requirements of the students were assessed and accordingly the job chart was prepared. Task analysis was also done to identify the knowledge, attitude and skills needed for the job. The tasks and sub-tasks were utilised to develop the content of the curriculum.

A rough draft was prepared and was discussed with the Director of Health Services (DHS), Director of Medical Education and Training (DMET), Director of Family Welfare (DFW) and their suggestions were incorporated and then a model draft was ready for the trial course.

The first trial course was conducted for 28 days covering: (i) Material Management; (ii) Vehicle Management; (iii) Fiscal Management; (iv) Development

of Information System; (v) Staff Development; (vi) Supervision; (vii) Medico-legal Areas; and (viii) Communication.

Teaching was mainly through problem solving session, role play, group discussion and field visits. The various programme officers were invited for exchange of ideas. The video simulations and the practical demonstrations were the other techniques which were highly appreciated. Only 10-20 per cent of the time was devoted to formal lectures.

PROBLEMS

While the programme was being developed the organisers faced a lot of unforeseen problems which have been categorised under three major heads: (i) Problems due to Trainees; (ii) Problems due to Trainers; and (iii) Problems due to Administrative Difficulties.

(i) **Problems Due to Trainees:** At the outset the trainees, herein called the course developers, were not psychologically prepared for such a programme. It was difficult for them to adjust to the rigid work schedule. Being rather senior professionals and being in peripheral health cadre, they were used to a different life-style. Some Medical Officers could not initially accept the idea of sitting in the same classroom with the supervisors. Staying in the same hostel with their junior colleagues was too much to expect. Some also felt one month to be too long to be absent from headquarters. Medico-legal case matters compelled some to miss the sessions and the continuity was lost. There were some other reasons also.

(ii) **Problems Due to Trainers:** The trainers were the staff deputed from the peripheral cadre. They were not sure of their future career and hence, they developed a sense of insecurity. They were staying away from their family and children. The education of their children was hampered. They could not bring along their families as they were not sure of their stay and the accommodation was another difficulty.

Personal benefit of the trainers was almost nil. Their present experience was of no use for them in their future career. Financially, they were hard hit, and technically their teaching experience was not to be counted for their future promotion. Hence, they could not visualise the benefits in the existing situation.

(iii) **Problems Due to Administrative Difficulties:** Originally the workshop was organised for 28 days. But due to financial constraints it was reduced to 22 days which was within the power of the Director, Family Welfare (DFW) to sanction the D.A. when the programme was only for 22 days or less. Hence, the content of the curriculum had to be reduced to 22 days.

The trainees were not relieved in time and some were not relieved at all. In one of the batches only four trainees joined. Initially the programme was planned for 20

workers for 28 days and the mix was adjusted accordingly so that all could participate and learn from each other's experience. A basic minimum number of trainees was required for teaching/learning inputs. But when only four trainees joined the inputs were extremely low and the per learning situation was seriously affected. Cross fertilisation of the ideas was the least. Cost per trainee naturally increased since the resources pooled for 20 were utilised by four only. Untimely joining of the trainees adversely hampered the progress. As the transport facility was so poor the field based programme suffered a lot.

The various programme officers of the State who were required to be participants or trainers in the workshop could not stick to their schedule due to sudden pressing needs and it was impossible to substitute them or to organise other programmes at the last moment. Again, their lessons also could not be accommodated later on due to the tight work schedule.

Finally, it was found extremely difficult to organise, the follow-up field visits for evaluation and to get the right feedback which was very important to improve the curriculum.

However, with great difficulty only one follow-up visit to the district of Ganjam could be organised.

OBJECTIVES OF THE FOLLOW-UP VISIT

Feedback is extremely important to evaluate the success/failure of any programme. One of the methods of evaluation of the curriculum was to observe the trainees in the field situation. As they had returned to their respective PHCs it was felt desirable to find out the following:

- i. Whether or not they were able to implement the programme at their respective places along with the reasons?
- ii. Whether the training material prepared in the classroom settings were found suitable or proved useful in respective field situations?
- iii. What type of support they have received from their supervisors?
- iv. Whether the trainees were able to solve the problems (which were found to be different for different areas) at their respective levels?
- v. Whether they were able to involve the higher officers for the implementation of the programmes?
- vi. Whether they have brought back new ideas to improve the trial courses?
- vii. Finally, it was also necessary to utilise the situation to get the CDMOs and other programme officers involved in the programme and to orient them to get their support.

RESULTS OF FOLLOW-UP

At the initial phase five PHCs of the district of Ganjam were visited by the trainers. They could contact four MOs and four HAs. More such visits, though had been planned originally, could not be undertaken due to administrative and financial bottlenecks. However, the single follow-up visit undertaken was extremely rewarding and encouraging for the organisers. The following are the results of the follow-up:

1. The first thing that was most striking was a change in the attitude of the trainees.
2. Since, the programme was entirely new the colleagues of the trainees were very inquisitive and were curious to get the information. This situation could have been utilised as a place for dissemination of knowledge, but this was not done.
3. On return trainees had started improving their record maintenance system.
4. There was an attempt to improve the cold chain and its maintenance. The maintenance of the refrigerator, dial thermometers, ice boxes had improved.
5. Staff Development:
 - i. Committees were formed at various different levels and had started functioning
 - ii. The MOs had started involving the BEEs and HAs in the decision taking process.
 - iii. The MOs had delegated the main stores to the other MOs and had created a sub-store in some places.
 - iv. Continuing education programme has been started by a few MOs and supervisors.
 - v. HAs felt responsible for the development of health workers:
 - a. They in turn had started involving the HWs also in the decision-making process.
 - b. Control of HWs had started through the HA rather than directly by MO.
 - c. Regularity of sector meetings had improved and the situation was utilised for continuing education.
 - vi. The trainers met the CDMO and appraised him about the proposals who in turn became interested in the programme. There was exchange of ideas/knowledge. His support to ensure the functioning of the programme . at the various PHCs were requested for, and he readily agreed to.

The visiting trainers returned satisfied after the field visit. They felt it was a challenging job. Every day was a new day and every situation was a learning situation for them. The findings were taken care of during subsequent courses. The final draft was prepared after running five trial courses both for the MOs and five for the HAs. The report has been submitted to the Government of Orissa for its approval. After its acceptance it would be implemented all over the State. It is too premature to predict the results though there are definite indications for its acceptance.

CONCLUSION

This is just an isolated experience and not an unmixed success story. But even this belated attempt indicates that there is a need for serious rethinking at the highest level. This could be used as an example where the field training centre is one of the medical colleges of the State and has been chosen to develop curriculum for MO, PHCs and HAs. Even when the programme has been developed in a medical college setting and the peripheral health staff have been recruited as trainers and have also been involved in planning the curriculum. This has kindled the hope that a curriculum committee could be formed at the college level involving the various programme officers of the State along with the academicians of the medical college so as to pool down the experiences of all the concerned. This would not only make the curriculum more need based and relevant, for the peripheral health staff are more aware of the field situation. This would not only relieve the isolation of each group but would encourage peer group learning. The participation of each one is not only feasible but is extremely desirable to serve the interest of this vast community. This would also create an atmosphere of understanding between both the groups. Further, it would also help to initiate the development of a Referral System complex which is so very important for the proper utilisation of scarce resources of the country, at the same time providing primary health care services at the grassroot level.

The Jagatsinghpur experience, though small, has nevertheless brought out the fact that medical colleges can accept the challenge and should not stand isolated from the main stream of health care delivery system. They are basically responsible to train physicians for primary health care and should not shirk their responsibility.

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PLANNING AND ORGANISATION OF EMERGENCY SERVICES

A.K. Agarwal*

ABSTRACT

This paper deals in brief with some of the modern concepts and considerations in the planning, designing and organisation of an emergency service in a hospital. Things like, what important physical facilities are required? What would be desirable flow-path in a casualty department? How the diagnostic support should be organised? At what rate the number of casualty is increasing? Are some of the issues addressed? A yardstick for grading the emergency services according to the size and type of a hospital/health institution has also been discussed. Comments on the working of accident and emergency services in Delhi hospitals illustrate the urgent need to revamp and reorganise the emergency services in the hospitals throughout the country.

The most important period which affects a patient's survival and the degree of his disability is the time immediately after the injury. Emergency patients have to be examined and treated without any delay. An uncomfortable and apprehensive patient is not prepared for the delays in treatment and for the impersonal attitude sometimes apparent in busy emergency rooms. Consequently, the emergency department must be operational 24 hours a day and is expected to deal immediately with a range of complex problems. The emergency patient considers himself to be in immediate need of medical, surgical or other care. Surgical and traumatic patients represent between 35 and 70 per cent of emergency cases. Less than 5 per cent of emergency department visits are with life threatening conditions.

Since World War II, there has been a continual increase in emergency room visits and hence, functioning of an effective emergency department becomes more difficult. On an average, emergency room visits show a 5-6 per cent increase each year. The emergency room's skyrocketing volume has been placing pressure on hospital planners to find out appropriate ambulatory care settings to serve the community better. A study by the American Hospital Association indicates that between 16 and 30 per cent of the hospitals admissions come through the emergency department. It has been noted that not only do emergency admission patients generally remain in the hospital for a longer period of time, but also their admissions usually entail greater use of ancillary services than that which occurs with scheduled patients. The main reason as to why many people prefer the hospital

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emergency room for treatment is that they think hospitals have better treatment facilities than the privately run clinics and nursing homes.

EXTERNAL PLANNING OF EMERGENCY UNIT

The external planning relates to conditions of the site and the need to provide adequate parking space. The parking space should be so arranged as to provide direct pedestrian traffic flow to the principal entrances such as main, emergency and out-patient. Unauthorised entrances and shortcuts should not be used. Ambulances and other emergency vehicles should be able to reach the emergency entrance without problems. One view is that the emergency department should be easily accessible. The directional signs to the Emergency Department should be conspicuously placed and clearly visible, day and night. Waterproof fittings should be used in all external situations. The entrance may be at the rear of the hospital, so that the routine hospital working is not disturbed. The emergency department entrances - one for the ambulant patients and other for patients on stretchers should be slip proof and at grade level so that the wheelchairs and trolleys could be easily wheeled in. Differences in entrance levels should be bridged by ramps.

For the entrances two-way doors with glass panel at eye height and springs to keep the door in open position are recommended. A door with width of 1.6 mts. should allow the attendants to walk on either side of the stretcher or trolley as the patient is taken in.

The ambulance post should be of drive through type, covered and enclosed to protect the patients from the weather while they are being transferred from the ambulance or from other vehicles into the emergency department. Vehicles of relatives and friends, police cars, press vans and even ambulances must not clutter up the ambulance port.

The ward-boys, orderlies or porters should be available near the entrance. A trolley, stretcher, and wheelchair store or bay should be located immediately adjacent to the entrance. The need of ambulance attendants, police and mass media are served by a room of about 10 m² near the entrance hall equipped with a desk chairs, and telephones. Access to toilet is necessary. The lobby should include a waiting area with benches for the relatives. There should be shelves for literature describing the functions and the rules of the department as well as other well-chosen current reading material. A TV set may be an asset. Access to a tea or coffee bar is valuable. The attendants who come back with the patient are themselves sometimes in a state of shock. A hot/cold drink can prove extremely beneficial. A receptionist, station in the lobby together with public phones, drinking water and toilets are essential. However, the patients' relatives or friends should not be allowed in the work areas of the emergency department. X-ray and laboratory services should be easily accessible to the emergency department. Over 40 per cent of emergency patients require X-rays and about 20 per cent need laboratory examination. If emergency rooms handle a patient volume in excess of 1000

patients per month or handle an unusually high number of fracture cases, they may have their own X-ray facilities. A portable X-ray apparatus is seldom satisfactory. Best results are obtained if an X-ray unit is located within or adjoining to the emergency department. Provision must also be made for the consultation services of radiology technicians or radiologists.

FACILITIES

Emergency Rooms should contain the following elements determined by each individual hospitals, situation and patient load.

Emergency Treatment Room

- Each room should be designed and equipped with complete first-aid, including suturing.
- Approximate size may be 12 by 16 ft. and equipped with hot and cold water, sink, oxygen, suction and a minor surgery type lighting and table for suturing/first-aid.

Examination and Treatment Room

- may be 10 by 12 ft. in size and should contain oxygen, suction and adequate lighting.
- should be clean and soiled supply cabinet.
- should have lockers for patients valuables or clothings.
- if possible, should be in a line or tier between the emergency unit corridor and the OPD, with doors opening to both corridors.

In this way these examination and treatment rooms can be flexibly used from either or both sides in case of serious disaster or mass casualty situations.

Observation or Holding Room

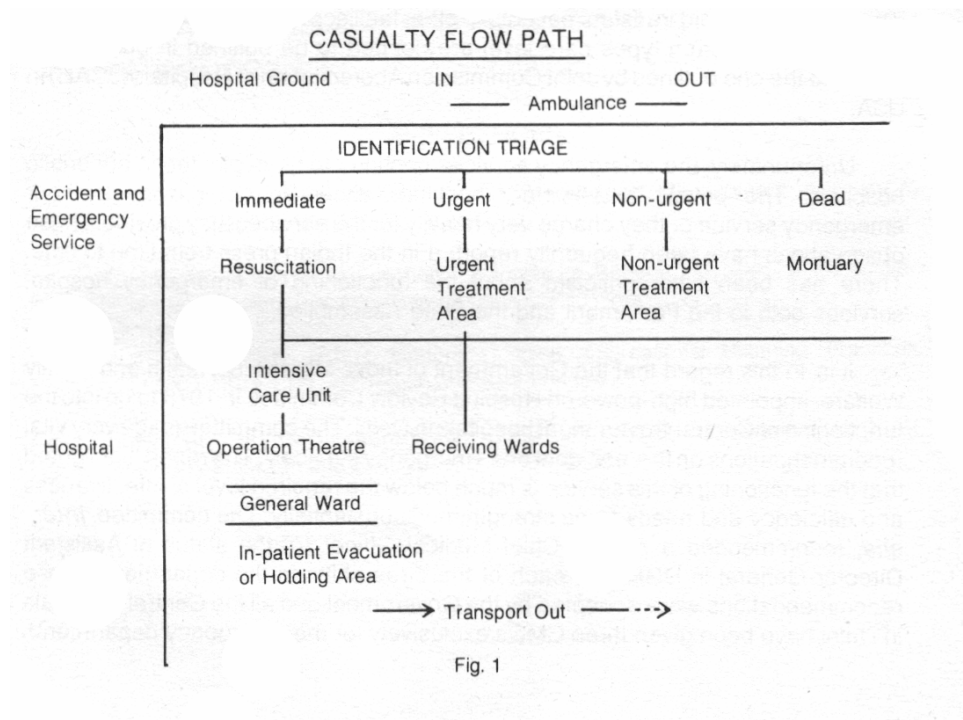
- This patient care room should be divided into cubicles by permanent partitions at the side and with a folding door at each entrance.
- This should be used for sick employees, injured visitors, and ambulatory or one-day-stay patients.
- Also, may as well be used for holding patient admitted for emergency care, who may or may not require hospitalisation after a period of observation.

- This observation holding area should be self-contained nursing unit with nursing work area, the nurserver' (clean and soiled supply cabinet), patient-nurse communication system, oxygen and suction outlets and adequate general lighting for examination.

Other Facilities Should Include

- 'Quiet' lounge rooms for family members.
- Security and isolation room for dangerous, noisy or infectious cases.
- An interview room, with telephone for police and press.
- An administrative control station adjacent to the entrance.
- An on-call room for medical staff on duty.
- Wheelchair and stretcher storage area.

In addition to all these facilities, the planners and administrators would also take steps to eliminate any confusion regarding the flow of patients in the emergency/casualty department. A linear diagram on the casualty flow path would be helpful in the designing and working of this department as shown in Fig. 1.



It has been noted that as much as 40 per cent of the visits to emergency department are non-emergent in nature. Many report to seek quick admission to become indoor-patient. This problem is sometimes very acute in our hospitals which by and large provide free hospital services to the community. A sorting or identification trial according to the seriousness of patient therefore, becomes necessary.

Generally, the emergency department has atleast two orthree functional areas. Typically, there is a trauma area where the severely injured surgical cases are handled and resuscitated. There should be a medical examination area nearby and a costing area for orthopaedic problems. There should be observation beds for patients who need to stay in the emergency room area before they are discharged or admitted to the main hospital.

DIFFERENT TYPES OF EMERGENCY CARE

The National Academy of Sciences (USA) has identified four categories of emergency care. Type I, major emergency facilities included 24 hour specialist in the hospital in addition to other 24 hour back up services. Type II is the basic emergency facility where the emergency room physician is located in the hospital with certain specialists on call. Type III is the hospital that provides standby emergency facilities with an emergency room nurse and a physician on call. Type IV is a referral emergency room facility that has only an emergency nurse or an ANM who after the first-aid transfers patients to other facilities for life support system. The requirements of each types care level are needed to be outlined in our country similar to the one outlined by Joint Commission Accreditation of Hospitals (JCAH) in USA.

Unfortunately, the emergency services continue to be neglected in our public hospitals. The private or voluntary hospitals either do not provide 24-hour emergency service or they charge very heavily for the services they provide. These observations have been frequently reported in the Indian press from time to time. There has been bitter criticism about the functioning of emergency/hospital services both in the Parliament and the State Assemblies.

It is, in this regard that the Government of India, Ministry of Health and Family Welfare, appointed high-powered Hospital Review Committee in 1978 to go into the functioning of Central Government hospitals in Delhi. The committee made very vital recommendations on the 'accident and emergency services'. The report highlighted that the functioning of this service is much below the required level of effectiveness and efficiency and needs to be strengthened substantially. The committee, *inter-alia*, recommended a post of Chief Medical Officer (of the status of Assistant Director-General in DGHS) in each of the three shifts in the department. These recommendations were accepted by the Government and all the Central Hospitals in Delhi have been given three CMOs exclusively for the emergency department⁴.

To conclude we can say that each hospital should have a well organised emergency service department, with equipment, personnel and supplies ready at all times for the care of acutely ill and seriously injured patients.

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IMPACT OF LAPAROSCOPIC STERILIZATION IN RURAL BENGAL

Pradip Kumar Mitra*

ABSTRACT

A significant change in the outlook of rural mothers has been observed. Rural mothers have become more conscious about laparoscopic sterilization during the last five years. The procedure and modifications to get the optimum psychological support as well as results with complications have been analysed thoroughly in this paper.

In rural India, laparoscopic tubal occlusion in female using silastic ring is a safe, simple and effective method in the hands of experts for mass sterilization camps. This paper analyses how to overcome the initial setbacks and problems of this method.

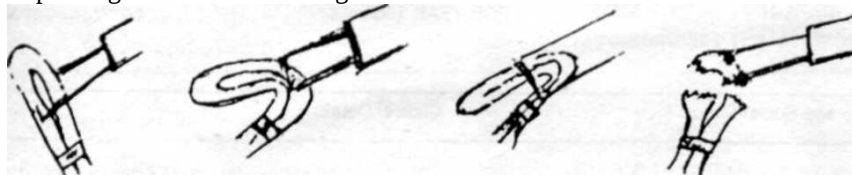
MATERIALS AND METHOD

The study was conducted in Murshidabad district of rural Bengal during last five years. Only camp sterilizations conducted at a remote primary health centre (PHC) and sub-health centre (SHC) have been included. Standard single puncture technique was adopted which needs no detailing. Here 10 mm Storz type single puncture laparoscope and 'Chimco' brand silastic ring have been used. The important modifications are given as follows:

- i. Prior psychological preparation of each group of cases by conducting 'film shows' of the entire procedure.
- ii. Use of battery operated light source to counteract the rumour of electric current operation.
- iii. Appropriate sedation.
- iv. Non-exposure of private parts by covering with large bed sheets.
- v. Vaginal approach to hold and elevate the uterus was done only by expert female assistants (except in cases of (D/C or D/E).
- vi. Laparoscopic crushing or resection of tubal loop to avoid failure as the tensile strength of the silastic ring is often questioned as they slip out on many occasions. Here after application of silastic ring the middle portion of

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the tubal loop is grasped with the tong or laparoscope and boldly drawn inside the scope. Thus, the total effects are: (a) crushing of the tubal loop; (b) at times segmental resection of the summit of the loop by the sharp edge of laparoscope; and (c) further pushing in of the silastic ring.



- vii. Removal of abdominal stitch on 4th day at home to reduce abdominal discomfort etc.
- viii. Introduction of MTP (D/E) upto 10 weeks and sterilization at camps which was not done usually.
- ix. Laparoscopic sterilization during immediate puerperium by modified technique.
- x. To perform maximum 100 sterilization per day.
- xi. Preservation of pregnancy (10-12 wks) and sterilization on request. Here no uterine elevator is used. The gravid uterus is pushed up gently with fingers through vagina and the cervix is pushed to left or right with the index finger placed at lateral fornix for tubal stretching and ring application. Sofar 98 cases have been done and no complication or failure has been reported as yet. This modified approach is being used for the last three years.

RESULTS AND ANALYSIS

TABLE 1
SHOWING YEAR-WISE NUMBER OF CASES

1982	1983	1984	1985	1986
3286	1425	2628	5285	6289

A prompt response followed by sharp drop was noted initially due to various psychological problems and operative complications which could be averted gradually by modifying the total approach to 'lap camp' as briefed above.

**TABLE 2
FOR YEAR 1986**

Average Social Status		Clinical Details	
1. Education		1. Age	
Uneducated	87.7%	21 -25 yrs.	8%
Educated			
(above class V)	12.3%	26-30 yrs.	51
		31-35 yrs.	34%
		36-40 yrs.	6%
		above 40 yrs.	1%
2. Occupation		2. Parity	
Housewife	90%	Para 2 (3.6%)	
Labourer	10%	Para 3 (22%)	
		Para 4 (25%)	
		Para 5 (26%)	
		Above Para 6(23.4%)	
3. Economic status		3. MTP with (38%)	
Poor	89.4%	without (62%)	
Middle class	9.7%	4. Without MTP. gr	
4. Previous			
contraception			
None	68.2%	Interval	86%
Condom	23.2%	Puerperal	14%
Others	6.5%		

TABLE 3
SHOWING AVERAGE COMPLICATION RATE

Complications	1981-82 (Percentage)	1985-86 (Percentage)
1. Uterine perforation	2.01	1.08
2. Haemorrhage from mesosalpinx	0.12	0.07
3. Bleeding from round ligament'	0.05	0.01
4. Neurogenic shock	0.05	0.01
5. Omental prolapse	0.08	0.03
6. Wound infection	0.01	0.003
7. Laparotomy for intraperitoneal hge.	0.09	Nil
8. Cardiac arrest (death)	0.01	Nil
9. Failure (Pregnancy)	0.48	Nil

TABLE 4
**SHOWING LONG-TERM SIDE-EFFECT AFTER FOLLOW-UP
FOR ONE YEAR**

Side-effects	1981-82 (Percentage)	1985-86 (Percentage)
1. Disturbed menstrual cycle	2.1	0.07
2. Abdominal pain	0.36	0.1
3. Backache/Pelvic pain	0.34	0.21
4. Weight gain	0.38	0.32
5. Changed libido	0.45	0.24
6. Psychological symptoms	4.4	0.31

DISCUSSION

An overall reduction in all the complications, side-effects and pregnancy rate with total increase in acceptance in the recent years has been observed. This is mostly due to the modifications which have been introduced in the laparoscopic operation and applied in rural Bengal at present. Major complications had occurred in less than 1 per cent of cases. Mortality has become extremely rare. Thorough clinical scrutiny, optimum operation time, rejection of cases having slightest adnexal morbidity as observed on laparoscopy, proper follow-up etc. could be attributed to the same. However, the overall complication rate is higher (7.1 per cent) as compared to other recent reports. But the rate was less than the reports. The observations of this study were quite comparable to those studies where the complication and side-effect rate has been reported as 7.7 per cent. Greater number of complications were observed in MTP with sterilization cases although the acceptance rate was also higher in that group. Similar experience and findings have been reported by another researcher. But follow-up for one year and inclusion of minor complications were not there in detail in many of those reports. Routine D/C or S/E to reduce the luteal phase pregnancy as advocated by one another author was not done because it increases risk of complications. Further, the High Trendelenberg or Ron-Manvi method where double puncture laparoscope was used and vaginal manipulation of uterus was avoided were advocated and described for adoption. But until now only one single puncture laparoscope has been supplied by the Government of West Bengal for mass sterilization. So the modifications as suggested were sought to get the full impact of the modified method.

CONCLUSION

Awareness has been aroused in rural people to remove the fear about this simple but permanent procedure to achieve higher acceptability. No undue risk should be taken in camps and any tubo-ovarian pathology as observed on laparoscopy should be left for minilap tubectomy to reduce the overall complication rate.

ACKNOWLEDGEMENT

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यह देखा गया कि परिवार नियोजन के प्रति ग्रामीण क्षेत्रों की महिलाओं की धारणा में काफी महत्वपूर्ण परिवर्तन हुआ है। गत पांच वर्षों के दौरान लेपरोस्कोपिक नसबन्दी के बारे में ग्रामीण महिलाओं में काफी

जागरूकता आई है। इस लेख में, अधिकतम मनोवैज्ञानिक समर्थन तथा परिणाम प्राप्त करने के उद्देश्य से लेपरोस्कोपिक नसबन्दी संबंधी प्रक्रिया तथा अपेक्षित संशोधनों आदि के बारे में और इनसे जुड़े जटिलताओं के बारे में व्यापक रूप से विश्लेषण किया गया है।

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