HEALTH MANAGEMENT INFORMATION SYSTEM (HMIS) AS A SUPPORT TO THE STRATEGY FOR "HEALTH FOR ALL BY 2000 AD"

By

Dr. N. Seshagiri
Additional Secretary & Director General
and
Dr. Gautam Bose Additional Director
National Informatics Centre
Planning Commission
New Delhi

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1. Introduction

The Management Information System (MIS) varies according to the set-up of the system and is always geared to the concept of organisational needs, problem definition, design outline, detailed system design, system integration and finally the implementation and maintenance. This is true for Health and Family Welfare Sector too.

The Health in broader concept is holistic one and has many sub-systems. However, the "HEALTH FOR ALL" strategy forms the basis of all the health activities in the country. Any health activity unless it is linked with the concept of "HFA" cannot be viable and cannot have optimal contribution towards the total health system.

In India the Multi-Purpose Workers (MPW) scheme was introduced in 70's with an idea of integrating all the health care delivery activities including promotive, preventive as well as curative services for achieving the "HFA" goals. However, in actual practice it has been observed that the grass root workers, both MPW male as well as female including their supervisors, are mostly busy in fulfilling their own targets for the various target oriented disease programmes rather than to provide the total health care delivery to their assigned population. In the process, some health activities get neglected and certain segment of population, who are either not aware of the health facilities or are refractile to the various health approaches, remain uncovered.

It has been further observed that in the country, various health sub-systems have their own information systems, some of which are well developed and some are under developed. All of these are independent systems and have no linkage amongst each other. All the efforts till now geared towards synchronising and streamlining the

various health information systems have not succeeded. The reasons quoted are plenty but it is mainly due to the usual reluctance on the part of an established system to give way to a newer and modern concept of system integration. Hence, the onus now is on the programme managers to contribute maximally towards the development of an integrated, synchronised timely, action-oriented information system for management of health activities at every tier and not only for archival purposes.

An MIS should contain enough information about the programme activities, quantify the outcome, identify the uncoverd areas and bottlenecks as well as should help the workers of respective tiers to arrive at a decision for appropriate action. In other words, the information system should help in decision making, planning, organising, executive and controlling processes which are not only inter-dependent but are interactive. While designing this type of information system, utmost care should be taken in choosing the information parameters such that the routine information collection is kept at its bare minimum so that the collection mechanism and the grass root workers are not unnecessarily loaded. Rather every information parameter before its inclusion in the system should be first weighed against its actual utilisation.

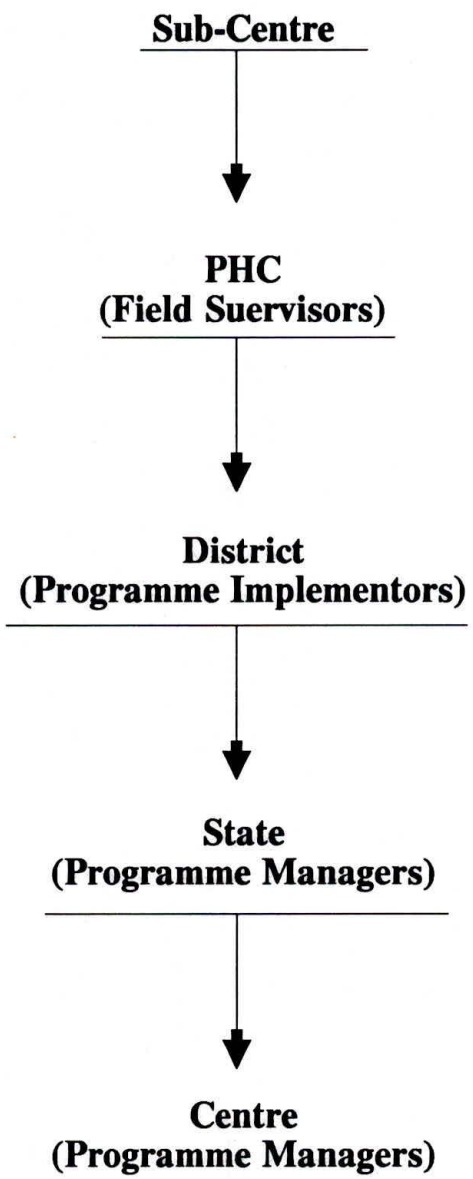
2. Health Information in India: Present Status

The Health Information in India as it stands now is a fairly developed one to serve the purpose of policy makers, strategy supervisors and the programme implementors at higher levels. However, as already indicated above, the system suffers from several ills viz. fragmented, non-standard, ad-hoc information flow instead of user orientation etc. Further, most of the information is for archival purposes, for use at a deferred date, if any, at all.

In other words, the MPWs at subcentres are collecting and sending the information to PHC because they are asked to do so. The same holds good for PHC, district and state levels also. Under the circumstances, the respective tiers are able to produce the data on demand by higher authorities, but in the process, the data looses all its requirement for converting it into a meaningful information for action oriented use at the implementation levels. Thus, the basic concept of decentralised planning and remedial action at appropriate level gets defeated.

The above picture is true throughout the country with slight variations in the degree only, depending on the type and quality of general administration and resources available for the health sector in a particular state.

Structurally the information flow in the health set up is as below:-



In the above data flow, several agencies/organisations are involved which include CBHI, E&I Division and information cells of various programmes at the central levels; equivalent of the same at the state levels and respective programme officers at the district levels.

It may be pointed out that this holds good only for the rural areas as most of the national health programmes are rural service oriented. The Urban Health Information System is simply conspicuous by its absence. Moreover, the quality and reliability of the data presently being collected is very poor due to its low coverage and are not comparable because of non-standardisation. In short, it can be said that a true health profile of the country just not available, though various approximations are always being made by extrapolating the quality data and data available through special surveys/studies.

3. Efforts Towards Integrated Health MIS

Since the weak points in the health information area were identified as early as in 70s, an integrated Management Informa tion and Evaluation System (MIES) for-health sector was devised by the CBHI and was introduced in 1982; wherein it was visualised that all the districts in the country would collect informaion from PHCs in an integrated format and would send the report directly to the CBHI. It was expected that the information would be computerised and output tables would be provided to the programme managers at the various levels. Unfortunately, the scheme did not take root for several reasons and were identified in due course.

Based on the above experience and advancement in the field of management information and also keeping in view the utmost need of establishing MIS as a support to the HFA strategy, the Government of India in consultation with the World Health Organisation (WHO) and four participating states had devised a Health Management Information System (HMIS) for the HFA strategy which was field tested and reviewed.

In the review meeting of HMIS held in September 1989 in New Delhi, it was unanimously observed that the devised information system is a satisfactory one as well as feasible. The system was recommended

for implementation all over the country in a phased manner. However, it was advised that the system should take advantage of the modern Computer Communication Informatics Net work of Government of India (NICNET) set-up by the National Informatics Centre (NIC). The formats and information flow should be made computer compatible so that data could be fed in the District Informatics Centres of NIC.

It may be noted that simultaneously several other experiments/studies, by various professionals/institutions, were going on in certain parts of our country on the same subject. To name a few, Ballabgarh Project by AIIMS, Bavala Experiment by IIM-Ahmedabad, CMC Ludhiana Experiment, NATHI by CMC-Vellore and IPPMIS Project by Kerala Government. Out of these, only the last named one i.e. IPP-MIS Project approximates the HMIS Project of GOI-WHO, supported by the participating states as far as its relevance for application to the total population of the State/country.

4. NICNET

National Informatics Centre (NIC) provides Informatics services to the Government of India at different levels such as Central/State Government and District Administration. NIC has set up a nation-wide Satellite based computer communication network called NICNET to facilitate development of District Databases on important sectors of economy and also to standardize and rationalise interactive information exchange between the Districts and the States and then to Centre, for decision support at all levels.

NICNET comprises of

(i) Large Main frame computers (NEC-S1000) at NIC Hq, New Delhi and Regional Centres at Pune, Bhubaneshwar and Hyderabad.

(ii) ND-550 or equivalent super mini computers for providing informatics services to the States.

(iii) 386 PC-AT computer system at each district to provide serv ices to the District Administration.

NICNET uses satellite based communication links through INSAT I-D for providing information flow among Districts, States and Centre. A schematic diagram of NICNET is given in Fig.1.

5. HMIS Version 2.0

In appreciation of the fact that conversion of the manual system of the devised HMIS into a computer compatible one required not only the technical expertise, but also proper understanding of the various health information systems in operation, a central team was constituted under instructions from the Union Secretary (Health), comprising of experts from the allied fields. The team not only studied the devised HMIS and other available information systems but also made field visits to various HMIS and non HMIS districts, Kerala State as well as project areas of other experiments. The team also studied the feasibility of utilisation of District-NIC set up and NICNET services for the purpose of HMIS. During these visits elaborate discussions were held with grass root workers, field supervisors, PHC, district and state level officers and various other experts on the subject. Besides, exclusive meetings were held separately with Central Programme Managers to ensure that their interest did not suffer due to conversion of the system into a computer- communication based one.

As a result of the above deliberations, the HMIS version 2.0 has been developed and devised and has been now accepted by the Ministry of Health & Family Welfare for its country-wide implementation.

HMIS Version 2.0 includes:-

(i) PHC Reporting Format

(ii) District/Special Hospital Reporting Format.

(iii) Private Hospital/Nursing Home Reporting Format.

(iv) Camps Information Format.

(v) Manual for Instructions for PHC Computer.

(vi) Output reports at PHC,District,State & Central levels.

Besides the above, suggestive model formats for Subcentre Report to PHC and Registers to be maintained at Subcentres are also presented. It may be emphasised that Subcentre reports/registers are only suggestive models and it would be entirely left to the States to adopt these with or without modification or continue with their existing system.

It may be observed that the HMIS Version 2.0 is not merely a computer compatible format of earlier HMIS but its scope is much larger both in concept as well as in structure. In the proposed system, the flow of information is manual only upto the District level wherein the information will be entered into the District Computers of NIC and upward and downward flow of information from the District to the apporopriate tiers will be made through NICNET by means of output tables.

In HMIS Version 2.0, an effort has also been made to include, only upto the district level, the hitherto neglected information component from the urban, private and voluntary sector. Due precaution has also been taken to filter the information at appropriate levels so that desirable information can be disseminated at appropriate tiers. In short, the proposed information structure is pyramidal rather than cylindrical. An indicative diagram on Information Flow in HMIS ver. 2.0 is given in Fig. 2.

Copies of Health MIS 2

6. Logistics for Implementation of HMIS Version 2.0 in States/UTs

The HMIS Version 2.0 formats have been field tested, especially PHC format, in four PHCs randomly selected in the remote areas of Muzzafarnagar district of Uttar Pradesh and Sonepat district of

Haryana. The field test results show that the formats are easily comprehensible, especially with the aid of instruction manual which is presently available in English only. The PHC Computer/Health Assistant could follow the getup of the form and filled them correctly. Hence, it is expected that by translating the format and the instruction manual into the regional languages and with one/two days' training to the PHC Computer/Health Assistant and the District Information Officer (DIO) of NIC, it will be feasible to introduce the system in the States/UTs.

For the above purpose, it is proposed that each state should hold one day training session for the District Chief/Designated Officer, Data Entry person from the District Statistical Cell and District Computer Centre Officer. For the comparatively small and medium sized states, it will be possible to organise the training in the State Capital. This training will be imparted by the officials of the Ministry of Health & Family Welfare and Health Information Systems Division of NIC. Subsequent to this, it would be possible for the trained district officials to impart training to the PHC Computer/Health Assistant in their respective District Hqs.

7. Scope of HMIS Version 2.0 and Supplementary Information for Individual Health Programmes

The scope of the proposed HMIS Version 2.0 is limited to the extent that it will indicate the broad programme performance indicators and morbidity & mortality pattern of the population at respective tiers. In order words, it is the Health Intelligence and will reflect the Health Profile of India at District, State and National levels and our progress towards achieving HFA goals.

It may be worthwhile to mention that Programme Managers / Implementators of various National Health Programmes may require additional information besides those to be generated by the HMIS Version 2.0 viz. financial/administrative information, micro level programme indicators etc. It is envisaged that these would be obtained by special methods, as are advocated by the individu al programme authorities, either by surveys or sentinel centres etc. and special periodic administrative reports.

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INFORMATION FLOW IN HMIS (Ver. 2.0)

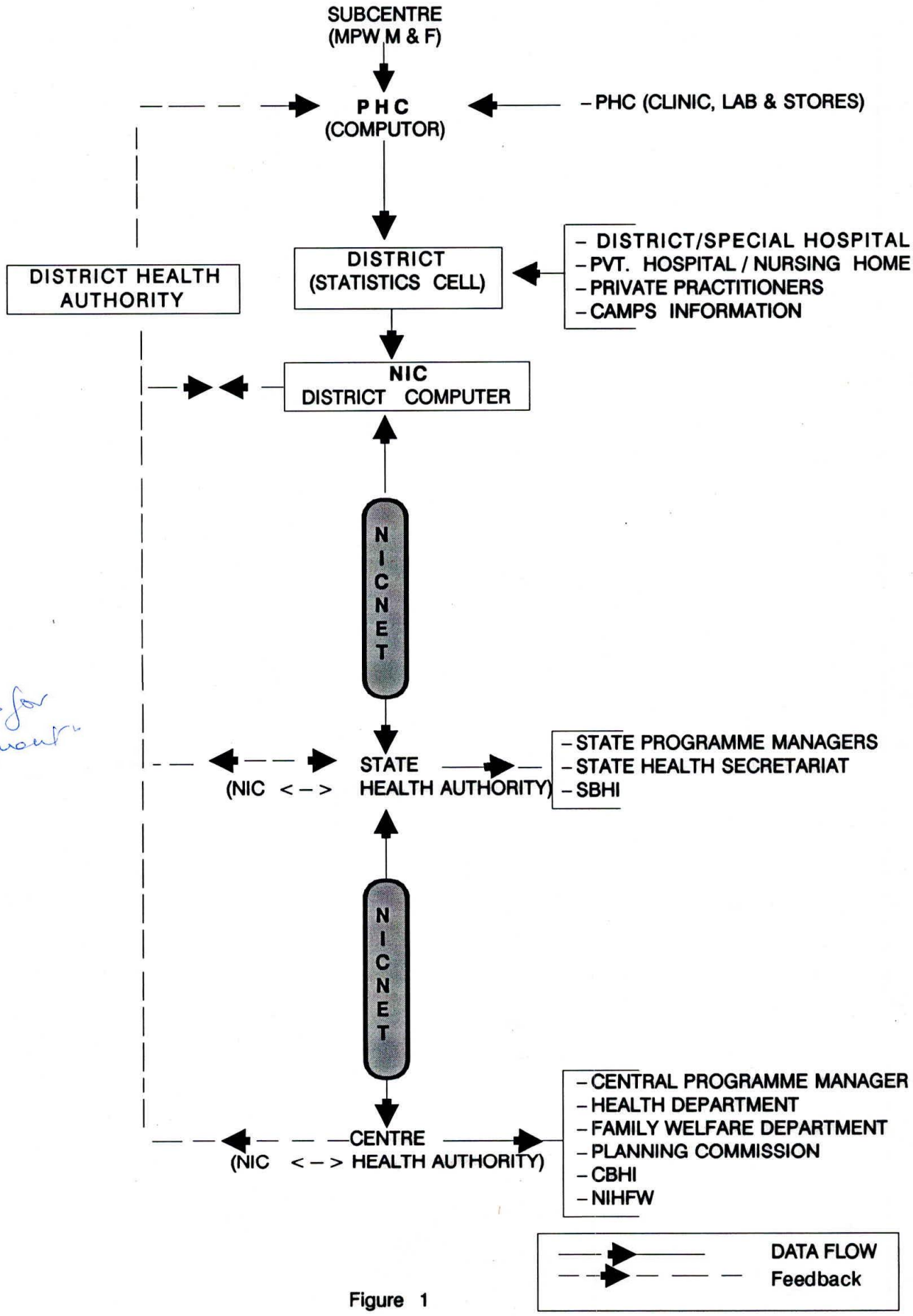
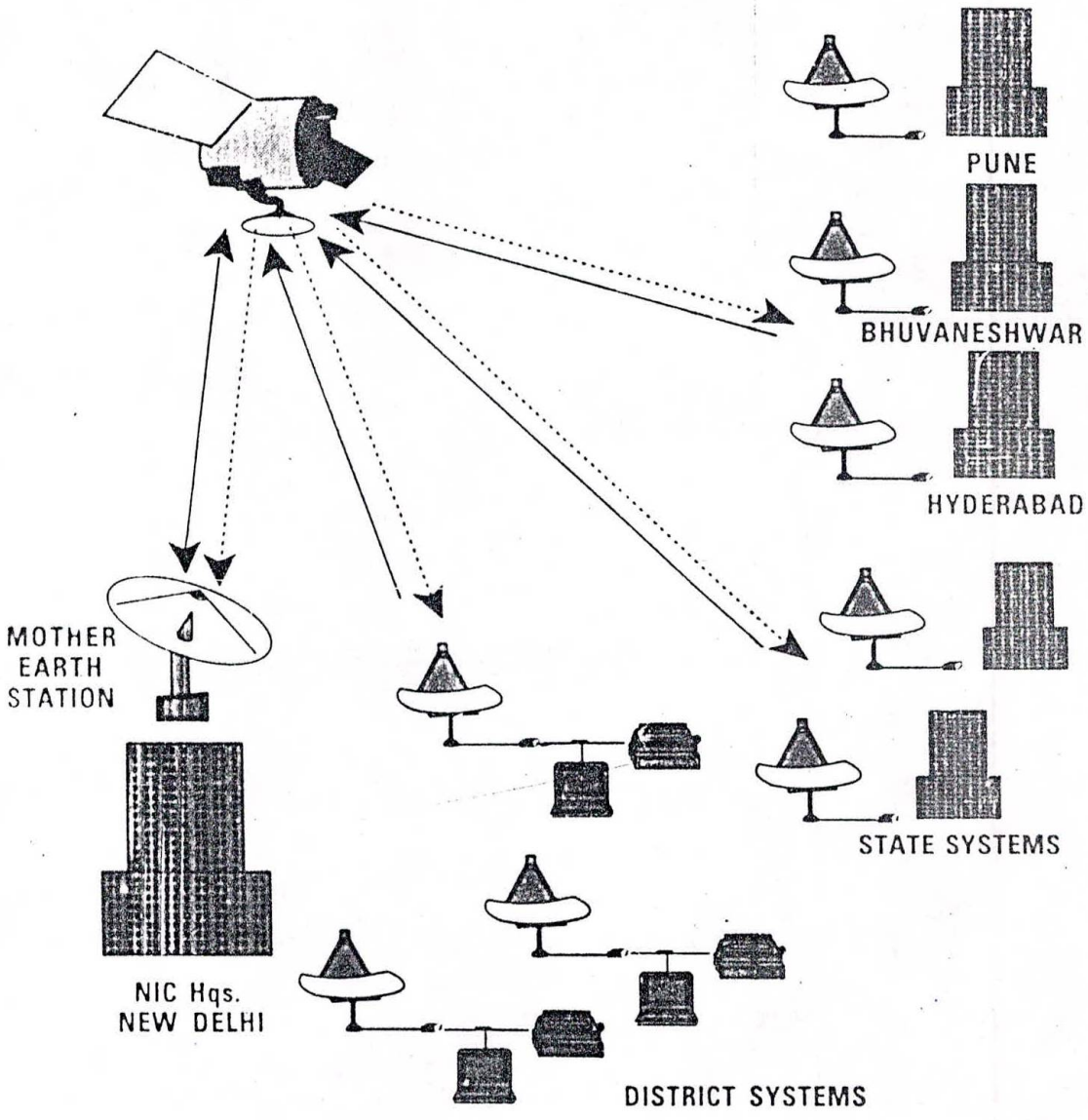


Figure 1

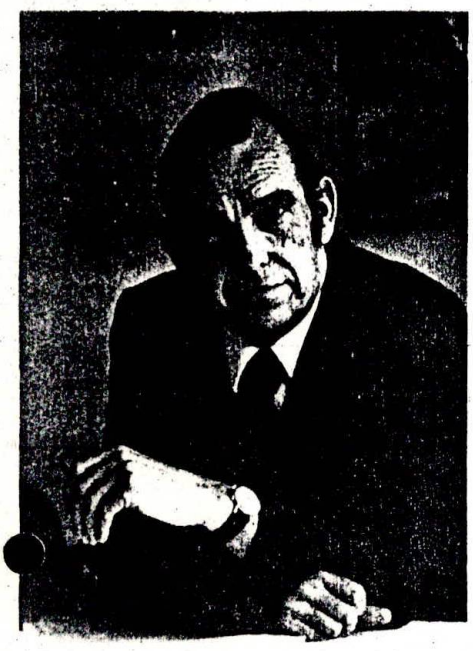


INSAT
1B
1.5 sec delay
between
districts.

NICNET

A Nationwide Satellite Based Computer-Communication Network

Foreword by Dr. H. Mahler, Director General World Health Organization



There are those who believe that hospitals and primary health care are incompatible subjects, arguing that every dollar spent on a hospital is one less for primary health care. This school of thought would have us enhance the position of primary health care at the direct expense of hospitals. There are still others who see hospitals as the repository of the best that medical care has to offer and, as such, see it as a waste of time and energy for hospitals to deal with other facets of health care. They would keep primary health care separate, and not allow it to interfere with the life of a hospital.

This conference was convened because we felt the time was ripe to dispel the above notions. Hospitals cannot be isolated from primary health care – which is the key to achieving health for all by the year 2000. They are too powerful to be ignored; they have knowledge and a functional capacity that must be tapped by primary health care. They shape the public and professional image of health – an image which must be radically altered if the "health for all" movement is to obtain universal support. In my opening address I indicated that hospitals could become one of the main flag-bearers of this movement, but only if they change their ways.

I believe the outcome of this conference represents a major step forward. The role of hospitals in support of primary health care has been carefully explored, and the conference conclusions provide a direction in which to aim; a basis for guiding the changes required. I would draw particular attention to the important role given to hospitals as well as medical faculties and other educational institutions in adapting their curricula to the needs and challenge of primary health care. Unless there is a re-orientation of the education of professionals, especially physicians, the conclusions of this conference cannot be realised. This was brought out again and again in the discussions; it is not new, but in the light of growing understanding of the concepts of primary health care and of its central place in national health development, it takes on particular importance today.

In this connection, I am especially gratified to see the unequivocal support given by His Highness the Aga Khan to the outcome of this conference. With his support, a major ally for the "health for all" movement has been gained. In shaping his health services and educational institutions along the lines described, he will no doubt provide an important example for others to follow.

Action speaks louder than words. The conference has set the stage for action with the production of the present report. You are encouraged to use this report, to make it available to others and to participate in whatever way you can in the implementation of its conclusions.

THE ROLE OF HOSPITALS IN PRIMARY HEALTH CARE

Report of a conference sponsored by
the Aga Khan Foundation and the World Health Organisation
21–26 November 1981, Karachi, Pakistan

Major Conclusions of the Conference

1. Hospitals have an important role in fostering and encouraging the growth of primary health care — a role which in some areas of the world they are already pursuing. Little progress, however, can be achieved without a strong and unequivocal statement from political leaders at all levels of their commitment to primary health care. This commitment must be unambiguous, leaving the people and administrator in no doubt that the political leadership of the country, right up to and including the very highest level, is committed to primary health care — the key to achieving health for all by the year 2000.

2. The role of hospitals in primary health care should be guided by co-ordinating machinery which should be established by national governments. This structure should be established at each level of administration (national, regional, local) and includes a committee or council or board where representatives from each part of the health system (hospitals, health centres and primary care workers) can sit with representatives of the community to deal with questions concerning policies, management and resources.

3. Hospitals should be associated with a well defined catchment area within a regionalised framework.

4. Hospitals should have a department of community health to mobilise interest, expertise and direct interactions on one side with the clinical services and on the other with the communities in its catchment area. The department should have a multi-disciplinary composition and foster and encourage teamwork. The responsibilities of these departments of community health should include:—

   (i) support and encouragement to primary health care programmes in the hospital's catchment area;

   (ii) inservice training for reorientating hospital health workers in order to change the 'hospital outlook' to a 'health perspective';

   (iii) cooperate with the educators and supervisors of primary health care workers in the field to improve training management and administration;

   (iv) collaborate with the community in seeking relevant information on health problems and appropriate solutions;

   (v) ensure that the hospital meets its referral and logistic support responsibilities;

   (vi) develop effective ways in which the community can support and assist in improving hospital services;

   (vii) work with other sectors, non-governmental organisations and community associates including women's groups active in the catchment area;

   (viii) identify gaps in the delivery of primary health care services and introduce appropriate innovations;

   (ix) stimulate and conduct relevant health services research which focuses on practical issues to achieve a progressive improvement of services.

5. Health resources will have to be increased to improve health systems, including a dramatic increase in primary health care services. Resources for primary health care should be raised by:—

   (i) increasing the proportion of the overall health budget that is allocated to primary health care;

   (ii) using all health resources more rationally;

   (iii) generating new sources of funds from international organisations and community contributions;

   (iv) reorienting hospitals through departments for community health so that an increasing proportion of the hospital budget is spent on supporting primary health care;

   (v) improving the balance of health personnel so that there are more types and numbers of workers available at the local and intermediate levels of the health system.

6. Medical faculties, as well as other educational institutions for health workers, should adapt their curricula to focus on community health needs and, where practical, develop and use training material in the local language; they have to introduce early and continuous contact with primary health care practice; they have to ensure doctors and health care personnel are more community oriented; they have to participate regularly in primary health care research, teaching and service, not ignoring management and administration.

7. The National Hospital Associations and other relevant bodies should be encouraged to collect, publicise and circulate widely, local, nationally and internationally, noteworthy innovations and developments of the role of the hospital in primary health care.

8. The World Health Organisation and other international, national, professional and non-professional bodies, should maintain a continuing dialogue on the role of hospitals in primary health care in order to ensure that the potential positive role of hospitals is understood and that past antagonisms are converted to collaboration.

9. The Aga Khan Foundation is in a unique situation and should take a leadership role in illustrating how the programme of a teaching hospital and medical college can be developed in full support of primary health care.

10. The report of this conference should be widely distributed to all member states of the World Health Organisation, to educational institutions involved in health care and to, relevant non-governmental and funding agencies, encouraging them to act upon the conclusions contained therein.

Background paper on The Role of Hospitals in Primary Health Care, prepared by the World Health Organization.

Introduction

This paper is concerned with some selected, critical issues in the future development of the hospital as part of a national health care system and within the primary health care (PHC) approach to health. No attempt will be made to be comprehensive with regard to all types of hospitals and all aspects of PHC, or their actual and potential relationships. Neither is this paper explicitly concerned with formal health service planning and the more balanced use of resources between different levels of health services. However, many of the issues which will be discussed have a significance which carries beyond that of the tertiary care hospital alone, as well as being important to the better utilization of scarce resources. The discussion will be organized mainly around the four themes of the Conference, as follows:

1. The role of hospitals in promoting and using community participation in the development of PHC;
2. the role of hospitals in providing direct support to primary health activities (continuous education, supervision, referral, supply, etc);
3. the role of hospitals in orienting physicians and other health professionals towards primary health care; and
4. the role of hospitals in conducting and supporting health services research.

The basic principles of primary health care as a set of specific activities and PHC as an approach to health development have been widely discussed and by now are well know to most health workers, as well as to many others. The distinction between good (or bad) health and good (or bad) health services is an important one and fundamental to the appropriate conception and understanding of PHC. Properly organized health care services have the potential for making an important contribution to improved individual and collective health status, but it will be only on contribution of many. Other contributions will come from areas and developments not commonly thought of as part of the health sector; for example, agriculture, education, transport, employment creation, greater economic and social equity, etc. (the intersectoral aspects of PHC). Still other contributions will be made by organized communities as well as by individuals and their families to their own health care needs. This will come in the form both of directly health-related activities and greater participation in the overall life of the wider national community.

The International Conference on Primary Health Care that was held in the Soviet Union, at Alma-Ata, in 1978 issued a Declaration which stated that primary health care is the key to attaining health for all by the year 2000. The Alma-Ata Conference described the health care aspects of PHC as essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development, in the spirit of self-reliance and self-determination.

Primary health care reflects and evolves from the economic conditions and socio-cultural and political characteristics of the country and its communities. It addresses the main health problems in the community, at the first level of contact providing promotive, preventive, curative, and rehabilitative services accordingly. At this level of first contact in the community it includes at least education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs.

From this it can be seen that the major thrust of PHC is toward those who in the past have had least access to adequate nutrition, clean water, health care, etc. It is unfortunate that this 'thrust toward the periphery' has been taken by some as implying some sort of opposition to the very existence of hospitals and other mainly urban-based institutions. This picture is not correct, as the PHC approach involves the entire health system including hospitals, from the university teaching hospital to 'front-line' hospitals. Although it is true that in many, if not most countries sophisticated hospital development has proceeded relatively more rapidly than a proper overall balance in the health care system would dictate, the true spirit of primary health care as adopted at Alma-Ata sees hospitals as a *tremendous potential resource for support to PHC*. Only with the full support of hospitals and their staffs, with their commitment to high-quality care, can PHC avoid the trap of becoming 'second class medicine for second class citizens' Correspondingly, only by becoming part of a national health care system based upon the primary health care approach to health can hospitals regain their full relevance to society as a whole, and not

just to a relatively small minority of the better-off. In fact, there is not as much choice in all of this as may be imagined. The cost explosion in hospital care is such as to make impossible their present pattern of development even wealthy countries, much less poor ones. These issues will be discussed in greater detail within the context of the four themes of the Conference.

Because of the special position enjoyed by the leaders of medicine in most societies, it may be that the most important contribution to be made by them in the struggle to achieve 'health for all by the year 2000' is a socio-political one. This responsibility falls particularly heavily upon those medical leaders actively engaged in teaching, research and the utilization of the highest levels of medical technology; of course, this combination of activities is to be found most particularly, but not only, in those hospitals most actively engaged in teaching medical students. There is an urgent need for these and other leading health institutions to be permeated with the challenging philosophy of primary health care. However, care must be taken by those who do take up this difficult challenge because it will not decrease their scientific responsibilities, as is feared by some, but rather will increase them, often in unexpected ways.

The Past Development of the Hospital

In general, the hospital has developed as an enclosed building associated largely with curative activities performed for those individuals who find their way to the institution. In particular during the last half century or so, their development has not come about as a direct response to the major health needs and demands of the mass of the population in any particular country, or of the possibility of acting upon those needs and demands. The more sophisticated the hospital, the greater the cost implications and the wider the gap between their special capacities and the population's overall health needs and demands. This gap came to encompass the areas of teaching and research as well. Survey data from many countries show the limited catchment areas of so-called national referral centres. In Third World countries it is usual for 90 per cent of all in-patients in such institutions to be drawn from the city in which it is located. What are some of the major factors explaining the development of hospitals in the way described?

To begin with, there is the restricted ability of the poor to fulfil their demands for needed health care. They are not in a position, economically or politically, to enjoy access to much health care of any kind - except possibly of the traditional type - and certainly not that which is based upon a costly high technology. Much formal health care planning is based upon the dual assumptions that all the population is to be covered with particular services (e.g. number of doctors per 1000 of population) and that this coverage must be based upon the most sophisticated of available technologies, even in the absence of proven relevance and positive impact. These assumptions ignore the economic and political incapacity of the poor to purchase much of their own high cost care, and have too little political influence to guarantee that governments make available to them sufficient health care resources so as to cover their basic health needs. It is here that community involvement is most important: the ability of the organized wider public to influence decision – making at all levels in favour of policies directed toward the achievement of 'health for all'.

As has been stated, the modern hospital has not developed in response to the major health needs and demands of the mass of the population, and the possibility of positively acting upon those needs and demands. One basic reason, as discussed, has been the weakness of the poor: another has been the external influences brought to bear upon the hospital; external, that is, to mass health needs and demands. The major such external factor has been technology itself. Undoubtedly, many of the technological innovations of recent years have been positive in terms of the number of people who have benefitted from them. It is equally certain that many of these technological innovations have had only marginally beneficial effects, while others have had no effect at all, and some have had positively negative ones.

The economic environment of current health care systems provides some incentives and few discouragements to the adoption of the latest technology. Beginning with the subsidization of research and development, governments and industry provide relatively unconstrained conditions for 'buyers' and 'users' of health technologies. This situation is further perpetuated by various pressures resulting, for instance, from marketing campaigns, high public expectations concerning specialized medical care, the prevailing professional image of quality medical care (in terms of medical 'centres of excellence'), and even competitive aspirations for prestige. All of these contribute to relative, or absolute, overinvestment in costly medical care facilities which are often misused, especially by the relatively privileged few having easy access to them.

The modern medical school and its teaching hospital are the product of a symbiotic relationship with industry which has produced the scientific and technological base on which the teaching hospital now rests. This particular symbiotic relationship substitutes for one between the hospital and the whole population which would be based upon mass health needs and demands. The existing relationship between the hospital and the producers of high technology extends beyond the immediate uses of all possible available technologies, to the training of future medical practitioners, and to research efforts as well. Medical students are trained to pursue a 'technological imperative', to use any available technique of intervention — sometimes even in the absence of clearly proven effectiveness, regardless of cost, if there is any possibility at all of medical gain no matter how limited.

The problems connected with application of the 'technological imperative' are greatly exaggerated in conditions of sharp resource constraints. Thus, the external (to mass health needs and demands) technological factor is compounded in Third World countries by another factor external to them: that the latest technological innovations are developed by, and in the first place for use in the industrialized countries. The application of the technological imperative in countries spending annually as much as US $1,000 per capita for health care creates sufficient havoc there, but when applied in countries spending one-tenth or one-hundredth or even one-thousandth of that amount for health care, the results are catastrophic!

The issues discussed above — the limited influence of the poor, and the effects of technology — have contributed to the development of the hospital as an 'enclosed place' catering almost exclusively to the needs only of those relatively limited few having access to it. The hospitals, and especially the most select amongst them — the university linked teaching institutions — face inwards rather than outwards. Consequently, they offer only very limited support to other less sophisticated health care institutions and usually no direct support at all to communities and families, except as sick individuals who may arrive at the hospital.

The training activities of those hospitals most actively engaged in teaching are largely determined by the factors already discussed. Teaching is based upon the 'technological imperative' and produces graduates having both the inclination and capacity to practise medicine mainly in the hospital setting. There exists, in fact, a critical disjunction between the needs of an appropriate health services system and the medical training institutions. Too few of the kinds of

personnel most needed are trained, while relatively or absolutely too many of others come into the medical market-place. It is now the case that many countries, developed and developing, are facing a gross oversupply of medical graduates, at least relative to effective economic demand.

Hospitals, in particular teaching institutions, traditionally have played an important role in conducting and supporting research. However, most of the research which is undertaken is of a bio-medical or clinical nature, often quite narrow in its potential applicability. The possibility of having sick patients serve as a source of research data has facilitated the conduct of such research within the hospital setting. This factor, coupled with the availability of high technology-based instruments, and the desire to do research at the internationally determined (industrialized countries, actually) frontiers of knowledge have all contributed to a research pattern which is not only not relevant to mass health needs, but in the case of most Third World countries limited in output as well as often of poor quality. One of the important bases for this poor quality work is located precisely in the effort to reproduce the research being undertaken in the industrialized countries.

Reorientation of the Hospital Towards the PHC Approach to Health

The discussion here will focus upon the potential for future changes, in the context of the four interrelated themes with which this Conference is concerned; namely, the hospital's role in promoting community participation, providing direct support to PHC activities, orienting health professionals to PHC, and conducting and supporting health services research. The discussion is based upon the analysis, offered above, of the development of existing hospital systems, and teaching institutions in particular. It also rests upon the assumption, stated earlier, that "only by becoming part of a national health care system based upon the primary health care approach to health can hospitals regain their full relevance to society as a whole..."

1. The Role of Hospitals in Promoting and Using Community Participation in the Development of PHC

While there is no single model for participation — because of political, economic and other country differences — the fullest possible level of authentic community participation should be encouraged in health policy and decision-making as well as in community and family self-help. Indeed, the concern that participation be real and accompanied by true responsibility and authority leads to consideration of the need for the community to exercise appropriate social control of the health services. Where this degree of community participation has been achieved, health personnel become better motivated and more able and effective in their joint pursuit, with the community, of PHC goals. In such situations a rural community, for example, when involved in decision-making may give priority to such health-related concerns as clean water for drinking and water for crop irrigation rather than to personal health services. However, it is usual that the community also demands some form of immediate attention for disease and injury. Often broader health-related goals cannot be pursued without assuring the personal health services element and its appropriate back-up and referral, up to and including the tertiary care institution.

It should be noted that in the case of national institutions such as tertiary care hospitals, and especially those engaged in teaching, the relevant community which needs to be involved in participation is the wider national one and not just the population living in the immediate neighbourhood of the hospital, although such a local population might be drawn into some relevant participatory activities.

Training and orientation of health workers to support and appreciate full community participation is essential in most countries. This should not be limited to the clear connexions with clinical concerns, such as self and family and community help with rehabilitation, though these are important especially as entry points for more traditionally trained personnel. It is also important that health workers learn about hazards in the workplaces of their countries and how workers of all kinds are learning and organizing or would like to learn and organize to avoid such hazards. In a similar way, they should learn what women's groups are concerned about when it comes, for example, to overly active medical intervention in the birth process. Learning about community organization and change will also help health workers to be better able to foster broad health promotive and preventive efforts. Such learning cannot be based on theory alone, it must take place as apart of direct exposure to the real problems of the community.

The problem of maintaining active community involvement beyond the first stage of enthusiasm is a significant one. If the system rests on community decision-making and control the problem may not be so large a one, as the real action will be at this level. If so, then it is only when participation is not accompanied by true (co-) responsibility that communities lose interest. This is one of several areas of research that should be pursued in relation to this sphere of concern.

2. The Role of Hospitals in Providing Direct Support to PHC Activities (continuous education, supervision, referral supply, etc)

Increasingly, hospitals are seen as a part, usually the major part, of an overall health care system. Acceptance of the PHC approach implies not only the full integration of the hospital with the overall health care system, but the reorganization of the entire health system so as to provide support for primary health care activities. This means that the health system as a whole will have to accept the goal of making essential health care available to all. The more specialized needs of this care will influence the type of service that has to be provided by the central levels of the health system. The result should be stronger links between the more centrally placed health institutions and the people and communities they are intended to serve, usually through the medium of health care facilities and programmes engaged in PHC activities at the less specialized levels of the health care system.

Thus, from its position of dominance, the hospital is potentially the strongest ally within the health care system for the promotion of total population coverage with essential health care, and the extension of this minimum goal to that of 'health for all by the year 2000'. The changes required to achieve this desired end are far-reaching in nature, but necessary if national health development is to evolve in a socially relevant direction. The continued isolation of hospitals from the health needs that face most people, especially the poorest, represents an outstanding past failure of the health system to rationalize its structure and the use of available resources.

Some health systems have moved in the desired direction of creating a more comprehensive health care system for the community, within which the role of the hospital is linked fully with all other aspects of health care including that of making essential care available to all. In other situations, individual hospitals have taken the steps necessary to shape their activities to meet the wider needs of the community. These experiences are important. They provide evidence that the prevailing model of hospital functioning need not to be taken as a universal norm. Alternative forms are available from which valuable knowledge can be gained, knowledge which can help guide future developments.

Examples of hospitals functioning successfully as parts of integrated health service and manpower development systems can be found in a number of countries. In one instance the Dean of the medical school is not only the Director of the central hospital, but the Director of the regional health service as well. The staff of the medical school is not only responsible for servicing the hospital, but spend at least one day per week as well in associated health centres; the reverse process, of health centre staff taking part in the service and teaching activities of the hospital, also takes place. Another example of such integration is to be found in a number of countries in which health services for urban and semi-urban regions have been taken over by the training institutions responsible for the education of physicians, nurses and other categories of health personnel.

Perhaps the most important specific role of hospitals in primary health care is the day-to-day support they can provide to the various health activities being undertaken within communities, at other health units and in cooperation with health promoting activities of other sectors. It is in this relationship of providing active support that hospitals can most immediately influence the quantity and quality of essential health care available to the population.

The proper functioning of a hospital system or any of its components is not only dependent upon the adequacy of its resources. Of more importance is the relationship of the hospital to the prevailing patterns of need for medical and health care. A well endowed hospital, not effectively and fully linked in a two-way system of referral and support to this need will not be able to use its resources to the fullest effect. In such a situation, it is not uncommon to find highly qualified staff attending minor illnesses and high-cost beds and technology being inappropriately utilized at the same time as outpatient clinics are grossly overcrowded. To avoid this, it is necessary to have a properly functioning system of primary health care closely supported by all levels of the overall health care system.

One way of entering the reorientation process discussed above would be by reviewing the scope and context of a hospital system's activities (or those of a single hospital) and relating them to the support of particular PHC activities in specific areas and in defined population groups. The hospitals, and especially the most prestigious ones, could use their enormous human and technical resources to provide the public with properly validated information on health problems and appropriate methods and technology for solving them. The prestige of the leading medical centres could serve to counteract the false health information that is being so widely propagated, whether through ignorance or for ulterior motives.

3. The Role of Hospitals in Orienting Physicians and Other Health Professionals Towards PHC

Training is intimately linked with service and research. Students absorb views and habits which will affect their behaviour over a life-time of work. Too often, however, teachers consider teaching as more of a distracting nuisance than anything else. Frequently, they would prefer to get on with a piece of research, or high technology-based clinical work which, incidentally, might be highly rewarding not only in some scientific sense, but in a more immediate way as well. Even when research or private practice does not interfere with teaching, pressing service demands frequently overwhelm the best of intentions on the part of a teacher of clinical medicine.

Despite these many difficulties, the proper training and retraining of health workers in the PHC approach is both a powerful motivating force and an essential activity for the accomplishment of PHC. The relative distance from PHC of an exclusively clinically oriented training, usually acquired in hospitals, has already been indicated. The point has also been made that because hospitals constitute a major health resource in most countries, they need to be turned into centres of active health promotion and prevention with strong community guidance so that medical training itself can be reoriented to be based on PHC. All hospitals have at least some role to play as teaching institutions.

Training must be multidisciplinary and teach teamwork and appreciation of community participation rather than exclusive medical control. Teamwork in many situations will necessarily extend to work with nurses, nurse practitioners, and other types of health personnel. Most of such training should be on the job, at the local level so that the student can see the place of more specialized and general knowledge in relation to local needs and tasks. Retraining might be used not only to reorient personnel towards PHC, but to expand the capabilities of PHC workers, perhaps into broader development roles. There is a clear need for continuing education to reinforce existing skills, and its inclusion as part of the supervision process. All health workers need to be educators and messengers of health, and their respective training programmes should incorporate these aspects.

There is a great need for new curriculum alternatives and appropriate teaching materials. The organization and management of large hospitals has also to be reconsidered so as to reflect a wider community based orientation. One major issue to be resolved is the proper relationship between a university-linked medical school making use of a Ministry of Health hospital for its clinical teaching, and the Ministry. In some countries, this issue has been approached by making the training institutions responsible for the delivery of both preventive and curative health services within a specific region of the country. In other situations, Ministries of Health carry direct responsibilities both for the training of health professionals and their later employment. Obviously, the basis for successful change goes beyond such organizational means only, but these may be useful entry points for other required changes in these areas. Whether such solutions might be widely applicable remains to be seen.

4. The Role of Hospitals in Conducting and Supporting Health Services Research

Health services research is concerned with problems and questions which affect the functioning of the health system as a whole. Although it may include certain bio-medical aspects of the treatment of disease, it mainly addresses questions which if answered could provide better insight into how best to improve the overall effectiveness and efficiency of the various parts making up the health system including, of course, the hospital itself. In the hospital context, health services research should include both activities which take place within the hospital, as well as those which take place in the communities in which the hospital is directly involved. In fulfilling the latter role, hospitals can provide valuable insight into the design and development of local health systems based upon the primary health care approach. For example, how to design maternity systems which can seek out those most needing hospital-based delivery while making it possible for other women to be delivered safely at a community-based maternity unit. Other examples of much needed research which could be stimulated — especially, but not only — from a hospital engaged in teaching would be: the relationships between primary health care activities at the periphery and the wider health care system; the relationships between the health care system and other sectors affecting health; the relationships between the PHC approach and specific disease control programmes; and, the relationships between community participation and the development of PHC activities. Research which actively involves health workers as well as members of the community, i.e. participatory research, is often required for the successful carrying out of much of the research under discussion.

The form of participation is often the most effective way of orienting health workers towards PHC.

Within the hospital setting in particular, a valuable service could be performed by reassessing many of the health technologies currently in use. Clinicians have been raised in a technological environment which makes it difficult for them to discern between that which has passed through a rigorous test of scientific validation and that which has gained acceptance only through long-continued practice or perhaps just spectacular advertising claims. The list of questions relating to efficacious and cost-efficient clinical practice which need to be answered is long. Which surgical interventions are really beneficial? Which diagnostic radiology is essential? Which laboratory tests provide essential information, and which only marginally useful information?

Which radiotherapy in fact prolongs life? Which drugs are effective and harmless? Which electronic equipment for cardiac patients is really life saving? Enormous monetary savings could be made, not to speak of the alleviation of human suffering if simple tests could be discovered to predict, for example, which patients would be really likely to benefit from intensive coronary care. Similarly, an enormous increase in efficiency could be brought about by rationalizing the use of expensive radiological and laboratory equipment.

To perform these functions would involve not only biomedical and bio-engineering research, but also epidemiological, economic, social, behavioural and health systems research. A combination of these facets of health research is required both to identify and to generate health technology that is scientifically sound and socially and economically acceptable, as well as to discover the most efficient and effective ways of applying this technology, whether in the overall health care system or any of its constituent parts including, of course, the hospital.

Beyond the health system, the leading medical centres should be promoting research into the wider socio-economic dimensions of health. Research is required to discover ways of making it possible for people to develop more healthy lifestyles, for influencing positively decisions affecting the physical environment in which we live, and so on.

Most hospitals in a position to conduct or support research are also in a position to promote it through problem-oriented training programmes which include a research component. A first step in the promotion of health services research could be its inclusion in the various education and training programmes in which the hospital is engaged. It is clear that the PHC approach requires more, not less research and that it be relevant to the most pressing mass health problems.

Concluding remarks

Some suggestions have already been made as to how hospitals — individual institutions or the entire system — might enter into the process of reorienting themselves towards primary health care activities and the PHC approach. In connexion with this, the following are some questions which can be asked with regard to the four specific themes of this Conference.

Community Participation

1. What are appropriate forms of community participation in the health sector in general and in hospitals in particular?
2. How can hospitals play a role in stimulating effective forms of participation?
3. What are the particular roles of non-governmental, private, cooperative and other types of communities at the different levels of the health sector (e.g. local and national government)?
4. How can health workers be encouraged to accept and stimulate appropriate forms of community participation?
5. How can appropriate forms of participation in the health sector be sustained in different types and levels of communities?

Direct Support to PHC Activities

1. How can hospitals promote broader-based health policies at the national level, including provision to the public and decision-makers of appropriate health and health service related information?
2. How can hospitals become more responsive to, and knowledgeable about the health needs of a total population living in a well-defined area?
3. How can a more efficient pattern of health care activities be developed withing the specific areas being supported by hospitals?
4. How can hospitals positively influence developments in other parts of the health system, including the training of auxiliary health personnel, the activities of peripheral health units, the provision of logistic support, the improvement of two way referral systems, supervisory and monitoring activities, etc?
5. Keeping in mind the social goal of health for all by the year 2000, how will hospitals evolve in the coming decades in response to this goal, with particular reference to basic functions, organizational set up and staffing?
6. What should be the interaction between governments and hospitals to bring about necessary changes?

Orienting Physicians and Other Health Professionals Towards PHC

1. How can hospitals make the training of health professionals more relevant to the needs of the population, the new role of the hospital, and the role of professionals?
2. How can hospitals promote favourable changes in attitude and behaviour on the part of health workers toward teamwork and development of new roles?
3. How are these changes likely to directly influence the functioning of hospitals?
4. How can these changes be linked to wider health service manpower development efforts in the context of national health care structures and institutions?

Conducting and Supporting Health Services Research

1. Which outstanding problems in the health system could most benefit from research supported by hospitals?
2. How can hospitals be actively involved in health services research; and especially at the lower levels of the system?
3. How can health services research be included in training programmes conducted by hospitals?
4. How can participatory research be organized and carried out?
5. What is the hospital's role in the evaluation of cost effective health technologies?

It has become almost trite to recognize the existence in today's world of an interrelated set of problems which together constitute a global crisis. In one way or another, virtually everyone now alive is feeling the effects of that crisis. Of course, the poor and weak — and especially those in the Third World — are feeling them most painfully. As a

consequence, and despite their weak position, the poor are raising ever more powerful demands for more just and equitable social and economic relations, both between and within countries, communities and families. History seems to teach that although the road to greater justice and equity may be long, it does in fact have an end.

The need to respond to the just demands of the weak is no less great in the area of health than elsewhere. In fact, it is in the field of health that some of the most important demands are being raised and where some of the most important progress could be made. A challenge has been offered to the leaders of medical practice, teaching and research to use their powerful political and technical strengths in support of the great struggle to achieve 'health for all by the year 2000'. This medical leadership, if imbued with the best values of medicine as they have come down through the centuries, could penetrate the community — and especially the political leadership of the national community — with those values and the scientific strengths that go with them. This could represent a massive contribution to both justice and good health which may, in fact, in their wider social and community senses, be one and the same thing.

For your information and perusal

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WORLD HEALTH ORGANIZATION

ORGANISATION MONDIALE DE LA SANTÉ

STATEMENT BY DR H. MAHLER
DIRECTOR-GENERAL, WORLD HEALTH ORGANIZATION
for the
INTER-REGIONAL MEETING ON
STRENGTHENING DISTRICT HEALTH SYSTEMS

Harare, Zimbabwe, 3 August 1987

Excellencies, ladies and gentlemen,

1. I should like in the first place to thank the Government of Zimbabwe for hosting this important inter-regional meeting which is the first of its kind devoted almost exclusively to issues of health development in districts.

2. It is an honour for me to welcome all of you on behalf of the co-sponsors (Christian Medical Commission, Danida, UNDP, UNICEF and USAID). It is very encouraging to note the large number of participants, the majority of you representing your countries but, in addition, many representing international and bilateral technical assistance agencies as well as nongovernmental organizations and training and research institutions. This serves to underline the fact that the issue of strengthening district health systems is a matter which all of us must support vigorously.

3. In every liberation struggle there comes a time to re-examine tactics, redefine targets and take stock of the ability of the troops to achieve the final victory.

4. For experience shows, Mr Chairman, that the fight for freedom is long drawn out and must be fought on many fronts.

5. Even where commitment to achieving the final objective is total, and where the moral values underlying the struggle cannot be challenged, except by cynics, the very nature of the struggle itself, the hard, grinding slog, year after year, and the difficulty to demonstrate that the war is being won on every front despite the unmistakable pointers of periodic gains - all of these whittle away at the determination to win.

6. It is my judgement that the struggle in which all of us here today are active combatants - the struggle to liberate mankind from the burden of unnecessary ill health - has reached that inevitable phase when we must remobilize for the final push towards Health for All.

7. It is not by accident that I make these remarks here in Zimbabwe. I make them precisely because we are in Zimbabwe and because we can all be inspired by the example of our hosts whose experience has demonstrated to the world that the long drawn out fight for liberation can be won in the face of the established status quo and a constant undermining and misrepresentation of the moral basis for the struggle.

Ten years since Alma-Ata

8. During the last fifty years or so, individual countries and WHO have become increasingly aware of the deficiencies of the health strategies they have been employing. These have sometimes been based on erroneous concepts. One concept is that associated with the idea of 'centres of excellence', whose effects - contrary to the rhetoric - manifestly fail to 'trickle down' to the rest of the system. Another concept adopted in the 50s and early 60s is the tackling of single communicable diseases by means of time-limited 'vertical campaigns', that were inordinately expensive and failed to tackle the wide range of health needs felt by the people. Even the technocratic strategy of basic health services of the late 60s and early 70s, proved to be an insufficient response

to the problem. Out of these dissatisfactions with the past was born the concept of primary health care, adopted by the World Health Assembly after the International Conference on Primary Health Care at Alma-Ata in 1978, as the approach through which the world's major health problems can best be tackled in order to achieve the goal of Health for All by the Year 2000.

9. So what shape are we in after ten years of struggle? Are we fighting fit, ready for the final push, towards achieving our goal by AD 2000?

10. The Health for All concept has definitely spread rapidly to all countries as a health conscience movement far beyond the expectations of those that were at the Alma-Ata Conference.

11. BUT the worsening economic situation in recent years in most developing countries, and the adjustment policies that have been instituted by many governments have adversely affected health programmes to the extent that in some situations the challenge appears to be slowing the deterioration.

12. Nevertheless, impressive progress has been made in improving health status as measured by various indices such as infant mortality rate in practically all countries, BUT (why must there always be a BUT?) some countries, and groups in need within all countries, still lag far behind the acceptable.

13. Yes, political commitment in words to improving people's health is high BUT the allocation of resources still remains heavily in favour of urban, hospital-based medical care.

14. Yes, coverage with immunization, drinking water, maternal and child health care is steadily increasing BUT in a number of countries hunger and malnutrition are on the increase because of inequitable food availability, rapid population growth and adjustment policies which make no provision for protecting the poor and vulnerable.

15. Yes, literacy rates are improving BUT the literacy gap between the sexes is widening at the very time when awareness of the critical importance to health of adult female literacy is at an all time high.

16. Yes, progress has been made BUT some of the fundamental principles of primary health care still remain mere rhetoric in too many countries. Take one of the pillars of primary health care, namely that of intersectoral action. Here, the synergistic effect of better nutrition, better sanitation, better education, better housing, as well as better essential health care, is all too often forgotten in favour of a concentration on reducing mortality from a few specific diseases. Take another pillar of primary health care, namely community involvement. Here, quite insufficient progress has been made in enabling people to take their health into their own hands. In all countries the nature of the prevalent health problems is such that many essential activities can be undertaken by ordinary people in their own homes; but in spite of the over-whelming evidence of the need for health workers to inform people about what is important for their health and impart to them skills they are capable of applying themselves, conventional over-medicalisation remains an obstacle to health in many places. Indeed, in most countries community participation means the execution by volunteers of tasks planned, defined and directed by health workers and, at best, sanctioned by the local administration.

<u>District health systems</u>

17. Mr Chairman, in my opening sentence I referred to the need for a re-examination of tactics, of the methods and procedures through which health for all strategies are being implemented.

18. The recent evaluation of their national strategies by some 90 per cent of WHO's Member States, in addition to the facts I have just quoted, brought to light with dramatic and sobering clarity one particular fact about our tactics which was already known to some extent but which had failed to attract the attention it deserved. It is that the greatest obstacle to achieving health for all is weakness in the planning, organization and management of health systems, particularly at the district level.

19. Although the failure to fill the organizational gap at the intermediate level of national health systems has much more serious consequences in the poorest, least developed countries, its negative impact can also be felt in the developed countries where, all too often, health systems remain geared to reacting to patients when they turn up for medical repair care rather than taking active measures to keep people healthy so that they turn up as patients less often.

20. I make that point to strongly emphasize that the problem we are required to face up to, everywhere, is the need to set in place health systems based on primary health care.

21. That said, it is those who can afford to suffer least who continue to suffer most because of the inability to mobilize and coordinate, on a sustained basis, all the potential health-enhacing resources which every nation has at its disposal. I refer to all the institutions and individuals providing health care in a district, whether governmental, social security, non-governmental, private, or traditional, as well as ordinary people's self-care in their communities and the health-related activities of other socio-economic sectors.

22. It is this interacting complex of services and facilities from village health post to hospital and of people from village leader to district education officer, from community health worker to public health nurse, etc. which constitutes the district health system. But the challenge is how to turn this district health system into one which is truly based on primary health care so that it can function to full effect. Some tough decisions will need to be taken, some key problems must be tackled because they simply will not go away.

23. In this respect the first fact to be made clear is that the creation of strong district health systems based on primary health care cannot and must not be left to the districts alone. The effectiveness of district health systems will always depend on the extent of support from the national level.

24. Most importantly this includes a fair and sustained allocation of resources. Thus ensuring equity in health and health care between districts must be a major responsibility of the national level. This clearly implies the need to tackle, head on, the issue of resource allocation. It is a sad but unchallengeable fact that most countries have made deplorably little headway in this regard. As always there are a few exceptions, one of which is Zimbabwe, which has successfully redistributed a considerable proportion of the funds previously allocated unfairly to two hospitals.

25. The second challenge for the national level is decentralization. Central to this issue is the delegation of decision-making with respect to the use of the resources that districts have at their disposal. This is right at the heart of political debate in many countries. Let us not pretend that district health systems will make an impact on people's ability to lead economically and socially productive lives if they only retain the role of post offices through which national authorities despatch directives to be implemented normatively on a nation-wide basis, irrespective of the epidemiological and operational variations which exist from district to district.

26. I submit that if we all take our collective goal of Health for All as seriously as we say we do, a most critical tactic which countries would do well to consider is to focus their limited resources locally on local problems through strong district health systems based on primary health care.

Mobilization of local resources

27. However, a change of tactic towards support for targetted local action can only bring good results if all resources, funds, manpower, supplies and equipment are mobilized and rationalized. This is a particularly important caveat at this time when national health systems are chronically underfinanced and subject to gross inefficiencies in resource use.

28. In many developing countries the ratio of health expenditure to gross national product is not even constant, but declining, whilst the ravages of inflation and population growth further erode the real expenditure on health per capita. In such a critical situation the need to utilize every cent effectively becomes a critical necessity BUT, (there's that word again) precisely because of weak organization and lethargic management in districts we see great wastage of available resources and a failure to mobilize and utilize potential resources such as the efforts of people themselves on their own behalf.

29. Poor horizontal management of a broad range of primary health care programmes in districts often co-exists with excellent vertical management of special programmes resulting in loss of opportunities to do more with the available resources. The concomitant inability to mobilize and rationalize the efforts and potentials of non-governmental organizations, of community participation and of other health-related sectors adds to these lost opportunities.

30. As if that were not enough, the impact on the morale of the front-line health workers in their health stations, health centres and district hospitals provoked by chronic neglect and poor conditions of service is such as to raise the question of whether or not many district systems are making any contribution at all to the health and well-being of the people for whom they are supposed to be responsible.

Fit to fight?

31. In many opening remarks I referred to the need to take stock of our ability to achieve the final victory of Health for All. Are we fit to fight?

32. It seems to me that the answer is not a resounding Yes! Some of us are doubtless suffering from battle fatigue and it seems that all of us must do more, much more, to improve the morale and the capabilities of our front-line troops.

33. Nevertheless, I am convinced that we know a good deal about what to do. We know that we must adopt the tactic of rehabilitating and building up our district health systems. We know many of the obstacles which confront us in doing that, yet we also know something about how to overcome them. We know where to mobilize and rationalize resources, however meagre, for the struggle ahead. We recognize the paramount importance of motivating and re-orienting all health workers, families and communities to primary health care.

34. For those many problems which still remain to be overcome let us be bold and adopt the approach of learning-by-doing, through the systematic and practical application of health systems research in districts.

35. Finally, and above all, let us all share our concrete experiences, as in this meeting, for these may prove to be amongst the most precious resources at our disposal.

WHO support

36. Mr Chairman, ladies and gentlemen, your WHO remains steadfast in its commitment to support you to build up strong district health systems based on primary health care.

37. I humbly submit that your WHO has already created most of the necessary tools to cooperate with countries to initiate and maintain district action programmes. However, with the exception of a few countries, many of which are represented at this meeting, such an action programme has not yet penetrated far beyond the central conceptualizing level. We shall need to be able to do that, and to document the operational process in detail in a few districts in each specific country setting.

I see four principal possibilities for WHO support.

38. First of all, I envisage a strengthening of WHO support for research and development in selected districts as a means of finding practical solutions to difficult operational problems. Linked to that is the pressing need of focusing WHO country budgets on health systems research designed to boost development of district health systems.

39. Secondly, I envisage support for country-wide action for district development. This might include technical support for the development of national strategies and plans of action for district strengthening. It could also comprise support for improving the planning, management and monitoring of operational procedures for districts, including integration of individual programmes, training and reorientation of health personnel, intersectoral action, selection of appropriate technologies.

40. Thirdly, I envisage information support to the promotion of district health systems through learning material relating inter alia to training, leadership and team development. Exchange of information about country experiences in developing strong district health systems will form an important part of this information support.

41. Finally, I envisage WHO support through vigorous mobilization of additional human, technical and financial resources for strengthening district health systems based on primary health care. The presence at this meeting of representatives of important multilateral and bilateral agencies and of a number of training and research institutions is evidence of increasing interest in strengthening health infrastructure development in districts as a means of boosting the effectiveness and efficiency of the Health for All and primary health care implementation.

42. Mr Chairman, ladies and gentlemen, at this historical juncture of your WHO, I can think of no better tactic of mobilizing for the struggle towards our goal of Health for All than a declaration by all Member States of their intention to increasingly commit the bulk of their national and external health resources to the establishment of strong district health systems based on primary health care.

43. No words could match such a response to that nagging challenge which has pursued us all since the Declaration of Alma-Ata, the challenge to <u>put our money where our mouth is</u>!

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Draft

DECLARATION OF HARARE ON STRENGTHENING DISTRICT HEALTH SYSTEMS BASED ON PRIMARY HEALTH CARE

At our meeting here in Harare a mere twelve years before A.D. 2000, the date set for achieving the goal of Health for All, we strongly reaffirm primary health care as the means to achieve that goal.

Despite impressive progress in implementing primary health care in many countries, weakness in planning, organization and management, particularly in districts, represents one of the greatest obstacles impeding health development. This fact emerged from an evaluation conducted by 90 percent of WHO Member States.

We are convinced that effective intensification of primary health care depends on comprehensive action based in well-organized district health systems, as called for by the 1986 World Helth Assembly. With increasing concern to ensure equipty and the sustainability of the impact of accelerated programmes on priority health problems, we are convinced that the district provides the best opportunities for identifying the underserved and for integrating all health interventions needed to improve the health of the entire population.

A district health system is taken to mean a more or less self-contained segment of the national health system which comprises a well-defined population living within a clearly defined administrative and geographical area, either rural or urban and all institutions and sectors whose activities contribute to improved health.

We believe that the community and all sectors, including the health sector, need to come together for the effective strengthening of district health systems, through vigorous implementation of the following points for action:

* DEVELOP A DISTRICT PLANNING PROCESS to define objectives and set targets in each district with emphasis on those families and communities most at risk.

* STRENGTHEN COMMUNITY INVOLVEMENT by creating appropriate mechanisms for providing support and increasing self-reliance by strengthening their knowledge and skills in solving their own health and development problems.

* PROMOTE INTERSECTORAL ACTION by creating mechanisms to give health concerns higher priority on the agenda of district development and helping each sector define their role in health activities.

* DEVELOP DISTRICT LEADERSHIP for primary health care through orientation, training and continuing education of key individuals from all walks of life.

* MOBILIZE ALL POSSIBLE RESOURCES for heatlh development, exploring further the role of financing through user-charges, social security and pre-paid schemes, and making better use of resources available from communities and non-governmental groups.

* ENSURE SUSTAINABILITY by integrating all programmes into the district health system and improving the basic management skills of health personnel.

* REDEFINE THE ROLE AND FUNCTIONING OF HOSPITALS within a district as integral parts of the district health system.

* USE HEALTH SYSTEMS RESEARCH as a tool for solving problems of the district health system, including financing and resource allocation and to answer the need for health development networks to conduct situational analyses and field studies.

* ADOPT NATIONAL POLICIES which provide for necessary support to districts

* DECENTRALIZE financial management and manpower management as appropriate to encourage flexibility within districts in adapting national policies for resource use according to local priorities.

* ENSURE EQUITY BETWEEN DISTRICTS by allocation of national resources on the basis of need.

Although communities and nations will naturally take responsibility for the above action, we would also:

ENCOURAGE THE MOBILIZATION OF INTERNATIONAL RESOURCES in support of the implementation of district health systems based on primary health care, action research and development, and exchange and dissemination of information. National, regional and global collaboration in this effort will avoid wasteful duplication and ensure that support is provided for priority areas. Such support should promote national capabilities.

M 3.4

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HOW MUCH OF A HOSPITAL'S WORK COULD BE DONE BY PARAMEDICAL WORKERS?

Helen Gideon, MD
Christian Medical Commission,
World Council of Churches,
1211 Geneve 20, Switzerland.

(Paper from Bangalore Workshop conducted in April 1973 for the Orientation of Medical Officers and Nursing Superintendents for Community Health Care).

Summary

Analysis of 1032 outpatients and 681 inpatients for eight mission hospitals in six states in India showed that 48% of outpatients and 44% of inpatients would probably not have needed to come to the hospital if they had been treated or advised earlier by a paramedical worker.

Material and Method

Hospitals sending delegates to a community health workshop were asked to send a list of inpatients for one week and 1,000 consecutive first attendance outpatients by age, sex and diagnosis. The object was to get the participants of the workshop to analyse these data to get an idea of what percentage of patients need not have been admitted to the hospital if health education, advice, preventive care or simple treatment could have been given to them earlier. Also, what percentage attendance at OPDs was really necessary either for prevention or treatment.

It was decided that the patients be categorized into 'Preventive' (P) and 'Non-Preventable' (NP). Preventable, where admission and OPD attendance could have been prevented if care had been given and accepted earlier. Non-Preventable, where admission or OPD attendance was required for treatment. Before this exercise could be given to the participants, the workshop leaders did a 'test' analysis. A careful look at the lists soon made it clear that patients could not be divided into these two categories. For instance, how would one categorize those who came for FTND (full-term normal delivery) or 'New Born'? or cases marked NYD (not yet diagnosed)? or those who came for tubectomy? Could a threatened abortion, febile convulsion, eclampsia have been prevented? Unless a decision could be made on such diagnosis, the analysis could not proceed.

Consideration had also to be given to the inconsistencies that were bound to occur with each participant's interpretation of what could be called 'P' or 'NP'.

With this very real problem it was decided to have a third category which was termed 'Special'. This category included all doubtful diagnoses, FTND, new born, etc. Three leading physicians took the lists and marked each patient 'P', 'NP' or 'S'. Careful attention was paid not to overweigh the preventable cases. For the OPD lists it was decided that every fifth case out of 1,000 be analysed. The following list serves as an example of the classification in each category:

INPATIENTS

Admission probably unavoidable. 'NP'	Admission avoidable, had simple care been given earlier 'P'	Obstetetrical and other unclassifiable diagnoses. 'S'
Cancers	Upper Respiratory Infection	Full-term normal delivery
Accidents & Fractures		
Pneumonia	Septic Abortion	Abortion
Asthma & Bronchitis	Abscess	New Born
Heart Diseases	Parasites	Tubectomy
Pyelonephritis	Pulmonary Tuberculosis	NYD
Diabetes mellitus	Amoebiasis	
Delivery requiring Caesarean or forceps	Typhoid Fever & immunizable diseases.	
Hansen's Diseases needing admission	Gastroenteritis	
Antepartum Haemorrhage	Malnutrition & anaemia and related infections	

OUTPATIENTS.

Hospital outpatient attendance, probably unavoidable 'NP'	Hospital outpatient attendance, avoidable had early community care been given 'P'	Obstetrical, unclassifiable 'S'
Diabetes	Kwashiorkar, Malnutrition & associated infections	Antenatal
Cancers	Abrasions	Check-up
Fractures	Anaemias & general weakness	
Sterility	Myalgia	
Hypertension	Gastroenteritis & Diarrhoea	
Allergies	Hookworm & other Parasites	
Epilepsy	Discharging Ear	
Patients & Surgery Urinary Infections	Upper Respiratory Infection Hyperacidity Immunizable Diseases	
	Scabies.	

The following table lists the hospitals from where data was obtained.

TABLE 1 Name, location and size of hospital; number of one-week inpatients; number and percentage of patients analysed.

	Beds.	Admission date.	No. of patients (1 week)	No. analysed.	No. not included in analysis 'S'.
Holdsworth Memorial Hospital Mysore City.	280	1-8 Sept. 1972	138	68	70
CSI Hospital Bangalore	200	?	110	79	31
CSI Hospital Woriur Tiruchy 3 Tamilnadu.	52	11-17 Feb. 1973	30	21	9
Mohulpahari Christian Hospital PO Mohulpahari Bihar.	120	19-25 Mar. 1973	52	30	22
Holy Cross Hospital Kottayam Quilon Kerala.	250	?	196	163	33
Creighton-Freeman Christian Hospital Mathura Uttar Pradesh.	160	3-11 Feb. 1973	52	26	26
* Holy Family Hospital Delhi.	115	26 March 1973	192	141	51
** St.Joseph Hospital Dindigul Tamilnadu.	350	17-23 Feb. 1973	189	153	36
Total			959	681	278
Percentage			100	71	31

* One day only

** Not by age and sex, included only in totals

Participants worked in pairs, analysing the material by age, sex, 'preventable', 'non-preventable' and 'special'. As each pair completed the analysis, the information was called out and recorded on a blackboard and percentages were calculated.

The bed strength of these hospitals varies from 52 to 350 beds; the total number of inpatients for one week for each hospital (except Holy Family, Delhi) was 959; 681 or 71% of these have been analysed.

TABLE 2 Analysis of 681 patients (by age and sex) admitted during one week for conditions defined as 'preventable' and 'non-preventable' ('P' and 'NP').

2.1	UNDER-FIVES					
	Males		Females		Total	
	No.	%	No.	%	No.	%
'p'	19	63.3	16	72.7	35	67.3
'NP'	11	36.7	6	27.3	17	32.7
Total	30	100.0	22	100.0	52	100.0

2.2	5-14 YEARS	
	No.	%
'p'	18	48.6
'NP'	19	51.4
Total	37	100.0

2.3	15-44 YEARS					
	Males		Females		Total	
	No.	%	No.	%	No.	%
'p'	34	54.8	61	48.0	95	50.0
'NP'	28	45.2	66	52.0	94	50.0
Total	62	100.0	127	100.0	189	100.0

2.4	45 + YEARS.	
	No.	%
'P'	28	25.4
'NP'	81	74.6
Total	109	100.0

2.5	SUMMARY ANALYSIS Irrespective of Age, Sex	
	No.*	%
'P'	301	44.0
'NP'	380	56.0
Total	681	100.0

* Total analysis includes 153 patients of the Holy Family Hospital in Delhi and 191 of St. Joseph's in Dindigul, as data from these hospitals were not available by age and sex.

Note: As a result of some corrections, these figures vary slightly from the handouts at the workshop.

Summary of Table 2 Of 681 inpatients:

67.3% of patients under five years were preventable admissions
48.6% " " 5-14 " " " "
50.0% " " 15-44 " " " "
25.0% " " over 45 " " " "
44.0% of total patients, regardless of age, were preventable admissions.

These figures would have been considerably higher if more information had been available in the diagnosis as was listed.

OUTPATIENTS.

Of the eight hospitals, only four sent lists of 1,000 consecutive first-attendance outpatients by age and sex and diagnosis. Three hospitals sent grouped diagnoses which were difficult to analyse. In all, it was possible to analyse 4,331 outpatients; of these, every fifth case was considered. The results were as follows:

TABLE 3 Analysis of selected 1,032 outpatients from hospitals by age and sex and by conditions defined as 'preventable' and 'non-preventable' ('P' ad ('P' and 'NP').

3.1

3.1	UNDER-FIVES					
	Males		Females		Total	
	No.	%	No.	%	No.	%
'P'	53	80.3	41	80.4	94	80.4
'NP'	13	19.7	10	19.6	23	19.6
Total	66	100.0	51	100.0	117	100.0

3.2	5-14 YEARS	
	No.	%
'P'	49	70.0
'NP'	21	30.0
Total	70	100.0

3.3	15-44 YEARS					
	Male		Female		Total	
	No.	%	No.	%	No.	%
'P'	131	49.9	92	37.3	223	43.7
'NP'	132	50.1	155	62.7	287	56.3
Total	263	100.0	247	100.0	510	100.00

3.4	45+ YEARS	
	No.	%
'P'	24	22.8
'NP'	81	77.2
Total	105	100.0

3.5	SUMMARY ANALYSIS (OP) irresp. of age & sex	
	No*	
'P'	495	48.0
'NP'	537	52.0
Total	1,032	100.0

* For one hospital, data by age and sex was not available. These 60 patients have been included in the total.

Summary of Table 3 Of 1,032 outpatients:

80.3% of patients under five did not need hospital OPD care
70.0% " " 5-14 yrs " " " " " "
43.7% " " 15-45 yrs " " " " " "
22.8% " " over 45 yrs " " " " " "
48.0% of total patients, regardless of age, need not have attended OPD.

CONCLUSION

These data should not mean that hospitals can be done away with. The figures are presented with the hope that hospitals may find it possible to reorganize their services, so that highly experienced doctors, specialists, and sisters are not forced to waste their time on work that can be done by others.

If auxiliaries could be trained, given simple standing instructions on what to treat, what drugs to use, what to refer, then almost half the hospital work-load could be reduced. If auxiliaries are not available, it may be po possible to train and use school teachers or girls with a high school education to work in their own villages, with supervision from the hospital staff.

Such reorganization will:

a) give the doctors and specialists more time;

b) save hospital funds, facilities, beds, drugs and the time of the supporting staff;

c) develop responsible paramedical staff;

d) make it possible to serve greater numbers of people, as time of personnel and funds will become available;

e) save family disruption caused by admissions that could be prevented;

f) save the time spent at outpatients, which patients can use to earn a livelihood.

The advantage listed seem obvious. At the same time one can visualize the problems associated with reorganizing services, e.g., for a while the hospital income will drop due to prevented admissions. It may be that admissions will increase again as patients needing treatment are diagnosed in the community. There will be problems of retraining the staff to fit into the changed pattern of service. Problems such as these and many others will arise, but if the value of reorganization is realized and accepted, the challenge of change will not seem insurmountable.

June 1973.

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V. Other Staff

		50 Bedded Hospital	100 Bedded Hospital	200 Bedded Hospital	750 Bedded Hospital
) Sr.Driver		-	-	-	1
Driver		-	-	-	10
Driver-cum-Cleaner-cum-Stretcher Bearer(Ambulance)		-	*	*	-*(One Driver per Ambulance)
Cleaners					
Class IV		-	-	-	4
		30*	55*	100*	365**
		*(this includes chowkidars & N.Os)			11**(this includes N/Os St.Bearer,N/A, Sweeper & Also Cl. IV staff & Ditary & other depart-ments)
Carpenter		-	1	1	4
Electrician		-	1	1	4
Welder		-	-	-	1
Tinsmith-cum-plumber		-	1	1	4
Mavildars		-	-	-	7
Sewage Cleaners		-	-	-	6
Khalasis		-	-	-	8
Chowkidars		-	-	-	50*
					*(may be designated as security Guards)

. Other Staff

	50 Bedded Hospital	100 Bedded Hospital	200 Bedded Hospital	750 Bedded Hospital
1 Executive Engineer	-	-	-	1
2) Assistant Engineer(Civil)	-	-	-	1
3) Assistant Engineer(Elec.)	-	-	-	1
4 Assistant Engineer(Air.Cond)	-	-	-	1
5 Assist Engineer (Hort.)	-	-	-	1
6 Section Officer	-	-	-	5
7 Sanitary Superintendent	-	-	-	1
8) Sanitary Inspector	-	-	-	2
9) Security Officer	-	-	-	1
1) Caretaker	-	-	-	1
1) Asst.Caretaker	-	-	-	1
1) Vehicle Supervisor	-	-	-	1
1) Asst.Vehicle Supervisor	-	-	-	1
1) Workshop Supervisor	-	-	-	1
1) Telephone Supervisor	-	-	-	1
1) Laundry Supervisor	-	-	-	1
1) Asst.Laundry Supervisor	-	-	-	1
1) Telephone Operator	-	-	-	5
1) Cook	1	2	3	-* *(included in Class IV)
2) Cook Mate	1	3	4	-*
2) Barber	1	1	2	-
2) Tailor	1	2	2	-
2) Gardner	1	2	4	12

	IV.Para-Medical & Nursing Staff			
	50 Bedded Hospital	100 Bedded Hospital	200 Bedded Hospital	750 Bedded Hospital
23) Technician (Laboratory)	1	2	4	6
24) - " - (Blood Bank)	-	2	1	7
25) - " - (E.C.G.)	-	1	2	5
26) - " - (Diet)	-	-	-	3
27) - " (Radiology)	-	-	-	5
28) - " - (Operation Theatre)	-	-	1	10
29) -" - (Mortuary)	-	-	-	4
30) - " - (C.S.R.)	-	-	1	-
31) Technical Asst.Lab.	-	-	-	14
32) - " - (Diet)	-	-	-	1
33) - " - (Pharmacy)	-	-	-	3
34) - " - (Blood Bank)	-	-	-	1
35) - " - (E.C.G.)	-	-	-	1
36) - " - (B.T.)	-	-	-	3
37) - " - (Mortuary)	-	-	-	1
38) Lab.Assistant	-	-	2	-
39) O.T.Assistant	1	-	-	10
40) Lab Attendants	-	-	-	10
41) Dark Room Attendants	-	-	-	3
42) Linen Keeper	-	1	1	-
43) Steward	1	1	-	2
44) Nursing Orderly	1*(included in total Strength of Class IV)	2*	4*	-

IV. Para-Medical & Nursing Staff

	50 Bedded Hospital	100 Bedded Hospital	200 Bedded Hospital	750 Bedded Hospital
1. Sr. Tutor Nursing	-	-	-	5
2. Matron	-	1	1	-
3. Asst. Nursing Supdt.	-	-	-	9
4 Blood Transfusion Officer	-	-	-	1
5. Asst. Blood Trans. Officer	-	-	-	1
6. Operation Theatre Supervisor (Medical)	-	-	-	1
7. Asst. Supervisor (O.T) Non Medical)	-	-	-	1
8. Dietician	-	-	1	1
9. Asst. Dietician	-	-	-	1
10. Assistant Matron	1	-	-	-
11. Sister-in-Charge	2	6	12	-
12. Nursing Sisters	-	-	-	63
13. Home Sisters	-	-	-	5
14. Staff Nurses	13	25	48	260
15. Chief Pharmacist	-	-	-	1
16. Manufacturing Pharmacist	-	-	-	1
17. Asst. Chief Pharmacist	-	-	-	1
18. Pharmacist	2 One for stores)	4	5	10
19. Head Pharmacist	-	-	-	2
20. Senior Radiographer	-	1	1	-
21. Radiographer	1	2	3	8
22. Physio Therapist/Occupational Therapist	-	1	1	6(4+2)

III. Administration				
	50 Bedded Hospital	100 Bedded Hospital	200 Bedded Hospital	750 Bedded Hospital
1. Dy.Med.Supdt./Lay Secy.(Gaz.)	-	-	1	-
2. Office Supdt./Lay Secy.(Non.Gaz.)	-	1	1	3
3 Nursing Superintendent	-	-	-	1*
4. Principal Tutor (Nursing)	-	-	-	1
5. Administrative Officer	-	-	-	1*
6. Dy. Nursing Superintendent	-	-	-	1*
7. Accounts Officer	-	-	-	1
8. Asst. Nursing Supdt.	-	-	-	1*
9. Welfare Officer	-	-	-	1
10. Purchase Officer	-	-	-	1
11. Medical Records Officer	-	-	-	1
12. Asst. Med. Records Officer	-	-	-	1
13. Accountant	-	-	-	2
14. Cashier	1	1	1	1
15. Asst. Cashier	-	-	-	1
16. Stenographers	-	1	1	10
17. Head Clerk	-	1	1	3
18. Upper Division Clerk	1	2	3	15
19. LowerDivision Clerk	2	4	9	45
20. Store Keeper	-	-	-	10
21. Medical Records Clerk/Technidan	-	-	2	12
22. Medical Records Attendants	-	-	-	10
23. Peons	-	-	-	20

(Preference will be given to those with qualification in Hospital Administration)

STAFFING PATTERN FOR GOVERNMENT HOSPITALS

Hospitals	I. Administration
1. 50 Bedded Hospital	Senior most specialist should be the Medical Superintendent, in addition to his professional duties.
2. 100 Bedded Hospital	Senior most specialist should be the Medical Superintendent, in addition to his professional duties.
3. 200 Bedded Hospital	Senior most specialist may be the Medical Superintendent in addition to his own professional duties. Deputy Medical Superintendent of the rank of G.D.M.O may be whole time officer.
4. 750 Bedded Hospital	One Medical Superintendent, One D.M.S. and two Assistant Medical Superintendents*. If this department is having a formal certificate, diploma or degree course in hospital administration or has training programme in hospital administration, then these posts will also have additional teaching designations like medical superintendent-cum-professor of hospital administration, Deputy Medical Superintendent-cum-Assistant, Professor of Hospital Administration, Assistant Medical Superintendent-cum-Lecturer in Hospital Administration.

II. Bed Distribution

	Medicine	Surgery	OB & Gynaec.	Paediatrics	Ortho-paedics	Eye&ENT	Emer-gency	Others
1. 50 Bedded Hospital	25	15	10	-	-	-	-	-
2. 100 Bedded Hospital	30	15	16	15	10	-	-	14
3. 200 Bedded Hospital	65	45	30	20	15	20	5	-
4. 750 Bedded Hospital	As per the latest teaching hospital norms laid down by the Medical Council of India.							

*(Preference will be given to those with qualification in Hospital Administration)

I 3.5

HOSPITALS OR HEALTH

Dr. N. H. ANTIA
F.R.C.S.

Despite a ten-fold increase in doctors and hospitals beds since Independence and a hundred fold increase in the production of drugs, 80% of our people continue to have no access to any meaningful form of health care. Communicable diseases like malaria, tuberculosis, filariasis, leprosy, gastroenteritis, measles, tetanus, polio and whooping cough, for which there are cheap and effective preventive and/or curative measures, continue to take their toll and some appear to be on the increase.

The response of the medical profession and their associates, the Pharmaceutical industry, the health bureaucracy and politicians, is a further increase of medical colleges, increased drug production, more sophisticated urban hospitals, and lately, more medical research. Is it that our health policy makers are not aware of the problems that face the majority of our people, especially those in the rural areas ? Or are their priorities related chiefly to the problems of the elite minority who have both money and power and of which they are a party. I believe it is a bit of both.

At independence India was fortunate to have the Bhore Committee's report which even today remains an unrivalled document, with a clear analysis of the health problems of populous and predominatly rural countries with limited financial resources and a detailed prescription for its solution. It recommended a decentralized Primary Health Care approach which would reach out to every village with emphasis on prevention, health education and involvement of the people in their own health care. This was adopted by our government right from the First Five year Plan. Why is it then that we have ended up with a predominantly urban based hospital-oriented curative service (notwithstanding our 5,600 primary Health Centres) while China which adopted the Bhore Committee's approach at a much later date has already surpassed the targets which we have now set for 2000 AD. The causes for our failure have been critically analysed in the recent ICMR / ICSSR report "Health for All : An Alternative Strategy". It boils down to a lack of will to look after the interest of the majority of our poor whether it be in health, education or any other field, and China and Sri Lanka have demonstrated that even with limited resources and available medical technology it is entirely feasible to provide good health to all, provided the will is there.

The almost entire emphasis of our medical profession right from the day that the student enters the medical college is on personalised curative services based on the existing western model, a model whose medical problems and financial cost can only be appropriate for the elite minority of our country.

Since there is no immediate hope of changing this pattern of services despite proclamations to the contrary, is there an alternative which could serve the needs of the have-nots ? Fortunately, our experience with a 35,000 rural population over a period of 10 years at Mandwa across the harbour from Bombay reveals that much can be achieved even under the existing circumstances provided an entirely new approach is utilized.

Instead of the usual medical approach of classifying diseases and health problems on the basis of anatomy or pathology, let us classify the problems according to the skills and facilities which are required for their diagnosis prevention and treatment. It opens up an entirely new approach to the problems of health and disease. One realizes that by far the commonest problems of prevention and also of diagnosis and treatment are of a very simple nature and can be tackled readily and often most effectively by the people themselves. This may

em farfetched, but if you think over it, ost of the episodes of illness that even ou and your family experiences in the ome consist of minor ailments such as oughs and colds, fevers, aches and pains, uts and bruises, boils and loose stools. hese have traditionally been looked fter by the family and cured with simple edicines or even herbs even though they re being rapidly medicalized. Many of hese can be prevented by a commonsense pproach such as dieting, resting, boiling f drinking water and teaching clean abits to the children and servants. lthough they may rarely represent the nset of a more serious disease one does ot have to run to the doctor except if he symptoms persist or aggregate. The ast majority are self-healing in nature.

There is another group of diseases hich are also fairly common and cause lot of morbidity if they are not adequa-ely treated, but are seldom fatal. These re also equally easy to diagnose and hese are extremely cheap yet very safe nd effective remedies for them, which an be used by the people themselves if nade available, Scabies, worms, boils, iarrhoeas and conjunctivitis are some examples.

The third group consists of diseases which are today the greatest killers and cripplers in our country but strange as it may sound, are relatively easy to diagnose or at least to suspect, and for which inexpensive, safe and effective remedies are available which after confirmation of diagnosis can be carried out by a community health worker if the treatment regimen and drugs are provided. Not only is this cheaper, but it also ensures early diagnosis and regularity of treatment for these are functions which require more cultural affinity than scientific skills. Let me illustrate this with a few diseases which pose the most major national health problems and fall within this category.

Despite consuming by far the largest chunk of our health budget for years, malaria has once again raised its ugly head and poses a national hazard. Why is it that after almost eliminating this disease it has returned with a vengeance? We blame the mosquito and the parasite but if you would peruse the Ph. D. thesis of Col. Pranab Datta, on his remarkably detailed and frank systems study of this disease in Gurgaon district which is only next door to the Ministry of Health in Delhi, you will realize that the malaria programme succeded only when a rigid almost military approach was undertaken in the past. In the present circumstances where there is an absence of accountability at all levels, the failure in national programmes in health or other fields is due almost entirely to the failure in implementation, namely a human failure. We must accept the unpleasant reality that no programme, however well planned, has any hope of success under the prevailing conditions.

In the above circumstances, suppose we place our faith in our people and in their own self-interest rather than in their exploiters who have their own self-interest whether they be politicians, bureaucrats or professionals, is there a possibility of tackling this problem. Strangely enough, despite research and medical jargon the control of malaria boils down to the elimination of the mosquito vector and of the parasite in the human. It basically consists of treating all persons who have fever with rigors with a single dose of a cheap and effective drug called chloroquine after taking a blood smear, which if positive must be followed by a further short course of pills. If there is a high rate of malaria in an area, measures must be taken to find and remove sources of mosquito breeding and spraying house with insecticide. These tasks do not require either skills or facilities that are beyond the capability of any villager if they are taught, encouraged, and provided the drugs, slides and insecticides. They can use the spray guns which they use for their crops. There would be no problem of accountability like it is for the army of malaria control staff, for the mosquito bites and the fever provide sufficient incentive to the villager but not to remote health officers and technicians

The incidence of tuberculosis a disease which is responsible for 10% of all deaths continues to increase despite a National Tuberculosis programme, free supply of drugs and 5600 Primary Health Centres; and despite our hospitals and every urban street and now even villages overflowing with doctors. The reason is not difficult to understand. Just imagine yourself as a landless labourer in a village with a cough of more than a few weeks duration, with low evening fever and with loss of weight and appetite. You will probably wait in the hope it will get better and only when much worse seek the help of a local doctor for the Primary Health Centre is too far away and because the paramedical workers is as usual on leave, not available or has no medicines. The figures of the National Tuberculosis Institute at Bangalore tells us that 80% of the time you will come home undiagnosed with a bottle of cough mixture and probably with a vitamin injection in the bargain. It is only when you are seriously ill and unable to work that you will borrow money and go to a larger urban medical centre when you will be diagnosed as suffering from advanced tuberculosis. If you are fortunate to be referred to the District Tuberculosis Centre you will be provided with a free supply of streptomycin injection and INH tablets. Your only recourse is to go to the local doctor for the injections three times a week for which you will have to pay him or her a few rupees which you can ill afford. No wonder once you feel better after a few injections you stop your treatment (which comprises of 90 injections) till you have a relapse and are dubbed as an irregular patient who has become drug resistant. In the meanwhile, you have spread the disease to your children who are further malnourished because of the expenses on your illness. Despite the official figures you can well imagine why only a small minority of patients take regular treatment. Are we surprised that tuberculosis is on the increase in our country. The response of the health service providers is to increase the staff and provide newer and more expensive drugs when there is no reason to believe that these workers will work any more conscientiously or that the newer drugs will be consumed more regularly.

Instead, suppose we teach a local village woman some elementary principles of health and illness and among her other duties to suspect persons suffering from cough, low fever, loss of weight and of appetite and have them checked for tuberculosis by a doctor ; then teach her to keep a stock of streptomycin and INH and give the injections. There is every likelihood that there will be a marked improvement in early diagnosis and regularity of treatment. She will keep a watch for early signs of the disease in contacts of the patient and explain to the patient in her own way the need to keep away from the children and to properly dispose the sputum. In actual fact our experience shows that this is exactly what happens if you take this approach and only a few people need to be referred for complications to the doctor.

Let us take leprosy which we glibly propose to eradicate in the next 17 years. The problem is the same compunded by the natural desire of a person not to go to a special leprosy technician or leprosy centre for treatment because of the social stigma attached to this disease. The disease is easy to suspect. A pale anaesthetic skin patch or thickening of the facial skin and of a few nerves ; after confirmation by a skin smear the treatment used to be the taking a tablet of Daspone daily for a few years. Yet Leprosy has been on the increase despite 17 years of a National Leprosy Programme based on such a cheap yet remarkably effective drug. Now we blame drug resistance as a result of irregular treatment and wish to enforce a much more expensive and complicated multidrug regimen which is to be implemented under medical supervision only. The occasional complications of the drugs are magnified and the treatment taken away from the hand of the people so that a larger leprosy empire can be built with no guarantee that it will deliver the goods any better than in the past.

Yet in our experience, trained village omen identify cases much earlier because ıey move regularly in the village without ırrying the stigma of a leprosy worker. hey ensure regularity of treatment and elp in the process of rehabilitation in ıe village itself.

The same problems apply to most of ur major health problems like gastroent-ritis, tetanus, whooping cough, diphtheria, ıeasles, filariasis and guineaworm. Why ıen this reluctance to take the people ıto our confidence and teach them to be s self-sufficient as possible? Why are we o anxious to appropriate their own legi-imate functions and prevent them from ooking after their own welfare when we ave clearly demonstrated over 3 decades hat we are incapable of solving their roblems. Is it because this would threaten he medical empires we have built on ıuman suffering? Or are we afraid that nce health is 'demystified' people may uestion all the other myths we have reated to keep them in a state of perpetual lependancy? Is it not better to frighten hem with the sight of the awful conse-uences that result from the failure of prevention and early detection so that we may then build equally awful hospitals in our beloved cities to deliver Primary Health Care to the influential and 'chit cases' and terminal care to the poor.

While there is undoubtedly a need for hospital facilities can these not be chiefly in the form of small general hospitals within each taluka or even sections of the towns. 90% of all referred problems can be solved by such hospitals within the community with adequate provision of general medical and surgical staff and facilities of an operation theatre, X-ray and pathology. They would be cheaper, more accessible and a part of the commu-nity. They could not possibly be as impersonal and inhuman as the unmana-geable monstrosities we have spawned in the cities and towns for the benefits of the medical profession. Having created these unnecessary and unworkable disease palaces we now seek to devise methods to manage the unmanagable. Even here we seem to be so bewitched by the western model that we ignore the most important reasons why our hospitals do not function : namely, the cultural pro-blems of the doctors, staff and patients. We try to ape the western hospitals with our oriental culture with the result that our institutions are only caricatures of their western counterparts. They are socially unclean, leave aside medical asepsis ; we happily accept 40% infection in our cold surgical operations and our doctors and students including the pro-fessors of microbiology regularly suffer from diarrohoea, dysentery and infectious hepatitis from the unhygienic good which is cooked under their vision 70% of all equipment is not functional at any given time (Ramachandran report).

Yet we continue to build larger hos-pitals with the latest specialities and gadgetry at enormous cost and take pride in our intensive care, renal dialysis and microsurgical units, as also in the CAT scan while the institution goes to the dogs.

In fact we are falling between two stools ; we do not have pride nor do we work within the strength of our own culture which is built on intense interper-sonal relationship and works best in the family ; village and at the most at the taluka level ; impersonal organisation which has been evolved in the West. We spend on sophisticated equipment whose chief value under the present conditions lies in the prestige reflected on its pur-chaser and operator. Even if it works, it generally serves only to prolong the life if not the agony of the aged. This, while we have no compunction in neglecting hundreds of thousands of children suffering from pneumonia who could be saved with a few tablets of sulphonamides or provid-ing the knowledge of oral rehydration for combating the greatest killer of our children for if they survive they may grow up to be our new generation who may well break their bonds to liberate themselves and their country.

(Delivered at the 2nd Conference on Hospital Administration.)

M 3.7

HOSPITAL MANAGEMENT PROGRAMME - COIMBATORE PRODUCTIVITY COUNCIL,
COIMBATORE - MAY 7-11, 1979

ADMINISTRATION OF OUT-PATIENT AND IN-PATIENT DEPARTMENTS - I

by

Major General B MAHADEVAN PVSM AVSM FAMS (Retd)*

1. General

The general principles of hospital administration are the same as those of administration in any other field, the basic difference being in the realm of humanitarianism and in the ideal and spirit of service. In hospitals, one is dealing with sick people with many behavioural abberations, who need kindness and sympathy. Unlike business houses and factories, the end product of a hospital is not production of bolts, nuts, cars and other goods, but the production of service - to the people, by the people.

In the past, hospitals were meant only for the treatment of the sick. The present day concept, scope and philosophy, has undergone a radical change all over the world, both in developed and developing countries. The hospital of today has been accepted as a social entity and a focal point in Community Health activities. The WHO in its first technical report on "Role of Hospitals in Programmes of Community Health" brought out as early as 1947, gave a very comprehensive descriptive role, namely that "The hospital is an integral part of a social and medical organisation, the function of which is to provide for the population complete health care, both curative and preventive, and whose out patient service reach out to the family and its home environment, the hospital is also a centre for training of health workers and for bio-social research.

Therefore, the modern concept goes beyond the conventional idea of a hospital being a repository for the treatment of the sick and visualises it as one part of a comprehensive integrated system of health services, both of preventive and curative medicine and as an institution devoted not only to in-patient treatment but also to render ambulatory domiciliary care for the community, including control of communicable diseases. So, one should view the hospital organisation as an essential part of the health service of a country. This, I feel, should be a fundamental thinking. Further the term hospital should be broadly used to include hospitals of various gradations - teaching hospitals, metropolitan city hospitals, polyclinics, district and taluq hospitals, primary health centres and mobile hospitals. However, in this talk of mine, I am confining my remarks to the requirements of a general hospital in a metropolitan town.

Hospital form the most costly part of a health service programme in a community. It is, therefore, sound from the economic point of view to do everything feasible to keep patients out of hospital by reviewing the reasonable demand for inpatient treatment. The hospital should be the Centre of a net work of clinics and services functioning within the community itself and regarded as a projection of the hospital's activity beyond its own walls and extending into the homes and work places of the people.

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*Director of Rural Health Services and Training Programmes
St John's Medical College & Hospital
Bangalore 560034

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In recent years, the centre of gravity of a hospital has been shifting more and more from wards to the out-patient departments. Much of the investigation and diagnostic practices that formerly necessitated admission to a hospital can now be carried out in a well equipped out-patient department with a saving of expense and avoidance of the disruption of family life that hospitalisation causes. This is one of the means of keeping a patient out of hospital to which reference has already been made by me.

If the following extramural services based on a hospital are well organised, the cost of medical treatment can be reduced and much suffering prevented in a community, both from the disease and economic points of view.

a) Promotion of health and prevention of disease through antenatal and postnatal clinics, industrial health and school health services

b) Link up with the local health authorities in epidemiological work - case finding and immunisation procedures. The local Medical Officer of Health to be given a staff status for integrating hospital and local health authority services

c) Integrated maternal and child health services - social obstetrics and social paediatrics

d) Routine and periodical examination of community for prevention of chronic diseases such as rheumatic group and cardiovascular diseases

e) Early detection and treatment of psychiatric illness through a good OPD mental health service

f) Health education of patients and relatives in wards and OPD

g) Efficient medico-social case work to ascertain physical, emotional and social aspects of illness including follow up

h) A good nutrition and dietetic services extending to homes of the people

i) Provide facilities for training of medical, nursing and health workers of all grades

j) Provide opportunities for research both in and outside the hospital

k) Establish a close link between General Practitioners and hospital work with particular reference to diagnostic, x-ray and library facilities. A General Practice Unit could be conveniently established in the OPD

l) Function as a referral hospital under the regional hospital scheme

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m) Organise Clinico-Social Case Conferences where General Practitioners and Health Officers are invited to participate in the discussions.

2. Out Patient Department

Hospital facilities and medical and para-medical help are perhaps the most over worked resources in our country. There is scope for better utilisation of existing resources by application of modern management concepts and techniques in many spheres of hospital activity. Many hospitals in India and abroad have reaped rich benefits by such applications in diet planning, materials control, better ward utilisation and long range financial planning. OPDs particularly in government hospitals which provide an interface with a large number of patients, offer an unique opportunity for better service and enhancement of hospital image, through application of modern management technique.

The out patient department is the point of contact between the hospital and the community. Many patients gain their first impression of the hospital from the out-patient department, and it is, therefore, important if the patient's co-operation is to be obtained, that this impression should be a favourable one. Everything should be done to create an atmosphere of friendliness and welcome. Although the lay out of the departments, the architecture, its furnishings and decor do play a role, it mainly depends upon the attitude of all members of the hospital staff employed therein. For most people it may be a first visit to the hospital which could be a frightening experience unless there is an atmosphere of reassurance, an absence of red tape and formalities. The OPD (including the casualty department) is a hospital's shop window. Therefore, the reputation of a hospital can largely be made or marred by its impression upon the patient in the first few minutes after his arrival.

There are three aspects of out-patient work which need consideration.

(a) Emergencies and accidents (casualty department)

(b) Unreferred patients : In underdeveloped countries, the hospital represents the only available source of medical care. The OPD is, therefore, over crowded with unreferred patients. Appointments cannot be made, patients are mixed together, an attempt to impose rules fails before such a huge attendance. This was a position years ago in developed countries as well but as community care has developed, unreferred patients are few.

In developing countries, it should be the local health plan to establish local dispensaries within towns, which are administratively linked with the main hospital but physically independent. Only patients requiring specialist attendance should be referred to the OPD of the main hospital. Such 'filter' clinics have proud of great value in many countries and metropolitan towns. Unfortunately people are specialist and hospital minded and flock to the hospital even for minor ailments. Unless the local health authority lays down rigid rules, for such 'filter' clinics and levies a charge for hospital work, this scheme of establishing out reach clinics may not be totally successful.

(c) Referred patients : That is to say, those that have been sent by a general practitioner or peripheral health clinic to the OPD of a hospital for consultation by a specialist or for special investigations (pathological or radiological). The primary role of an OPD is to provide specialised services and facilities, not normally available to the General Practitioner, thus enabling him to institute ambulatory and domiciliary treatment which is ideal from the points of view of economy, preventing disruption of family life and making available hospital beds for treatment of more urgent cases. The OPD should also serve the purpose for selection of patients for whom in patient treatment is necessary, either immediately, in acute cases or by appointment system when a bed becomes available. The OPD should also play the important role as stated earlier for follow up of patients discharged from wards.

A good OPD should function as a poly-clinic. The conventional components of an OPD are:

a. Consulting area (standard consulting suite)
b. Treatment area
c. Passage and waiting area
d. Minor operating theatre with required annexes
e. Diagnostic services area - Radiology, Cardiology and respiratory diseases, laboratories, EEG, Dental, chiropody, clinical photography, endoscopy, medical physics, day patients and recovery
f. Physiotherapy and occupational therapy
g. Administration and general service areas - Reception, Medical records, Medico Social Unit, Administrator's office, Pharmacy

Certain essential areas of operation only will be dealt with in this paper.

The structural requirements of an OPD are conditioned by the functions of the several parts of the department, which in turn, depend upon the social and cultural characteristics of the population to be served. It must be remembered that the OPD is one of the growing points of a hospital. With increasing knowledge and scientific explosions, the practice of medicine is changing very rapidly. OPDs should be planned in such a manner that they are capable of permitting the growth of new specialities with an increasing range of diagnostic tests and 'working up' procedures. on ambulatory patients. Therefore, an OPD needs to be planned with a measure of adaptability in its internal arrangements and a very substantial capacity for growth.

A centralised OPD should preferably be built horizontally. This permits extensions or contractions when required and avoids movements of patients going upstairs and wandering all over, creating confusion for the hospital staff. It may be more economical to have vertical buildings linking the OPD with the pattern of ward design. Vertical buildings, although compact, depend for movements on lifts, stairs and ramps. They have limited flexibility. The building whether horizontal or vertical should lend itself to easy adaptation and expansion.

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Fragmentation of any part of a hospital leads to wastage of staff. In an OPD, consultation among specialists is frequently required and hence out patient clinics should be grouped together in one department. The OPD should be near a public road to be easily accessible to patients, as some of them may not be very mobile. It should be near the x-ray, pharmacy and pathology departments. Only in the case of dental suites, opthalmology and orthopaedic clinics, would special accommodation be required with provision for equipment, fluoroscopy etc.

Large waiting halls have become a thing of the past. Some kind of entrance hall or concourse is needed in which out patients may be received and registered and from which they may be directed to a small waiting room or space serving the particular clinic they are attending. These subsidiary waiting rooms are necessary to prevent the corridors outside the various consulting rooms from becoming crowded with waiting patients, this impeding circulation of patients. The effectiveness of an OPD can be measured in terms of:

a. The total average waiting time for a patient from the time he enters a hospital till the time he leaves after medical attention

b. The total time spent by a doctor with the patient for diagnosis, treatment and education on preventive medicine

c. No. of patients treated

d. Cost of offering the service and the revenue generated if any

e. Extent ofpatient satisfaction

f. Effectiveness of medical care

In our country particularly in government hospitals, the appointment system does not work due to many obvious reasons. The patients arrive in a random manner and wait in a queue in different places. As the patients arrive for registration etc., unless the capacity of servicing through the three main areas ie., registration; clinic and dispensary, is balanced with the arrival of patients, queues will build up. The length of the queue and the average waiting time per patient are dependent on the balancing of capacity with the demands imposed upon it. In the absence of an appointment system, the arrival pattern of patients cannot be approximated to a poisson distribution, which is necessary for the application of the Queueing Theory. Hence other methods have to be employed for better allocation of resources to reduce waiting time of patients. In one hospital study, it was observed that a male patient spends on an average 85 minutes waiting at various stages (registration 35 minutes and at clinic 27 minutes) to get 2 minutes of doctor time for the examination. For a patient attending the x-ray and laboratory, the waiting time was 195 minutes. By modifying the starting time of registration/clinic/dispensary, synchronising the doctor time, availability with patient arrival pattern, and opening up of another registration counter, a reduction in waiting time at various stages was achieved. The doctor was able to give five minutes service time per patient. The waiting time of patients, particularly at the registration, was used for health education.

The causes of delay in service causing bottlenecks in an OPD, has been well summarised in the Porritt Report of U.K.

a. Faulty appointment system
b. Waiting for registration
c. Delay in finding old notes
d. Patients losing their way
e. Making appointments for subsequent visits
f. Making appointments for special investigations
g. Delay in special departments - x-ray, pathology etc.
h. Waiting in the dispensary
i. Insufficient internal communications
j. Insufficient clerical staff, particularly receptionists and unit secretaries
k. Insufficient and faulty instruments
l. Unpunctuality of patients and doctors
m. Waiting on examination couches
n. Inadequate information from general practitioners. So far as India is concerned, the following may be added:
o. General illiteracy
p. Queuing for minor or imaginary ailments as an excuse for getting sick leave
q. Lack of free general practice service
r. Shortage of hospitals
s. Shortage of medicine, nursing and other technical staff
t. Importunity of the clients
u. General lack of 'self-help' tendency.

Attempts have been made to meet the conflicting requirements of various specialities by establishing a standard consulting suite with slight modifications to suit individual requirements. Privacy of consultation is essential even in underdeveloped countries. The practice of simultaneously examining several patients and taking their histories in the same room, albeit behind screens, is very undesirable for both patients and most specialities. Nuffield studies advocate that the design of clinical suites should facilitate consultation and examination in an unbroken sequence based on the principle of interchangeability. A flexible and most economic arrangement would be to have a series of intercommunicating consulting rooms. A consultant conducting a clinic uses one, two three or more consulting rooms according to the nature of work, his speed of operation and the number of assistants he has. The consulting room need be just adequate to contain a doctor's table and chair, a patient's chair, an examination couch, an instrument trolly and a lavatory basin. In one corner should be a curtain on a rail behind which a patient can undress and dress. While one patient is dressing, the doctor writes his notes, then moves into the next consulting room to deal with the second patient, and so on. Time and motion studies conducted on this pattern of consulting rooms indicate no waste of consultant's or patient's time. Standard consulting rooms of this type can very adequately serve most specialities. In India a size of 12' x 14' may suffice per consulting room. For teaching purposes a larger consulting room to provide 400 sq ft would be necessary.

However, for ear, nose and throat, opthalmological and gynaecological work, some modifications could be made. From the nursing point of view also, this intercommunicting system is economical. Every 2 or 3 consulting rooms can be served with a nurse's bay fitted with a bay and reagents for urine testing, a desk for patient's records and either a small steriliser or a space for holding packaged, sterile instruments from the central supply department.

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The minor operating theatre in the OPD should be a simple type, for dealing with minor surgical conditions with diagnostic procedures such as cystoscopy and sigmoidoscopy. A recovery room with a bed is needed for patients to rest in for a while, until the pain, shock or effects of the anaesthetic have passed.

X-ray, pathological and electrocardiographic facilities need to be provided for special investigations. Patients requiring such investigations should again visit the hospital by appointment with the special department. Otherwise the work of the department could be completely disrupted by a trickle of outpatients at all hours. For instance, x-ray examination involving contrast media particularly, need special appointment of the patient and need the personal attention of the Radiologist. With certain specialised clinics, it will be possible to make arrangements for x-ray examination at the time the patient sees the consultant - a straight x-ray of the chest for the chest physician or of a bone or joint for the orthopaedic surgeon. The same applies to electrocardiography in an ad-hoc cardiac clinic with a technician and the cardiologist may be able to see the tracing with the patient's notes, without delay. With regard to pathological investigations, the specimen (blood, urine etc.,) can usually be taken at the time of request but the result is not available until the time of the patient's next visit.

An OPD depends for its success on the quality of its staff more than upon any other single factor. All the clinicians including the most senior members of the medical and surgical staff, should play their part in the clinics of the OPD. In a teaching institution, the OPD is the most important teaching area from the points of view of good clinical material and teaching medical students the art of practising medicine in a comprehensive manner.

The nursing side of the OPD should be the responsibility of a well qualified and experienced nurse, whose primary function should be to see that the work in the various clinics proceeds smoothly.

Another important member of the OPD is the Receptionist who makes first contact with the patient. Patients and their relative can be exasperating people, asking all kinds of silly questions, but they are often ignorant and frightened people (particularly in an underdeveloped country) who must be treated with patience, sympathy and understanding. A Receptionist should possess charm and be courteous in dealing with such people.

Facilities for refreshments (canteen) should be available in the OPD. Every attempt should be made to undertake health education of patients and their relatives during any waiting period in the out-patient department.

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M 3-8

On Asking the Right Questions

From the Voluntary Health Association of India

MANY a hospital is hard put to define its philosophy. It does not have one. If it does, nothing clear is written down. It is only the minds of some of the older staff.

No hospital can afford to continue with vague assumptions about its mission Every hospital needs to discuss and write its philosophy in clear terms and publicise it. Again, after some years it must revise and rewrite this document. Many voluntary health care institutions in India which flourished years back, are now limping, barely managing to survive. They have outlived their original purposes and have become irrelevant to the time and the place.

"Our philosophy is to serve the poor", or "promote health care", or "cure the sick and the needy". Such statements are inadequate. They conceal. They do not enlighten.

There are many ways of serving the poor, promoting health care and curing the sick and the needy. In fact, that is what voluntary and government institutions in India have been attempting for many years. The poor are still poor, the health of the populace has not improved, and society on the whole is becoming more sick and needier.

Fundamentally, what does "promoting health care" mean? What is the definition of health?

If health is understood to be the mere removal of disease, the mistakes of the past will continue to be repeated by health care institutions. The health of the people will continue to be unsatisfactory. But if health is defined and understood in the context of the individual's social, economic, physical, mental and spiritual well-being, the answer is entirely different. The philosophy and mission of the health care institution is then wider. The health care administrator has a total set of new and different decisions to take. The task of "providing health care" is now connected with the economic development and well-being of the community. It is in the light of this new and different answer to the question "what is health" that there is a trend towards preventive and community health, and holistic health. This answer seems to make more sense too.

Who are our friends ?

This is related to the question "What is our mission?" Often the top administration intent on "pulling the institution through", interprets friends to be funding agencies a thousand and more kilometres away. This leads frequently to unnecessary and curious behaviour on the part of hospital managements — like new buildings; new specialities; additional, sophisticated equip-

● *There is an idea prevailing that people need hospitals urgently. So build the hospitals, cure the sick and improve the health af the people. Nothing can be patently more absurd.*

Yet another idea prevailing is that the services rendered by health care institutions are "intangible". You cannot "really measure them". This is equally absurd. And suicidal. It has generated much wishful thinking, planning and hoping.

These silly notions avoid embarrassments, skirt searching questions, and difficult answers.

Such questions and answers demand clear thinking on the part of men who manage voluntary health care institutions. ●

ment; efforts to increase OPD census and number of surgeries; (whereas if the hospital is promoting health, it should endeavour to decrease OPD census and the number of surgeries and so on). Fortunately many funding agencies have alerted themselves to the fact that the right questions are not being asked, and incomplete answers are often given. As a consequence funds for the same old ideas about health are no longer flowing.

Sometimes the "friends" are thought to be neighbouring hospitals or comparable hospitals in the country. This leads to another range of curious and unnecessary behaviour for after all "what will the neighbours think, if we do not keep up with the Joneses". Imitation (as much as competition) among service organisations is suicidal.

The correct answer to the question, "Who are our friends?" would be, the community. The people in the community around and near the hospital are its friends. It is they who are using the services of the organisation. If the people do not need the institution, it need not exist in that community.

What do our friends need ?

The experience of the past tells us that our answers to these questions have missed their targets. Health is not one of the needs felt by the people in the community, the friends of the hospital. Health is not a high priority. Food, drinking water, housing, loan facilities and good seeds seem to be more urgent needs. So if the health care institution intends "promoting health" and "serving the poor" it is these needs which have to be catered to first. Health will have to take a back seat.

Our answer to the question, "What do our friends need?" will therefore change the role of the health care institution to one of social and community development, of which health is only a part.

What do our friends value ?

What do the people in the community value most in a hospital ? The people in the community value trust and equality. They value participation. They value their tradition, culture and time-honoured customs. Any institution in a poor society which respects these values of the people will probably have more success.

Nothing perhaps provokes more the ire of a community than to see a posh hospital coming up when the problems of the poor are more basic — malnutrition, hunger and unemployment.

Nothing perhaps provokes more the ire of a community in the long run than to see a posh hospital coming up, when the problems of the people are more basic—malnutrition, hunger and unemployment. Worse still is the management of the hospital which lives in total isolation from the real problems of the surrounding community and continues to believe in the myth of promoting health care.

However, some enlightened health professionals have identified the more correct answers. Hence among them there is a trend toward community health, towards more participation of people so that they assume responsibility for their own health; and attempts to integrate health with economic development and well-being. It is thus only in response to some of the time-tested traditions of people, that there is now a movement towards using local herbs and medicines, and a healthy respect for faith-healing. It is in response to the economic status of the community that health institutions have continuously to explore ways of lowering the costs of health care.

The affluent expect routine curative care from the hospital. The poor of the community expect wisdom and solace from the people who manage the institution. The latter constitute the majority. Hence it makes sense to respond accordingly.

Questions for the Future

No dynamic institution can rest content once the above questions are asked and the correct answers secured.

Every management needs to plan for the future—both the immediate and the long-term. The effective administrator and the effective governing board is constantly examining "What will be our philosophy and mission? Who will be our friends in the future — in the next two years, five years and ten years ? What will our friends need? What will they value?" The answers of today are only valid for a limited time. Tomorrow's answers and tomorrow's requirements will be different. New knowledge and new experiences imply changes in philosophy and our ways of

doing things. Refusal to acknowledge change and experience of the past forebodes the decay of the voluntary health institution.

Conclusions

The business of management is to ask certain questions of vital importance to the institution. The absence of such questioning, and the answers to these questions if any, can make or break an health care institution, especially a voluntary institution since the latter has only limited resources.

Enlightened people concerned with health have been asking such questions. At the same time the intention has been to learn from past performance and past ideas in health.

Our concept of health before asking the right questions is portrayed in Figure 1. Figure 2 gives the picture after the possible right answers. The new answers imply a social and developmental role for the health care institution.

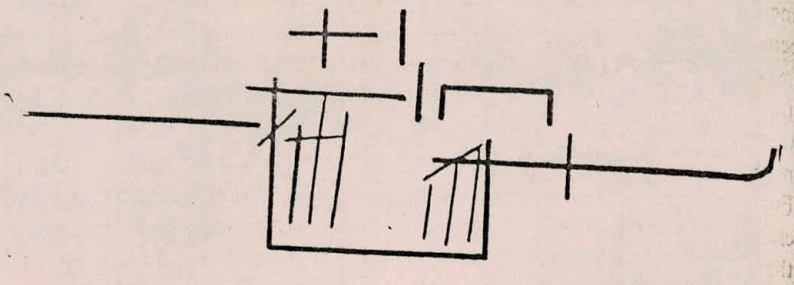
It is possible that our answers are incomplete or even wrong. That is unavoidable. New knowledge and new experiences inevitably erode into our past structures and old ways of doing things. It is the task of effective managements continuously to anticipate and plan for change.

Our emphasis has been centred around the voluntary health care institution. The bias is intentional. The reasons are historical.

It is the voluntary health sector which has pioneered many new approaches in health care in India. Being non-governmental in structure, it has shown more flexibility and adaptability. Commitment is high (but often mis-channelled because of lack of questioning or inadequate answers). It can be expected therefore that it would be easier for the voluntary health agency to pioneer in community health and development, and holistic health.

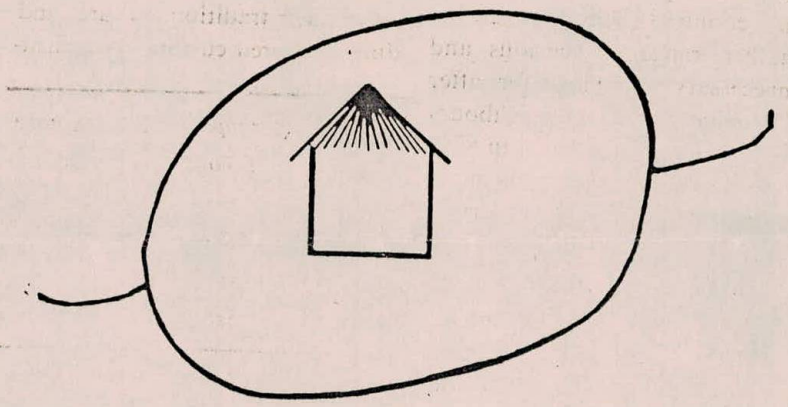
With this pioneering goes the

Figure 1. *Traditional health institution.*



- no defined territory
- care for all who *come*
- priority on curative
- a little extension work
- sophisticated and excellent medical facilities
- specialised service
- little effect on total health
- not owned by community
- high cost of service
- healer (doctor) centred

Figure 2. *New role of the health institution.*



- defined community
- vertical range of services
- banking
- cooperatives
- farm facilities
- drinking water
- animal husbandry
- nutrition education
- youth clubs
- women's clubs
- training of community health workers
- MCH under fives
- TB and leprosy
- school health
- cure for the seriously ill
- liaison with specialised hospitals
- community participation
- more patient oriented
- appropriate technology used
- low cost drugs and house remedies used
- greater effectiveness on the total health and awareness of a smaller number of people; long term effect
- greater chance of spreading health awareness
- holistic health

responsibility of training new categories of people, appropriate to the health needs of the country. The multipurpose worker and the nurse practitioner are only some examples. There is also the responsibility of the voluntary health agency in the promotion of low cost health care. The history of free care and charity has promoted dependency and raised unhealthy expectations in the people. A great deal of time and energy through health education for

Free care and charity has promoted dependency and raised unhealthy expectations in the people.

unlearning is involved here. Only then would the concept of self-responsibility seem more acceptable.

All this does not preclude the need for hospital beds and curative care. There will still be people who will require to be hospitalised and need specialised medical care. But hospitals need no longer take our prime energy. Small hospitals are needed as a support to the community effort. The priority could be lower.

Health Status—Plans and Achievements

If we look solely at the statistical indicators in the health sector, the achievement since Independence has no doubt been impressive. We now have 106 medical colleges in place of 30 in the immediate post-Independence era. There are 5,400 health centres and over 38,000 subsidiary health centres where there were none before. Our rupee outlay on health has gone up with every Plan. National programmes on communicable diseases and population control have been initiated. Smallpox has been eradicated. There are 28,000 leprosy beds and almost 43,000 TB beds available. Millions have been covered by the immunisation programmes. 24 per cent of the 120 million eligible couples have been covered by the family planning programme, and so on.

What the statistics fail to point out is something most people working in the health care field sooner or later become aware. The health budget has never exceeded 5-6 per cent of the total Plan outlay. Of this, a major portion has been utilised in the building up of sophisticated medical colleges and training doctors. Ironically, in 1978, this country had half as many registered nurses as doctors.

Over 45 per cent of the population are below subsistence level. More than two-thirds of the population have no access to safe drinking water or basic Mother

In 1978 this country had only half as many registered nurses as doctors.

and Child Health Care programmes. Child mortality at places is as high as 150 per 1000. Malnutrition is common among adults. It is formidable among children. The rate of population growth continues to be 2.5 per cent in spite of the family planning programmes. Malaria is staging a comeback even more deadly than before. There are no statistitics available to show the number of tuberculosis cases that are now resistant to first line drugs owing to lack of follow up.

A cursory glance at the diseases treated at any general hospital will show that the majority of cases are preventible in nature. The root of the disease lies in poverty, malnutrition, environmental decay and ignorance. In such a situation how can our health resources be spent to provide at least basic health care to the people ? After years of groping and experimentation, it seems to be amply evident now that to be effective a radically different method must be adopted.

The major health provider of the country has all along been the Government. Each State has formulated its policies under the broad guidelines of the Central Government. Cities have municipal health systems over and above government ones. Hospitals are provided by big employers such as the railways, police, plantations, large industries, etc. for their own employees. Cities also have the benefit of the private practitioner.

The voluntary and charitable institutions providing health care constitutes a significant part of the total. In 1970, it was estimated to be roughly 22 per cent of the health care system.

The Growth of the Voluntary Health Agency

The voluntary institutions were usually started to fill a need that no other organisation took heed of. Most of them were built by religious organisations. Dedicated and committed people reached out to serve the needy. They became aware of the needs of the people and the fact that many people had no access to medical

care. Charitable voluntary health centres and hospitals sprang up to fill the gap supported by religious institutions. In the late 19th and early 20th century, most of these were of Christian origin supported by churches in India and abroad. The lone missionary who started the health care facility soon spread the word of the usefulness of such a hospital. Friends abroad were eager to help. Funds were received and bigger and better hospitals were set up. Compassionate donors sent money, equipment and drugs. Many trained doctors and nurses came themselves to contribute their skills towards caring for the sick.

The sick came flocking to these hospitals from near and far. As the news spread of the skillful and dedicated service, more came. So the hospital grew to accommodate them. More funds and equipment arrived from friends and churches abroad. And so the voluntary hospitals continued to grow.

In spite of the nobility of thought which inspired the starting of many hospitals and health centres, this activity of medical care has turned out to be short-sighted. The doctor was always overwhelmed with the number of patients waiting to be treated. He did not stop to examine the root cause of the disease and help improve the hygiene factors. He had no time. Moreover, the patient was never to take the responsibility for his health. Over and above this, when the patient came and was not able to pay for his care, he received it free. He was even provided free food.

As a result, the expectations from the charitable voluntary hospital grew. Even those who could afford some of the cost wanted large concessions of free treatment. The voluntary hospital continued to fulfil these expectations, with virtually total dependence on the foreign funding agencies. The patient, once cured, returned to his village home to drink contaminated water and live in unhygienic conditions, knowing that when he fell sick again he could count on the magnanimity of the charitable hospital. No significant impact was made on his health, even less on his health awareness.

Many More Problems

This was only one problem. There were many more. The expatriate doctor usually ran the institution single-handed. As long as it was of a small size, and the inflow of funds continued, he managed well. He gave jobs out to the local needy, who could help him in running the hospital. The result was that all his time was spent in seeing the patients and managing the institution.

Problems began to surface in the post-Independence era. The expatriates started to return home. The sources of funds, which were more often received through personal contacts, began to dry up. There were insufficient skills available within the organisation either to provide the high quality of medical care or to manage the institution. Costs of service went up rapidly. Many hospitals just shut down. Many others drastically reduced their charitable work and began to charge patients, thereby closing their doors to the very people for whom they were built.

Most of the hospitals that survived did so because they began to draw more and more a rich clientele. The paying patient was more demanding. Therefore it became necessary to keep up with the sophistication and the rapid specialisation in the medical field. The more sophisticated the hospital, the more successful.

The Promotion of Wellness

Modern medicine has created a set of beliefs, habits and value systems which are not strictly health inducing. Firstly, traditional modern medicine has concentrated more on the absence of illness than on prevention and promotion of a high level of health and wellness.

The drugs prescribed by the modern doctor are so expensive that only the top 10 per cent in India can afford it. Many drugs cause more problems than they solve. This system of doctors and medicine has made the patient dependent on the healer, that is the doctor. Self-responsibility for one's own health is discouraged in several roundabout ways. The sick person is exempt from all role-obligations. He need not work. He can go to bed, and others will care for him. Society does not hold the patient responsible for his illness. The patient must accept the need for help, and is obliged to cooperate with the source of help.

Our new concept of health would not stop at the neutral point of the illness—wellness continum. It attempts to go further, to a state of high well-

ness, with maximum emphasis on self-responsibility.

The Wellness Life Style

Self-responsibility is the first step to a wellness life style. There are at least four other dimensions relevant to our concept of holistic health.

- Nutritional awareness (eating wellness — promoting foods and avoiding illness – inducing ones)
- Physical fitness
- Environmental sensitivity
- Stress management.

The Suffocation of the Spirit and the Mind

Somewhere along God died for many people. There are still many who are going around with lanterns in mid-day in search of God He is not to be found in the market.

In practical terms, this means boredom, nausea, alienation and a general purposelessness in life. The spiritual life of man is seldom talked about in connection with his health. The promise of modern medicine has made it even unfashionable to ask questions about meaning — what is the meaning of life and the world and so on. Dreams and their psychic content in terms of their relevance to man's health tend to get ignored or overlooked.

Jung and others following him have shown that much of the modern day neuroses are related to man's search for meaning and content in life. Our dreams are messengers of meaning from our unconscious.

Our new vision of holistic health would therefore try to integrate the psychic and spiritual urges in man. An integration of the body, the mind and the spirit would be a necessary part of our journey towards high-level wellness.

With this, the human touch and the spiritual aspects of man would be restored to the healing process. The future of health care would be a return to the roots of man.

While not specifically oriented towards physical health, humanistic psychology, the consciousness-expanding movements and spiritual movements all recognise that health is a by-product of one's mental attitude. So holistic health requires techniques which heal the whole man, not just the body. This also was known for many ages. Kings, priests, prophets, fakirs, seers, tribal doctors, saints over the years knew the power (and used it) of psycho-spiritual therapy in healing.

Holistic health requires techniques which heal the whole man not just the body.

Wellness Education and Health Care

Wellness education and health care should remain separate. They are two separate systems. Doctors are becoming a new genre of practitioners who work alongside and complement educators and other health field professionals. J. W. Travis remarks : "It is my firm conviction that the same person cannot practise disciplines that are on different ends of the illness—wellness continum. The wellness practi. cannot also treat illness." calls for role clarification. Othe. wise medical practitioners and other highly trained professionals will suffer burnout resulting from a superhuman effort to do both.

It is doubtful whether hospitals can change to holistic health and wellness education. They have been too much and too long concentrating on the physical. The future scenario in health would therefore be many doctors, nurses, para-medicals, priests, counsellors, etc. moving out of the hospitals to set up community healing centres. Here they will work together as a team that will take more and more the aspects of ashrams. They could begin with instruments/questionnaires to assess one's stress level and health level. These data would form the basis for determining a new life style. Once the person is decided and firm about his new life style, then any necessary training would begin. Self-responsibility will be the basis for change.

As this shift toward self-responsibility grows, the need for hospitals becomes much less, the cost of health care goes down drastically, and a high-level of wellness becomes within the reach of people. One of the most wonderful advances of science is the fact that psychologic stress has been shown to depress immune activity. Mobilisation of positive psychological attitudes will restore the body's ability to overcome invasive viruses and destroy mutant cells. Since tension diseases are the main cause of disease today, psycho-spiritual therapy is the only way

even to hope for healthy people. As the benefits are reaped, the existing health care delivery system will cease to exist as we now know it.

Most probably, this new/old approach will "take off" faster in the rural communities, using schools, health centres, adult education, cooperatives, etc. as a medium. Since this constitutes 80 per cent of India's population it is a good place to begin. The change will be slow and painful.

What does All This Mean to India ?

● Doctors and health professionals have over the years shouldered the responsibility for individuals health and cure. Now it is their primary task to shift their responsibility back to the individual through a patient and sustained educational process.

● Individuals must be aware of both the applications and limitations of medicine. This can be done by health education in regional languages, using adult education classes, school health programmes, mahila samajams, youth clubs, etc. for wide dissemination of knowledge.

● Meditation as a means of attaining Nirvana can be reinstated as an ancient practice, for stress reduction and at-oneness with nature.

● Developing a new life style to incorporate proper exercise, a balanced diet, adequate sleep and a philosophy of life which gives meaning to the uniqueness of each person's existence. This meaning keeps the person alive and productive in the use of his creative potential.

● Wide use of wellness/worseness continum questionnaires to assess and redesign a health management programme to maintain health through a healthy life style. This method can be used by hospitals, clinics, health centres, and by health personnel wherever they are. Once the method is taught to the public, they can become "teachers" for others as more and more people learn how to take responsibility for their health.

● The practice of holistic health and wellness education in the hospital/healing centre would need new kinds of professionals in new areas such as:

(a) Nutritional awareness counselling.
(b) Meditation through yoga.
(c) Autogenic training.
(d) Acupuncture/acupressure.
(e) Bio-feedback/biogenics.
(f) Mechanical/electronic pain relievers.
(g) Faith healing.
(h) Psychosynthesis.
(i) Massage, Rolfing, Feldenkrais.
(j) Jungian psychology : dreams, guided fantasy.
(k) Dance/art therapy, Tai chi.
(l) Homoeopathy.
(m) Chiropractic.
(n) Clinical psychology using all counselling methods.
(o) Depth psychology—use of intensive journal methods.

People would stay long enough to be well along in their new health life style so that they can carry it on successfully in their homes.

Our new concept of health therefore requires a fundamental restructuring of our traditional approach to health. The community would need a great deal of education and publicity about the shift. Not a few obstacles and problems will be faced.

Problems Not Insoluble

These problems are not insoluble. What we are envisioning will be neither easy nor accomplished immediately. It could be a process over the next ten years—just as ten years back there was a process to move towards rural community health care. It requires some prophets, some teachers and some very broad awareness.

Contact address :
The Director, VHAI
C-14 Community Centre
Safdarjang Development Area
New Delhi-110016.

M 3.9

VOLUNTARY HEALTH ASSOCIATION OF INDIA (KARNATAKA)

REPORT ON THE WORKSHOP ON 'INTERPERSONAL SKILLS IN HOSPITAL AND HEALTH CARE ADMINISTRATION'

A Workshop on 'Interpersonal Skills in Hospital and Health Care Administration' was organised by the Voluntary Health Association of India (VHAI) Karnataka Branch on 22 Feb 1981 at St Martha's Hospital, Bangalore. The key resource personnel for the Workshop consisted of Professor R L Kapur, Head of the Dept of Community Psychiatry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore and his active young team of Psychiatrists, Nurses and Psychiatric Social Workers.

Session I

After the opening remarks by Dr Marie Mascarenhas, Secretary, VHAI (K), Professor Kapur gave a key note address in which he highlighted the need for better interpersonal skills in any health team and also listed out some of the common problems which juniors and seniors in a heirarchy faced in their day to day interactions. Professor Kapur stressed that the need for developing interpersonnel skills in a hospital setting was mainly for the ~~sake of~~ the sake of the patient who entered our hospitals and health centres as a guest. Starting with the senior administrators in our institution, he listed out the following common situations or methods of functioning which were the cause of many problems.

1. Administrators block suggestions by juniors like angry parents responding to a naughty child

2. Administrators delegate responsibility and allow free discussion but do not delegate the power to make decisions taken, effective

3. Administrators follow an open door policy, acting the good samaritan role with juniors and leave 'middle management' out of the decision process

4. Administrators appear to give freedom in choice but are not always open to all options and show their definite preferences.

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5. Administrators often pass on the buck of decision making even on important matters to middle level managers so that they can be made the scapegoat for difficult or unpopular decisions.

6. Administrators constitute committees to study and suggest policy decisions but no action is taken on their deliberations

7. Administrators often expect acceptance of their ideas by juniors as a mark of their respect or a sign of their worth. In such situations criticism or differences of opinion are seen as personal criticism. This feature was particularly culture-based and peculiar to India.

Having taken the administrators to task, Professor Kapur then listed out the common problems associated with juniors in a heirarchy which were of equal importance in causing interpersonal conflict and strained relationship in a health institution.

1. Juniors who accept decentralised powers but refuse to accept the responsibility which goes with it.

2. Juniors who do not take their problems to seniors because of the 'such things are not done' attitude (some of the smaller problems need small solutions and often the seniors can solve it at an earlier stage. If it is kept bottled up it often blows over into a much larger problem)

3. Juniors who develop a father-complex with their bosses. This sort of emotional dependency is again peculiar to the Indian situation.

Professor Kapur then dealt on the problem of interpersonal conflict being projections of intrapersonal problems of either or both individuals. It was therefore very important for each one of us to indulge in a certain amount of self-analysis to discover: What makes us angry? Who makes us angry? Why are we angry? This realisation would help us to control our reactivity in different situations and accepting the constraints of our

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Session III

After a very interesting hour of discussion the four groups presented the salient features and conclusions of their discussion at a plenary session chaired by Professor RM Verma, Professor Emeritus, NIMHANS.

Among the many interesting perceptions/suggestions that emerged from the group discussion were:

1. Importance of humanising relationships in an organizational heirarchy even if it means starting on simple steps such as calling a person by a name he likes to be called
2. Importance of self analysis to understand one's own coloured perceptions of situations and people
3. One should gradually evolve into a role rather than try and fit into a fixed notion of it
4. Liberalisation of heirarchical relationships was necessary but not at the cost of discipline in the institution
5. Heirarchical relationships should not be carried over outside office or after office hours.
6. Occasions for informal group or team interactions like having a meal together should be increased in any organization
7. Special meetings where all categories of staff could assemble and air their problems should be held regularly. Some institutions call these 'preventive' meetings or 'grumble' or 'grievance' meetings.
8. One of the biggest problems in interpersonal relationship in our organisations was the factor of role rigidity, which is culturally induced, strengthened by community rewards and expectations, related to a need for security and a result of a rigid demarcation of responsibilities in a heirarchy. This often results in an individual reacting in a rigid critical manner in

every situation.

Following the group reports there was a lot of interest generated in the so called concept of 'grumble' meetings. Issues such as

i. who should be present?

ii. what action is to be taken? and

iii. Does/Should this bypass middle management?

were raised and enthusiastically discussed. The consensus was that

a. All sections of an organisation should be involved in such meetings;

b. The meetings should take place in decentralised smaller units so that good group interaction could take place

c. To balance negativity and positivity such meetings should discuss problems as well as good points in each institution. The idea of SWOT sessions was very much appreciated ie., a discussion on STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS to every institution.

Professor Verma then summed up the plenary session by taking an overview of the interpersonal problems in health institution and stating that

a. In our health institutions the quality of healing has begun to suffer because the quantity of technical know-how had increased but the quantity of participatory experience especially between doctor-patient was getting reduced.

b. It is important that interpersonal skill development must be at the basic operative level and not at the level of pure intellectual understanding

c. All meetings, ward rounds, conferences in an health institution should be a mutually enriching experience for all concerned

d. Every organisational problem should be understood in relation to the individual body-mind relationship

e. We know that in the human organism tension can be nature produced, ambition produced and even doctor produced. These tensions based on past experiences captivates the present resulting in a

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double slavery of 'anticipatory precaution'. This is true not only of internal physiology but also interpersonal relationships.

f. For better interpersonal relationships the human being must undergo a growth process and it is very important that in the brief period of his contact with a health team or organisation this process is helped on and not stunted.

g. In every heirarchical organisation there must be a continuous processof delegation of the 'power-responsibility and experience' triad to juniors for the overall growth of the organisation.

h. Every organisation must move from a heirarchical leadership representing cumulative power to a situation of teamwork and mutual enrichment representing free flowing power of human creativity.

Session IV

In the afternoon after lunch there was an interesting role playing session in which the following participated:

i. Hospital Administrator of St Martha's Hospital: Mr GD Kunders
ii. Consultant, Dr Koshy
iii. Staff Nurse
iv. Junior Doctor, Dr Angelina
v. Helper: Salome
vi. Patient: Dr Sylvia Babu

The problem presented to the group was a common situation in the ward. A Consultant prescribes an emergency drug for a seriously ill patient and on the rounds next day discovers that this has not been administered to the patient. The group played their roles very realistically and since each member of the team blamed the other for the problems and all this was done forgetting the need of the patient—the role playing was followed by a very lively discussion. The session was chaired by Dr Channabasavanna, Medical Superintendent, NIMHANS. The main consensus that emerged in the discussion led by Dr Kalyanasundaram was:

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1. The patient is the centre of all our activity in a hospital or health centre. Hence his needs, must be supreme over institutional or personal needs of the health team.

2. In every crisis each member of the health team must keep the patient in view and must be encouraged to use his initiative or creativity—more than what is expected by role definition.

3. A post or a job has some built-in role limitations but these do not apply to the person who plays that role. Each of us should use the role limitation but not get under it. In moments of crisis, our crativity should burst out of this limitation.

4. In a health team every member is equally important. No member, not even the doctor by virtue of his education or social status should feel like 'boss' and play a superior role. In fact he should use every opportunity to strengthen the team concept by decentralising responsibility and power and encouraging initiative.

5. In the Indian situation, due to the culturally strong family bonds, health team members in India should encourage and explore the possibility of family members of a ptient being more involved with the nursing care and management of patients as well as seeking their help during crisis situations.

6. As a side light of the role playing there was some discussion on the importance of having a standardised list of drugs in every hospital pharmacy and of ensuring that all the staff of the hospital prescribed from this list for the sake of hospital efficiency, economy and good patient care.

The Workshop was very much appreciated and it ended with Dr Marie Mascarenhas proposing a vote of thanks to Professor Kapur and his team for being such an excellent resource on such an important problem in hospitals and health care institutions.

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QUALITY ASSURANCE OF HOSPITAL CARE

by

Dr. Mario C. de Souza
Deputy Hospital Administrator
St. John's Medical College Hospital
Bangalore

(Prepared for presentation at the 1989 National Hospital Convention of the Indian Hospital Association to be held at the Lady Hardinge Medical College, New Delhi on 11-12 November 1989. Adjudged as the Best Essay submitted for the Essay Competition 1989 conducted by the Indian Hospital Association.)

I. INTRODUCTION

Medical care is one field where perhaps the consumer is relatively ignorant about what is good for him. Decision-making is therefore wholly relegated to the provider, who, practically is free to do as he pleases. Vested interests prevailing in certain situations, and due to utter negligence at other occasions, the decision-making power that the provider enjoys is at times abused to his own financial advantage leading Ivan Illich to asseverate in the opening chapter of his book 'Limits of Medicine': "The disabling impact of professional control over medicine has reached the proportions of an epidemic..... the epidemic of iatrogenesis".

Further, to make matters worse, in contrast to an industrial situation where output can be easily expressed in terms of units, there is no clear conceptualization of output of health care. In this context, the fascination which exists with high technology care leads one to associate the esoteric practices of modern medicine with quality care. And since the application of such technology is generally expensive, both providers and consumers are apt to link costs with quality and view the two as synonymous. Not surprisingly therefore professionals are heard to deliberate that, "a choice must be made between good patient care and high costs on one hand, and poor quality care and low costs on the other." High technology for-profit enterprises further justify their philosophy by arguing that, "... the purpose of our centre is to save the patient's life and not his money!" But analogies such as these are fallacious for they deny the very concept of productivity and assume that the only way to provide better patient care is to abandon all economy measures and practice extravagence.

Quality assurance of hospital care attempts to resolve just the above issues. It aims at establishing quality control programmes to evaluate and monitor the quality of care and to ensure that care of a reasonable standard is provided at a reasonable cost. Quality assurance is not synonymous with use of sophisticated procedures, super-specialization and adoption of superfluous invasive technology. It does not advocate excellence at all costs, Instead, quality assurance necessitates that institutions and health professionals render care in a most efficient, effective and economical manner. This entails a cost-benefit exercise to define strategies for optimum utilization of resources, focus on cost-effective methods, and introduction of systematic on-going quality control programmes to continuously monitor and improve the quality of care rendered and the overall productivity of the hospital.

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II. THE PRESENT SCENE IN INDIA

Looking in general at the functioning of Indian hospitals, it can be said that systematic and comprehensive quality assurance programmes are virtually non-existent. Some major centres of learning do have some appraisal activities such as periodical publication of statistics relating to patient-load, mortality and morbidity, clinical conferences, clinico-pathological reviews, mortality meetings, and enquiry into major incidents of negligence. These however, are generally limited to the technical aspects. Termed Medical Audit or Peer Review, the focus is on a retrospective analysis of medical records and statistics to ascertain the accuracy of diagnosis and treatment regimen. Rarely are the associated problems of hospitalization looked into. Thus, what problems were encountered during the patient's stay, were the investigation and treatment procedures carried out of any material value, did the patient benefit at all from the hospitalization, was the expenditure incurred by the patient disproportionate to the benefits, etc., are questions never asked. The patient is generally at the mercy of the hospital/doctor and is required to pay for every procedure done, irrespective of the need for the same or the inefficiency with which it was administered. There is no system laid out to ensure that a routine patient visiting the hospital is given a reasonable standard of care consistent with the hospital's objectives and resources. It is therefore not infrequently that one hears of incidents of gross negligence: the healthy eye that was wrongly extracted, the unconscious patient who fell off the cot and sustained a pelvic fracture because the cot lacked side railings, the patient who succumbed during a coronary angiography which was unfortunately carried out on the wrong individual, the knife-happy surgeon who has built castles out of the proceeds of unindicated tonsillectomies, the case of a patient never recovering from anaesthesia given by a drunken anaesthesiologist, a kidney being removed during caesarian section, and many other such 'stories'. The traditional 'wall of silence' that exists around every operation theatre effectively filters off most of the incidents of malpractice, but as an insider into the functioning of hospitals, I may aver that had we in India a more well-informed populace and a speedier system of dispensing justice, settlement of malpractice cases would have been a major concern for hospital administrators and doctors.

III. HOW IS QUALITY ASSURANCE PRACTICISED IN A HOSPITAL?

Appraisal of quality of care involves assessment of:

- quality of technical care
- quality of art-of-care

To institute a system of quality assurance, every hospital is required to set up a Quality Assurance Committee which meets periodically and reviews the quality of care delivered in relation to previously determined standards. Such appraisal is to be conducted with reference to three sets of variables:

1. Structural Variables:

The hospital management and medical professionals must agree on what is the minimum infrastructure required for making available a particular service. There must be clarity regarding the

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building requirements, type of equipment needed, environmental characteristics of the hospital, and the number of each category of staff required for rendering care to the patient. The committee should lay down the minimum qualifications required for each category of medical, nursing and paramedical staff and should define the type of organisation necessary in the hospital for effective delivery of patient care. The setting up of different departments, the need for different coordinators, the days and timings during which each department should be open to render service and determining the size of each department keeping in mind the overall hospital objectives come under the purview of quality assurance committee. The committee should also approve on an annual basis the budget to be made available for patient care activities. Appraisal of structural variables therefore involves determining the extent to which these recommendations have been complied with. Thus, at least annually, the hospital management or the quality assurance committee should conduct a variance analysis to note the difference between actuals and standards, this being easily possible if the standards are expressed in quantifiable terms.

2. Process Factors:

The committee should specify the type of cases that are to be accepted for investigation/treatment based on the hospital's resources. It should also lay down the standing instructions to be followed for routine patient care, the nursing regimen to be adopted, the manner of documentation of patient information and the hospital records that are to be maintained for ensuring effective delivery of care. The committee, either directly or by setting up the following sub-committees, should look into the following specific aspects of treatment:

(a) Tissue Utilization Sub-committee, to screen:

- unindicated surgeries
- normal tissues removed/amputated
- correlation of pre and post operative diagnosis
- surgical complications
- deaths arising out of or during surgery/anaesthesia.

(b) Therapeutics Sub-committee, to review:

- non-ethical prescribing practices
- irrational use of antibiotics
- use of irrational drug combinations, banned drugs
- non-adherence to drugs listed in hospital formulary.
- unindicated transfusions
- iatrogenic complications arising out of IV and blood transfusions.

(c) Infection Control Sub-committee, to study and recommend strategies for control of:

- nosocomial infection in different departments

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- iatrogenic infection sustained by patients
- routine procedures to be followed to control cross-infection in the Operation Theatre, Wards, Laboratories, Blood bank and Treatment Rooms
- sterilization procedures, preparation of packs by the Central Sterile Supply Department.

(d) Nursing Audit Sub-committee, to enquire into:

- non-conformance to recommended nursing regimens
- inappropriate/excessive use of consumables, disposables and supplies
- incidents arising out of poor nursing care - fall from cot, bed-sores, patient burns, etc.

3. Outcome Measures:

Appraisal of quality of care through outcome measures strictly involves examination of indices relating to the output of the hospital and to the patient's final condition. However, there is yet no clear conceptualisation of hospital output. Diverse definitions exist though none of these have been validated through economic cost-functions. Hospital output has been defined in terms of patient days, sum of weighted services, episodes of illness, end results or desired health levels expected of the specific hospitalisation, etc. In view of this confusion that exists, hospitals traditionally appraise their 'output' through use of surrogate factors which theoretically are known to have some relation to output: length of stay, review of performance/efficiency of particular services (eg: cost analysis of each disease treated, cost-benefit ratios of specific services rendered, etc.), review of performance/efficiency of the providers (eg: performance appraisal of doctors, performance evaluation of a department through appraisal by objectives, practicioner-profiles such as patient-department turnover ratio, analysis of length of stay department/doctor wise), review of performance of the hospital relative to that of other hospitals (length of stay speciality-wise, mortality rate speciality-wise, disease-wise cost of treatment, ratio of expenditure on investigations to the patient's hospital bill disease-wise), review of the overall satisfaction of the patient with the quality of care rendered as recorded at the time of discharge.

IV. DATA FOR HOSPITAL QUALITY ASSURANCE

1. Medical Records:

Since medical records detail the patient's condition, his response to treatment and all significant interactions between the patient and the providers, and since these data are in a form easily accessible, medical records are perhaps the most useful source of information on quality of care rendered. The

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hospital management must therefore ensure that the records are maintained in a legible, complete and factual manner and that they accurately summarise the events that have occurred during the hospitalization of the patient. With the increasing use of problem oriented medical records (POMR) and recording of progress notes through the use of SOAP (subjective complaints, objective findings, doctor's assessment and plan of action) and with the recent application of computers for medical record indices and for patient data-base computerised information systems, the patient's case-file can be a powerful tool for the concurrent and retrospective review of the process factors of hospital care.

2. Incident Review:

During a patient's hospitalization several incidents may occur which have a bearing on the treatment and the patient's final recovery. These 'critical' incidents may be of the following nature: delayed attendance by a physician, incorrect medication, burns arising out of faulty physiotherapy, assault on a patient by an employee/outsider, wrong patient being subjected to an investigative/surgical procedure or a right patient being subjected to a wrong procedure, death in a corridor with no physician/nurse accompanying the patient, etc. Risk management involves maintaining a record of such critical incidents and analysing them for their nature, frequency, time and place of occurrence, personnel involved, and listing of their causative factors. Corrective action can then be taken to reduce the frequency and seriousness of such incidents that cause risk to the patient's well-being. Risk management can go a long way in improving the work standards of a hospital and in the overall improvement of quality of care rendered.

3. Hospital Information System:

An on-line real-time data-base computerized system can be of immense value in generating a management information system for appraisal of quality of care. Periodical reports of such information could include:

(a) Workload statistics - admissions, bed occupancy, surgical procedures, length of stay

(b) Activity audit - poor scheduling, list of pending tasks/procedures in critical areas, review of repeat investigations

(c) Practicioner profiles - workload, competance, patient satisfaction

(d) Financial performance - use of consumables, breakages, profitability, budget-actual variance, cash flow.

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4. Patient Satisfaction Surveys:

Surveys to ascertain index of patient satisfaction may be undertaken at fixed points in time or on an on-going basis. Such surveys, carried out through questionnaires, interviews, etc. by social workers, hospital management trainees, consultancy groups, etc. help to document patient satisfaction with respect to 4 variables:

(a) Delay in attendance by doctors, nurses, helpers

(b) Discourtesy shown to patient during course of hospitalization

(c) Lack of amenities, especially those charged for

(d) Incidents of incorrect treatment, iatrogenic complications.

However it is important to note that one can still have a dissatisfied patient who may have actually received good quality care and vice versa. Patient satisfaction is a better indicator of quality of art-of-care, quality of nursing care, and quality of facilities provided than of quality of technical aspects of care per se.

V. CONSTRAINTS FACED BY PROVIDERS IN RENDERING QUALITY CARE

Hospitals and doctors encounter the following constraints which often result in poor quality care:

(a) Lack of Resources: Insufficient resources - infrastructure, equipment, consumables, money for recurring expenses, staff - makes it impossible for output of a certain quality to be turned out under the prevailing circumstances.

(b) Drugs and Medical Supplies: Non-availability of essential drugs and supplies, spurious, adulterated and sub-standard drug preparations and medical consumables, improperly sterilized or pyrogenic materials, etc. have a deleterious effect on the course of hospitalization and final prognosis.

(c) Improper Maintenance: Building and equipment require proper maintenance for efficient use. To minimize equipment down-time it is necessary to ensure adequate after-sales service, availability of spare parts, service manuals, etc.

(d) Personnel problems: Lack of motivated employees, staff indiscipline, irresponsible trade union activity, strikes and go-slows, etc. compromise the quality of care.

(e) Affordability: Where medical care is not free or subsidized, the ability of the patient to meet the expenses of treatment is of critical importance in deciding what care to give and the intensity and quality of such treatment.

(f) Unreasonable patients and attendants: Illness, anxiety, absence of immediate response to treatment, ignorance about prognosis, late attendance, etc. cause patients, their families and friends to adopt an unreasonable, uncooperative and belligerent attitude.

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VI. IMPETUS FOR QUALITY ASSURANCE

1. A Well-Informed Populace:

In his book "Limits to Medicine" Ivan Illich argues that the ultimate cure for the 'epidemic of iatrogenesis' rests with the lay public whom he exhorts to rise up and counter the professionalization of medicine. To do this, the populace must be well informed. In India, because of the high level of illiteracy, the ready willingness of the patient to accept his karma, and particularly since the demand for health care services in the rural areas grossly exceeds supply, it is unlikely that patients, consumer forums and lay organizations can exert sufficient pressure on the medical establishment to demand a better standard of care.

2. Hospital Accreditation Laws:

Unlike as in the U.S.A. where there exists a Joint Commission for Accreditation of Health Care Organizations, in India there is no organization empowered by legislature to lay down standards for hospitals and health professionals so as to regulate the quality of care. The Medical Council of India looks into the requirements of medical education and for this purpose it inspects facilities available in medical college hospitals. The quality of care rendered is however not appraised and there is no regulatory/supervisory body for granting recognition to non-medical college hospitals and nursing homes. The State Medical Council does look into complaints from aggrieved patients regarding negligence and unethical practices against doctors, but it is largely ineffective in regulating the non-technical aspects of quality of care in hospitals. India requires a legislation that provides for setting up of a statutory Accreditation/Vigilance authority in each State to inspect hospitals and ensure that basic requirements are met, to issue licences for carrying out specific diagnostic/operative procedures, to enquire into major incidents of negligence and to take stringent action against hospitals/health professionals involved in gross malpractice.

3. Third-Party Payers:

In the U.S.A. bills relating to hospitalization and other medical expenses are generally met by third-party payers - Medicare, Medicaid, Blue Shield, Blue Cross, employers. Beyond payment of insurance premiums and government taxes, patients are not involved in settlement of the major portion of the hospital bill. It was therefore customary for patients to demand the 'best' and hospitals and practicioners, to play safe and to increase their revenue, administered more diagnostic and treatment procedures than necessary claiming the full cost for the same from third-party payers. All this resulted in spiralling costs of medical care. Recently, with the introduction of the diagnosis related group (DRG) reimbursement, an effective way has been found of curtailing hospital costs while at the same time increasing quality and efficiency. Through use of the 467 DRGs, the US Government Health Care Financing Administration has begun to reimburse hospitals involved in Medicare and Medicaid predetermined amounts based

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on the diagnosis reported and not on the basis of length of stay, procedures carried out, etc. Efficient hospitals can profit through this system by retaining the difference between the amount reimbursed for the particular disease treated and the actual costs of treatment, whereas inefficient hospitals must absorb the difference. In India, there is an increasing trend towards third-party payments by employers and insurance firms. Although insurance firms have fixed an upper limit for medical reimbursement liability, third-party payments are sure to result in inflated hospital bills as patients do not immediately feel the pinch and are hence demand more than what is necessary. To offset this phenomenon, insurance firms in India must draw from the experiences of America and work out a system similar to DRG reimbursement. Hospitals in the voluntary and private sector do find it convenient to collect payments from third-party apyers, more so as their clientele is assured. Employers, insurance firms and the Government thus can exert sufficient pressure to demand a better quality of service at a reasonable cost.

4. Legal Redress:

The Law of Torts makes it possible for aggrieved patients/ their families to file malpractice claims against doctors for compensation for iatrogenic damages arising out of negligence. Further, under the doctrine of 'respondeat superior' (let the master be responsible), hospital managements too can be held responsible for vicarious liability, i.e. the conduct of their employees, including doctors, and can be held liable for payment of malpractice claims.

The duties of a hospital/doctor to a patient, the ambit of medical negligence and the factors necessary to establish liability in India have been detailed extensively in AIR 1969 Supreme Court 128-135, AIR 1975 Bombay 306-324, and AIR 1985 Madhya Pradesh 150-171 as follows:

(a) "The duties which a doctor owes to his patient are clear. A person who holds himself out ready to give medical advice and treatment impliedly undertakes that he is possessed of skill and knowledge for the purpose. Such a person when consulted by a patient owes him certain duties, viz. a duty of care in deciding whether to undertake the case, a duty of care in deciding what treatment to give or a duty of care in administration of that treatment. A breach of any of those duties gives a right of action for negligence to the patient. The practicioner must bring to his task a reasonable degree of skill and knowledge and must exercise a reasonable degree of care. Neither the very highest not a very low degree of care and competance judged in the light of the particular circumstances of each case is what the law requires (ch. Halsbury's Laws of England, 3rd ed. vol. 26 p 17)".

(b) "Mistaken diagnosis is not necessarily a negligent diagnosis. No human being is infallible. A practicioner can only be held liable if his diagnosis is so palpably wrong as to prove negligence."

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(c) "A person is not liable in negligence because someone else of greater skill and knowledge would have prescribed different treatment or operated in a different way nor is he guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible body of medical men skilled in that particular art, even though a body of adverse opinion also existed among medical men."

(d) "A doctor cannot be held negligent simply because something went wrong." "It would be wrong and indeed bad law to say that simply because a misadventure or mishap occurred, the hospital and doctors are thereby liable (Lord Denning in Hatcher v Black and others, 1954)."

(e) "We must not condemn as negligence that which is only a misadventure. The doctor is liable when he falls below the standard of a reasonably competant practicioner in his field so much that his conduct might be deserving of censure or inexcusable."

(f) "To establish liability, it must be shown: (1) that there is a usual and normal practice, (2) that the defendant has not adopted it, and (3) that the course in fact adopted is one no professional man of ordinary skill would have taken had he been acting with ordinary care."

Despite the above clear pronouncements by the major Courts in India, with the prolonged delay in fighting legal battles in India, only the rich and the very well-informed can afford to seek the necessary legal help. Besides, the traditional reverence that doctors enjoy (when the patient is sick, the doctor is God!) precludes a patient from seeking compensation for damages caused, more so since the patient may have further need of the same doctor. Legal redress is therefore not an effective impetus to quality assurance of health care.

5. Forums of Medical Administrators:

There is an understandable reluctance on the part of doctors in defining parameters and standards within which they will render care and, traditionally, no doctor likes to sit in judgement over his colleagues. If health care providers have to play a role in ensuring a higher quality of care, the responsibility rests on the medical administrators - Directors, Medical Superintendents, Hospital Administrators - for it is these management representatives who generally have to face the consequences of malpractice in terms of poor reputation of the hospital, loss of clientele, legal expenses, compensation for iatrogenic damages and higher hospital costs. It is therefore necessary for hospital management representatives and their professional forums to strive towards bringing about this change: adoption of quality assurance programmes, laying down minimum standards for hospitals/professionals, instituting an accrediting process and regulating the quality of hospital care in India.

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VII. REFERENCES

1. All India Reporter 1969 Supreme Court 128-135, Dr. Laxman Balakrishna Joshi vs Dr. Trimbak Bapu Godbole and another. Division bench of Justices R.S. Bachawat, J.M. Shelat, and A.N. Grover.

2. All India Reporter 1975 Bombay 306-324, Philips India Ltd. vs Kunju Punnu and another. Division bench of Justices Vaidya and Sapre.

3. All India Reporter 1985 Madhya Pradesh 150-171, Ram Bihari Lal vs Dr. J. N. Shrivastava. Division bench of Justices C.P. Sen and S. Awasthy.

4. Berki, S.E., Hospital Economics. Massachusetts: D.C. Heath and Co., 1972, pp 85-120.

5. De Souza, M. C., "A Note on Hospital Cost Concepts". Abhipraya, Fellowship Journal of the Indian Institute of Management, Bangalore, August 1980.

6. De Souza, M.C., "Quality Assurance as a System for Cost Reduction of Hospital Care". Proceedings of the Seventh Annual Conference, Indian Society of Health Administrators, Bombay, 1986, pp 253-265.

7. De Souza, M.C., "Costs versus Quality: Conflicts in the Indian Context". Hospital Administration, Vol. XXV, No. 1, March 1988, pp 94-102.

8. Goyal, R.C., "Health Care Administrators and Law of Torts". Hospital Administration, Vol. XXV, No. 2, June 1988, pp 163-170.

9. Pena, J.J., Haffner, A.N., Rosen, B., and Light, D.W. (eds.), Hospital Quality Assurance: Risk Management and Program Evaluation. Maryland: Aspen Systems Corporation, 1984.

10. Rowland, H.S., and Rowland B.L. Hospital Administration Hand-Book. Maryland: Aspen Systems Corporation, 1984, pp 627-663.

11. Shanahan, M. (ed.) Proceedings of an International Symposium on Quality Assurance in Health Care, Paris, November 1986.

12. Srivastave, M., and Ghei, P.N. "Myth of Medical Audit". Hospital Administration, Vol. XXV, No. 2, June 1988, pp 171-179.

13. Timmappaya, A. "Medical Audit." Hospital Administration, March 1968, pp 112-115.

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STREAMLINING PHARMACY PURCHASES IN A VOLUNTARY HOSPITAL

(Paper prepared for presentation at the 1989 National Hospital Convention of the Indian Hospital Association on 'Hospital and Drugs' to be held at the Lady Hardinge Medical College, New Delhi on 11 - 12 November 1989.)

by

Dr. Mario C. de Souza, MBBS, FIIM
Deputy Hospital Administrator*

and

Sr. Mary Clare, M. Pharm
Chief Pharmacist*

*St. John's Medical College Hospital
Sarjapur Road,
Bangalore 560 034.

I. INTRODUCTION

A Pharmacy in a voluntary hospital is of major concern to every Hospital Administrator as, beyond ensuring the continuous availability of prescribed drugs, it is an important cost and revenue centre. While its 'profits' are critical for subsidizing the non-income generating departments of the hospital - the higher the surplus the better - drugs cannot be dispensed at prices greater than the specified maximum retail rates. In fact, in keeping with the charitable image of such hospitals, drugs should be priced lower than that prevailing at for-profit retail drug stores. In order to achieve the above conflicting objectives simultaneously - generating profits despite under-pricing - the Pharmacy must procure good quality drugs at economical rates and further decrease costs by strictly adhering to concepts of materials management.

This paper describes how policies and procedures have been revamped to streamline purchase of drugs and medical/surgical supplies in a large teaching hospital in the voluntary sector so as to ensure higher financial surplus to subsidize free and concessional care. The case study documents the experiment, problems encountered and results obtained.

II. ORGANIZATIONAL SETTING

The study was undertaken at St. John's Medical College Hospital, Bangalore which has a large out-patient department catering to over 700 patient visits per day as also an in-patient facility with 781 beds located in the 17 general wards and 197 beds in the 9 private wards (as on 31-12-1988). Beyond care being rendered at subsidized rates in the general wards, about 1/3rd of patients admitted to these wards are given totally free care while an almost equal number are given concessions on the total bill as assessed and recommended

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by the 4 medico-social workers. Since no Government grants are received by the institution, the financial deficit incurred because of the above free and concessional care (Rs.56.48 lakhs out of a total recurring expenditure of Rs. 646.98 lakhs in 1988-89 (15 months audit year)) is met through an endowment fund established for the purpose as also through revenues in excess of expenditures generated by the Pharmacy, Diagnostic Services, Private Wards and Operation Theatres.

In attempting to augment resources to finance charity care, special attention was given to the Pharmacy in view of its tremendous potential to generate surpluses. The Pharmacy dispensing section at St. John's Medical College Hospital is well established and stocks all the drugs required for patient care and for hospital use. Despite the constraint of having to keep the dispensing rate of drugs below the approved maximum retail rates and below the rates prevalent at for-profit retail drug stores (because of the charitable image of the hospital), the Pharmacy, after accounting for salaries and all other expenses, generated a surplus of Rs. 14.42 lakhs in 1988 (proportionately calculated from 15 months). Limited by the constraints of under-pricing and a price inelasticity of demand, the only option available for augmenting the surplus was to apply the below listed cost-containment measures to procurement (and stocking) of drugs and medical/surgical supplies purchased directly by the Pharmacy as also by the Central Stores Purchase Department.

III. INTERVENTIONAL PROCESS AND RESULTS

1. ABC Analysis: In January 1989 an 8-digit code was developed for drugs stocked by the Pharmacy and these were categorised in a manner as done in the Monthly Index of Medical Specialities (MIMS India). The average unit purchase cost and quantity of each formulation consumed (dispensed out) in 1988 were recorded. These data were fed to the computer and the ABC analysis report printed out in March 1989 revealed the following:

Category	No. of formulations	%	Consumption Value	%
A	89	10.83	Rs. 46,65,981.77	69.82
B	165	20.07	Rs. 13,45,277.05	20.13
C	568	69.10	Rs. 6,71,376-91	10.05
	822	100.00	Rs. 66,82,635-73	100.00

2. Reconstitution of the Drugs and Therapeutic Committee: The Drugs and Therapeutic Committee was reconstituted in March 1989 with 7 ex-officio members and 5 senior clinicians commanding high

credibility. Two important objectives of the Committee included:

- preparation of a hospital formulary listing the drugs to be prescribed, stocked and dispensed in the hospital;

- selection of suppliers, short-listing of brands, placement of major orders.

At its first meeting on 17-3-1989, the Committee was apprised of the ABC analysis exercise that had been undertaken. The members discussed and approved:

- inviting quotations for 'A' category drugs and related products from reputed manufacturers;

- selection and stocking of only one brand of the required drug formulation based on cost, user preference, reputation of the brand and company's reputation; it was also recommended that effectiveness of different brands of an antibiotic be tested microbiologically for in-vitro sensitivity, though bio-availability, in-vivo effectiveness and sensitivity to specific strains of organisms could not be tested in the hospital situation;

- it was recommended that clinicians be advised to use generic name of drugs while prescribing;

- the Pharmacy was authorised to stock only one brand of each drug formulation as selected by the Committee and to dispense this brand irrespective of the brand actually prescribed by the clinician;

- the Pharmacy should not stock banned and bannable formulations as advocated by the Voluntary Health Association of India, unless the respective formulation was essential and no alternative existed.

A decision was also taken to circulate to the heads of Clinical Units the list of drugs stocked in the Pharmacy and to invite from them suggestions for:

- deleting/adding drug formulations to the list;
- brands preferred by the respective clinical unit;
- exclusion of specific brands based on past experiences of non-effectiveness, adverse reactions, etc.

3. Brand Selection and Ordering: Accordingly a list of 166 drug formulations was prepared along with the approximate annual requirement, and quotations were invited from 60 manufacturers, distributors and stockists of repute. The firms were advised to offer their lowest effective unit rate for each formulation after taking into account free/promotional offers, quantity and payment discounts, excise, central and state sales tax,

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freight and insurance. The firms were also required to give an undertaking to bind their prices for one year, i.e. uptil 30-6-1990. These data were fed to the computer and comparative statements generated for each product. Appendix I lists out a sample comparative statement, the current purchase cost of the respective drug and the savings achieved for that formulation through this exercise.

The comparative statements were reviewed by the Drugs and Therapeutic Committee over several meetings and based on the guidelines listed above, one brand of each drug was selected for ordering while a second brand was short-listed as a reserve. In the case of few products where product specifications were not strictly comparable (eg. vitamin - iron preparations), more than one brand was selected. Appendix II lists out the drug formulations considered by the Committee, the unit rate of the drug as was being purchased at that point in time, the company selected and new rate applicable for the same drug as per the tender. It may also be noted that none of the companies/brands selected are substandard.

The order, in the form of a committed volume contract, included the following safeguards:

- specification of drug formulation, strength, pack size, approximate quantity required, unit rate inclusive of excise and taxes;

- delivery at hospital premises;

- monthwise delivery schedule, the quantity to be supplied each time dependent on the economic order quantity;

- fixation of price for a period of 1 year, and clause prohibiting revision in price for any reason whatsoever;

- provision for decrease in quantity by 25% based on consumption pattern;

- provision for purchase of additional requirements of the same product at the same specified price;

- name and particulars of third party if supply was to be effected by distributor/stockist;

- commitment to pay within 1 month;

- in case of delay in supply, provision to purchase similar product from some other source and charging of the difference in amount to the firm;

- in case of defective supply, provision to take back consignment and effect immediate replacement, cancellation of order;

- confirmation by firm of above terms and conditions.

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The experiment achieved the following results:

- purchase planning and placement of a single order for a product with predetermined stock replenishment schedules;

- selection of a single brand acceptable to clinicians, thus cutting down on multiple orders, duplicate inventory, stocking costs;

- fixation of prices for the whole year thus preventing price escalations and increase in purchase costs;

- savings because of committed volume contracts and inter-firm competition; as can be seen from Appendix II, without this exercise, at current rates, the hospital would have spent Rs.55.84 lakhs for purchase of these A category and related drugs; through this process, the projected purchase cost was brought down to Rs. 43.95 lakhs, effecting substantial savings of Rs.11.89 lakhs for free and concessional care at the hospital.

- these savings were possible without any negotiation of price with the respective firms; further savings are likely in future years because of the credibility of the hospital, its purchase policy becoming known, inter-firm competition, quantity discounts, etc.

4. Group Purchasing: In order to contain costs, the Central Stores Purchase Department of the hospital also has been exercising controls on purchase of major items of expenditure relating to medical/surgical supplies (eg. adhesive tape, plaster of paris bandage, cotton, guaze, x-ray films, etc.). Through purchase planning, forcasting of demand, inviting quotations, intense negotiations with competing firms, seeking quantity and payment discounts, and placement of committed volume contracts (or rate contracts where demand could not be accurately forecasted), substantial savings have been effected. Appendix III shows the decrease in the purchase cost of one such item over the years as compared to the officially published wholesale distributors rate applicable for sale in bulk to hospitals. In attempting to decrease costs still further, a meeting was convened on 21-1-1989 with representatives of two other large hospitals in the voluntary sector. Appendix IV shows the quantity purchased in 1988 and the difference in rates then being paid by the three hospitals for the same products. A decision was taken to pool the requirements of the three hospitals and try out group purchasing on an experimental basis. Further negotiation with competing firms ensured additional price discounts and a combined order was sent on behalf of all three hospitals including the following provisions:

- all safeguards cited above for placement of a committed volume contract;

- delivery to be made to the individual hospital consignee departments as per the respective delivery schedules spread throughout the year;

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- assurance of payment by the individual hospitals within 2 weeks of receipt of the consignment.

5. Other Stock Control Measures: Beyond streamlining purchase of drugs and medical/surgical supplies, inventory costs were minimized by fixation of reorder level and minimum stock level for each item, identification of non-moving drugs and follow-up action with doctors and/or firm, and increasing turnover of inventory by decreasing the value of closing stock.

IV. PROBLEMS ENCOUNTERED

1. Skeptism: Resistance was initially faced from clinicians not involved with the short-listing of brands. This was further precipitated by disinformation spread by representatives of firms which had not been successfull in obtaining orders for their key products. Clinicians had therefore to be convinced that:

- low cost does not infer poor quality just as high cost drugs do not automatically assure good quality; with the system of loan licencing, drugs from reputable firms can be manufactured by other lesser known firms; further, higher costs are invariably due to royalty on patents, expensive packing materials, sales promotional expenses, etc.;

- the hospital need not stock multiple brands of the same product to suit the individual whims of clinicians; representatives of clinicians, keeping in mind certain objective criteria, can agree on a single brand of choice;

- clinicians insisting on specific brands will be required to justify their requests supported with technical data to the Drugs and Therapeutic Committee;

- immediate action will be taken on receiving reports regarding non-effectiveness, spurious supplies, quality, etc.

2. Freezing of Prices: Pharmaceutical firms have not been willing for price fixation for one year in view of possible changes in Government policies, increase in raw materials costs, inflation, etc. Hence, although they have accepted the orders and executed supplies, the public sector firms and a few others have communicated their inability to bind their prices. Faced with the threat of being blacklisted, and the possibility of having to bear the difference in cost if the drug is procured from some other source in accordance with the terms of the order, it is likely that any general price revision will not apply to the drugs ordered as above. The hospital has been successful in the past in enforcing the terms of such orders (including not yielding to upward rate increases consequent to change in statutory duties) for medical/surgical supplies being purchased under committed volume contracts. The private firms seem likely to oblige though the public sector companies may not be able to overcome the bureaucracy in the long run and may lose out on future orders.

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3 Disadvantages of Group Purchasing: Group purchasing necessitates that members of the group come to an agreement on a single brand of a product so as to avail of quantity discounts possible through bulk orders. This can be a difficult process as individual hospitals often have discrete preferences regarding brands, suppliers, etc. Dissonance created by suppliers and mistrust with regard to the interests of the person coordinating the purchase can further create problems in arriving at an objective decision. Further, non-compliance of the terms of the contract (especially payment delays) by member hospitals can make a group purchasing endeavour infructuous.

V. CONCLUSION

The case study documents the attempts made by St. John's Medical College Hospital to effect substantial savings to be utilized for charity care by bringing down the purchase cost of drugs and medical/surgical supplies. These strategies are not in itself innovations as, since several decades, government hospitals have conformed to the system of tenders and rate contracts by which firms and their products are screened by Committees and procurement rates fixed for a defined period. The system has not worked as well as it should have because of vested interests at various levels which have allowed suppliers to alter the quality, quantity, price and other terms of the contract to the detriment of the hospitals. However, in voluntary and charitable hospitals across the country, even though constraints of money exist, purchases have not been streamlined as suggested above. The experiment is but one example of what is possible in the Indian context, particularly when resources are to be used as imaginatively as possible to deliver efficient and effective care at an economical rate to the greatest numbers - the primary objective of any hospital in the voluntary sector.

Appendices I - IV follow.

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Appendix I

St. John's Medical College Hospital

DRUG TENDER EVALUATION REPORT

Drug Name: Ampicillin Strength: 500mg Drug Code: 07010305
Presentation: Vial Annual Requirement: 55000 Curr.Purch.Cost: Rs.8.22 (Aristo)

Company/ Trade Name	Amp. of Distill. Water*	Unit Rate	Discount	CST/KST %	Effect. Rate
1. Cadila Ltd. Capicillin	No	4.50		4+10	5.15
2. Lyka Labs. Limited Ampilin	No	5.46		4+10	6.25
3. Indian Drugs & Pharmaceuticals Broacil(Ampicillin)	No	5.60		10	6.16
4. Mohan & Co Kampibiotic	No	4.54		10	4.99
5. Ranbaxy Roscillin	Yes	5.15		10	5.67
6. Aristo Aristocillin	Yes	6.45	25 free/100	10	5.32
7. Biochem Ampicillin Sodium	No	6.20		4+10	7.09
8. HAL Ampicillin	No	5.63	20 free/100	10	4.95
9. Unique Ampicillin	No	9.61		4+10	10.99
10. KAPL Ampicillin	No				5.69
11. Pharmindia Synthocilin	No	5.90		4+10	6.75

*Cost of Distilled Water ampoule: 0.40 p.

		Unit Rate	Total Value	Saving
Aristocillin :	Current	Rs. 8.22	Rs. 4,52,100	
	Proposed	Rs. 5.32	Rs. 2,92,600	Rs. 1,59,500

54.5% discount

Appendix II

LIST OF DRUGS SCRUTINIZED BY DRUGS AND THERAPEUTICS COMMITTEE

Comp Qn. Page	Formu-lation	Present-ation	Qty.	Existn. Rate (Rs) 1988-89	Revised Rate (Rs) 1989-90	Savings achieved (Rs)	Company Selected
1	Gelusil	tab	6,000	0.13	0.05	480.00	Parke Davis
2	Gelusil	liq 170 ml.	3,672	10.34	5.83	16,160.72	Parke Davis
3	Gelusil	liq 400 ml.	300	11.02	11.02	0.00	Parke Davis
4	Gelusil MPS	tab	8,400	0.13	0.13	0.00	Parke Davis
5	Gelusil MPS	liq 170 ml.	5,870	9.17	9.15	117.40	Parke Davis
6	Gelusil MPS	liq 400 ml.	2,073	17.99	17.99	0.00	Parke Davis
8,9	Ranitidine HCl	tab 150 mg.	75,345	1.77	1.42	26,370.75	Astra-IDL
10,	Ranitidine HCl	tab 300 mg.	1,045	3.56	2.67	930.05	Themis
12	Ranitidine	amp 50 mg.	18,220	3.56	1.84	31,338.40	Gufic
14	Dipyrida-mole	tab 25 mg.	4,560	0.19	0.19	0.00	German Remedies
15	Dipyrida-mole	tab 100 mg.	24,625	0.67	0.67	0.00	German Remedies
16	Nifedipine	cap 5 mg.	37,560	0.36	0.19	6,385.20	Pharmindia
17	Nifedipine	cap 10 mg.	53,320	0.43	0.27	8,531.20	Pharmindia
18	Nifedipine	cap 20 mg.	28,400	0.66	0.56	2,840.00	Cadila
19	Clonidine	tab 100 mg.	73,480	0.43	0.18	18,370.00	German Remedies
23	Streptoki-nase	vial 750000 I.U.	65	1215	900	20,475.00	Kabivitrum
24	Pentazoci-ne lac.	inj 30mg/ml	19,225	3.22	3.09	2,499.25	Biochem
_)	Pentazoci-ne HCl	tab 25 mg.	3,025	1.71	1.71	0.00	Ranbaxy
27	Paraceta-mol	tab 500 mg.	113,020	0.19	0.11	9,041.60	IDPL
28	Paraceta-mol	syp 60 ml.	2,330	4.90	3.41	3,471.70	Unique
29	Dextro-propoxy phene analgesic diazepam	65 mg/ 350	75,775	0.73	0.63	7,577.50	Wockhardt
30	Phenobar-bitone	tab 30 mg.	63,600	0.11	0.04	4,452.00	May & Baker
31	Phenobar-bitone	tab 60 mg.	99,000	0.15	0.07	7,920.00	May & Baker

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Appendix II (Contd.)

Comp Qn. Page	Formulation	Present-ation	Qty.	Existn. Rate (Rs) 1988-89	Revised Rate (Rs) 1989-90	Savings achieved (Rs)	Company Selected
32	Diazepam	amp 10mg/ml	7,500	1.78	1.50	2,100.00	IDPL
33	Diazepam	tab 2mg	8,100	0.20	0.18	162.00	Roche
34	Diazepam	tab 5mg	63,000	0.29	0.14	9,450.00	IDPL
35	Diazepam	tab 10mg	17,300	0.43	0.36	1,211.00	Ranbaxy
37	Imipramine HCl	tab 25mg	44,000	0.55	0.34	9,240.00	Torrent
38	Imipramine HCl	cap 75mg	6,720	1.21	0.87	2,284.80	Torrent
39	Carbamazepine	tab 100mg	3,200	0.78	0.63	480.00	Torrent
40	Carbamazepine	tab 200mg	13,100	1.49	1.20	3,799.00	Torrent
41	Ibuprofen	tab 200mg	30,000	0.26	0.22	1,200.00	Boots
42,43	Ibuprofen	tab 400mg	96,000	0.45	0.44	960.00	Boots
44	Ibuprofen	tab 600mg	1,070	0.64	0.64	0.00	Boots
47	Dexamethasone	Vial 8mg/2ml	6,500	5.28	3.85	9,295.00	IDPL
48	Dexamethasone	dr 2.5ml	532	5.74	6.45	- 377.72	Merind
49	Dexamethasone	tab 0.5mg	5,640	0.21	0.27	- 338.40	Merind
50	Hydrocortisone Sod Succ	vial 100mg	8,210	12.51	8.92	29,473.90	Lyka
51	Prednisolone	tab 5mg	1,28,600	0.29	0.18	14,146.00	IDPL
57	Frusemide	amp 20mg/2ml	24,135	1.11	0.92	4,585.65	IDPL
58	Frusemide	tab 40mg	60,000	0.16	0.16	0.00	Hoecst
59	Nalidixic acid	tab 500mg	7,560	2.49	1.30	8,996.40	Micro
60	Amikacin Sul-phate	vial 100mg	580	15.06	11.43	2,105.40	Pharmindia
61	Amikacin Sul-phate	vial 250mg	850	31.11	22.88	6,995.50	Pharmindia
62	Amikacin Sul-phate	vial 500mg	350	53.10	45.76	2,569.00	Pharmindia
63,64	Amoxycillin	cap 250mg	12,985	2.00	1.20	10,388.00	BPRL
65	Amoxycillin	cap 500mg	29,485	3.26	2.30	28,305.60	BPRL
67,68	Amoxycillin	syr. 60ml	2,125	15.04	9.07	12,686.25	Unique
69	Ampicillin	vial 500mg	55,000	8.22	5.32	159,500.00	Aristo
70	Ampicillin	cap 250mg	18,400	1.16	0.72	8,095.00	HAL
71,73	Ampicillin	cap 500mg	88,300	3.20	2.20	88,300.00	Aristo
74	Ampicillin	syr 40ml	600	9.01	6.78	1,338.00	Aristo
75	Chloramphenicol	vial 1gm	4,415	10.49	9.35	5,033.10	Fairdeal
76	Chloramphenicol	cap 250mg	27,000	0.81	0.50	8,370.00	IDPL
79	Chloromycetin	syr 60ml	140	10.18	6.60	501.20	HAL
80	Cefazoline Sodium	vial 500mg	4,500	23.46	21.12	10,530.00	Cadila

Appendix II (Contd.)

Comp Qn. Page	Formulation	Present-ation	Qty.	Existn. Rate(Rs) 1988-89	Revised Rate(Rs) 1989-90	Savings achieved (Rs)	Company Selected
81	Cefazoline Sodium	vial 1g	1,600	42.24	31.78	16,736.00	HAL
82	Cefazoline Sodium	vial 250mg	60	42.23	27.46	886.20	Biochem
83	Cefotaxime Sodium	vial 1g	585	145.14	107.54	21,996.00	Pharmindia
84	Cephalexin	cap 250g	98,160	3.20	2.53	65,767.20	Lyka
86	Cephalexin	cap 500mg	17,000	6.02	5.12	15,300.00	Cadila
88	Cephalexin	syr 40ml	1,200	14.19	12.66	1,836.00	Searle
89	Cloxacillin	vial 250mg	260	4.85	4.50	91.00	Lyka
90	Cloxacillin	vial 500mg	6,480	6.59	6.11	3,110.40	Lyka
91	Cloxacillin	cap 250mg	20,300	1.38	1.28	2,030.00	Lyka
92	Cloxacillin	cap 500mg	29,440	2.65	2.46	5,593.60	Lyka
93	Cloxacillin	syr 24g/ 125 mg	420	9.51	8.82	289.80	Lyka
94	Doxycycline	cap 100mg	14,640	1.92	1.56	5,270.40	Unique
95	Erythromycin	tab 250mg	37,560	2.09	1.42	25,165.20	HAL
96	Erythromycin	syr 60ml	800	11.33	8.05	2,624.00	HAL
97	Gentamycin	vial 80mg	59,800	4.50	4.25	14,950.00	Biochem
98	Gentamycin	eyedrop 3ml	924	3.77	2.77	924.00	HAL
99	Norfloxacin	cap 400mg	5,800	7.46	5.47	11,542.00	Pharmindia
100	Benzylpeni-cillin	vial 5L	190	2.84	2.73	20.90	IDPL
101	Benzylpeni-cillin	vial 10L	63,000	4.06	3.57	30,870.00	HAL
102	Rifampicin	cap 150mg	35,000	0.98	0.68	10,500.00	IDPL
103	Rifampicin	cap 450mg	62,400	2.71	1.96	46,800.00	IDPL
104	Cotrimoxazole	amp 5ml	1,260	4.41	1.76	3,339.00	Cadila
105	Cotrimoxazole	amp 30ml	250	5.50	3.36	535.00	Roche
106, 107	Cotrimoxazole	tab 80mg/ 400mg	130,000	0.60	0.39	27,300.00	KAPL
109, 110	Cotrimoxazole	tab 160mg/ 800mg	51,900	1.11	0.86	12,975.00	Pharmindia
111, 112	Cotrimoxazole	syr 50ml	1,460	7.10	5.11	2,905.40	BPRL
113	Ethambutol	tab 200mg	5,040	0.37	0.31	302.40	HAL
114	Ethambutol	tab 400mg	4,800	0.68	0.52	768.00	KAPL
115	Ethambutol	tab 600mg	4,500	0.99	0.85	630.00	Cadila
116	Ethambutol	tab 800mg	28,400	1.31	1.12	5,396.00	Cadila
117	Ethambutol	tab 1000mg	1,200	1.61	1.26	420.00	Cadila

Appendix II (Contd.)

Comp Qn. Page	Formulation	Present-ation	Qty.	Existn. Rate(Rs) 1988-89	Revised Rate(Rs) 1989-90	Savings Achieved (Rs)	Company Selected
118	I.N.H.	tab 3400ng	42,300	0.14	0.12	846.00	IDPL
119	Pyrazinamide	tab 500ng	10,600	1.46	1.14	3,392.00	HAL
120	Pyrazinamide	tab 750ng	10,400	2.19	1.67	5,408.00	Lyka
121	Metronidazole	vial 100ml	13,310	8.55	7.74	10,781.10	Unique
122	Metronidazole	tab 200ng	9,720	0.32	0.17	1,458.00	KAPL
123	Metronidazole	tab 400ng	34,200	0.57	0.37	6,840.00	Eros
124	Metronidazole	syr 60ml	250	9.08	8.09	247.50	Unique
125	Mebendazole	tab 100ng	19,480	8.88	8.67	4,090.80	Cadila
126	Mebendazole	syr 30ml	425	6.62	5.24	586.50	IDPL
128	Tonoferon	liq 170ml	1,180	14.06	14.06	0.00	East India
129	Becadexamine	cap	102,240	0.40	0.38	2,044.80	Glindia
130	Ostocalcium	tab	211,000	0.13	0.13	0.00	Glindia
131	Ostocalcium	syr 160ml	220	6.52	6.52	0.00	Glindia
132	Ascorbic acid	tab 100ng	13,200	0.10	0.07	396.00	Eros
133	Ascorbic acid	chew.tab 500ng	36,880	0.58	0.48	3,688.00	Ace Chemi-cals
134	Ascorbic acid	dr 15ml	165	7.18	6.67	84.15	IDPL
136	Becosules	cap	57,360	0.32	0.32	0.00	Pfizer
137	B Complex forte with C	tab	48,900	0.48	0.35	6,357.00	IDPL
138	Salbutamol	inhaler 200 m.d	330	24.22	22.46	580.80	Cipla
139	Salbutamol	tab 2mg	31,200	0.33	0.11	6,864.00	Fairdeal
140	Salbutamol	tab 4 mg	57,600	0.49	0.17	18,432.00	Fairdeal
141	Salbutamol	syr 112ml	290	9.33	8.65	197.20	Cipla
142	Salbutamol	expectorant 110ml	140	7.30	6.80	70.00	Cipla
143	Pyridine	500mg/ 20ml	400	72.30	72.30	0.00	Sumitono
145	Povidone iod-ine	sol. 50ml 1%	620	8.92	8.17	465.00	Wockhardt
146	Povidone iodine	sol. 500ml 5%	960	70.08	68.64	1,382.40	Unique
147	Povidone iodine	oint 10g ment	1,040	10.75	5.31	5,657.60	Noel Pharm
148	Povidone iodine	oint 20g ment	830	12.53	10.38	1,784.50	Wockhardt
153	Chymoral forte	tab	8,800	2.11	1.94	1,496.00	Martin & Harris
154	Detol anti-septic	sol. 5 ltr.	565	138.38	115.00	13,209.70	Fairdeal

Appendix II (Contd.)

Comp Qn. Page	Formulation	Present-ation	Qty.	Existn. Rate (Rs) 1988-89	Revised Rate (Rs) 1989-90	Savings achieved (Rs)	Company Selected
158	Dextrose 5%	I.V. 540ml	30,348	8.85	6.60	68,283.00	Sri Sai
159	Dextrose 10%	I.V 540ml	5,120	9.90	9.35	2,816.00	Sri Sai
160	Dextrose 5% Na Cl 0.9%	I.V. 540ml	27,820	8.25	6.60	45,903.00	Saibaba
164	Electrolyte P	I.V 540ml	3,780	9.72	8.45	4,800.60	Core Parenterals
165	Sodium Chloride 0.9%	I.V. 540ml	5,000	8.25	6.60	8,250.00	Sri Sai
166	Peritonial Dialysis	Sol. 1L	3,400	15.73	15.73	0.00	Sellwell
169	Ringer Lactate	I.V. 540ml	4,280	11.00	7.62	14,466.40	Ace Chemicals
170	Mannitol 20%	I.V. 350ml	1,092	17.32	15.40	2,096.64	Sri Sai
		Total value:		5583993.65	4395399.01		
						Rs.1188594.64 (21%)	

Note: Beyond the lower limit of cost-reduction of Rs.11.89 lakhs, price escalations during the year will not be permitted, thus effecting further savings to be utilized for charity care.

Appendix III

Statement showing Savings possible through Planned Purchase Contracts

JOHNSONPLAST

(Adhesive tape USP, 7.5 cms x 10 metres, per roll, packed in 4 rolls per tube)

Year	Quantity consumed by St. John's Medical College Hospital (in Rolls)	Unit Rate (incl. of excise and taxes) as purchased by Hospital (in Rupees)	Wholesale list price as published by M/s. Johnson & Johnson + 4% CST + 10% KST (in Rupees)	Savings Achieved by Hospital (in Rupees)	Remarks
1985	1064	39.60	NA		Purchased as and when required from authorised dealer at hospital rate
1986	1384	42.77	42.61	- 221	Purchased as and when required from authorised dealer at hospital rate
1987	1580	36.76	42.61	9,243	Committed Volume Contract begun
1988	1760	33.28	42.61	16,421	Intense negotiations with competitors for placing contract
1989	2400*	31.62	47.19	37,368	Group purchasing begun.

NA: Not available. * 1992 for 10 months plus forecast for 2 remaining months.

Appendix IV

Comparative Statement showing Quantity Purchased and Unit Rate paid in 1988 for similar products by Three Voluntary Hospitals in Bangalore

Item	Specifications	St. John's Medical College Hospital		Hospital 'X' (a large hospital)		Hospital 'Y' (a medium sized hospital)	
		Quantity	Unit Rate	Quantity	Unit Rate*	Quantity	Unit Rate*
1. Adhesive tape	4 rolls per tube 7.5 cms x 10 mts.	440	133.10	60	164.10	170	166-00
2. Plaster of Paris bandage	a tin of 10 rolls						
	10 cms x 2.7 mts.	125	123.20	120	134.75	60	157.00
	15 cms x 2.7 mts.	200	148.50	360	214.78	40	221.00
3. X-ray films	polyester base, 50 sheets per packet						
	8" x 10"	250	436.72	NA	489.60	50	493.60
	12" x 12"	250	655.08	NA	726.85	65	718.68
	15" x 12"	250	982.62	NA	1073.10	120	1027.55
	14" x 14"	100	1059.05	NA	1119.35		
	17" x 14"	125	1176.88	NA	1237.70	30	1352.00

NA : Data on quantity of X-ray films used not available.

* Prices fluctuated during the year. Amounts mentioned in table reflect average/recent rates paid in 1988 by the respective hospitals.