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TECHNICAL DISCUSSIONS:

HEALTH SYSTEMS MANAGEMENT

CONTENTS

HEALTH SYSTEMS MANAGEMENT
(Agenda item 7)

1. INTRODUCTION

The Regional Committee, at its Forty-first Session, had decided to have Technical Discussions on the subject of "Health Systems Management" at its Forty-second Session, and that the subject of "Hospital Management" would be discussed as one of the technical papers. One of the Member States proposed that "Health Legislation" would be the topic of another technical paper.

The present document, which looks into "Health Systems and Their Management" covers all the above three topics, reviewing the different aspects of the health system concept and its management, and the queries that those concerned may have in this respect.

In fact, a discussion on health systems at this stage, is timely. Despite the reorientation of health care provision following the Declaration of Alma-Ata, a large number of countries worldwide still have limited or poor access to health care facilities, which, if at all available, are mainly concentrated in urban areas. Existing facilities mainly provide curative health care with little attention to the protection and promotion of health, including preventive care. In addition, the involvement of other sectors interested in health, as well as the involvement of the community is minimal. All these factors have drawn the attention of governments and international agencies, such as WHO, to the need for developing health systems that adequately respond to community health needs and problems, through the adoption of comprehensive health care systems based on primary health care.

A system in general refers to a number of related parts that are dependent on each other and together achieve a set of goals and objectives. Accordingly, a health system can be defined as a combination of policies, resources, organizations, functions and management structures, the interaction of which results in the delivery of health services to the community. In this definition, the study of a health system concerns itself with the pattern and methods of delivery of health care, as well as with the structure, functions and management of this system.

The ultimate objective is to achieve an integrated health system where the organization of services and assignment of responsibilities and functions within the health system succeeds in addressing the health needs and priorities of the community served, and obtains the commitment and collaboration of all the different components of the system to achieve the desired goals and objectives.

However, it is not possible to have a uniform or standard type of integrated health system that may be applicable in all countries.

2. DETERMINANTS OF A HEALTH SYSTEM

Different countries are at different stages of development, and as such, have different political inclinations and different types of social, physical

and cultural environments. These determinants affect and decide the type of health system needed and the extent and quality of health provision for each population. The major determinants of a health system are given below.

2.1 Environmental and demographic

The physical environment affects the health system through its geographical location, rainfall, temperature, humidity and other climatic factors. The type of housing, water supply and the degree of atmospheric pollution—all have an influence on the patterns of disease development and control. All the above factors have both positive and negative effects on health and thus dictate the type of comprehensive health care system to be established.

It is clear that a health system established in a country where the population is limited, the land surface small and the roads and means of transportation easily accessible, would greatly differ from that established in a country where the population level reaches tens of millions, the land surface is very large, the roads inaccessible and transportation lacking. The system that is suitable for large urban conglomerations would be unsuitable for nomads or small communities living on mountains (in Afghanistan or the Republic of Yemen, for instance) or in remote islands (such as in Oman or the Republic of Yemen), in view of the fact that a health system is supposed to cover the whole population. Similarly, health problems and consequently the health system found in a country with a large number of imported male labour in the productive age (as in some of the Gulf countries), would vary from the health system established in a country having high rates of newborns and of mortality and where approximately half the population is below 15 years of age (such as in Afghanistan and the Republic of Yemen), or a country with a large conglomeration of emigrants from neighbouring countries (such as Djibouti and Sudan).

2.2 Political

Policies and directions are of great importance in determining the type of health care system required. The type of political system determines, in many countries, whether to have free full health care or fee-for-service health care. It also decides whether the public or private sector should be the main provider of health care. Different types of social security and cost-sharing mechanisms have been developed and adopted by different governments following various political ideologies and beliefs.

Administrative divisions in countries play an important role. The health system in a country with limited surface and population (such as Bahrain or Qatar) will certainly differ from the health system established in a country such as Pakistan, where more than 130 million people live, and which is subdivided into provinces, forming a federation, with a high degree of decentralization and responsible for the delivery of most of the health services.

2.3 Scientific and technological

New developments in science and technology affect all levels and components of a health care system, extending from diagnosis and treatment to prevention and control, and ultimately to health protection and promotion. They affect all types of health care facilities. Technological developments outside the health sector affect the development of health systems as well. Notable examples are the developments in communications and their effect on accessibility of health services; advances in agriculture and their impact on the provision of food and improved nutrition, and the contribution of environmental health improvements to disease prevention and control.

2.4 Cultural and social

The impact of some components of the social entity and cultural structure on the health system is not to be ignored.

Religious bodies have played and continue to play a crucial role in health systems. They have contributed greatly to the establishment of health care institutions, particularly hospitals and clinics. They have had a strong influence on the adoption of suitable attitudes as regards major health issues, notably abortion, methods of contraception, euthanasia and organ transplantation. Religious teachings and behaviour have had an impact on the degree to which people indulge in extramarital sex and its relationship to sexually transmitted diseases, notably AIDS, as well as on the abuse of alcohol and drugs.

Nongovernmental organizations play an important role in the implementation and follow-up of the activities of health care institutions. They have stimulated participation in the capital and recurrent financing of health care facilities, in addition to establishing such facilities at their own expense.

Family solidarity continues to be an important element in health care. The structure and role of the family have a wide-ranging effect on health systems. The extended family in developing countries is still a major source of support in many cases of dependence such as sickness, child birth, death and unemployment. The family provides important care services to the elderly, and to women in times of pregnancy and in childbirth, thus reducing their need for hospitalization.

Customs, traditions and beliefs have both positive and negative effects on health care. Taboos related to certain foods affect the health of children and pregnant mothers in some countries. On the other hand, the role of traditional healers in health systems should not be ignored.

2.5 Economic

The level of economic development is a major factor in determining the type of health care delivery system. Poverty leads to a crowded and unhealthy environment, poor nutrition, poor housing and poor hygiene. It is closely related to high rates of mortality and morbidity caused by communicable diseases, malnutrition, gastrointestinal infections, etc. On the other hand,

urbanization and better economic conditions brought about by industrialization do not completely solve the problems. They brought about higher rates of trauma, injuries, occupational health hazards, sexually transmitted diseases, alcoholism, and psychotropic substance and drug abuse. Alternatively, economic growth and development positively affect the number and quality of facilities, human resources, commodities and knowledge. A wealthy nation is expected to have adequate facilities, trained human resources and sufficient supplies and drugs which result in overall better health conditions for its people.

3. OBJECTIVES OF HEALTH SYSTEMS

Although health systems differ from country to country and have different functions and orientations, they all, as Aly Ben Al Abbas said about one thousand years ago, "aim at realizing health protection for healthy people and health recovery for ill people", or more specifically, advancing, protecting and promoting health and preventing diseases as far as the healthy are concerned, disease diagnosing and treating for the purpose of health recovery, as far as the ill people are concerned, and alleviating suffering in those cases when recovery is not expected. A health system may have secondary functions such as enhancing industrial or agricultural production through the improvement of the health of workers in factories and farms, and increasing national productivity, through improving the health of personnel and thus reducing absenteeism. Therefore, the investment role played by the health services should be emphasized. They should not be regarded as being simply resource-consuming.

4. COMPONENTS OF HEALTH SYSTEMS

A health system has five major components, namely: resources, organization, economic support, management, and delivery of services. These five components are interrelated as shown in **Figure 1.**

Particular health needs and problems determine the types and amounts of resources required by the health system. The organization of the health system, its management and financial support, all constitute the mechanism necessary for its operation. The output is the delivery of health services to the population and the outcome is hopefully good health, an improved health status and a healthier and happier population.

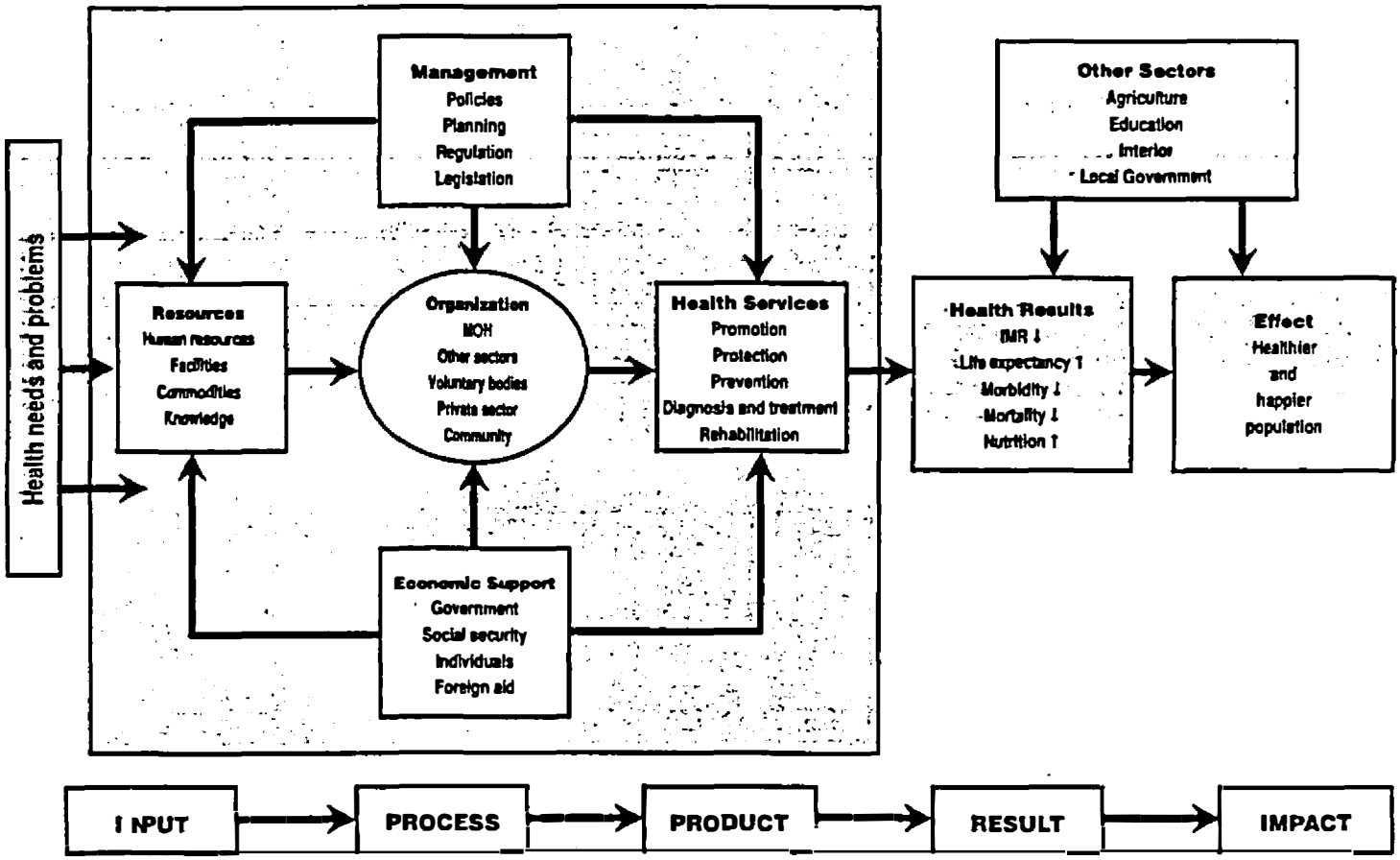
4.1 Resources of a Health System

The resources of a health system can be subdivided into: human resources, facilities, supplies, and knowledge.

(a) *Human resources*

The main resource of any health system is the human element. The different categories of human resources should work together as a team to enhance each other's input and output. Policies for human resources development must be translated into human resources plans indicating the

Figure 1. A HEALTH SYSTEM*



* Adapted from Roemer, Milton I. *National Health Systems of the World*, Part I. Oxford University Press. 1991

number and levels of the different categories of human resources, which can be broadly grouped into:

Physicians, namely graduates of schools of medicine, who are responsible for protecting and promoting health, and preventing, diagnosing and treating diseases. They often specialize after their basic studies in a branch of clinical or preventive medicine. This is also true of such health professionals as pharmacists, dentists, and social workers who acquire their skills and knowledge through formal university education.

Other professional practitioners include traditional healers, traditional birth attendants and religious healers, who acquire their skills and knowledge through apprenticeship. Many traditional healers are very experienced and can easily be absorbed into health care systems (as is the case in Pakistan).

Paramedicals (allied and auxiliary health personnel) are health personnel who do not form part of the above categories. They work side by side with physicians and other professional specialists, providing the necessary technical support. The most important of these allied personnel is the nurse. Different categories and types of nurses in different countries have different levels and types of training. Allied personnel also include laboratory technicians, X-ray technicians, physiotherapists, nutritionists, anaesthetic technicians, speech therapists and social workers. They also include medical assistants, pharmacy assistants, ophthalmic assistants and dental assistants. Both allied and auxiliary health personnel can either work under the supervision of a professional or work directly with a physician.

Support personnel work under some supervision from the other categories. These include community health workers who function at the primary health care level and are the first point of contact of the community with the health care system. Their training is community-based, community-oriented and aimed at solving the community's health problems. Some perform multipurpose health care activities, while others are engaged in only one activity, such as immunization. This category of support personnel includes public health workers who are generally responsible for environmental control activities and disease prevention, such as monitoring of water supply, sanitation, food quality control and rodent and insect control. It also includes administration and finance officers, transport officers, public relations officers, and others, who provide administrative, financial and logistical support for the health care system.

The major problems of human resources in any health care system include: (1) lack of clear policies; (2) absence of plans indicating the number, quality, training, distribution and supervision of different categories of human resources; (3) maldistribution of human resources, both quantitatively and qualitatively (for instance, they are concentrated either in cities where living conditions and work opportunities are better, or in hospitals, or they take up clinical specialization); (4) shortage or excess in one category or the other (the number of dentists was only 3 per 100 000) in seven countries of the Region, and the number of physicians exceeded that of the nurses and midwives in three countries, whereas in the Scandinavian countries, for example there are 25-45 nurses for every 10 physicians); (5) poor utilization of resources, often due to the imbalance of the numbers of different categories; a physician, for instance, would be undertaking activities that may be performed by a nurse, or both may be engrossed in administrative and clerical activities at the expense of their professional work; (6) poor career structure which leads health personnel to emigrate to other countries; (7) poor efficiency and effectiveness—often the result of unsuitable training programmes or poor supervision; (8) lack of continuing education; and (9) poor social and living conditions, particularly in rural and remote areas.

(b) Facilities

Health systems facilities include:

General ambulatory care facilities that provide care for ambulatory patients, and are usually accessible to the population and serving geographical areas with a defined population. They include various primary

health care institutions, polyclinics, dispensaries and outpatient departments in hospitals. They usually provide ambulatory care both in the preventive and the curative fields, referring cases needing special care to higher levels. School health clinics are another important source of ambulatory care for students and school children.

Private clinics also provide ambulatory care. Patients are seen by a general practitioner or a specialist and receive ambulatory treatment with referral for consultation or hospital care if necessary.

Specialized clinics which provide outpatient care for specific categories of the population or specific disorders, e.g. ophthalmology clinics, diabetes and hypertension clinics, paediatric clinics, maternity clinics, sexually transmitted disease clinics, etc. Patients are filtered through these clinics and those needing hospital care are referred to the appropriate specialized or general hospitals. Group practices are another form of special clinics in which specialists work together as a group.

Hospitals can be general hospitals or secondary and tertiary care specialized hospitals. Specialized hospitals can be maternity hospitals, mental hospitals, paediatric hospitals, chest hospitals, etc. In addition to their basic role in providing curative health care to cases referred from outpatient health care facilities, hospitals are used for the education of health personnel and for health research.

Long-term care facilities are mostly used for the elderly. They also serve chronically ill patients who need bed care for a long period and include facilities for tuberculosis and leprosy patients, mental health care, etc. Medical intervention is usually infrequent in such facilities, similarly as in nursing homes, old people's homes and convalescent homes. These facilities may be owned by the government, the private sector or voluntary organizations.

Environmental health facilities include facilities for the provision of clean water, proper sanitation, food quality control, environmental pollution control and insect and rodent control. Such facilities may be owned and operated by different agencies in collaboration with ministries of health. Local government authorities usually play a major role in the provision, operation and maintenance of such facilities.

(c) Commodities

These are chemical and biological instruments, tools and substances used for diagnosis, treatment, prevention, research and training activities. The most important of these commodities are supplies and equipment, drugs, and transport facilities.

With the advance of science and technology, these commodities have become more complex and sophisticated and require suitable and often specialized training for their operation and maintenance. In most developing countries these commodities are imported and consume an appreciable portion of the health budget.

(d) Knowledge

Systems of health statistical information, as part of the health system, are the principal source of health information. Technical and managerial knowledge is acquired through education, training, association and communication. Journals, books, pamphlets and the media convey a great volume of knowledge about health and disease. Research is an important source of new knowledge. A health system relies on knowledge disseminated through different means of communications. The acquisition of knowledge is a continuing process, though difficult in remote areas.

4.2 Organization of health systems

The organization of a health system is the systematic arrangement of resources with designation of responsibilities, channels of communication and authority amongst personnel working in the system, for the purpose of optimally attaining the objectives of this system.

There are two major types of health systems, namely public and private. This does not necessarily mean that only one of them would be found. They exist side by side in most countries, but in varying proportions.

(a) Public health sector

Public health sector includes: (1) the ministry of health; (2) the ministry of education in so far as school health and the education of specific categories of health personnel are concerned (this also covers universities which provide education and training to physicians and other health personnel, and teaching hospitals which provide new and advanced curative services and undertake health and medical research); (3) a number of other governmental agencies and ministries, providing direct medical services to the personnel working therein and sometimes their families, such as the armed forces, the police force and transport establishments; (4) the ministry of local government as far as the provision of local health care, environmental health activities and the safety of the environment are concerned; (5) other environmental health agencies; (6) social security programmes; (7) the ministry of agriculture in so far as food and nutrition programmes, as well as the prevention of zoonotic diseases are concerned; (8) the ministry of social affairs with respect to the health of the elderly, refugees, and social security activities; (9) the ministry of industry in so far as the manufacture of drugs, and the provision of supplies and equipment needed for health institutions are concerned.

The ministry of health is the main public provider of health care to the community. The responsibilities of the ministry of health vary from one country to another, but the main ones include:

Protective, promotive and preventive health services, particularly the control, elimination or eradication of communicable diseases, control of the environment, food quality/safety control, maternal and child health, nutrition services, accident prevention, health education, occupational health, health care of the elderly, etc.

Curative health services include the diagnosis and treatment of diseases in different types of primary health care institutions, outpatient departments and clinics in hospitals, polyclinics, specialized centres and institutions, as well as in the rehabilitation centres attached to them.

Training of different categories of health personnel. The major forms of such training include graduate, postgraduate, basic, post-basic and continuing education programmes.

Usually, the Ministry of Health manages and provides health care at three main levels: the central or national level; the intermediate level, often called governorate, regional, provincial or district level in different countries; and the peripheral or community level. Each level has specific functions. The central level is responsible for policy formulation, planning and direction. The intermediate level is responsible for implementation, management, supervision and follow-up activities. The peripheral level is responsible for the provision of health care to the community.

Voluntary bodies can be considered part of the public health sector and are usually oriented to the control of specific diseases, such as tuberculosis, leprosy and cancer. Others are interested in specific categories of the population, such as children, the elderly, women and orphans, serving their interests through charitable societies or organizations. *Professional associations, religious bodies and mass organizations* interested in health care can also be considered part of the public health sector, each serving the community or a specific group in its field of interest and relevance.

In view of the diversity of the sectors involved in health development activities, care should be given to the determination of the major roles and the contributions of each of them. Such policies should be periodically tested to evaluate their efficiency and input. Methods should be developed to ensure adequate collaboration between the sectors, such as the establishment of national health councils or interministerial committees. This collaboration is often weak at the central level but clear at the peripheral level, through local and popular councils. It is recommended that the sectoral collaboration mechanism cover the private health sector.

(b) Private health sector

The private health sector varies in its importance, responsibilities and function from one country to another. In the past, the private sector played a relatively minor role in the provision of health care in developing countries. With the escalation of health care costs, the private sector has acquired a more significant role, seeing that many governments are unable to provide free and full health care to their entire population. Private health sector is the basic provider of health services in countries such as Cyprus and Lebanon, and plays a relatively limited role in this respect in the Libyan Arab Jamahiriya and most of the Gulf states.

The major activities of the private sector are carried out by *private practitioners*, particularly physicians, dentists, physiotherapists, and others. Private practitioners usually serve those sectors of the population that can afford to pay the fees for their services. Other private sector

workers include pharmacists and workers in drugstores. They sell both prescription and over-the-counter drugs; often people describe their complaints and the pharmacist prescribes the drug without consulting a physician.

Traditional healers are very common in developing countries, particularly in rural areas. They charge relatively low fees and some have gained a wide reputation as effective healers. They often play an important role in the field of health care, such as traditional birth attendants (TBAs). In some countries, TBAs are given minimal training in hygiene, sterilization and infection control although they do an excellent job in maternal care (in Sudan, for example). In some other countries, such as Pakistan, traditional healers have been integrated into the government health services, particularly in the field of mental health.

4.3 Economic support

The level of economic development of any country is believed by some to be the most important factor determining the nature and type of its health system. An economically disadvantaged country, burdened with a multitude of health problems, such as rampant infectious diseases and malnutrition, naturally develops a health system quite different from that of an affluent country, concerned largely with chronic diseases and problems of the elderly.

The level of economic development has other influences on the health system. Most conspicuous is its impact on the supply and quality of health resources and technical competence. Less affluent countries usually suffer from lack of qualified personnel—mostly physicians, nurses and technicians—and from poorly constructed and equipped hospitals and clinics. Poor economic conditions are usually associated with low levels of general education and a less favourable health environment. All these factors affect both the quantity and quality of care provided to the population.

Another important effect of the level of economic development is its impact on the amount of national resources allocated for health. This amount, usually expressed as a percentage of the gross domestic product (GDP), determines the amount of the total expenditure on health. On average, countries with poor economy spend less than 2-3% of their GDP on health, while this figure reaches 8% or more in some other countries. The general average for countries of the Eastern Mediterranean Region is approximately 4.5%. Developing countries, hard pressed by the need for economic development and the interests of the foreign debts, allocate a small percentage of their budget to social programmes such as education and health. Some of these countries allocate less than 1-2% of their total national budget to health.

As there are great discrepancies in the absolute amount of the GDP and large differences in the numbers of the population, the parameter to be used, would be the *per capita* share in the health expenditure (estimated in American dollars for purposes of comparison with foreign countries, taking into consideration the rate of exchange of the local currency in relation to the American dollar). The *per capita* share in the expenditure of the Ministry of Health, in the least developed countries of the Region, was found to be less

than US$5, whereas it reached nearly 50 times as much in some Arab countries of the Gulf.

When reviewing the above figures, however, two points should be taken into consideration; the first is that these figures often indicate the expenditure of the Ministry of Health only. It is frequently difficult to assess the health expenditure of other government sectors, and few countries can assess their private health expenditure, as this necessitates studies (such as the family expenditure surveys conducted by national statistical institutions). The second point is that the increased value of the *per capita* share in the health expenditure does not necessarily entail that a multitude of health services are delivered. The cause may be that the costs of importing the human resources needed, or of purchasing and operating sophisticated equipment are high.

Another important parameter to be taken into consideration is the type of financing of health services, or from where the money comes for financing health services. The source of financing determines, to a great extent, whether the system will be mostly private, public, or a combination of both. In general, financial support for the health system comes from one or a combination of the following sources.

General tax revenues, including the taxes collected at any level of the government—national, provincial, or local. Their use for health purposes compete with other demands from all other branches of the government and the result is a national budget, part of which is allocated to health. Unfortunately, political forces influence the allocation of revenues to various programmes, and in many cases the health sector, regarded by many as an unproductive sector, is given low priority. For this reason, health leaders often favour taxes that are earmarked for health-related purposes, such as revenues from social security taxes and compulsory health insurance.

Social security (including revenues from compulsory health insurance premiums). In many countries, both industrialized and developing, laws are enacted requiring employers and employees to pay a stated percentage of wages and salaries into a special fund for health and/or other social services such as pensions, disability, and unemployment funds. These periodical payments do not go to the general treasury, and are usually called "subscriptions" or "contributions", rather than taxes. In some countries when revenues from subscriptions are not sufficient to cover the costs of programmes, the government may contribute from the general treasury funds.

Health services financed by social security revenues fall under the category of "compulsory health insurance". Contributions for health services can be part of the overall social security subscriptions or can be separate contributions. Sometimes the social security or health insurance fund operates its own clinics, hospitals and health facilities, and beneficiaries of the fund must obtain services from these sources. Under a different arrangement, the beneficiary is allowed to obtain the services from outside sources and then get reimbursed, totally or partially, for the expenses incurred.

Voluntary/Private health insurance. This insurance, usually voluntary in some countries, still remains a significant source of financing of health care. Voluntary insurance companies sell packages of health benefits that usually cover part or all of the cost of health services, but can also cover related benefits such as compensation for accidents, disability, and loss of pay as a result of sickness or disability. Insurance premiums and corresponding benefits are usually regulated by the government in order to protect the public. Laws may require such insurance companies to give a minimum or standard package of services, or to adhere to certain procedures in the marketing of their private health insurance. In general, private health insurance is sold to people with relatively high incomes who want access to the medical care of private hospitals.

Charitable donations in affluent countries. This source of financing of health services is usually significant because there is a high percentage of middle and upper class individuals who are willing to make donations to support the health system in general or to pay for the cost of care on behalf of those who are unable to pay. In the less affluent developing countries, significant donations for charitable purposes, including health, may still come from a handful of wealthy persons or from industrialists.

Direct payments by individuals and families. In every health system, no matter how large the percentage of health care cost is covered by the government or by insurance, some expenditures are made directly by individuals and families. Substantial expenditures are also made by individuals in most countries for day-to-day health-related items, such as self-prescribed drugs, insurance deductibles and co-payments, or the fees of private health practitioners. The amounts spent on private health care seem to be proportional to family income. Severe illness, however, is more prevalent in low-income families. Thus, the proportion of earnings spent on health care has generally been found to rise as family income declines.

Foreign aid. Recently, foreign aid for health activities is being transmitted to developing countries along two main channels—one multilateral and the other bilateral. Foreign aid for health is rarely in the form of money, but rather in the form of advice, skilled personnel, equipment and supplies, training to nationals, and various other activities which constitute a "health project".

Among the major multilateral agencies in the health sector are the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), but certain other activities are sponsored by the United Nations Development Programme (UNDP), the World Bank, and the United Nations Population Fund (UNFPA). Regional funds and charitable organizations such as AGFUND, the Kuwaiti Fund for Socioeconomic Development, the Islamic Development Bank, and the African Development Bank, also play important roles in the financing of the health system.

4.4 Management of health systems

The managerial process of national health development is composed of related links, among which the following could be mentioned:

(1) *Health policies*

Health policies in all countries are influenced by the social and political choices which usually reflect the orientations of a comprehensive development plan. The health policy document delineates the strategic framework of the health plan prepared on the basis of an objective analysis of the current health status and major health needs. Priorities and objectives are also identified in the light of the capabilities and resources which are either available or possible to mobilize and collect.

(2) *Health planning*

The health policies that were formulated are then translated into strategies and programmes using different planning tools, including broad and detailed programming. This is the main stage of the managerial process, in which decisions are made about the most appropriate alternatives regarding the health status and needs of the community, and in which their integration with other development plans for the purpose of intersectoral coordination takes place. Several forms of support are needed including the provision of information, considered an essential priority. Without up-to-date, accurate and reliable information, it is not possible to plan effectively.

Another form of support required is the logistic support which ensures that planned programmes function properly, necessary drugs, equipment and supplies flow regularly, and the required transport facilities are made available. This is important for the continuity of health system activities. Legislation provides the legal support needed for all programmes and activities included in the health plan.

(3) *Implementation*

The implementation of various health programmes necessitates the availability of several skills and capabilities to ensure the good management of human resources, time and crises. They also ensure the proper leadership of the health team, considered essential for the management of health services.

(4) *Monitoring and evaluation*

Continuous monitoring of programme implementation, particularly if supported by a good information system, enables the follow-up of progress achieved in the implementation of planned activities. Evaluation, at regular intervals, enables the diagnosis of problems and, if need be, a reprogramming of activities. Evaluation is undertaken on the basis of indicators agreed upon before implementation of the plan. It covers certain elements, such as: (1) suitability of implemented activities to the attainment of health needs; (2) progress made towards achievement of desired goals; (3) assessment of performance efficiency; (4) assessment of economic feasibility as opposed to

financial costs, and (5) measurement of the impact of plan implementation on the health status.

Despite the considerable efforts made for providing training in the Region to personnel in the field of managerial process, the management of health systems is still facing some problems. In the intercountry meeting held in 1994 to review the status of health planning and management and its development prospects, the main problems and the reasons for them have been identified as: (1) the weakness of the institutions involved in health planning, whether at central or governorate/district levels; (2) the shallow strategic thinking in the field of health planning and management, and the non-use of forecasting techniques in health planning; (3) the scarcity of health system researches needed to support the managerial process of national health development; (4) poor "evaluation knowledge" in the field of health management, particularly as regards the economic evaluation of programmes and the criteria for identifying the efficiency of the health system.

Hospital Management

In every health system, hospital care is the most expensive component. Accordingly, no significant reduction in the total cost of health care can be achieved without proper management and efficient utilization of hospital resources. Proper hospital management can significantly reduce the rate of hospital use (hospital utilization) and the cost involved, without affecting the quality of service provided. If, for example, the average length of stay for hospital patients is shortened from eight to seven days, this could mean a saving of 10-15 per cent of the total cost of hospital care, and this in turn will be reflected as a significant reduction in the total cost of health care. Following are some of the important managerial issues in hospital care.

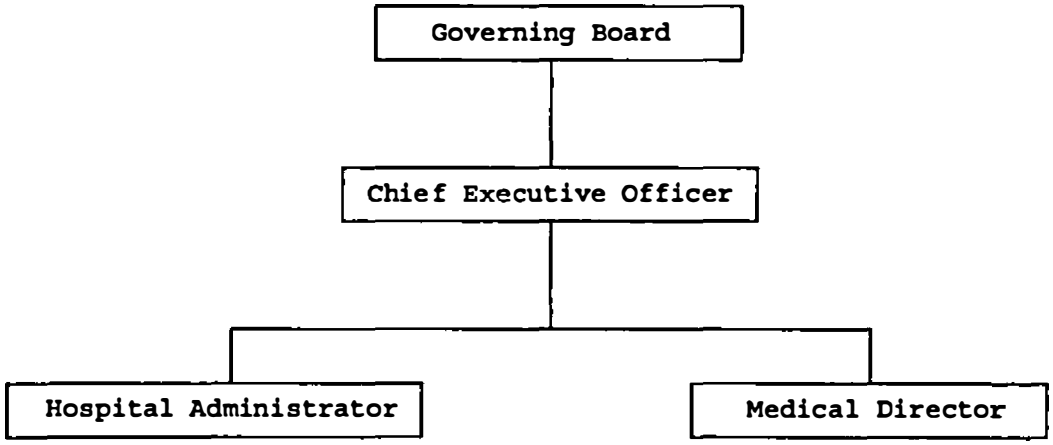
(i) Planning for hospital care. The need and supply of hospital care is usually measured by the number of available hospital beds and the ratio of beds to population (usually expressed as the number of beds per 1000 population). This is referred to as the bed/population ratio which has been increasing steadily over the past century. Recently, however, there has been a marked decline in the need for hospitalization and hence the number of beds needed. This decline has been brought about by a combination of a number of factors, the most important of which are: (a) modern technological advances in diagnosis and therapy which usually result in a shorter hospital stay, (b) the pressure of the cost involved either on the patient or on the insuring party, (c) quality control measures that usually control unnecessary hospital stay, and (d) the introduction of alternative and less expensive approaches to hospital care such as day surgery, extended care facilities, nursing homes, and home care programmes.

The bed/population ratio depends to a great extent on how well developed the health system is, and on the availability of proper financing, both for capital costs (building and equipment) and operating expenses. If hospitals are built without due consideration to the considerable sums of money needed for operation and maintenance, the result will be deteriorating buildings, non-functioning equipment and poor service. Countries of the Region should be aware of the dangers of over-building hospitals unless the health system can

provide the funds needed for operation and maintenance. There are no standard bed/population ratios for use in hospital planning, but that ratio probably ranges from 1-4 beds per thousand population depending on how strong the health system is and on the availability of a financial mechanism to pay for the cost of operation. Hospital planning must be preceded by a careful study of the need and demand for hospital beds and the utilization rates of available hospitals and alternative facilities.

(ii) Top management. The top administrative authority in the hospital is often the "Governing Board". In government hospitals, the Ministry of Health or the local administration appoints the board. In nongovernmental hospitals, the board is appointed by individual owners or the organization that owns and operates the hospital. The board is responsible for setting the overall policies of the hospital, including the assignment of functions and responsibilities to the different departments and sections. The board also formulates and sets the rules and operating standards for all departments and units, to ensure their proper functioning. The board is therefore the highest management authority of the hospital. It approves the budget and controls all financial activities. It appoints the "Hospital Director" and all senior medical and nonmedical staff. It sets the standards for medical practice to ensure that the care provided by the hospital is of the highest possible quality and meets the norms and standards of acceptable medical practice.

The hospital director, appointed by the board, assumes ultimate responsibility for the work of the hospital. Whether the director should be a physician or a suitably trained non-physician is the subject of much debate. In medium- or small-sized hospitals, the director is usually a practising member of the medical staff of the hospital. In large medical centres, distinction is usually made between the medical and administrative aspects of hospital operation through the appointment of a "Hospital Administrator" responsible for the managerial aspects of hospital operations, and a "Medical Director" responsible for medical issues and practice. In this case, both will serve under an "Executive Officer" who is also appointed by the board; this creates a tripartite kind of organization represented by the diagram below:



The three top officers meet regularly to discuss issues of concern to both the hospital administrator and the medical director.

Whether the top officers of the organization are physicians or non-physicians, they should be properly trained in hospital management and administration. Such training, on a full time or part-time basis, is available in many parts of the world and in a number of countries in the Region.

(iii) Quality control. Every hospital should have a "Quality Assurance Programme" to monitor the care given and compare it with standards that may be locally or nationally established. Quality assurance means that the services provided by the hospital are the best possible within the existing resources and current medical knowledge. Quality is controlled by careful review of all or of a representative sample of medical records and accordingly it depends primarily on a "good and accurate medical records system". Records are reviewed by a panel of doctors from within the hospital and this allows the identification of any deviation from good and acceptable medical practice.

For the hospital as a whole, a number of indicators have been developed to monitor the quality of care. Important among these indicators are:

- Average bed occupancy, average length of stay in the hospital and average bed rotation. (These can be calculated for the hospital as a whole and for each separate department.)
- Hospital mortality rates, including general, maternal and neonatal mortality rates.
- Infection rate
- Post-surgical complication rate
- Normal tissue sample rate
- Caesarian section rate.

The normal range of these rates must be fully explained to members of the staff who should be fully aware of the significant implications of deviations from the normal.

(iv) Alternative approaches to hospitalization

Because of the cost involved, efforts are made worldwide to reduce the need for acute hospital care. Most of these efforts concentrate on the establishment of alternative facilities for the care of the chronically-ill patients who require no active medical intervention, but still need nursing and bedside care. These facilities assume different names, such as **nursing homes, skilled nursing facilities,** or **convalescent hospitals**. These facilities can either be attached to hospitals or freestanding. They provide 24-hour nursing care and medical care by physicians, as needed.

Although the need for such facilities is evident, yet there are relatively few of them in the countries of the Region. Accordingly, most of the chronically-ill patients who cannot be cared for at home are taken care of in the general hospital system. This creates pressure on the available beds in the form of longer stay and waiting lists.

Another important alternative to acute hospital care for long-term patients is to provide the necessary care in the patient's home. The concept of "home care" has been well established in many parts of the world. Through organized home-care programmes attached to hospitals, the long-term patient can still receive the care needed at home, without occupying an expensive hospital bed.

(5) *Health legislation*

General progress, advances in science and technology, and new discoveries have contributed greatly to the well-being of humanity. Nevertheless, they are often associated with potential hazardous effects on the lives of people and on the environment in which they live and work. Preventive measures are, therefore, needed to protect the society and control such harmful effects. Legislation is an important and effective tool, formulating and delineating rights, responsibilities and duties of all the people and the agencies concerned. It sets norms and standards for healthy behaviour and lifestyles and strikes a balance between the interests of the public and the rights of the individual in relation to health in general.

Accordingly, every health system is supported, directly or indirectly, by legislation in the form of laws that permeate all the components of the system and which must ultimately be regarded as part of its management. In the past, health legislation was mainly concerned with the control of communicable diseases and issues relating to international travel. Accordingly, the International Health Regulations were formulated.

The main objective was to ensure maximum possible security against the spread of infectious diseases at the world level, and the application of the minimum possible restrictions on the freedom of travel and world traffic. The Regulations have been amended several times, last in 1981. The purpose of such modifications was to make the regulations conform to recent available epidemiological data. The most important amendment, particularly that of 1981, dealt with the introduction of the concept of epidemiological surveillance, established as a method of identifying and controlling communicable diseases. Provisions have also been introduced in the Regulations, pertaining to the identification of infection sources, the methods of dealing with them and reducing the risks involved, in addition to measures of environmental sanitation in harbours and airports and their surroundings with a view to preventing the spread of disease vectors, limiting the introduction of communicable diseases and containing their endemicity.

The International Health Regulations include several sections amongst which are those dealing with:

- reporting and epidemiological data;
- health procedures and measures to be taken upon departure, between the port of departure and the port of destination and on arrival;
- provisions relating to diseases subject to reporting by virtue of these regulations; and
- health documents and the different relevant basic provisions.

The annexes to the Regulations relate to the health standards to be observed by ships and aeroplanes, and an example of the International Vaccination Certificate.

With the passage of time, it was found out that the knowledge of national health authorities regarding these regulations was decreasing. They were referred to or applied in very few cases. This was due to the introduction of many new concepts on disease surveillance in general health practices, resulting in the reduction of disease transmission risks between countries, the appearance of new diseases rapidly spreading throughout the world, and the great increase of world traffic. All these factors have limited the value of the International Health Regulations.

Following the occurrence of plague in India in 1994 and the concomitant circumstances relating to the application of the International Health Regulations, the World Health Organization established a committee to review the effectiveness of these Regulations, and decide on the measures to be taken in order to develop them further and make them suitable to the epidemiological status at the world level. This committee is expected to meet before the end of the current year and its recommendations will be referred to the Executive Board and the World Health Assembly to decide on the action to be taken to amend the International Health Regulations.

With the increasing complexity of the health care system, it has become necessary to legislate comprehensive laws covering all aspects of this system. Examples of health legislation and the role it plays in supporting the functions of the health system, are given below.

1. *Facilitating resource production*. Laws may authorize the provision of funds for training physicians, nurses, and other types of health personnel. Legislation may also require that professional graduates serve in rural or remote areas for a certain period of time. It sets standards for performance and licensing requirements. Public hospitals and health centres may be constructed under legislative authorization, and necessary funds allocated for maintenance and operation.

2. *Authorization of programmes*. All or most of the organized programmes of health services rest on some legal foundation. A ministry of health is normally established by law, although its scope of activity may be defined in very general terms, such as "protection of public health". The same applies to ministries of labour, whose scope of activity may be defined as "protection of the safety and health of workers". Financing of all public health programmes, such as communicable disease control, environmental sanitation, and many others, require legal authorization. The operation of private health institutions, such as private hospitals and clinics, require adherence to laws regulating their services.

3. *Social financing of health care*. The several methods of financing of health services rest partially or totally on legal foundation. Legislation is obviously required for mandating periodic contributions to social security programmes by employers and employees. Even nongovernmental health insurance companies are usually subject to

various legal constraints; similarly, charitable organizations must often function within certain legal boundaries.

4. *Quality surveillance.* The several forms of regulation of health personnel affairs and health facilities rest largely on law. Laws are enacted in order to protect the population against poor quality services. They are also necessary to protect people from worthless or injurious services that might be provided for motives of pure profit.

5. *Prohibiting injurious behaviour.* Most of the regulations concerned with environmental sanitation rest on laws that may restrict the behaviour of individuals or groups. Laws may prohibit discarding garbage in the streets or disposing of waste in water supplies. Laws usually establish speed limits to reduce the chances of injuries to drivers and others. Recently, laws have been enacted in many countries to limit smoking in public places and prohibit advertising of tobacco products.

6. *Protecting individual rights.* In many countries laws are intended to ensure the protection of individual rights in the operation of a health system. The patient on whom a surgery is to be performed may be entitled to know the risks entailed and to give his "consent" to the procedure. Industrial workers may be entitled to know the hazards of their jobs and working environment. Such rights are, in many countries, guaranteed by law.

Issues that health care seekers would wish to incorporate in the health legislation are those relating to health care provision, equity, accessibility of services and health care quality. Other important issues include the consent to health care on the basis of knowledge of its nature, confidentiality, respect for the privacy of health care recipients, and the right to consult records and review complaints. There is also need for legislation to regulate such ethical and complicated issues as abortion, sterilization, euthanasia, organ transplantation and research involving human subjects.

7. *Regulation of activities of health care providers.* Laws regulating the licensing of health personnel are important and necessary. There exist however, some rules, regulations or directives that govern the performance of the various categories of health professionals, and specify their job descriptions, duties, responsibilities and rights. Professional ethics and morals form an essential element of health care provision, and consequently relevant laws have been enacted. In addition, laws and regulations have been promulgated to govern disciplinary action against various categories of health personnel, the composition of disciplinary boards, relating procedures and outcome.

8. *Regulation of activities of health care institutions.* Legislation usually regulates the activities of health institutions in various sectors, determining standards, necessary work environment and the levels and quality of health care. The design, licensing and approval of these institutions are subject to legal and follow-up controls. Equally important is the setting of standards to regulate the operation of health institutions and measure quality and safety control. Such

legislation is usually closely related to the ethics of health professions and associated responsibility and accountability.

4.5 Delivery of health services

The objective of all health systems is the delivery of health services to the community. This activity varies from one country to another depending on the determinants influencing the health system. The delivery of health services in a health system can take various forms, but can generally be categorized as follows:

1. <u>According to level of care</u>

   - Primary } Health care
   - Secondary }
   - Tertiary }

2. <u>According to type of service</u>

   - Promotive and protective } Health care
   - Preventive }
   - Curative }
   - Rehabilitative }

3. <u>According to sector of the population</u>

   - Maternal health
   - Paediatrics
   - Adolescent health
   - Geriatrics.

The delivery of health services varies as a result of the changes in policies, economics, top management, resources, particularly human resources (established as per needs), as well as the changes that occur in the health system. Following the Declaration of Alma-Ata and the introduction of the primary health care concept, for instance, the importance community health workers has increased and the distribution of human resources in rural and urban areas, hospitals and community health care centres, has improved. Equity in providing the community with facilities and services has become a very important issue. The utilization of health services has greatly improved due to their accessibility, leading to an increased demand for services and increased use of modern technology.

The result is that health care costs have escalated during the last few decades, negatively affecting the economics of some countries, particularly the developing countries. Governments have become incapable of shouldering, on their own, the whole cost of health care. They urged the participation of the community and the beneficiaries of services in the meeting of such costs. This led to the introduction of several reforms in the systems of health sector financing, collection of larger contributions from families and individuals and the appearance or development of social insurance schemes.

World financial institutions, such as the World Bank and the International Monetary Fund, have fostered the expeditious implementation of the above solutions, particularly in those developing countries that have introduced structural reforms in their economic systems, as well as those countries suffering from the pressure of indebtedness. The application of the above solutions, particularly the reimbursement of health care fees, led to the fact that full health services were no more available, particularly to the underprivileged and needy categories of people. Thus, the need for equality and equity was acutely felt. The World Health Organization, committed to the principle of complete adherence to equality in health services delivery, seeks to promote the role of the State as the legal and constitutional body responsible for the health of the citizens.

The number of countries adopting the concept of cost-sharing through the establishment of health insurance schemes, is gradually increasing. These schemes are based on principles of community solidarity, emphasized in the teachings of all religions, teachings regarded as basic reference documents in all countries of the Region. The rise in costs of health services is partly due to the increasing use of expensive technology and the irrational use of drugs and other supplies. This raises the issue of health cost control, an issue discussed in several intercountry meetings in the Region. Discussions have focused on the necessity of introducing techniques of cost analysis in health systems, in order to identify and diagnose areas where the rise in costs occurs and seek to reduce these costs. Such diagnosis contributes to the improvement in the efficiency and performance of health systems, thereby promoting the marketing of the concept of investment in the field of health.

In conclusion, it should be asserted that a health system needs to be dynamic to react to the political, social and cultural factors surrounding it, as well as the many factors within it. It is up to policy-makers to make the best possible use of every positive aspect of these factors. As the managerial aspects constitute one of the weak links of the health system, care should be taken by those who watch over the health of citizens in the Region to continuously maintain those activities that support and develop the managerial process among their high priorities.

5. RECOMMENDATIONS

In conclusion, it is recommended that Member States:

1. Further strengthen the management capabilities of their health systems through appropriate training in leadership and management practices, decentralization and delegation of authority; review and update health legislation and regulations; continue to monitor and evaluate their health systems; and introduce new managerial techniques, such as the use of computers;

2. Foster strategic thinking in the field of health planning, make use of forecasting for the purpose of identifying health development problems in the long run; and introduce the economic evaluation of health programmes;

3. Assume a central role in coordinating health services between the various sectors, particularly in the light of the growing role of the private sector in the field of health service provision;

4. Carry out a realistic assessment of the costs of implementing the health plans that reflect national priorities, giving due attention to recurrent costs;

5. Develop the capability of local bodies to mobilize and collect funds for the health sector; and ensure that such funds are solely utilized by this sector;

6. Take steps to reduce waste, and limit the rise in prices that result from the use of incorrect managerial procedures, inappropriate technologies or personnel; promote the rational use of drugs; establish programmes for improving the management and maintenance of equipment and ensuring the availability of spare parts;

7. Reorient the management of hospitals so as to ensure the rational use of hospital services and reduce the costs of health care provided by them without negatively affecting the quality of services; and introduce effective systems for the quality assurance of all aspects of medical practice, and their auditing; and

8. Ensure harmony between health legislation and national, regional and global changes taking place, particularly in the field of health technology; and that health legislation agrees with the basic principles and ethics of health professions.