National health systems and their reorientation towards health for all

Guidance for policy-making

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Preface

Despite tremendous strides in health science and technology, the health status of the majority of the world's population remains poor, hampering overall human development, the capacity of individuals to realize their potential for a productive life, and the human right to live and die with dignity.

In 1973 the Executive Board of the World Health Organization, following a careful study of the world situation (*82*), concluded that in many countries health services were seriously deficient in achieving their goal of improving people's health. Large segments of the world's population still had only limited access to health services, or no access at all. The available services were often provided in a narrow—mainly curative—and isolated manner, euphemistically called "medical care systems". Emphasis on highly technical and centrally located medical care facilities, frequently unrelated to people's needs and local realities, worsened the situation. Relationships with other sectors contributing to human wellbeing and with other community resources were too often neglected. There was a lack of proper balance among promotive, preventive, curative, rehabilitative, and sociomedical care. The availability of health services was usually poorest at the community level, where the need for them was greatest. All this resulted in the confronting of national health service systems in both developed and developing countries with two major problems: a low level of effectiveness and escalating costs.

It was therefore not surprising that high priority had been assigned all over the world to finding solutions to these problems. In many countries discussions in governmental and parliamentary circles and among the general public clearly indicated growing dissatisfaction with the state of health and health services. At the international level, similar discussions had taken place not only in health organizations, such as WHO, but also in other international agencies representing all shades of social, economic, and political orientation. Many international non-governmental organizations had also discussed possible ways of enhancing the relevance of health service systems to people's needs and socioeconomic realities. All the above forums seemed to arrive at a common conclusion: that the development of *comprehensive national*

health systems not only concerns the health sector, as traditionally defined, and its health services, but also involves all aspects of national socioeconomic development. It has been recognized that improvements in the health of populations can be achieved only as a result of strong political will, coordinated efforts by the health sector and health-related sectors, and the conscious involvement of communities.

The comprehensive approach to the development of national health systems has been further stimulated by three crucial events:

(1) Adoption by the Thirtieth World Health Assembly in 1977 of the concept of "Health for All by the Year 2000" as a common goal of WHO and all its Member States (resolution WHA30.43).

(2) Formulation by the 1978 International Conference at Alma-Ata of the concept of *primary health care* as a leading strategy in achieving "health for all".

(3) Adoption by the Thirty-fourth World Health Assembly in 1981 of the "Global Strategy for health for all by the year 2000" (resolution WHA34.36).

The first two concepts implied that there should be an equitable distribution among populations of whatever health resources were available (nationally and internationally); and that essential health care should be accessible to all individuals and families in an acceptable and affordable form, and with their full involvement, so that all people of the world would have the opportunity to attain, by the year 2000, a level of health permitting them to lead a socially and economically productive life.

The Global Strategy explicitly indicated that achievement of the health-for-all goal would require relevant reorientation of national health systems so that each might develop an appropriate organizational infrastructure based on primary health care. Such reorientation would have to be motivated by a basic regard for equity, social responsibility, and human rights. At the same time, it appeared that reorientation of national health systems would require fairly simple but scientifically sound and well-organized knowledge on the part of those responsible for system design and development at country level. This knowledge should encompass basic health system components, their structural and functional interrelations, the political and economic conditions influencing their development, and the possible mechanisms for initiating and maintaining "reorientation processes" directed towards the desired changes.

There is certainly a rich pool of information on the above aspects of national health systems, generated either through research or through an accumulation of practical experience. This has been further elaborated in several sets of "guiding principles", charting the course to the attainment of health for all by the year 2000 (*86*, *91*, *93–96*). The present state of knowledge in this field is nevertheless still too dispersed and often in too abstract a form to be of direct use to national decision-makers. For this reason, the present book has been prepared to give

practical guidance to those directly involved in the design and organization of national health systems based on primary health care. The book is divided into three parts:

(1) *Description of a national health system*—in which existing health systems and their organizational components are categorized in the simplest way, to enable national decision-makers to define easily the characteristics of their own health systems in comparison with others and decide on desirable changes.

(2) *Strategies for reorienting a national health system*—which, based on a global review, provides some alternative blueprints for the adjustment of various national health systems and their organizational components to the concept of health for all.

(3) *Implementation of reorientation*—a discussion of the fundamental requirements for initiating and maintaining national health system reorientation processes directed towards the desired change in the face of local constraints and opportunities.

Part 1

Description of a national health system

1. The components of a national health system

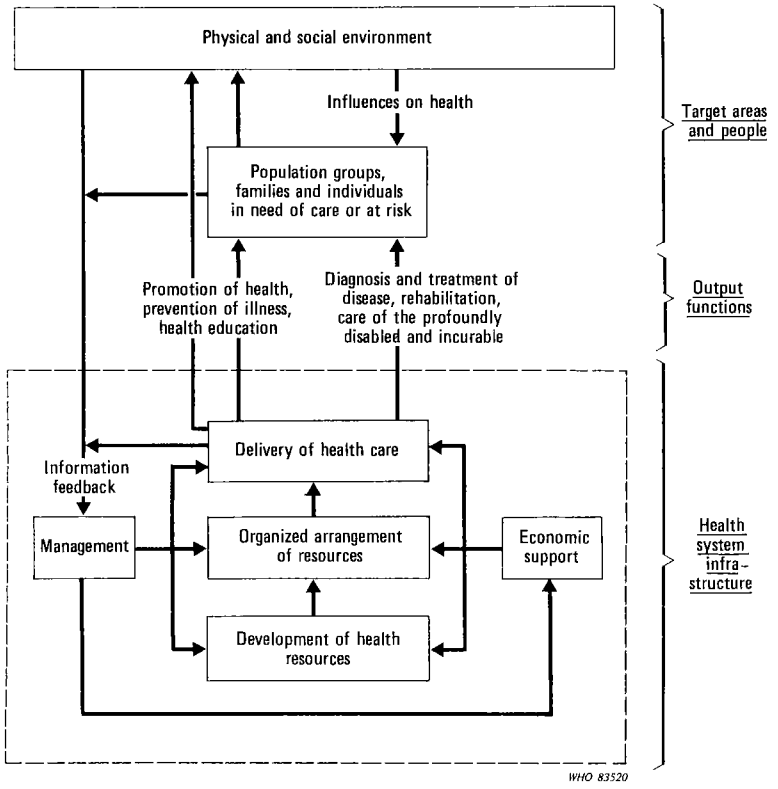
Any society can be analysed in terms of a number of interconnected systems—for example, agriculture, transport, and industry. (These are often described as sectors, particularly by economists.) The health system is usually one of the more complicated of these entities, its development having taken place slowly over the centuries, with inputs from people's beliefs, science, commercial factors, and other social forces, usually without any deliberate or systematic planning. Moreover, if one considers all the social and environmental factors that may contribute to or influence health status, one finds close relationships between the health system and many other systems—agriculture, industry, education, and so on. Thus a health system must be seen as a coherent whole, consisting of many interrelated component parts, both sectoral and intersectoral, as well as the community itself, which produce a combined effect on the health of a population. To create a purposeful system all parts must work together and adjust to each other. This can be done through constant communication and division of labour among the parts.

There are many different ways of describing and analysing national health systems, depending on the degree of thoroughness intended. The configuration of the health system is inevitably influenced by its fundamental objectives and values. At the most elementary level, the structure and functional interrelationships of the health system of any country can be analysed according to the model shown in Fig. 1. There are five major components in this simplified model of a health system, each of which is directly or indirectly related to the others (*67*):

—development of health resources
—organized arrangement of resources
—delivery of health care
—economic support
—management.

The broken line around these main components in Fig. 1 defines the boundaries of the health system infrastructure. Influences on health may arise in the environment or in people's biological make-up. The activities of the health system for health promotion, prevention and treatment of

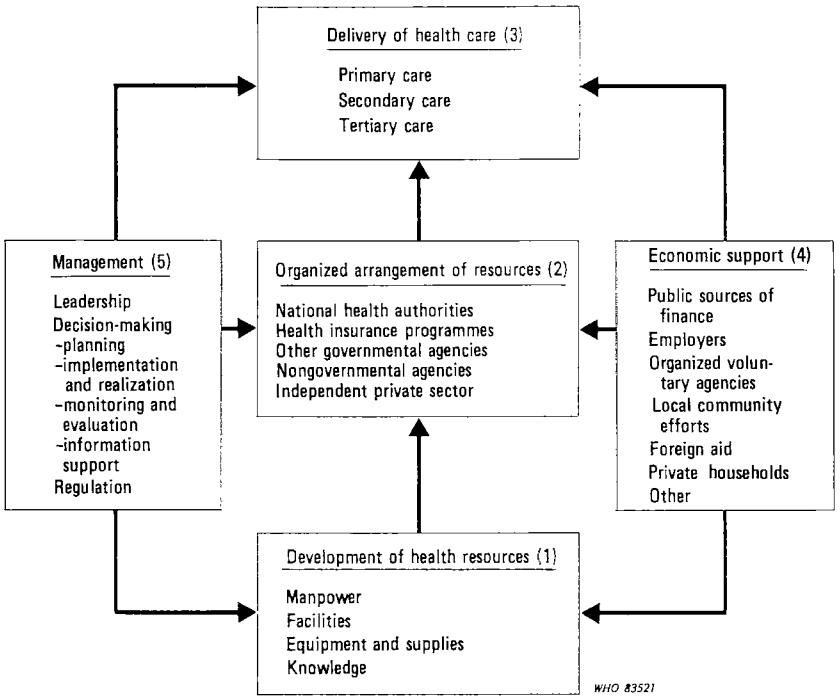
Fig. 1. Model of a national health system: its structure and functional interrelationships



disease, rehabilitation, and care of the profoundly disabled and incurable are directed towards the people; but some activities are also directed towards the environment in which people live. These activities are represented by the arrows directed away from the health system infrastructure. The health system is able to exercise its functions as a result of the development and allocation of *resources*. The total of the resources that can be allocated sets the limits on *budgets* for new investment and current expenditure. In almost all societies, the demand for health services exceeds the available resources. Priorities have therefore to be set for the goals and objectives that the health system will be expected to achieve. The results of health activities can be measured and the information fed back to management. Such information may relate to both the functioning of the health system (volume, distribution, and quality of outcome) and the effect that these activities may have on the population (impact on the health situation and social benefits). Through this feedback mechanism, management exercises its regulatory functions.

If a health system is to be reoriented to achieve a specified goal, such as health for all, it is necessary to analyse in detail the five major components of its infrastructure indicated in the model (Fig. 2).

Fig. 2. Major components of national health system infrastructures



Development of Health Resources

An early stage in the operation of any health system involves the development of the human and physical resources necessary to provide health care and perform supportive functions in the system. Many different types of resource are required, and their development entails diverse actions. In their simplest form, these health resources may be classified into four principal categories:

—health manpower
—health facilities
—health equipment and supplies
—health knowledge.

It may be noted that *financing* (or "money") is not regarded as a resource because it is a basic medium of social exchange—a nonspecific instrument of "value"—which must be transformed into certain

resources or services to become part of the health system. This medium of exchange is, of course, essential and will be considered under "economic support", the fourth of the five major health system components. Here we may examine the development of each of the four main types of health resource.

Health manpower

There are many categories of health personnel, including physicians (general and specialized), dentists, pharmacists, laboratory and X-ray technicians, nutritionists, rehabilitation therapists, hygienists and sanitary inspectors, professional nurses of many types (for bedside service, home visiting, public health work, etc.), health administrators, a variety of types of auxiliary health worker, and so on. Attention is usually paid to those directly involved in health care delivery, such as physicians, nurses, and health auxiliaries. However, in reviewing national health systems for their intended reorientation, all types of health manpower should be examined in order to decide on their appropriate composition.

Each personnel category must be understood in terms of its legitimate functions and related tasks, type of training, number and distribution in a country, relationships with other health personnel, and other attributes, such as possible substitutability (*22*). In so far as all health personnel are interconnected in the operation of the health system, they constitute a theoretical "team". The degree of meaningful coordination or team-work in actual practice, however, differs among national health systems.

Health facilities

Many types of health facility (or physical infrastructure) are required in a health system. Best known perhaps are hospitals for the bed-care of seriously ill patients; but there are also separate facilities for ambulatory care (such as outpatient departments, health centres, or health posts), pharmacies, laboratories, and so on. Indeed, the premises of every individual health practitioner constitute part of the health facilities of a national health system. Associated with preventive health services are various facilities for environmental sanitation, such as plants for water treatment, sewage disposal, and milk pasteurization.

The location, size, and design are important features of health facilities and have a major influence on their effectiveness. Functions often vary with the source of financing or sponsorship of facilities, whether this be afforded by an organization or an individual. The construction of modern hospitals is usually very costly and is therefore undertaken principally by units of government or health insurance schemes. In many countries, however, hospitals are built and operated by nongovernmental bodies, such as religious groups, nonprofit associations, or private companies. In some instances, they are owned by individuals—physicians or businessmen—and operated for profit.

Health centres for ambulatory care (mainly primary level) are also constructed and operated principally by governmental agencies. In recent years, as the importance of primary health care has come to be better appreciated, health centres have acquired a wider role. The functions both of hospitals and of health centres have also broadened. Hospitals, which at one time were almost exclusively focused on bed-care for the seriously sick, have come to provide more ambulatory care and also certain preventive services. Health centres, which used to be devoted entirely to preventive services, now customarily offer treatment and rehabilitation to the ambulatory patient as well. In peripheral locations, health posts and health stations, often housed in simple village structures or even in private dwellings, must be recognized as important health facilities—particularly for the delivery of primary health care.

The manner of financing the construction of health facilities is characteristically quite different from the manner of financing their operations. Regardless of how construction has been financed, operating costs—which include the provision of supplies and the remuneration of personnel—may be met by health insurance funds, governmental allocations, private payments, and other mechanisms; these will be discussed later.

Health equipment and supplies

Another type of resource in all health systems is the great variety of equipment, supplies, drugs, and other materials required for the treatment or prevention of disease. With advances in medical science, increasingly complex technology has been developed for the sophisticated diagnosis and treatment of various disorders. Radiological equipment, electrocardiographs, apparatus for biochemical analyses, and countless other such resources permit many serious diseases to be diagnosed at an early stage, when treatment is most effective. Much of this equipment, however, is very expensive and, in recent years, some health officials and members of the public have become sceptical about its relative value. The cost–effectiveness ratio of elaborate equipment may be quite poor, and some health leaders have called for the use of more "appropriate technology".

Much of the equipment used in a health system is not exclusively medical, but may be required for transportation, refrigeration, chemical analyses, etc. Equipment also encompasses prosthetic devices, including spectacles, hearing aids, and artificial limbs. The diversity of equipment and supplies used in prevention, diagnosis, treatment, and rehabilitation is great, and every national health system must find ways of standardizing them, possibly through controlled domestic manufacture or selective importation.

The production and distribution of drugs and related substances, such as vaccines, are particularly important and complex operations. Because of their predominantly entrepreneurial nature, drug production and marketing have encountered extensive public regulation throughout

the world. Drugs are a crucial part of the treatment of disease, and their quality and variety have steadily increased. However, expenditure on drugs has also risen very rapidly, particularly in developing countries, where all or nearly all drugs must be imported. To limit costs and to protect the quality of medical care, some countries have established official lists of "approved drugs" or even "essential drugs" authorized for purchase by public medical care programmes.[1]

Health knowledge

An important resource in all national health systems is knowledge of health and disease, and of various methods of disease prevention, treatment, and rehabilitation. New information of this nature is continually being acquired. Much knowledge has, of course, been gained from experience, and in many countries "traditional medicine" has accumulated a vast storehouse of theory and practice, only a fraction of which has been tested by modern scientific methods. However, although much medical and health-related knowledge originates from careful observation and exchange of experience, most of it derives from deliberate scientific research. In fact, most of the recent advances in health and in disease control have resulted from research efforts covering a wide spectrum of endeavour. Fundamental scientists, such as biochemists and physiologists, have revealed how cells and organs function. Microbiologists, pathologists, and clinicians have pieced together this knowledge to develop an understanding of the causative mechanisms of disease. Organic chemists and pharmacologists have produced and tested new drugs and vaccines. Physicians, epidemiologists, and statisticians have chosen the most effective of competing remedies through monitoring and evaluating their practical application.

Biomedical research integrates observations from many sources and permits the development of practical methods for the prevention or treatment of disease. This research is costly because it requires extensive resources—both human and physical. However, the results of biomedical research are usually published and are thus made available for application throughout the world.

Biomedical research has made important contributions to the fight against communicable diseases and the disorders caused by malnutrition. Countries are now confronted, however, by an increasing burden of noncommunicable and chronically disabling diseases, such as cancer, heart disease, hypertension, and diabetes and, so far, only partial answers to these problems have been produced because the causative factors are closely related to social and behavioural conditions. Hence massive programmes, heavily based on *sociomedical research*, are under way in many countries to counter these diseases, through the efforts of epidemiologists, sociologists, and others.

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[1] Lists of essential drugs are revised from time to time by an Expert Committee convened by the World Health Organization.

Health systems research (previously also called "medical care research" or "health services research"), which has been defined as the systematic study of the means by which biomedical, sociomedical, and other relevant knowledge is brought to bear on the health of communities under a given set of conditions, has now become an increasingly important type of health-related research. It is action-oriented research, which—by the use of scientific methods—aims at providing information and insight to facilitate a better understanding of health problems and their control. Health systems research can assist in more rational health planning and resource allocation, and should result in better design of health systems and encourage greater personal, family, and community self-reliance in the solution of health problems.

The growth in complexity and scope of health-related research has two major implications. First, there is now a compelling need for a multidisciplinary team approach to it, and this demands high levels of organization and coordination. Secondly, the rapidly rising costs of both biomedical and health systems research have increased the need for, and dependence on, funding from the public sector. Consequently, national governments and scientific communities face a growing challenge to clarify priorities in health-related research and establish effective coordination mechanisms within the health system for the purposeful and efficient use of available resources (*39*).

Organized Arrangement of Resources

To translate the various resources of health systems into health activities and enable them to function properly requires social organization of some type. Organized arrangements are necessary to bring health resources into effective relationships with each other, and also to bring individual patients or community groups into contact with the resources through health care delivery mechanisms. The degree of formality in these organized arrangements and relationships varies greatly (as we shall see) in different types of national health system.

In any national health system these arrangements and relationships may be promoted in several ways—some through the actions of government (at various levels) and others outside government. The major groupings or organized arrangements of health resources may be classified in five categories:

—national health authorities
—health insurance programmes (public)
—other governmental agencies
—nongovernmental agencies (voluntary)
—the independent private sector.

National health authorities

In almost every country there is a principal governmental agency concerned with health activities. This may be a special agency in the

government, a subdivision of a larger agency (e.g., "health and social welfare"), or it may consist mainly of a network of agencies operating at a lower (state, provincial, or regional) level. Most frequently, this agency is the ministry of health.

Ministries of health or their equivalent are organized in a variety of patterns. Usually, there are subdivisions concerned with different types of health programme, such as health education and promotion, preventive services and sanitary control, hospital and other curative services, rehabilitation and sociomedical care of the disabled, etc. Sometimes subdivisions are devoted to various elements of a health system, such as development and registration of health manpower, development and supervision of health facilities, logistics of equipment and supply, and financing. In most countries, below the level of the national ministry of health there are provincial or regional health agencies, or both: these bodies may be delegated certain authority or may have a large degree of autonomy in the development and control of health activities.

Considering health systems in general, the responsibilities of the ministry of health vary in different countries. In some, all or nearly all responsibility for the social organization of health resources and services is vested in a unified ministry of health. In others, the organization of only a small share of the health system, such as certain preventive services, is entrusted to the health ministry, and various other public or private agencies are concerned with other aspects. As the potential of health sciences has increased, however, the scope of health ministries has usually broadened.

Health insurance programmes

In about half the countries of the world (including almost all the industrialized ones), special health insurance programmes have been organized for employed people, and often for their dependents as well. In most of these countries, responsibility for the programme (sometimes called "social security") is entrusted to a governmental body, separate from or only remotely related to the ministry of health. The proportion of the population protected by health insurance programmes may vary greatly among countries. In developing countries, in which the economy is predominantly agricultural, this proportion is usually small (10 % or less); whereas in developed, industrialized countries, it is usually large (90 % or more). The scope of health benefits—such as the services of physicians, drugs, hospitalization, dental care, and transportation—also varies widely from one country to another.

In a broader sense, a social security programme is basically a method of collective financing to protect people against certain risks, including sickness, but also old age or unemployment. In the case of sickness, the protection may be given in one of two principal ways. Money may be provided to, or on behalf of, the patient to pay for services rendered by independent (generally private) providers of health care: this *indirect*

pattern is applied predominantly in highly developed and moderately organized countries. Alternatively, the health insurance programme may employ and control its own providers of health care (physicians, hospitals, etc.) for the direct provision of health services to the insured person. This *direct pattern* is used most frequently in the less developed countries.

Under both the direct and the indirect patterns of supporting health care costs, the process of financial support endows the health insurance agency with power to influence the performance of the health care providers. Thus the organization of health insurance programmes extends beyond being merely a financial mechanism, and becomes also a method of determining the content and quality of health services.

Other governmental agencies

In addition to the above-mentioned two major governmental agencies concerned with the organization of health services, there are frequently many others concerned with parts of the health system.

Ministries of education may, for example, make arrangements for protecting the health of schoolchildren. Similarly, health protection for industrial workers may be a secondary function of ministries of labour or industry. Military or defence activities also usually include arrangements for the health services required by military personnel in times of peace and war.

The work of other governmental agencies—devoted to special objectives such as rural community development, urban housing, transportation, criminal justice, or foreign trade—may include aspects relevant to health or medical care and thus constitute part of the health system. These functions may be performed by the defined agency itself, or in collaboration with the ministry of health. Ministries of finance or national planning bodies, which are concerned with overall governmental affairs, naturally also exert a considerable influence on national health systems.

Nongovernmental agencies

Outside government there are many different agencies or associations that play a part in a national health system. Some are voluntary groups concerned with tackling certain diseases (e.g., tuberculosis and cancer); others aim to provide health care for specific sectors of the population, such as children or the disabled. Some agencies provide direct services for patients, while others promote action by government or education of the people. Certain voluntary organizations render specific types of direct service, such as emergency care by the Red Cross or home nursing services by visiting-nurse associations.

In a growing number of countries, both developing and industrialized, the *health cooperative* movement—based on voluntary health insurance schemes for unsalaried workers (e.g., independent peasants

and artisans or the disabled working in special conditions)—has developed quite vigorously in recent years. Moreover, in several countries, a large proportion of people in both industry and agriculture are protected by voluntary health insurance schemes sponsored by professional groups or commercial companies.

Associations of physicians, nurses, or other health personnel must also be counted among voluntary health agencies. These organizations may, for example, enforce ethical codes of behaviour; they may also represent their members in supporting or opposing certain governmental health policy decisions. Such professional societies may, in addition, contribute to continuing education and to the establishment of standards of qualification for health personnel.

Private industrial firms sometimes enforce health or safety measures for their workers and, in this sense, participate in the health system. Organizations with entirely different objectives, such as religious groups, labour unions, or ethnically identified societies, may provide certain health services quite incidental to their primary objective.

Independent private sector

The fifth and final category of organized arrangements of health resources includes various types of independent health manpower—not involved in any of the above organized programmes, but furnishing services privately. Traditional healers, for example, function predominantly in the private sector. Physicians, dentists, pharmacists, and other health practitioners engage in private practice in almost all countries. In some countries, private practice forms the major part of their work; in others, it is mainly performed on a part-time basis along with employment in organized programmes; while in yet others it constitutes only a marginal activity after the exercise of what are considered full-time duties in a public programme.

Although private health practitioners work mainly as individuals in private premises, they are seldom wholly isolated. Among private practitioners in an area there are often networks for referral and consultation (including group practices). The services of private practitioners, of course, ordinarily involve the payment of fees, which must be settled either by patients or by governmental or health insurance programmes on their behalf. In countries in which a substantial proportion of health manpower time is devoted to private sector health services, there tend to be problems in achieving an equitable distribution of care in relation to needs, particularly if there is a shortage of manpower.

Broadly speaking, the private sector of a health service is complementary to the public sector. In health systems where public sector (or publicly supported) services are relatively weak, private sector services tend to be strong. When public sector services are well developed, the private sector is usually small. In all types of health system, however, private services may be sought by people anxious to

choose their own doctor (or other health care provider) and able to pay the costs.

Delivery of Health Care

The third major factor to be considered in the analysis of a national health system is the variety of processes by which various health care services are provided. In different countries or in different parts of the same country these processes may vary greatly.

Health care delivery may be classified in different ways. Most often it is categorized according to the objective of the service delivered. This separates health activities into promotional, preventive, curative, rehabilitative, and the sociomedical care of the profoundly disabled and incurable (*18*, *32*).

Activities for the *promotion of health* extend far beyond the traditional functions of health care institutions and aim at creating environmental conditions and human behaviour that can contribute positively to health. *Preventive activities* are directed not only against communicable diseases, but also against many other preventable conditions, such as rickets, endemic goitre, and dental caries. They include, in addition to immunizations, such interventions as vitamin supplementation, iodination of salt, fluoridation of water, and the provision of guards on machinery to prevent industrial injuries. The promotion of health and prevention of disease constitute so-called primary prevention. *Curative activities* consist in the use of drugs, surgery, or other procedures to interrupt a pathological process or to reduce the harmful consequences of a disease. If this is done at the earliest possible moment, when disability or even premature death can be prevented, it may be termed secondary prevention. In some countries, such early detection of disease is carried out through mass screening tests on population groups. *Rehabilitation* corresponds to tertiary prevention and aims at the restoration of physical, mental, and social functions through relevant medical procedures: this is often done in cooperation with social services (e.g., sheltered work, resocialization). *Sociomedical care* applies particularly to irreversible profound disability or progressive illness, in which neither treatment nor rehabilitation can bring improvement. The greatly increased life expectancy in many countries calls for organized forms of sociomedical care, either in special institutions or in the community, with the active participation of the people in both circumstances.

In the context of national health systems, it is more customary to consider health care according to its level of complexity, or the sequential order in which the health needs of populations are served. Thus the services to be delivered comprise primary, secondary, and tertiary health care (*82*).

The manner of delivery of all three levels of care differs among national health systems, but the differences are probably greatest for both the curative and the preventive aspects of *primary health care* (*8*,

29, *66*, *74*). The service may be provided by individuals—whether they operate in so-called traditional or modern systems—working on their own or by organized teams of personnel of varying composition. Among modern personnel, either physicians or health auxiliaries may be responsible—the latter having different levels of training. Preventive services are often provided by different personnel in special places, or they may be integrated with treatment services. The methods of remunerating health personnel also vary, leading to different types of work incentive.

An excellent summary of the place of primary health care in the infrastructure of a national health system is given in the Declaration of Alma-Ata (*86*):

> "Primary health care is 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 country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process."

At the *secondary* and *tertiary health care* levels, the manner of delivery may also range from an individualistic to an organized approach. Medical and surgical specialists may be in private practice, on the staffs of hospitals, or in organized teams (public or private) outside hospitals. The level of health care that is most uniform in its method of delivery among different national health systems is tertiary care, which virtually always requires elaborately organized teams of personnel in large hospitals.

The process of technical consultation or "supportive supervision" emanating from the tertiary (central) to the secondary (intermediate) and primary (peripheral) levels may be very casual in some systems and systematic and thorough in others. Similarly, the referral of patients from primary care to the secondary and tertiary levels may be practised with different degrees of regularity. Often self-referral occurs, when the attraction of higher-level health care institutions encourages many patients to bypass peripheral services that may be entirely adequate for most cases.

If people are to be effectively provided with health care appropriate to their needs, continous relationships must be maintained among the three levels of care. Such relationships in a country or province are often termed *regionalization*, and this may be carried out with different degrees of discipline in various systems (*16*, *48*). There are many interpretations of regionalization, depending on the aspects being emphasized, such as the distribution of health resources, the control of patient flow, voluntary or obligatory cooperation of health care delivery units at

various levels, and reasonable channelling of financial support. It is possible to distinguish between two general motivations for regionalization. The first stresses the needs and rights of people in terms of availability, access to, and quality of care, and community participation in the health care delivery system within a region. The second motivation stresses the need for rational use of resources and coordination of health care delivery systems. The first formulation is the older, pleading for drastic changes in favour of an equitable organization of health care; while the latter represents a more pragmatic concern with the most efficient allocation and use of resources. Both concepts are normative and can be contrasted with empirical/descriptive approaches to regionalization reported by countries (*99*).

Broadly speaking, patterns of health care delivery depend on the philosophical assumptions of the health system. At one extreme, health care may be regarded as equivalent to a commodity traded in the economic market; at the other extreme, it may be seen as a social right of the entire population of a country, requiring careful planning. Between these extremes may be found other assumptions, particularly with regard to selected population groups or specific diseases.

Economic Support for a National Health System

All the health resources and health care delivery mechanisms discussed above require economic support in any society. Since there are obviously many competing needs in a country, there must be procedures for channelling money into the health system. Unlike food and shelter, the need for therapeutic health care often cannot be predicted by the individual, and the need for many valuable preventive services may not even by recognized. Moreover, the ability of the various sections of the population to pay for health services in relation to their needs is dependent on income level. For these reasons, all national health systems have established certain mechanisms of economic support outside the operation of the free market.

These methods of economic support may be categorized in various ways. A WHO Study Group on the Financing of Health Services (*88*) classified the sources of finance as follows:

(1) public (all levels of government, including ministries of health, health insurance schemes, and other ministries);
(2) employers (industrial and agricultural enterprises);
(3) organized voluntary agencies (charity, voluntary insurance, etc.);
(4) local community efforts (financial contributions and unremunerated services);
(5) foreign aid (both governmental and philanthropic, the latter often from religious agencies);
(6) private households (both for payments to organized programmes and for purely private purchases); and
(7) other possible sources (such as lotteries and donations).

The precise composition of these sources of finance differs greatly among national health systems. In some, private households are the predominant source; in others, the major source of support is government revenues, a substantial part of which may come from health insurance programmes. To some degree, however, all seven sources of finance are found in almost every health system. Generally speaking, source (1), plus parts of (4), (5), and (7) involving governments, are often described as the public sector of health system financing. The remainder constitutes the private sector.

Within any country's health system, diverse methods or combinations of methods of financing may be used. Thus the curative aspects of primary health care may be supported by private household payments; environmental sanitation may depend on general revenues of government; and hospitalization may depend heavily on support from a health insurance programme. Even within one type of service, such as hospitalization, support may come from private households, voluntary insurance, public revenues, and charity.

Understanding the complex economic dynamics of health systems is important because each method has serious social implications. Thus private purchasing ordinarily means that health services go to the individual or family with the necessary money available: this may correspond very poorly to the differing health needs of families. Social security or even voluntary health insurance are safeguards against the unpredictability of illness, guaranteeing the availability of funds whenever illness may strike; however, such benefits come only to the insured. Others in great need may not be in an appropriate social setting (for example, the inhabitants of a remote village) for any type of health insurance to be available. Public revenue support ordinarily implies the availability of service to all people without discrimination; its extent, however, may be very limited and the quality of services provided may consequently be poor.

Whatever combinations of economic support mechanisms are used in a country, the aggregate amount of funding must be adequate if the health system is to be effective.

Management of a National Health System

The role of administrative or managerial processes has been implied in much of the above discussion: their importance for the proper functioning of a health system is so great that, together, they are regarded as a distinct factor in effective organization and operation. Ultimately, the pattern of management applied depends on the history, culture, and social values of a country. It also depends, inevitably, on the structure of authority (i.e., centralized, federal, or decentralized) of each country's government.

Since terms such as "administration" or "management" have different meanings in different countries, it seems useful to draw attention to the definitions that have emerged from recent international

discussions in the context of health programmes or health systems management.

In the early 1970s, the term "administration" was widely and predominantly used to cover the whole range of activities in the managerial processes of health programmes or health systems (*71*). Other interpretations suggested the direct interchangeability of the terms, stating, for instance, that "health management is essentially a system of administrative roles, functions, and tasks carried out by individuals at various levels of administration in order to improve the health of people" (*106*).

Contrary to the above viewpoints, some experts make a definite distinction between administration and management, such as the following (*19*):

> "*Administration* refers to the assortment of techniques used in the operation of an organization, including planning, financing, accounting, personnel control, system analysis, etc. *Management*, on the other hand, is the process of selecting opportunities, solving problems, engineering change, and building commitment to the objectives of the organization. In other words, the tasks of management are: defining the specific purpose and mission of the organization, making work productive and the worker achieve and manage social impacts and social responsibilities. *This type of 'leadership function', implicit for management, goes far beyond the techniques of administration.*"

A more operational and comprehensive definition appeared in a resolution adopted in 1978 by the Thirty-first World Health Assembly (WHA31.43). In stressing the importance of applying appropriate managerial processes to health development, this resolution called on Member States:

> " . . . to introduce or strengthen, as applicable and as appropriate to their social and economic conditions, an integrated process for defining health policies; formulating priority programmes to translate those policies into action; ensuring the preferential appropriation of funds from the health budget to those priority programmes; delivering those programmes through the general health system; monitoring, controlling and evaluating health programmes and the services and institutions that deliver them; and providing adequate information support to the process as a whole and to each of its component parts . . . "

This definition has been elaborated in depth and transformed into a set of guiding principles (*95*) that constitute an essential part of the WHO Global Strategy for health for all. It also appears to be a suitable basis for discussion of health system management and will be elaborated later in this study in more detail. Here we should summarize three crucial aspects of health system management that correspond generally to the above definition. These are:

—leadership
—decision-making
—regulation.

Leadership

The people and institutions involved in the development of national health systems have their own history, traditions, purposes, and power structure that make them resistant to change. Institutional inertia and departmental structuring of health systems are often serious impediments to progress. To overcome these constraints, there is an increasing need for a leadership function in health systems management, permitting the direction, motivation, and mobilization of people towards desirable change.

The reciprocal nature of organizational authority has led to the development of different concepts of leadership or leadership style. In the rather autocratic leadership style characteristic of traditional management theory, the superior gives orders and the subordinates report on their progress in carrying out these directives. Other modes of leadership have evolved, however—the "democratic" and the "participatory" styles. Unlike the traditional model, the new theories are based on the notion that, since all members of an organization have an interest in its good performance, they should all participate in the decision-making process. In national health systems, in both industrialized and developing countries, either of these leadership styles may be found; sometimes both are encountered in different parts of the system.

Decision-making

This may vary in health systems from an implicit—almost intuitive—process to very explicit and well-organized undertakings. The scope, character, and organization of decision-making processes depend on the way in which resources are arranged and, in particular, on the different attributes of their structure. This refers to responsibility, which may range from decentralized to centralized; the administrative system, which may be multifocal or unified; and sponsorship, which may range from almost completely private to fully public. Within this context, four crucial aspects of the decision-making mechanisms should be considered: (1) planning; (2) implementation and realization; (3) monitoring and evaluation; and (4) information support.

There are two different, although closely interrelated, aspects of *planning* within national health systems—namely, health planning and health system planning.

Health planning is a systematic, organized, forward-looking, continuous process to provide decision-makers with facts, prognoses, and options to improve the health of a population. Its main concern, therefore, is to understand the health situation and socioepidemiological factors affecting it. Appropriate technology is then selected to control causative factors and subsequently to improve the health situation. This leads to the formulation of relevant health plans and programmes.

Health system planning concerns the adjustment of all system components in order to absorb planned programmes and make them

operational. This may require changes in health care delivery, with repercussions on the development of resources and the method of economic support in the system. Moreover, changes to be effected at a certain time may have consequences earlier or later, which will require replanning in the health system. Although logically sound, the above sequence of planning is still too often postponed in practice. This is the main reason why many national health systems are not relevant to the needs of people, perpetuating functions no longer relevant, and changing their structure only under the pressure of urgent demands. Health system planning in some countries may be performed entirely within the ministry of health. In others, it may be one special responsibility of an overall planning agency. Sometimes the broad contours of system planning are drawn by a central planning agency, while details (e.g., the precise definition of functions and staffing patterns of health care facilities) are left to the health ministry. There are also different degrees of centralization and decentralization in national health system planning. In some countries, all planning is done in the national capital; but, in most, various planning responsibilities are carried out at local levels, which usually increases the relevance and acceptability of health plans.

Implementation and realization involve the translation of detailed plans and programmes into action, so that they become integral parts of the health system: this means day-to-day administration of those programmes and continuous follow-up to ensure that they are proceeding as planned. In different health systems, the extent of outward delegation of administrative responsibility (decentralization) varies greatly. Some systems retain almost all significant powers of decision-making at the centre or top: peripherally, the task is simply to carry out orders. In other systems, much decision-making authority, related to both planning and implementation, is vested in the lower echelons, sometimes within broadly defined guidelines from the central authority.

Determination of the extent to which a health system or programmes within it have achieved their objectives requires systematic *monitoring and evaluation*. This process is usually carried out on several levels of the system, varying in detail and in the range of aspects considered. However, proper performance of the evaluation task is never easy because of the very nature of health-related activities and the difficulties of quantifying health consequences. It is therefore often unavoidable to apply qualitative judgement—though this should be supported, whenever possible, by reliable quantified assessment.

Quite apart from the monitoring and evaluation process and the administrative levels at which it may be performed, community evaluation (e.g., through household surveys) has been found practicable for the evaluation of primary health care and its supporting services. Final responsibility for the evaluation of a total health system ordinarily rests with the central authorities, such as the ministry of health.

For health system management, *information support* is vital. However, the need for information may or may not be defined realistically. In particular, relevant information required for policy formulation, plan-

ning, programming, budgeting, and monitoring and evaluation is difficult to obtain. Sometimes information needed for strategic purposes cannot always be tapped from existing data bases, which are usually of an operational character. For instance, in most cases there is plenty of information concerning urban hospitals, but there are large gaps with respect to primary health care in both urban and rural settings. Also, one may find that the government sector is reasonably well covered, but that information about the private sector is lacking. In some countries, the development of information is handicapped by regulations protecting the privacy of both patients and professionals. Moreover, health systems research is neglected as a source of information generation in most countries.

Regulation

Another major aspect of health systems management (along with leadership and decision-making) is regulation, which plays a role in the operation of all national health systems, though its scope varies considerably. The licensing of health workers, the approval of health care institutions, the control of drugs, or the right of access to and conditions for use of health services are forms of legislative regulation. Sometimes the volume of regulation in a health system may become burdensome; but one must realize that regulations are typically issued in response to the occurrence of some abuse, or in order to anticipate problems. When *health legislation* is enacted in a country, it is sometimes difficult to formulate in advance the exact way in which services should be organized and provided; the language of the law may therefore be very general, leaving a public agency with the responsibility for issuing regulations.

Regulation in any administrative system depends on both deliberate (managed) and informal behaviour. *Managed regulatory functions* are those formally organized to establish objectives and other norms, to collect and process information on system operations, and to take corrective and adaptive action. These functions are usually governmental but may also be nongovernmental (such as in the ethical codes of professional associations). Once established and learned, regulatory procedures may become habitual and hard to change. *Informal regulation* consists of behaviour and activities that fall outside the sphere of governmental management but that also serve to adjust the functioning of the system. In this category, group and professional norms, social values, information communications, and interpersonal relationships are important elements. Informal regulation thus refers to the determinants of behaviour in a system with which management does not deal, either intentionally or through neglect.

While managed and informal regulation complement each other, it should not be assumed that they are always harmonious. Certain aspects of informal regulation may not be compatible with managed regulation and may come into conflict with it. When such incompatibility or conflict

appears, it points to a discrepancy between management planning and operating realities. One prime source of such discrepancy may be the inability of management immediately to reconcile planned change with the system's steady state (*71*). Ultimately, regulation of all types is expected to control a national health system so that goals of equity, effectiveness, and efficiency can be achieved—if not completely, then as far as possible.

2. Types of national health system

The previous chapter analysed the structure and functions of national health systems in a general way, but any particular system embodies the characteristics of the country in which it operates. Among the approximately 160 sovereign countries of the world there are, of course, no two exactly alike. For convenience, however, countries have traditionally been divided into groups or types according to certain criteria. Thus, in the past, political leaders and social scientists categorized countries as "have" and "have-not" states; nowadays, they speak of "developed" and "developing" countries. Such dichotomies are obviously over-simplifications, motivated by practical ends. If, instead, we focus on national features that appear to have the greatest impact on health care systems, we may derive a somewhat more meaningful classification by considering countries in two principal dimensions: economic and sociopolitical.

Economic System Characteristics

An important background influence is the size and strength of a country's economy, which is usually expressed in terms of one of the national accounting aggregates, such as gross national product (GNP) or gross domestic product (GDP). These aggregates measure the total volume of national economic activity valued at current or constant prices.[1] By dividing the GNP or GDP by the total population, one arrives at per capita GNP or GDP, which are common general purpose indicators of national wealth (*80*). Per capita GNP may thus serve as a general measure of human welfare—that is, of health in a very broad sense. In practice, many health variables are indeed correlated with per capita GNP of GDP (*94*). Countries with a high per capita GNP are predominantly industrially developed, while those with a low one are predominantly agricultural, or developing.

Health problems in industrialized countries have passed through various evolutionary stages, each characterized by different challenges to

[1] GDP is equivalent to GNP minus net investment incomes from foreign countries.

public health and personal health care. In the initial stage, infectious diseases, malnutrition, and poor housing were combated by socioeconomic improvements in combination with public health measures such as the provision of a pure water supply and sewage disposal facilities. As scientific advances were made, broader control of acute bacterial and viral diseases was achieved by means of immunization and chemotherapy as well as increased health care for individuals.

The second evolutionary stage has been dominated by chronic diseases, particularly cardiovascular and cerebrovascular diseases and cancer. Scientific and technological progress has produced a wide array of medical interventions for diagnosis and cure, higher levels of specialization in medical practice, and transfer of much of the care previously rendered in doctors' offices and patients' homes to increasingly elaborate and expensive hospitals. The cost of health care has risen dramatically and, in most countries, has become a matter of substantial public concern.

There is evidence in some industrialized countries of a third stage, which might be described as social and environmental pathology. Threats to health arise not from intrinsic disorders of bodily structure and function, but from environmental hazards related to urban development and exposure to toxic substances, as well as from changes in social behaviour associated with violence, alcohol, and drug abuse of epidemic proportions.

Industrialized countries have passed through these three stages over the course of more than a century. Developing countries, on the other hand, face the challenge of coping with all three stages simultaneously, with just a fraction of the human and material resources available to their industrialized counterparts. The need for careful selection of priority actions, based on appropriate technology and direct involvement of communities themselves in health care processes, is great. Policies must be closely related to overall socioeconomic development if countries with limited resources are to achieve the greatest possible benefits in health (*19*).

Sociopolitical System Characteristics

It can be taken for granted that the health system in any country is part of its social and political structure. However, in certain countries the main difficulty in defining the sociopolitical setting of health systems is to identify the principal features of the setting. Among several more or less sophisticated proposals, one seems particularly worth considering, since it is simple enough to be described in qualitative terms and its practical usefulness has been proved. An international comparative study of health care systems (*44*) has characterized the sociopolitical foundations of such systems by the following features: (1) health as a societal value; (2) collectivism as opposed to individualism; and (3) distributional responsibility.

(1) The *value placed on health* may range from high, when society takes full financial and organizational responsibility for the provision of health services and the services are reasonably related to needs; to moderate, when financial and organizational responsibility is shared between society and the individual (e.g., insurance covers part of the health services, with other parts remaining outside the societal arrangements); to low, when society assumes relatively little financial and organizational responsibility (e.g., some special services or population groups may be socially covered, but most responsibility lies with the individual).

(2) The *balance between collectivism and individualism* depends on what is considered the collective optimum and the extent of individual tolerance of regulations and guidance. It may range from maximum collectivism, when the system is almost entirely concerned with providing benefits to society as a whole, leaving little or no choice to the individual (a "high score"), to maximum individualism, when ill health and care are viewed as problems of the individual unless they pose a direct threat to society, as in the case of epidemic disease (a "low score").

(3) Similarly, *distributional responsibility* may range from high, when every citizen is eligible for the same standard of service and when barriers to use, such as inability to pay or lack of travel time, are largely eliminated; to low, when society does not assume direct responsibility for the distribution of resources and services, and planned distribution is limited to selected purposes (e.g., for education or research, or humanitarian and charitable goals).

National health systems with high scores for all three of the above features may be described as highly organized. Those that have low scores may be considered modestly organized. Between the two extremes, national health systems may have various combinations of sociopolitical characteristics.

Of course, no one type of health system can be singled out as the best: each type reflects a different sort of emphasis. For instance, one of the still widely used classifications of medical care systems is based on a very simple set of underlying criteria: public assistance, health insurance and national health service (*73*). Another places emphasis on "appreciation of the range of functions which systems can fulfil (e.g., comprehensive or selective), and the manner in which medical care systems are derived from generalizable societal, cognitive, and adaptive processes" (*60*).

Typology of a Health System According to its Economic and Sociopolitical Characteristics

On the basis of estimates of its economic and sociopolitical characteristics, the health system of any country can be situated within a theoretical matrix. The *economic dimension* of this matrix can be rather easily scaled by the use of a country's per capita GNP, as discussed

above (although this measurement cannot reflect the distribution of income within a country). The *sociopolitical characteristics* of a country, or even of its health system, are not so easy to quantify: to arrange national health systems in this dimension requires more qualitative judgements, which can be based on the system's embodiment of the three types of societal value discussed above.

Health systems may also be graded according to their administrative structure—that is, from governmental to private, from centralized to decentralized, and from pluralistic to unified. Thus a sociopolitical framework that vests great power in government and leaves little room for private enterprise would be expected similarly to vest all or nearly all health responsibilities in government, and have little private medical practice; while, at the other end of the scale, private medical and hospital services would be strong, and governmental health programmes weak. Centralization in the general sociopolitical framework would yield centralized controls, standards, and management in the health system; decentralized policies would generate similarly decentralized financing and control of hospitals, health insurance, and other health programmes. Pluralistic political ideology would undoubtedly be associated with a multiplicity of health programmes and numerous challenges to the achievement of coordination; whereas a generally unified political structure would almost certainly lead to the merging of all or nearly all health responsibilities in a single agency—typically a ministry of health. All the above sociopolitical aspects of health systems may be condensed into a scale of organization ranging from modestly, to moderately, to highly organized.

A conceptual matrix of the characteristics of national health systems, based on these two factors—the national economic level and the health system's degree of organization—, is presented in Table 1. Theoretically, every national health system in the world could be placed in one of these nine conceptual categories. In some categories there would be many health systems, and in others only a few. Moreover, the economic and sociopolitical characteristics of countries and their health systems are continually changing, so that a system might be in one category now and in another five years hence.

Subject to this possibility, Table 1 may offer general guidance for the development of strategies to reshape national health systems. The amplitude of health resources is bound to be much greater in categories 1, 2, and 3, for example, than in categories 7, 8, and 9, and reorientation strategies should obviously take this into account. Similarly, the role of the private sector in financing health services is much greater in categories 1, 4, and 7 than in categories 3, 6, and 9, and this must obviously influence the planning of any system changes. It is likely that a substantial majority of the world's national health systems do not belong in the extreme categories (1, 3, 7, and 9), but in the intermediate zone (2, 4, 5, 6, and 8). This reinforces the case for reorientation strategies to be highly sensitive to the precise characteristics and circumstances of each country's health system.

Table 1. National health systems: typology based on national economic levels and degree of health system organization

National economic level	Degree of health system organization		
	Modestly organized	Moderately organized	Highly organized
Developed (affluent)	1	2	3
Developing (transitional)	4	5	6
Least developed (poor)	7	8	9

Value judgements, based on the category into which a national health system falls, must be avoided. In almost all categories, certain systems may rank high or low on criteria of relevance, coverage, effectiveness, and efficiency (*96*). National health systems that are rather loosely structured (modestly organized) but highly efficient may have the most favourable effect on the health of their populations. On the other hand, some highly organized but resource- or structure-oriented systems could have a less favourable effect on health, because of organizational rigidity or inadequate financial support.

Major Features of National Health Systems of Different Types

Before considering the challenge of health system reorientation to reach the goal of health for all, it may be helpful to identify a few major features of the national health systems of countries in each of the nine categories listed in Table 1. This description is by no means comprehensive, but it may illustrate the distinctions between particular types of system.

In the top row of the table, the countries in all three categories (1, 2, and 3) are quite affluent, with a per capita GNP of US $3000 or more. The health systems of category-1 countries (*economically affluent and modestly organized*) are characterized by relatively abundant health resources of all types (manpower, facilities, commodities, and knowledge). The organization of these resources, however, is quite heterogeneous; it is often described as pluralistic, in the sense that separate organizational structures are found for different population groups, different diseases, and different geographical areas or political jurisdictions. The delivery of health services is predominantly by private and autonomous resources (doctors, hospitals, pharmacies, etc.) not functioning as part of any organized programme. Financial support for these services is also highly diversified, most of it coming from private sources—either individual households or voluntary insurance agencies. Management procedures are also pluralistic and rather permissive;

planning is mainly local rather than central; administration is highly decentralized, with great responsibilities exercised locally. Regulations are—paradoxically—fairly stringent, to counteract various abuses, but there are continual pressures to minimize them. Evaluation is also rather highly developed, in response to the identification of various inequities in the system.

The health systems of category-2 countries (*economically affluent and moderately organized*) also have quite abundant resources. Most personnel are trained at government expense (unlike their counterparts in category-1 countries), and most health facilities are built and controlled by public authorities. Furthermore, human and physical resources are largely organized in health programmes sponsored by government, so that health services are available to all or nearly all of the population. The pattern of delivery of personal health services varies a great deal among the countries in this category, but in the case of ambulatory care it is usually provided by private practitioners (although the ways in which they are remunerated vary). Medical services in hospitals, on the other hand, are provided mainly by organized teams of physicians and allied personnel employed by the institution. Preventive care is usually delivered through mechanisms quite separate from those used for treatment. Economic support of all health services is largely collectivized under the supervision of government by the use of health insurance (social security) as well as general revenue mechanisms: funds from these sources are raised and spent by government at both national and local levels. Nevertheless, a significant private sector still operates—mainly for out-of-hospital services. Management procedures are more unified than in category-1 countries, with broad authority exercised by the national government, though various functions are still delegated to local government. Regulation is extensive and quite well accepted by both health care providers and users.

The health systems of category-3 countries (*economically affluent and highly organized*) are quite different from those in both preceding categories. The supply of health manpower, particularly physicians, is even greater than that in the other categories and health facilities are also abundant; equipment and the supply of drugs, however, are more limited. Virtually all resources function as part of one large organized system of health services under the central direction of a unified ministry of health. The pattern of health care delivery is also quite uniform: for both inpatient and ambulatory care, services are provided by salaried personnel employed in public facilities; private practice plays only a small part. Preventive services are integrated with treatment services, being delivered through the same mechanism. Economic support of the overall health system is derived almost entirely from general revenues of the national government and, as a result, health care is regarded as a public service available without charge (except for out-of-hospital drugs and certain other items) to everyone. Management procedures are uniform throughout the country and supervised through a pyramidal hierarchy of authority. Health facilities and services are all explicitly

regionalized. Decisions on the production and use of all health resources are based on centrally formulated planning, carried out continuously.

In the middle row of Table 1, the countries in all three categories (4, 5, and 6) are economically less developed, having a per capita GNP ranging between US $400 and US $3000, of which a large proportion approximates to US $1500. The resources of health systems of countries in category 4 (*economically transitional and modestly organized*) are very much more limited than those of the countries in categories 1, 2, and 3. Deficiencies are especially marked in the availability of fully trained physicians and nurses; therefore much of the population (which is predominantly rural) must depend for health care on traditional healers and auxiliary health personnel. In spite of the paucity of physicians, the services of those who are available are used mainly in private practice, and only a fraction of medical time is mobilized in organized health programmes. Governmental health responsibilities are assumed by a central ministry of health, but other branches of government also play a part (e.g., the management of large teaching hospitals is undertaken by the educational authorities). Local government is very weak, and few responsibilities are delegated to it. Curative health services are predominantly provided by private medical practitioners, traditional healers, and drug-sellers (most of whom are not pharmacists). Preventive services are delivered mainly through public programmes, but these reach only a small fraction of the people. The lion's share of expenditure in these health systems comes from private individuals, and the aggregate of governmental health spending usually amounts to less than 50% of the total. Management capabilities are rather weak and uncoordinated even at the national level and are virtually nonexistent at the local level. As a result of all these conditions, health services are distributed very unevenly, with the greatest share going to affluent families in the principal cities—to the detriment of the great majority of the population, which is poor and rural.

The health systems of countries in category 5 (*economically transitional and moderately organized*) have somewhat better organized health resources than those in category 4, but there are still marked discrepancies between their availability in urban and rural areas. Among the different types of resource, the greatest development has usually been in the construction of large urban hospitals. The majority of health workers in these countries are involved in organized public programmes, although they devote some of their time to the private sector; likewise, health facilities are predominantly governmental. At the national level, the ministry of health is relatively well developed but often has to share authority and resources with a separate health insurance (social security) programme. The delivery of both curative and preventive health services is predominantly through organized schemes in governmental hospitals and health centres (for ambulatory care). Economic support for health services has been largely collectivized through both general tax revenue and health insurance mechanisms; the latter may affect only a small fraction of the population but absorbs a large share of total health

expenditure. Management skills, civil service procedures, regulation, and evaluation are more highly developed than in category 4 countries, and provincial or local government plays a definite role in regulation and planning. Countries in category 5 are mostly making steady progress in expanding their health resources and moving towards a more equitable distribution of health services.

National health systems in countries of category 6 (*economically transitional and highly organized*) have become organized along lines quite different from those in categories 4 and 5. Although health resources may still fall short of needs, they are rapidly being expanded; and great emphasis is put on the training of doctors, as well as health auxiliaries who can serve after brief periods of training. Virtually all human and physical resources are mobilized in countrywide programmes of publicly organized health services; very little private practice remains. The organized framework is essentially unified under a single ministry of health, with delegation of responsibilities to equivalent authorities at provincial and local levels. Health services are delivered to patients entirely from organized settings, for both ambulatory and hospital care, and no distinction is made between delivery of curative and preventive personal health services. The great bulk of financial support comes from public revenues; most of these have been collected at the national level, but authority to make health expenditures is delegated to local jurisdictions. Management responsibilities are more decentralized than in the health systems of category-3 countries, though general policies are promulgated by the national government. Centralized health planning is important, but regulation to ensure uniform standards is not so great because adjustments to local conditions are encouraged.

In the bottom row of Table 1, countries in all three categories (7, 8, and 9) must be considered extremely poor, having a per capita GNP of less than US $400, of which a large proportion is less than US $300. National health systems in countries of category 7 (*economically poor and modestly organized*) have much sparser health resources than those in category 4. Most, though not all, of these countries are former colonies of European powers and have gained independence only in recent years. Because of their historical background, the training of physicians, nurses, and other health personnel (with a few exceptions) commenced only in the last decade or two, and these workers are consequently in extremely short supply. The available physicians are, for example, heavily concentrated in the national capital, where most of their time is spent in private practice. Investment in physical facilities has been largely devoted to the construction of one or more highly sophisticated hospitals in the largest city, while both hospital and ambulatory care units (health centres and health posts) are few and far between. Traditional practitioners are, in fact, the major source of medical care for the rural population. Payments for their services, along with payments for drugs (often self-prescribed), account for greater health-related expenditure than the aggregate of governmental pro-

grammes. Nearly all public health functions are administered at the top, through a ministry of health or a health division of another ministry; since local government is very weak, hardly any functions are delegated peripherally. Trained administrative personnel are so few that nearly all of them serve at the national level. Some of the deficiencies in governmental health resources are offset by small health units (sometimes with hospital beds) operated by religious missions from abroad; other voluntary health agencies are few and relatively inadequate. The allotment for health activities forms a very small proportion of the overall government budget, and, in several of these countries, the proportion has even been declining. There has been no significant planning to develop health insurance programmes or cooperatives that might enhance economic support in the health system.

The health systems in countries of category 8 (*economically poor and moderately organized*) have somewhat greater and better organized resources than those in category 7. Supplies of health personnel and facilities are more substantial, not because national wealth is superior (in fact, the per capita GNP might be lower), but because the development of health resources and services has been given a higher priority. There is still a concentration of physicians and hospital beds in urban areas, but not to such an extreme degree as in countries of category 7. An appreciable effort has been made to establish and staff health centres for ambulatory care in rural areas; many villages also have small health posts staffed by briefly trained auxiliary health workers. Nearly all physicians work in the government health service, but also engage in a certain amount of private practice. (A few of these countries have, however, prohibited the private practice of medicine and dentistry.) Management of the health system is mainly in the hands of a central ministry of health, but efforts are being made to encourage local communities to take responsibility for elements of primary health care. A small amount of financial support is also being generated locally through various cooperative schemes. Since government takes the major responsibility for health services, many health ministry officials have had training in management and planning, which leads to more efficient administration of the health system. Voluntary health agencies are somewhat more developed than in category-7 systems, and foreign-sponsored religious missions are integrated, as a matter of course, into the overall health system.

National health systems in countries of category 9 (*economically poor and highly organized*) have organized their resources and services to a greater extent than those in categories 7 or 8, being guided by a principle defining health care as a public responsibility to be assumed by government at all levels. To expand health manpower as rapidly as possible, large numbers of health auxiliaries are trained to be front-line personnel for the delivery of primary health care. Most of these auxiliary health workers serve the people from very modest quarters in rural settlements as well as in the cities. Physicians are regarded as back-up personnel, to whom patients with more complicated ailments may be

referred. Traditional practitioners are also abundant, but continuous efforts are being made to integrate them into the organized health system rather than allow them to continue in private practice. Since countries in category 9 are very poor, health services are not yet entirely free, small charges being made for both ambulatory and hospital services. This money, however, does not go to the individual practitioner but to the organized entity in which he or she works (for a salary). Morever, many local health insurance schemes have been organized—both in urban industrial establishments and in rural agricultural enterprises or communes. In order to encourage local self-reliance, major responsibilities for the management of all health services are delegated to provinces and local communities. National standards and methods of work are widely publicized but are regarded as suggestions rather than rigid directives. Health promotion and disease prevention have very high priority, the strongest emphasis being placed on proper nutrition, improved environmental sanitation, immunization, and family planning. Education also has a high priority, for reasons of general social development as well as health objectives.

This completes our general overview of the nine major types of national health system in operation in the various countries of the world. In an attempt to stress highlights and draw the pictures with broad strokes, the foregoing accounts have doubtless been over-simplified. It is hoped, however, that these descriptions of systems are sufficiently accurate and clear to permit differentiation of structures and functions between and among the nine types. This should facilitate the design of strategies for system improvement that are reasonably appropriate to the various national circumstances.

Part 2

Strategies for reorienting a national health system

3. Problems associated with national health systems and some objectives of reorientation

Clear emphasis in the Global Strategy for health for all is placed on the development of comprehensive countrywide health programmes and on the achievement of reforms required in national health systems to ensure the effective and efficient delivery of those programmes. The outline of the strategy clearly indicates that, in order to achieve the goal of health for all, all components of national health systems have to be organized as a coherent whole oriented towards a common purpose—i.e., as a purposeful system. Primary health care is regarded as an integral component of such a system, within which it should play the central role as main entry-point and main channel of delivery—in other words, *the organization of national health systems should be based on primary health care.*

The primary health care concept implies essential health care made universally accessible to all individuals and communities by means acceptable to them, with their full participation, and at a cost that both community and country can afford. This approach seems to be valid for all countries, from the most to the least developed, though the form it takes will vary according to economic and sociopolitical constraints.

The development and implementation of the broad type of national health system that has now been conceptualized are obviously not easy tasks: due account must be taken of many problems and restrictions, both physical and sociopolitical, which vary in size and nature from country to country. Reorientation of national health systems towards health for all will be more successful, of course, if there is a clear understanding of the nature of the difficulties involved. These problems and—subsequently—the changes required can be briefly summarized in terms of the five major components of health systems discussed in chapter 1.

Problems in the Development of Health Resources

In all national health systems there are substantial problems involving the development of human and physical resources. Most developing countries suffer serious shortages of physicians, nurses, health auxiliaries, etc., in relation to health needs. There are also

qualitative problems, since many health professionals, particularly physicians, have been educated according to doctrines formulated in affluent, industrialized countries and not in accordance with the population's health needs in their own countries. The geographical distribution of health personnel is also very unbalanced, to the disadvantage of rural and other geographically and socially remote areas. Similar deficiencies apply to hospitals, health centres, and other facilities.

So far, the development of health services has always begun in more affluent, urban areas, with the expectation that increasing national income would lead to their gradual diffusion through the rest of the country. The fact that this usually has not happened is due to the enduring poverty in these countries and a *self-augmenting concentration effect*, which arises from the continuing investment of scarce resources in the same highly favoured urban areas (*77*). Newly qualified medical professionals tend to settle as much as possible in urban areas, where diagnostic and therapeutic facilities are relatively good and where greater earnings can be expected. This very concentration of personnel leads, in turn, to further demands for specialized equipment and facilities.

With respect to hospitals and other health care facilities there are difficulties that reflect the general problems of resource development and warrant some elaboration. All too often the links are weak between planning authorities and agencies responsible for the physical design, construction, and maintenance of health care facilities. Accordingly, architects are frequently not involved in formulating the building brief, when decisions relating to the size and scope of facilities and their general standard of construction and equipment are being made. Moreover, supervision of construction and evaluation of completed projects are rarely assigned sufficiently high priority.

In many developing countries the situation is definitely worse, the shortage of architects being aggravated by their frequent lack of experience or special training in the design and building of health care facilities. Specialist training is rarely available locally and training overseas is, with few exceptions, generally not relevant to the needs of developing countries—leading to inappropriate designs and a sense of public dissatisfaction. Foreign consultants, usually financed by external agencies, are frequently inexperienced or uninterested in the conditions prevailing in developing countries. Being used to working on large-scale projects with sophisticated manpower, methods, materials, and equipment at their disposal, they often produce inappropriate and out-of-scale solutions—expensive to build and operate and frequently requiring staffing patterns that are unrealistic under local conditions. Moreover, the extensive use of imported skills, materials, and technology tends to result in facilities that are alien to local cultural values and difficult to maintain (*38*).

In the developed countries there are other resource problems. For example, over-specialization in many of these countries has resulted in a

lack of primary care physicians and related primary personnel. In some countries, hospital and other institutional care has been increased beyond reasonably defined needs, and the economic dynamics of the system have led to much hospital utilization that cannot be medically justified. The production and sale of drugs in developed countries have resulted in much over-medication and the extensive sale of drugs (at high prices) to the public with or without a medical indication or prescription.

The generation of knowledge through research in many developed countries has led to great advances in technology for controlling and treating the diseases predominant in those countries. Equivalent research on conditions predominant in developing countries is, however, relatively seldom performed. Moreover, comparatively little health systems research has been carried out; and even when such research has been undertaken and produced significant findings, the results are seldom applied by policy-makers. Political and social opposition often obstructs reasonable change.

The general question of health-related technology has acquired increasing importance in both industrialized and developing countries because of its capital and operational costs and uncertainties about the relative benefits of its use. In affluent and free-market countries with modestly organized health systems, decisions over the choice of technology are made by many separate health care units. Purchases are based on each unit's structurally determined and often profit-oriented interests, which do not necessarily coincide with the interests of the majority of the population. In centrally planned or highly organized health systems, on the other hand, technology can be more deliberately acquired in relation to population needs; these systems, however, are more rigidly structured, so that they cannot respond rapidly to technological progress or changing needs. In some countries, in which local units of government have substantial autonomy, even with central planning the system can be reasonably responsive to technological innovation (*15*).

In the 1970s health leaders became more sceptical about the relative benefits achieved by the endless multiplication of all sorts of medical technology. It usually resulted in significantly increased institutional care, especially in the developed countries, and diminished concern about the great unsatisfied needs for primary care (*50*, *51*). This, in turn, accelerated the inflation of health care costs (which were already rising for other reasons). In the developing countries, excessive concern with technology obstructed the implementation of urgently needed primary health care in rural areas and other priority services.

One must realize that the medical profession has been (and largely still is) trained to pursue the technological imperative—i.e., to use any intervention possible, regardless of cost, if there is a possibility of any benefit to the patient. Moreover, the process of technological innovation and its relationship to high-quality medical care have been matters reserved for professional judgement only. The uncontrolled use of

elaborate technology is even sometimes protected by ethical canons governing the doctor–patient relationship, although the issue has social and economic ramifications far beyond this level. New health-related technology has brought unquestionable benefits, but concomitantly it has generated serious problems affecting the whole health system (*35, 37*).

The use of any form of medical equipment presents special down-to-earth problems in developing countries, in the majority of which there is a serious lack of standardization of purchasing policies. Owing to a proliferation of models, maintenance and the stocking of spare parts are impossible. For very sophisticated medical equipment, maintenance personnel are often provided by the supplier, but they cannot repair equipment from other manufacturers. The problem of standardization is sometimes further exacerbated, particularly in developing countries, by laissez-faire approaches to the development of health programmes, by gifts of equipment from donor agencies, and by nonselective trade agreements between countries.

Problems in the Organization of Resources

For many historical and political reasons, the organization of health resources in most countries has not been efficient in the sense of achieving maximum benefits from the available supply of personnel and facilities. Authority is often dispersed among several governmental and private agencies, which are not properly coordinated. Subsystems of organized health care may be fashioned to serve certain population groups. The social and geographical deployment of resources tends to favour individuals and families of higher socioeconomic status, to the detriment of poor people in both cities and rural areas.

In many countries the major determinants of resource distribution are market forces, rather than objective assessments of human and community needs. In cases in which the government accepts the private sector, it often happens that the latter does not comply with the health policy of the country and does not collaborate with the public sector; this may constitute an impediment to the development of a comprehensive national health system.

The separation of responsibilities for curative and preventive services, such as occurs in most countries, leads to waste and ultimately to an inadequate delivery of preventive and health promotive services. Although it is sometimes claimed that because of this separation greater emphasis is placed on prevention, in reality the results are just the opposite. The provision of personal preventive services (such as immunization, prenatal examination, and nutrition education) at the same facilities as those used for the provision of treatment serves to attract more people to both types of service. Relationships between central and peripheral jurisdictions in government may sometimes be poor, with the result that peripheral programmes do not receive the technical support and consultation of the higher levels. On the other

hand, the relationships may be authoritarian and rigid, so that community services are not responsive to the diverse needs of local populations. Many kinds of coordinating bodies may be established to overcome the problems of dispersed authority and responsibility. An atmosphere of controversy and competition, however, rather than cooperative efforts towards a common goal, often permeates the constituent organizations of a system.

Problems in Health Care Delivery

As a result of the inefficient and fragmented organization of resources, the delivery of health care involves problems in most countries. Many of them arise from the poor adjustment of patterns of health care delivery to the requirements of medical science, and also from the use of technology that is inappropriate to the needs of communities in various socioeconomic settings. Problems also arise from a lack of adjustment of delivery patterns to human needs. Personnel may be insensitive to patients' feelings and the circumstances of care (for example, patients may have to wait for hours under uncomfortable conditions). Mental and emotional problems are frequently overlooked. The continuity of a patient's treatment over a period of time—when different personnel may be involved in the same case—depends on good medical records: these are often lacking and, as a result, health care continuity is poor.

Health care delivery patterns have been adjusted to the complexities of medical science relatively well in many hospitals, where large teams of skilled personnel work together. For ambulatory care, however, the model of the private medical practitioner or the private and isolated traditional healer is quite anachronistic in relation to the potentialities of science. On the one hand, the individual medical practitioner may have to perform work that could be done well by far more modestly trained and less expensive personnel. On the other hand, special expertise—for example, in nutritional guidance, social work, or laboratory analysis—is not available when needed. To some extent teams of health personnel are being formed for primary health care in various national health systems; fortunately this trend is growing, but it is still not the predominant mode (*20*). However, slow extension is occurring in community health centres towards delivering integrated services, as well as in the regionalization of health facilities.

Problems in Economic Support

In most countries the economic support of health care is seriously below the level required to meet the health needs of the population. These financial deficiencies are obviously greater in the developing countries, but they also apply to many developed countries, particularly for low-income segments of the population. Weakness in national planning and budgeting for health systems also contributes to

such deficiencies. In many developing countries health financing by the private sector substantially exceeds that by the public sector, leading to great inequities in the distribution of health services to the people.

The sources of economic support for health care inevitably influence the distribution of services and may create serious unfairness. This is most dramatic with respect to uncontrolled private financing, which channels resources and services to people with the most money to spend. Even with social financing, mechanisms such as health insurance channel money—and therefore resources—to people with stable employment, thereby increasing the concentration of resources in cities, to the detriment of rural areas.

In so far as market forces determine the allocation of health resources, the latter will obviously flow to people and areas of greatest affluence. Moreover, the tendency for greater supply to yield lower prices—as in the classic market for other commodities and services—has been shown not to operate in the medical market. Instead, greater numbers of physicians and other health care personnel lead to the provision of a larger volume of health services at the same prices. In other words, physicians, and even hospitals, to a certain extent create their own demand (*65*). Increases in the availability of health manpower and other resources therefore lead to greater overall expenditure, and this, indeed, is a major reason for the worldwide increase in health care costs—without a commensurate increase in health coverage or improvement of the health status of populations.

Problems in Health System Management

The general organization of health resources in a country usually reflects historical developments rather than current needs. For this reason, management of the various parts of a health system is likely to be unwieldy and inefficient. In the developing countries this generally means excessive centralization of decision-making, with weak administrative capacity at the local level. Furthermore, decision-making processes that require substantial analysis and judgement at a central level are often weak through lack of political initiative, shortage of well-educated or experienced management staff, or both, and deficient information.

In some health systems, where responsibilities have been delegated peripherally, the necessary supervision from higher levels is lacking. Vertical relationships are usually inadequately organized. The occurrence of "top down" policy-making, without sufficient clarification at lower levels, weakens the position at those levels, and this problem is often aggravated on account of the bypassing of peripheral and intermediate levels and the duplication of lines of command. In most health systems horizontal liaisons between the health sector and other relevant sectors seldom function well or, in some cases, are missing altogether. As a consequence, intersectoral policies, strategies, or plans of action cannot be implemented.

In spite of a great deal of rhetoric about community participation in health policy formulation, this has only rarely been realized; too often it requires some dramatic incident to arouse the concern of the public to the point where administrative procedures are changed. Channels are seldom available for a continuous input of ideas and suggestions from the people into health system management.

Weaknesses in monitoring and evaluation often mirror weaknesses in planning, for without a clear delineation of goals it is difficult to judge the effects of work. An inadequate, or often irrelevant, supply of information inhibits both planning and evaluation; and available data may no longer be valid and not be comparable owing to a lack of uniformity. Information may sometimes be too detailed or so highly aggregated that it conceals rather than reveals problems. In other words, available information is seldom oriented towards health management and is therefore inappropriate for health policy development, planning, monitoring, or evaluation (*96*).

In many health systems one may find that regulatory mechanisms, such as environmental sanitation surveillance, quality control of health care, registration or licensing of health professionals, control of traditional healers, facility controls, drug controls, and cost or price controls, are functioning weakly. In a number of developing countries, appropriate regulatory procedures are even missing completely.

Whatever resources exist in a health system, their optimum use can be handicapped by lack of management capabilities at various levels. Under such circumstances it can be extremely difficult to develop the leadership needed to reorient the health system and to obtain the necessary intersectoral collaboration. In poor developing countries this lack of leadership is particularly manifest at the community level (*55*).

Some Objectives of Reorientation

In the light of these broad statements about problems that national health systems currently face and the general constraints on their reorientation, we may now proceed to examine the objectives of any proposal for improvement.

The World Health Organization and its Member States have been quite aware of the need for practical strategies to reshape or reorient national health systems. In 1981 the Thirty-fourth World Health Assembly adopted a "Global Strategy for health for all by the year 2000"; this had been formulated as the culmination of a process that began with the preparation of national strategies and continued with the development of regional strategies (*93*). With specific reference to national health systems, countries are called upon to:

> "review their health systems with the aim of reshaping them as necessary . . . This will imply the establishment of a well-coordinated infrastructure, starting with family and community care, and continuing with intermediate and central support and referral levels. This infrastructure will deliver well-defined health programmes that use appropriate technology and that cover the whole population, progressively if necessary."

This process of reviewing health systems with the aim of reshaping them as necessary must obviously vary in countries of different types and indeed within groups of countries of the same type. Thus the detailed structure and functions of national health systems must be understood comprehensively if any reorientation is to be achieved. A change in one of the five major components inevitably requires adjustments in the other four. Unfortunately, this is sometimes overlooked, which accounts for failures and frustrations in various plans for national health system development.

In the light of the health system problems reviewed in this chapter, we may examine the kinds of reorientation that may be required in the years ahead. Such reorientation should provide reasonable responses to questions such as the following:

(1) *Resource development.* How can health personnel be prepared and facilities established in reasonable relationship to population needs? How should primary health care be given appropriate emphasis? How can the quantity and quality of health manpower be properly adjusted to health service requirements? What emphasis should be placed in facility construction on units for ambulatory and primary health care with linkages to health centres and hospitals? Can drugs and other health commodities be prudently produced and distributed while avoiding excessively elaborate technology? How can scientific knowledge best be disseminated to all parts of the national health system?

(2) *Organization of resources.* How should sound functional relationships be established among various organized entities in the health system, both vertically (between different governmental levels) and horizontally (between health and other social sectors)? How can the geographical distribution of resources be organized according to human need, rather than market demand? Should various public and private health agencies be coordinated, or even integrated, within a unified ministry of health? Whatever may be organizationally achievable at the top, should all organized health activities (from whatever source) come under unified administration at the local level?

(3) *Delivery of health services.* How can health services be delivered to focus on the technical and human needs of the public (rather than on the requirements of health care providers)? What is the best way to emphasize prevention and health promotion? Should delivery of preventive and treatment services be integrated? How can team-work best be established among health personnel at the point of service delivery? How can health facilities be suitably linked in functional regional networks? How should health facilities be designed and operated to take full account of the human sensitivities of patients? How can records and communications best be used to promote continuity of care?

(4) *Economic support.* Can the economic support of health systems be planned in such a way as to promote equity—that is, to ensure that services are provided in proportion to need rather than in response to

personal affluence? Does this require the maximum use of insurance, tax revenues, and other mechanisms of social financing? Since market mechanisms have everywhere led to an inequitable distribution of health resources and services, should these be replaced, as far as feasible, by systematic health planning? In order to facilitate health system planning, should efforts be made to maximize public sector financing, whatever the total strength of the economy may be?

(5) *Management.* How can health system management be improved? Would appropriate training of administrative personnel be helpful? Should health workers be brought together with community leaders? Would it be practicable for central authorities to delegate a great deal of responsibility to provincial and local levels? How can an orderly flow of information be arranged in order to strengthen planning at all levels? How can regulations be built into the daily operation of health systems, rather than being dependent on rigid external policing? How can the health system be continually evaluated, so that regular feedback flows from communities to higher levels?

We may now proceed to an examination of strategies of health systems reorientation which may respond to the above questions in countries with different types of system.

4. Reorientation of health resources

The establishment of national health systems based on primary health care usually starts, as stated earlier, from a situation characterized by much irrelevance and inequity in the distribution of health resources. Thus members of the medical profession live mainly in cities—with all the professional and economic incentives to preserve the status quo; health legislation often obstructs change in health service responsibilities; and strong bias exists in favour of high medical technologies that are neither relevant to prevailing health needs nor appropriate to the socioeconomic context. What then are the steps that need to be taken to remedy this situation? How can health resources be developed rationally and allocated to meet the priority needs of people and avoid waste? How can teaching processes be modified to correspond to new health development policies and not produce health manpower able to function only with the aid of expensive equipment? How can facilities and equipment be modified for use and maintenance at the places where they are really needed? And, last but not least, how can relevant health knowledge be generated and implanted in order to serve as a useful health resource in itself?

There are no single and definite answers to these questions; however, at the present stage of worldwide experience it is possible to determine in what directions they should be sought. Within the process of health systems reorientation there are certain salient issues likely to suggest more specific strategies governing the use of resources. They relate, respectively, to the changing context, the increasing concern with relevance and adequacy, and the cost implications of health resources development and deployment.

The development of comprehensive health systems based on primary health care for the delivery of countrywide programmes that reach the whole population goes far beyond the scope of medical care or health service systems: it becomes part of the general socioeconomic infrastructure, which also embraces resource contributions from other sectors and from the community itself. In such a *changing context*, the meaning of the term "health resources" is also changing. For instance, "health manpower" no longer means only medical professionals and their supporting staff, but also includes people in other national sectors

who indirectly influence the health status of communities. This can be through supervising food and water supplies, controlling and engineering physical and social environments, or enhancing the level of education; it includes, too, people who participate directly in preventive, curative, rehabilitative, and sociomedical care functions. "Health facilities" and "health equipment and supplies" no longer mean only medical institutions and tools for the delivery of medical services, but also the home, work-place, and school, in which health care may be given. Other factors, ranging from water and sewerage installations to the mass media, facilitate health care functions at the community level. "Health knowledge" no longer applies only to professional education, but also to people's understanding of health problems.

Relevance and adequacy of health resources concern their qualitative and quantitative response to prevailing human needs and socioeconomic realities. In the process of national health systems reorientation, only resources that directly tackle existing health problems and can be culturally accepted and economically afforded by communities should be supported. Increasing the relevance and adequacy of health resources will obviously enhance the effectiveness of national health systems.

The *cost implications of health resources development and deployment* concern both developed and developing countries, although the causative factors differ. In the former countries, waste and abuse are prominent; while in the latter, lack of resources is the main problem.

The above salient issues in health resources reorientation have recently led to an increasing preoccupation with the concept of *appropriate technology for health.* Regarding technology as a comprehensive notion—including technical tools (facilities, equipment, supplies), nonmaterial components such as technical know-how and staffing and organization of work (manpower, procedures)—one can see a close relationship between health technology and health resources at various levels of the health system.

The concept of appropriate technology for health has been developed in parallel by the World Health Organization and its Member States (*107*). It is based on the assumption that, in meeting health needs, technology must be of proved worth in solving particular problems (this also applies to some components of traditional medicine). Appropriate technology must be acceptable to those who apply it and to those for whom it is used, and it must be affordable by the community. As noted earlier, the concept arose from an awareness of the needs of developing countries and the unhappy consequences of an uncritical transfer of health technologies from one country to another. It has now come to have a much broader application and relates to all the aspects of health resources development and deployment discussed above. It appears that the choice of health technology is not only a matter of conscious policy-making but is also determined by the pattern of production, which will certainly vary between open-market and centrally planned health systems, or between developed and developing countries.

It is now becoming widely recognized that health authorities should

provide all parties involved, including the medical profession and the general public, with reliable information on the value and limitations of various health technologies and the rationale for various types of health service, in order to create an informed opinion that will encourage the realistic formulation of national health programmes (*51*).

Bearing all this in mind, we may now discuss possible strategies for reorienting the several components of health resources, in various economic and sociopolitical settings.

Health Manpower

Historically, and partly as a result of the increasing technical capability of medicine, the care and comfort of the sick have been supplemented by active medical interventions, both conservative and surgical, and have later been extended to rehabilitation. The concept of health care has continued to widen to include the prevention of illness and the active promotion of health through environmental, educational, and other means. Each advance does not replace previous ones but modifies them and also raises additional problems, including coordination among the different services, differentiation of tasks, and appropriate adjustment of medical knowledge and skills to the broadening scope of health care. These trends also influence the organizational patterns of health care. Individual care, based on the single doctor–patient relationship, is being replaced by health care undertaken by groups (or teams) and institutions (which can be regarded as concentrations of professional teams around certain physical facilities). Furthermore, health institutions are being viewed as part of a much wider, collaborative health care system, rather than as self-contained entities (*83*).

The widening scope and changing organizational pattern of health care have also influenced the role played by the medical profession. To its traditional concern for the treatment and care of individuals is being added concern for the effects of medical decisions and actions on the health of the entire community and on community resources. The connexion is partly a sociomedical one (as in the case of family health problems), and partly an economic one, in that many interventions which are technically possible (such as hospital or specialist care) now require a large input of community resources. One could expect that the above trends, which influence the qualitative and quantitative requirements for the health professions, would also influence health manpower development and deployment. Surprisingly this has not been achieved to the extent desired: therefore improvements in relevance and adequacy remain the major issues for health manpower reorientation.

Originally the decreasing relevance of manpower development vis-à-vis changing social needs started in affluent pluralistic (modestly organized) countries. In such countries, the process of recruitment and education of health professionals, as well as the selection of professional careers and assignments, depends entirely on individual choice and

opportunities, without any social obligations. In consequence, the professional capabilities resulting from technological progress in medicine and the economic incentives of private practice have attracted a very high proportion of health professionals into specialties, with little regard for preventive and community medicine. Unfortunately, the same trend has occurred in developing countries with modestly organized health care arrangements and a laissez-faire approach to health manpower development. In these countries, it has also led to drastic reductions in the adequacy of health manpower in terms of professional qualifications, territorial distribution, and even migration abroad.

Various approaches to enhancing the relevance and adequacy of health manpower have been tried in recent years in different types of country, and some of the experience arising from them is worthy of deeper consideration. The discussion which follows will focus on three important aspects of manpower development and deployment: planning, training, and functioning.

Manpower planning

The actual planning for health manpower development may be performed using a variety of processes ranging from informal to highly formalized. Planning manpower for primary health care appears to span this entire range. Local groups may plan for their own needs through informal dialogue, with varying degrees of community involvement (usually more in decentralized systems) and normative recommendations (usually more in centralized systems). National planning is sometimes equally informal (laissez-faire approach); but the increasing complexity of matching national requirements with manpower development underlines the need for a more systematic process, despite the greater barriers to local participation. One fundamental concern in all types of country is the need for better coordination of health services and manpower planning. On the basis of experience, useful processes for health manpower planning have been well delineated (*22*, *26*).

Health manpower support for primary health care requires quantitative, qualitative, and distributive changes in present manpower patterns. Two crucial and interlinked aspects are the analysis and redefinition of the functions of various types of health worker and the production of adequate numbers of each type. The expansion and reallocation of tasks among existing and new health workers should be based on the principle that all health activities should be undertaken at the most peripheral level of the health system as is practicable, and by the workers most suitably trained to carry out these activities. Many countries, particularly developing ones, trying to overcome severe shortages of health manpower, have chosen to develop completely new cadres of auxiliary health workers, who are sometimes part of the official health services (i.e., primary health care workers) and sometimes part of the community (i.e., community health workers). They receive training and supporting supervision from the professionally qualified staff (i.e., doctors, nurses,

and midwives) of the health services. Many countries have already trained and deployed such workers; others are still in the planning stages (*89*).

The value of continued sharing of experience in these efforts is widely appreciated and the example is often followed in developed countries (e.g., medical, nursing, or social assistants). This may not be due to inadequacies in health manpower, nor to economic reasons, but mainly to the higher suitability (and even higher morale) of such workers for performing primary health care tasks. Evaluation and replanning at regular intervals during the implementation process is important to ensure that expansion does indeed provide the anticipated benefits in improved health for the community. Legislative changes and the development of appropriate career structures and reward systems are important prerequisites for motivating these new health workers.

The development of health manpower for primary health care must also include clarification of the role of the individual, family, and community in guided self-care and their relationships to other health manpower. It must also consider traditional health practitioners and develop means of enhancing their contribution to primary health care, where possible. The experience of countries in which substantial integration of traditional and modern medicine has been achieved indicates its value for expanding manpower resources (*17*, *87*).

Manpower training

Perhaps the strongest concern in the development of appropriate health manpower resources at present is the relevance of training programmes. Increased understanding of health systems based on primary health care has stimulated a reassessment of health training activities for all types of personnel, from doctors and nurses to community health workers. There have already been numerous, well-documented national efforts to change educational programmes to increase their relevance for current health needs and priorities (*30*).

New approaches to the education of doctors and nurses aim at reconciling the need for primary health care and referral services with the still-prevailing orientation of medical schools towards individualistic, curative, and high-technology medicine. The obvious requirement is for health care providers to be oriented to broader and more equitable health development programmes, with community involvement and appropriate technology. Training institutions clearly play a critical role in developing health manpower; therefore efforts should be directed towards making the necessary adjustments without placing the establishments in an adverse role.

The involvement of both medical schools and health care institutions in the movement towards health for all based on primary health care has been suggested as one way of tackling the problem, and this approach is being increasingly implemented in countries—developed and developing alike—with various degrees of health care organization. It is also seen as

a means of promoting a broader community-oriented role for hospitals, which are the site of most medical and nursing training, and bringing hospitals into closer collaboration with primary health care institutions and teams. (This also implies continuous inservice training.) The issues surrounding the reorientation of health manpower education will doubtless continue to be a subject for debate and experimentation for many years.

Manpower functioning

Many attempts are being made to change the orientation and attitudes of health graduates, including increasing the emphasis on the role of community medicine and technology, use of the epidemiological approach in health care practice, determination of the effectiveness and cost of procedures used, and enhancing the health profession's sense of social responsibility (*14*, *19*, *34*, *69*, *97*).

A rather more urgent need, recognized everywhere, is for the reorientation of existing personnel towards new roles in support of primary health care. This need applies to personnel at all levels of the health system, including peripheral health workers, those in referral and supporting institutions, planners and workers in health-related sectors, and national and local health policy- and decision-makers. In other sectors and among policy-makers and political leaders, a primary purpose is the clarification of the benefits of the health for all strategy and the development of broad support for primary health care (*41*, *100*).

Certain other strategies for reorienting the health manpower component of national health systems may be briefly noted. In all types of system the training of physicians, dentists, pharmacists, and others in the preventive and social aspects of their disciplines should be strengthened. The education of health personnel should be financed by public funds, so that inadequate family income is not an impediment to entry into the health professions. New graduates in medicine and other fields should be required, or strongly encouraged, to serve in areas of special need. In order to safeguard quality, physicians and certain other personnel categories should be subject to periodic relicensing, which might be made contingent on their following short refresher courses.

In the more developed countries the rapidly increasing volume of aged and long-term patients calls for training greater numbers of auxiliary geriatric personnel. In long-term care facilities, as well as in general hospitals, greater delegation of various procedural tasks to nurses and others could increase the efficiency of the health system.

In developing countries, in which a large proportion of doctors work in governmental health programmes, official salaries are typically quite low; as a result, these doctors also engage in private practice—often for several hours a day. This tendency creates split loyalties and tends to weaken the public system. Only if official salaries are increased, along with a requirement for doctors to serve more hours in the public programme, can one expect this problem to be reduced. In countries

with large numbers of traditional healers and severe shortages of scientifically trained personnel, strategies for effective use of the traditional manpower should be explored. In several countries these practitioners have been given training for integration into the national health system in various designated roles.

Health Facilities

Health facilities are essentially structures in which health care functions are performed; and until these functions are defined, the real need for buildings, equipment, and staffing cannot be determined. This requires a planning process capable of assessing priorities among health problems and of defining the necessary health care activities. Through such processes, some countries are now trying to identify feasible and affordable groupings of tasks, thus defining roles and responsibilities for manpower types: only then can planners design buildings to accommodate the performance of those tasks. In short, health facilities must follow from an overall health services planning process—they cannot precede it.

In present attempts at problem-oriented health systems planning, the key issues are: What package of health services is necessary to achieve the most relevant (in relation to human needs) and equitable distribution of health care; and what is the appropriate role of facilities in such a package? Practical experience, including that gained through WHO-sponsored national case studies, has shown that many primary health care tasks can be performed without special buildings—in the home, the school, or the work-place—and people often welcome this. Nevertheless, some tasks are much better performed in specially designed and constructed buildings. These tasks need not involve high-technology medicine but may be simple surgery, management of difficult births, treatment of accidents, or use of certain diagnostic equipment. While such functions do not require complex buildings, even the construction of modest structures may entail expensive mistakes.

As a general rule, hospitals devoted mainly to bed-patient care have attracted by far the greatest capital investment in the health systems of both developed and developing countries. With the current focus on high priority for primary health care, this policy must change: far greater attention and investment are required for the construction of ambulatory care centres and various types of small health post or station throughout rural areas.

For some time, WHO has been trying to dispel certain erroneous views of health facilities that have cost Member States too much without controlling the conditions most damaging to people's health. For example, it was long assumed that health facilities in developing countries should follow the patterns prevalent in more developed countries: only a few modifications, mainly in adjustment to climatic conditions, were contemplated. Fortunately, there have always been some people (decision-makers, planners, architects, health workers) who

have understood the implications of limited resources, insufficient or unreliable utilities, and specific social and cultural traits. Consequently, many hospitals, health centres, and smaller health facilities could be cited as examples of reasonable and appropriate planning, in both developed and developing countries. Unfortunately, costly mistakes did not receive the publicity they deserved and the same errors were repeated over and over again.

It was in this context that WHO undertook a worldwide study on the planning and design of health facilities in developing countries, with international dissemination of its findings (*40*). In order to hear the views of other interested organizations—the WHO regional offices, the International Hospital Federation, and the Public Group of the International Union of Architects—these bodies were consulted and involved from the outset. An example of such collaboration was a joint IHF/IUA/WHO international seminar on the planning and building of health care facilities under conditions of limited resources, held in Nairobi in 1974. Publications resulting from this work have helped to dispel widespread and longstanding misapprehensions (*59*).

A facilities plan cannot, of course, stand in isolation: it is merely a component of the overall health strategy, including manpower plans, supplies, transportation, etc. The advantages of integrating plans for building health care facilities into more comprehensive plans covering the entire infrastructure of services for an area are quite evident from several case studies (*109*).

The use of local materials and skills obviates most of the problems of health facility design discussed earlier. In this context, community involvement through self-help projects has time and again been found to be extremely beneficial. Community involvement in the development of health care facilities is highly valued, but further study is undoubtedly needed to realize its full potential. It is important that health authorities should contribute their ideas at the outset of facility construction, to avoid future difficulties in their operation or location.

Observations in the countries in which WHO case studies were carried out were generally favourable to a standard design, especially in contrast to more *ad hoc* solutions. Yet certain important problems may arise from the use of standard designs in nonindustrialized countries. In some places they are not appropriately followed, particularly by imitators who do not belong to the ministry of health; elsewhere they have been followed too rigidly. A range of designs is necessary, even for the same type of facility, to allow for regional variations in climate, building materials, and local customs. Besides, the use of standard designs tends to promote resource-oriented programmes, which may emerge at the expense of more relevant task-oriented primary health care functions.

One cannot state categorically that a certain type of facility should be promoted or discouraged; each country must identify its own requirements. Usually it is the primary level of a health system that has to be built up first, and then the more central supporting tiers. Technical

and managerial cohesion of a balanced health system can be achieved by applying the principles of regionalization (*7*). This is practically the only means of reducing the frequent tendency of people to bypass peripheral units, which leads to their underutilization and to overutilization of larger and more costly facilities.

Equipment and Supplies (Including Drugs)

The provision of adequate health services depends on the right sort of equipment being available and maintained in good order. Careful attention must therefore be given to the selection, maintenance, and use of equipment in any health care facility and by any health care team.

Two fundamental principles should underlie the choice of equipment for all health services, whether in developed or developing countries:

(1) all equipment should be as simple as possible; and

(2) the equipment chosen should be that which requires the least amount of maintenance and for which maintenance resources (skills and spare parts) are locally available (*12*).

The first step in equipping a new health project, whether it be a small primary health team or a referral hospital, is to draw up a systematic schedule of all the equipment needed. In making such a schedule a check-list would be useful (*105*). In any case, the compilation should be done in full consultation with future users. Every effort should be made to locate manufacturers within the country rather than abroad: local manufacturers usually mean lower cost, freedom from problems of import and foreign exchange regulations, and the possibility of direct liaison for maintenance services.

Once decisions have been made about what supplies, including drugs, are needed at primary health care and at supporting or referral levels, a logistics system must ensure the timely availability of these materials. This requires procurement of adequate amounts to meet local needs, adequate storage (particularly of such materials as vaccines and certain drugs requiring refrigeration), timely distribution to the points of use, and adequate inventory control and feedback, including mechanisms for resupply and redistribution according to needs (*63*).

The increasing consumption and cost of drugs have affected poor and affluent nations alike, and governments are increasingly involved in the control of unjustified drug consumption. For optimum use of limited financial resources, the drugs made available should be restricted to those proved to be effective, safe, and relevant to the needs of the population. Such selected drugs have been termed "essential" to indicate that they are indispensable for meeting health needs. The number of really necessary drugs has been found to be relatively small. Several developing countries that have adopted limited drug lists report good acceptance, as well as favourable medical and economic results. Selected drug lists and formularies are also successfully used in many developed countries, particularly those with more highly organized health systems.

Because of the great differences in health needs and conditions between countries, however, the preparation of a universal drug list for global use is not feasible; therefore each country has the responsibility of establishing a list to suit its own health needs and policies (*85*, *90*, *97a*).

Certain abuses or inefficiencies in drug distribution demand reform. In some countries, drug products are advertised directly to the general public, often leading to dangerous or wasteful self-medication; to protect health, such advertising should be regulated. Pre-packaged drugs imported by developing countries are usually very costly and tend to absorb a high percentage of national health expenditure. Economies may be achieved by importing the chemical constituents and manufacturing the final product domestically, wherever possible. When drug patents have expired, the use of generically equivalent compounds is nearly always more economical than that of brand-name products.

Knowledge

Knowledge in the health sciences, with concomitant cost and benefit implications, has grown exponentially, and it is now generally agreed that there is a need for a critical examination of the dynamics of health knowledge and for the development of an appropriate infrastructure for its collection and dissemination. The new health development policies adopted by WHO Member States explicitly emphasize orientation to each country's major health problems. Health interventions should focus on specific health problems in their socioeconomic context. Effective planning, implementation, and evaluation of national health programmes obviously depend on scientific knowledge, and will also often lead to new priorities in health research.

In all countries, even the poorest, some provision should be made for health-related research (for instance, by affiliation of two institutions at different levels of advancement). Clinical research may be performed in almost any health facility, and laboratory research may sometimes be performed with very simple equipment. Furthermore, much new knowledge can be derived from careful observation without any experimental procedures. In developed countries with abundant research capabilities more health-related research should be performed, not only on local diseases but also in response to international health needs. Regional research centres may also be organized in the developing areas of the world. Health services research, directed at improvements in the health system, can be performed in almost all countries, preferably at national health development centres (*113*).

Of the utmost importance is the conscious selection and presentation of basic health knowledge packages, which may be easily understood by groups involved in formulating and implementing national health development programmes. The type of knowledge and its form of presentation must therefore vary according to the requirements and capacities of potential users. There is a need for the preparation and systematic updating of relevant packages for policy- and decision-

makers, health workers at various levels, and communities themselves. Several relevant health knowledge packages are already available, prepared internationally (for national adaptation), nationally, or even locally (*28*, *31*, *49*, *79*, *101*).

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In all types of national health system some reorientation of health resources is required if the goal of health for all is to be reached. In the developed countries, reorientation concerns mainly the quality and relevance of resources; in the developing countries, the tasks are great from both the quantitative and the qualitative points of view, varying with the sociopolitical context of each country. Before resources can be translated into health care delivery, they must be socially organized in ways appropriate to the value and objectives of each country. This will be considered in the next chapter.

5. Reorientation of the organization of a health system

The major characteristics of nine types of health system have been reviewed in section 2 and need not be repeated here. However, it is worth recalling the overall character of these system structures—from localized, pluralistic, and private, on the one hand, to centralized, unified, and public, on the other. These organizational models are essentially theoretical extremes—just as the distinctions between "poor" and "rich" and "sick" and "well" are matters of degree and seldom absolute. In reality, all types of national health system have complex combinations of different organizational structures. Health systems that are modestly organized in developed countries are strongly localized in responsibilities, very pluralistic in administration, and predominantly private in sponsorship. At the other extreme, health systems that are highly organized in developing countries are very much centralized in responsibilities, unified in administration, and predominantly public in sponsorship.

Both of these descriptions, however, are greatly oversimplified. The first type of system has many organized programmes that are, in fact, centralized, unified, and public. Likewise, the second type of system has certain programmes for which responsibility is local, administration pluralistic, and sponsorship private.

Does this mean that the organizational structures of all types of national health system are converging on a model midway between the extremes? Objective observation does not suggest this: the general trend in nearly all countries is towards increasing degrees of organization of health systems. This trend is, in fact, observable with respect to all five components of the system: resource development, resource organization, economic support, management, and health service delivery. The reasons are many, but they boil down to: (*a*) the increasing educational level and democratic demands of populations; (*b*) the requirements of the health sciences and technology; and (*c*) considerations of cost and efficiency.[1]

[1] Trends in the reorientation of health system organization in the industrialized countries are well reflected in works by McLachlan (*48*) and Roemer (*67*).

In spite of these perfectly clear world trends, the nonorganized and essentially private and pluralistic features of all types of national health system seldom die out completely. Even in systems where national policy calls for health services as a right of the people and a responsibility of government, access to privately financed and privately provided services is not completely barred. A certain amount of private health care in a predominantly public system is often deliberately permitted by governments as a type of safety-valve, allowing social pressures to be released if some people (usually, but not entirely, among the wealthier) are dissatisfied with the public system. If this private sector within public systems does not become too large, it will not cause any significant inequities for the general population.

It was noted earlier that, in many developing transitional countries, as well as in the least developed countries, disproportionately large shares of health expenditure come from private individuals and families. This is true in both modestly organized and moderately organized (but not highly organized) health systems.[1] The major strategy of most of these countries has wisely been to move towards increased public sponsorship of programmes. In the long run, this is likely to be more effective in achieving equity than a frontal attack on the private health care sector.

International experience suggests that health system responsibilities can be borne very effectively at various points in the range between localized and centralized services. In fact the optimum arrangement may always be a balance between these two poles: centralized responsibility for broad policy matters and localized responsibility for programme implementation. Likewise, effective health systems can be achieved at various points between pluralistic and unified administration. Certain benefits are gained at both ends of the range: pluralism may sacrifice efficiency but gain in the motivation of health personnel; unification may achieve greater efficiency but suffer deficiencies in the motivation and performance of personnel. The optimum balance will doubtless differ among countries. So long as there is coordination between various agencies in a national health system, varying combinations of pluralism and unification should be quite suitable in attempting to achieve health for all.

Adjustment for the problems of pluralism through coordination may take many forms. At the national level of a health system, various councils or committees may be organized to bring together representatives of numerous health-related agencies; the same may be done at provincial or local levels. It is in the local community, where health services are provided, that coordination of health programmes is the most important; otherwise, patients suffer the effects of pluralism or fragmentation of services. In some health systems, where a multiplicity of agencies prevails at the national level, unified administration is

[1] Trends in the reorientation of health system organization in the agricultural countries are well reflected in works by Quenum (*62*) and Elling (*16*).

implemented at the local level. In other words, a local health agency is responsible for all health activities in a community, even though finance, standards, authorization, etc., may come from several different sources at higher levels.

Policies with respect to organizational sponsorship are another matter. Sponsorship has major implications for the distribution of health services. In so far as health system activities are privately sponsored, they will almost inevitably be directed towards benefiting the people who have contributed personally to their economic support: the many inequities resulting from private sector financing may thus be expected. Only through universal or nearly universal public sector support of health activities—not only for health programme organization, but also for the production of health resources and other components of the health system—can one expect the goal of health for all to be reached. Equity and social justice require that health services should be distributed according to need rather than socioeconomic standing. This question is mainly relevant to the economic support of the health system and will therefore be discussed in a later chapter.

6. Reorientation of health care delivery

Possible strategies for the reorientation of health care delivery may start with a consideration of trends observable in various national health systems. They relate to the questions: *what type* of care, *where* is it received, and *by whom* is it delivered—and do the answers ensure *effective coverage* of the entire population?

The spectrum of comprehensive health care (discussed earlier) explicitly indicates *what* should be delivered in terms of five basic health care components—namely: promotion of health, prevention of disease, treatment of disease, rehabilitation of patients, and sociomedical care of the profoundly disabled and incurable (*18*, *32*). This spectrum of care corresponds largely to a combination of promotive, preventive, curative and rehabilitative measures to be expected in health systems, as defined in the *Global Strategy for health for all by the year 2000* (*93*). It is also related to the eight essential elements of primary health care, as defined by the Declaration of Alma-Ata:

". . . 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 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" (*86*).

The only basic component of comprehensive health care which is missing in the latter formulation is the sociomedical care of the profoundly disabled and incurable. This type of health service is not very evident in developing countries, in which the extended family takes care of seriously disabled persons; and in developed countries, it is often overlooked because it may be outside the field of health services (i.e., in the sector of social welfare). Nevertheless, in all types of country, sociomedical care of the profoundly disabled is becoming more important. The increasing probability of long survival, as well as changing family patterns, calls for organized services, including terminal care, to reduce the suffering of many people.

At the other extreme of the health care spectrum, the importance of health promotion and early prevention of disorders, influenced by

personal behaviour, is becoming increasingly appreciated. In one developed country, on the basis of rational cost–benefit calculations, a national health development programme has recently called for the promotion of a healthy life-style by everyone as a priority goal, replacing previous emphasis on medical care services (*45*). With increasing urbanization in both developed and developing countries, many efforts are being made—through individual counselling and the mass media—to encourage healthy life-styles (*14*, *21*).

The concept of primary health care, both as an approach and as a basis of national health systems, indicates *where* health care delivery should mainly take place. (Actions taken at different levels of a health system, of course, should be mutually supportive—that is, in terms of referral links and supportive supervision.) Primary health care is usually delivered at four main levels—namely:

(1) *Home level*, which refers to the household as a basic unit in any community. Family members are primarily responsible for health activities at this level, whether they are dependent individuals, mothers of children or heads of household. People from the neighbourhood, as well as community workers of various kinds (including trained health personnel), interact with the family and are directly involved in services at this level.

(2) *Community level*, at which activities concern the health of a whole community and require joint voluntary efforts by many people (e.g., cleaning campaigns, health information/education sessions, or construction of facilities).

(3) *First health facility level*, which refers to the first level where a trained health professional is available, with resources for running clinic sessions. The kind of facility and the type of staff available vary from country to country: they may comprise a health post or dispensary staffed by only one or two community health workers. Health centres typically have larger staffs, including one or more nurses, midwives, community health workers, and sometimes a medical assistant or physician, a sanitary inspector, a pharmacy, and laboratory assistants.

(4) *First referral level*, which includes two kinds of referral system in a primary health care strategy. The first is a clinical referral system (usually based on rural or district hospitals) involving consultation and supervision of performance at lower levels; the second is an administrative referral system (usually the district health office), covering planning, management, and support activities related to sanitation, health information/education, disease control campaigns, etc. (*53*, *57*, *102*, *111*).

The question *by whom* health care is delivered to the people is one of the most crucial in the process of reorientation of health care delivery. Health care policies have, in the past, been based almost entirely on the unchallenged assumption that professional, or at least professionally controlled, manpower is the only acceptable channel for the delivery of

such care. If the goal of universal coverage is to be attained, however, this assumption must be abandoned. Professional personnel may bear the ultimate responsibility for safeguarding and supervising health care delivery, but the consensus now is that they cannot meet the health needs of the entire population. Among the factors contributing to this conclusion, the following seem important:

(1) the physical, social, cultural, and financial inaccessibility of professional personnel to large population groups;
(2) a rigid institutional system that makes it difficult for professionals to respond to the changing needs of the population;
(3) the frequent lack of community participation in health activities, so that professional health care delivery is isolated and impervious to the influence of the users; and
(4) the predominantly curative approach of professional health care delivery—neither influenced by nor integrated with preventive and health promotion activities (*104*).

In order to extend health care coverage, attention has once again been drawn to two further channels of health care delivery: traditional community health care and self-care.

Over a long period, traditional medicine or traditional community health care in many countries, has created the resources and procedures appropriate to local conditions and culture. Whatever its stage of development, people have made great use of traditional care in an attempt to solve their health problems. The incorporation of lay healers, and particularly lay midwives, into national health systems has proved to be useful in many countries (*110*).

Consideration of the individual, family, or neighbours as potential sources of health expertise and as channels for health care delivery has long been neglected or avoided; however, recent international discussions (*2*, *46*, *47*) have shown the benefits of such care. A partnership between families and professional health workers—for preventive, therapeutic, or rehabilitative purposes—can mean not only better access to health care, but also care of higher quality. In some national health systems, disability prevention and rehabilitation have been almost entirely based on community involvement (*92*). The same applies, to a large extent, to delivery of maternal and child health care (*84*). Several surveys have also demonstrated that, for the majority of the severely handicapped, chronically sick, and incapacitated elderly who are not institutionalized, most caring functions are performed by informal networks of relatives, neighbours, and friends (*25*).

Recent studies indicate that self-care supported by problem-oriented health education—which has been called guided self-care (*34*)—can result in significant benefits and economies, and can also contribute to the social accountability of the health professions. Expectations of patients and how they perform the patient's role reflect complex judgements about the relevance and effectiveness of, and satisfaction

with, health care. For quality evaluation, such judgements could complement medical auditing programmes. At the community level, the desirable balance of lay and professional interventions has, in recent decades, been widely discussed in economic, political, and organizational terms. It is now widely believed that community participation in the planning, management, and evaluation of health care programmes can make those programmes more responsive to perceived health needs and more prudent in the deployment of society's limited resources.

Action Required in Different Types of Health System

To attain health for all, as this goal has been internationally defined, will require many types of reorientation in patterns of health care delivery. Consideration must be given not only to the broad range of specific services discussed above, but also to the wide variation of delivery patterns in different types of national health system.

Modestly organized health systems

Within this type of system, in countries of all three economic levels (developed, developing, and least developed), reorientation would need to proceed along several lines. The conversion of private individual practice (of both traditional healing and scientific medicine) into a more cooperative team-work pattern is a central requirement. In some of the more industrialized countries there is fortunately some evidence that the trends are in this direction (*1*, *8*, *64*, *70*). For primary health care to have the necessary content and attributes, community health service should be offered increasingly by balanced teams of personnel working together at ambulatory care centres. In the light of prevailing customs in many industrialized countries, such teams might be either engaged in private group medical practice or employed as the staff of public or voluntary nonprofit health agencies. The delivery of personal preventive services should be integrated with the delivery of primary medical care at all health centres; but, certain members of the health care teams could still be assigned responsibilities for immunizations, health education, screening examinations, and other forms of prevention.

Health education to promote a sound life-style (nutrition, exercise, habits, etc.) should be included in the curricula in schools, as well as in universities, work-place training establishments, and other locales of adult education. Moreover, general social policies should be consistent with health education objectives. For example, while people are being educated about the serious hazards of smoking cigarettes, the advertising of cigarettes should not be permitted in the public media, and the growing of tobacco should not be subsidized by government. Similarly, food production and processing should be encouraged along lines consistent with current knowledge of sound nutrition; and regulations should be enforced to protect people from environmental hazards in general and occupational hazards in particular.

Developing countries with modestly organized health systems face particularly serious obstacles in the substantial proportion of health care rendered by private practitioners. The numerous inequities resulting from this pattern have already been discussed, yet matters can hardly be changed by law or edict in most countries (although legal prohibition of private practice has recently been attempted in a few). A strategy of strengthening health care delivery by appropriate teams of personnel should, however, be feasible.

In particular, all newly qualified physicians and other health personnel in these countries could perhaps be required to serve over a substantial period of time in organized health teams at governmental facilities (both hospitals and health centres) for most of the working week. After official working hours, private practice could be permitted for a limited length of time established by the government. As a practical expedient, the policy might permit a longer period of private practice in the early years of the reorientation process, with a gradual reduction later on. Many developing countries, it may be noted, have implemented policies of this sort for several years.

The care offered at health centres should encompass the full range of personal preventive and treatment services at the primary care level. Prevention should include immunizations, health education, appropriate screening tests, maternal and child health examinations and counselling, family planning, nutritional guidance, and so on. Treatment should comprise the primary care of all common ailments and injuries. Health centres should be staffed by teams composed mainly of auxiliary health workers under the supervision of a physician. Tasks should be delegated so that no procedure is performed by health personnel more extensively qualified than necessary for the proper performance of that task.

Environmental health protection must also be offered at the primary care level and will require close intersectoral cooperation (*72*). Top priority should be accorded to the provision of safe water supplies, along with appropriate provision for sanitary waste and excreta disposal. Much of the labour for developing such programmes should be drawn from volunteers in local communities, with equipment and supplies being provided by higher levels of government (*114*).

To improve nutrition, health education should stress a balanced diet; but more than this is needed. A minimum ration of essential protein-containing food should be assured to all families with expectant mothers and small children, and supplementary feeding of essential nutrients should be offered to children at all public schools (*6*).

Health education should orient all adults towards exercising prudent guided self-care (see page 71) of common ailments to the greatest extent possible; and similar education should also be offered in schools at the more advanced grades. Nevertheless, all except the most harmless drugs should be available at pharmacies or other shops only with a proper prescription. Dental care should be provided by trained auxiliaries, serving children in the schools and adults at health centres.

With regard to the delivery of hospital care in modestly organized health systems, patterns in the industrialized countries include a large, even predominant, role for private practice. As a result, there is much evidence of excessive hospitalization of patients—of a frequency and duration that can hardly be justified on medical or economic grounds. Fortunately, there are trends towards the increasing engagement by hospitals of salaried medical staffs, and this should be encouraged. The profit motive should eventually be removed from decisions to hospitalize patients, particularly for the performance of elective surgery.

In developing countries with modestly organized systems, the great majority of hospital facilities and beds are under public sponsorship, with organized and salaried medical staffs. Private hospitals with private physicians, however, absorb a disproportionate share of resources (nurses, technicians, equipment, drugs, etc.), and only by improving services in public hospitals can this situation be expected to change. In these countries, the need for improvement (both structural and functional) is particularly great in district hospitals, which have to act as back-up resources for health posts and health centres.

In countries of all economic levels, regionalized relationships should be developed between and among all hospitals and facilities for ambulatory care. This is particularly important in developing countries, in which technical resources at the periphery are often very limited. Reasonable communication and transportation between rural health services and district hospitals can often mean the difference between life and death.

Moderately organized health systems

In these systems greater progress has already been made in achieving effective and efficient patterns of health care delivery. Coverage of the population by health insurance in the industrialized countries is very wide, and therefore accessibility to medical care is good. Furthermore, insurance financing provides leverage for achieving greater team-work among health personnel. The current movement of general medical practitioners into community health centres, where they can work closely with public health nurses and other health personnel, should be further encouraged.

Reasonable salaries should be offered to doctors in order gradually to replace fee-for-service remuneration. Personal preventive services should be functionally integrated with treatment services in health centres; thus mothers and children should receive preventive attention (including immunizations) at these centres rather than at separate locations. The inclusion of benefits for preventive services under health insurance programmes would facilitate such integration (*61*, *115*).

Regarding delivery patterns in hospitals, medical staff organization already involves specialists predominantly on a full-time basis. Greater attention is required, however, to improve relationships between out-of-hospital general practitioners and in-hospital specialists. Regionalization,

which often exists in theory, should be strengthened in practice, and should link hospitals not only to ambulatory care facilities, but also to facilities for long-term patient care (helping to alleviate present trends towards over-hospitalization).

In developing countries with moderately organized health systems, team-work should also be encouraged to improve the delivery of primary health care, as well as ambulatory forms of secondary care. Physicians can be attracted into public service, and discouraged from private practice, by adequate salaries and perquisites. Attempts should also be made to draw traditional healers and birth attendants into the main health system by special training and reasonable salaries.

In these countries, health care delivery patterns are complicated by the operation of several autonomous subsystems of health care under the control of ministries of health, health insurance programmes, charitable societies, and other bodies. Delivery of services from these several sources should be integrated at the local level, which would, of course, imply the integration of preventive and curative services. Regionalized relationships among ambulatory care centres and hospitals at different levels would also require coordination among the different responsible agencies.

The consumption of self-prescribed drugs is a special problem in these countries. To cope with it, supplies of essential drugs must be regularly available at all ambulatory care centres or hospitals. At the same time, health education or guided self-care should include information on drugs that may be safely consumed without a formal prescription.

Highly organized health systems

In these systems, a great deal of team-work and regionalization have already been achieved in the delivery of health services. Preventive services are also integrated with treatment at health centres; but the scope and content of preventive services should be strengthened, particularly with regard to socially prevalent health problems. In the industrialized countries with this type of system, such problems include obesity, alcoholism, and atmospheric pollution. To tackle these problems effectively, closer intersectoral cooperation is important.

Greater efforts should be made to establish continuity of relationships between health service users and the delivery system (particularly the primary care team). Patient education and guided self-care might reduce the high rate of utilization of ambulatory services in many cities, and could increase the effectiveness of services for chronic conditions, including long-term care and rehabilitation.

For developing countries with highly organized health systems, there is little to suggest concerning patterns of health service delivery. Health teams, integration of preventive and curative services (with emphasis on prevention), and regionalized relationships already constitute the policy being implemented. The basic problem in this type of country is the

need for massive expansion of both human and physical resources to ensure provision of essential services to all in need, and this will depend mainly on overall economic development.

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In summary, health care delivery patterns in all types of health system and in countries of all economic levels should, at the outset, ensure primary health care for everyone. The many preventive and health promotive elements of primary health care should be integrated in their delivery with treatment services; and the health education element should include the promotion of guided self-care. Beyond this, secondary care should be available at larger health centres and district hospitals, and tertiary care at regional hospitals and specialized medical centres. Since accessibility to health care is of the greatest importance, primary care resources should be close at hand in every community (or within a short travelling distance). For greatest effectiveness, services should be provided by teams of health personnel, the composition of which must depend on the economic level of the country. Health posts, health centres, district hospitals, and other facilities should all be functionally linked in health regions. This entire framework of resources should culminate in health services that are scientifically sound as well as sensitive to people's needs.

7. Reorientation of economic support

No factor in national health systems affects the distribution of health services so fundamentally as the manner in which they are financed. The control of funds by government on behalf of whole populations enhances the chance of social justice being achieved; but even governmental control of funds may not lead to health care equity if certain population groups are unfairly favoured over others. Private control of funds inevitably leads to inequitable distribution of health care, since private expenditure depends on personal affluence, which bears no relationship to health needs.

Another relevant issue is the efficiency of economic support for national health systems. There is great concern about the increasing cost of health care (mainly in developed countries) and the limited financial resources available for its provision (as in most developing countries). To improve the efficiency of health care, emphasis is being placed on achieving a proper allocation of funds ("allocative" efficiency), and on decreasing the cost of health services (operational efficiency). *"Allocative" efficiency* is mostly oriented towards the rationalization of objectives and priority-setting for health programmes, through cost–benefit reasoning. *Operational efficiency* involves searching for the least expensive ways in which to deliver various health services and achieve certain results, either by increasing the outcome or by decreasing resource consumption. The latter is based on cost–effectiveness reasoning and appears to be most useful in identifying low-cost substitutes for various health technologies (*37*).

An international comparative study of health care utilization (*78*) has proposed a framework for estimating the economic effects of various substitutions within the health system at different consumption rates. Assuming that the outcomes of various health services are of comparable effectiveness and acceptability, areas with a greater use of high-cost modalities (e.g., inpatient hospital care) than of low-cost modalities (e.g., ambulatory care) have made an expensive substitution. However, since the physicians providing ambulatory care may control the use of, or the points of entry into, a high-cost modality (leading to a high consumption of both ambulatory and inpatient hospital care), such areas may be said to have made no substitution but, instead, to have an

expensive combination. Conversely, areas with a greater use of low-cost modalities and a relatively small use of high-cost modalities have made an inexpensive substitution; and areas with low rates of use of both high-cost and low-cost modalities have an inexpensive combination.

The almost unlimited increase in demand for health care, and therefore in health expenditure, has led to mounting concern about the efficiency of health care delivery. Some have proposed a rationing of the kind and quantity of health services, implicitly or explicitly (*56*). *Rationing by fee* is widely applied in free-market settings; but this is generally regarded as inappropriate in an equitable health system. With rapid advances in health technology, health care costs may begin to exceed the level that a country can afford (in relation to competing needs). This process has been controlled in some countries by setting limits on total health expenditure—i.e., by *implicit rationing*. Beyond this, mechanisms may be developed for deciding on reasonable investments in various types of health care facilities, manpower, technology, and quality standards; this is *explicit rationing* and is often condemned by professional groups as bureaucratic or as "political medicine". Under a policy of rationing by fee, physicians are serving as clinical entrepreneurs; with implicit rationing, they are serving as allocators of scarce resources; with explicit rationing, they are forced by a central authority to be economizers (*58*).

From the perspective of the above discussion, we may now consider how economic support might be reoriented in different types of health system, better to attain the goal of health for all.

Action Required in Different Types of Health System

Modestly organized health systems

In these systems, problems emanating from private sector financing are especially great. It would probably not be politically feasible, however, suddenly to transfer all this financing to the public sector; to be realistic, more pragmatic strategies must be considered.

In affluent industrialized countries with such health systems, much can be gained by building on mechanisms of social financing (both governmental and nongovernmental) that already exist. Thus, to support the costs of essential health services for everyone, health insurance programmes should be extended to cover the totality of the population. This could be achieved either by compulsory participation by all people (employed, self-employed, their dependents, the poor, and others) in existing local health insurance programmes, or by establishing a national social insurance system in which local insurance bodies would be absorbed. To support the actuarial costs of the indigent, the unemployed, and other persons without income, funds would have to be contributed from general revenues. Under each of these strategies, the benefits or services provided should be broadened in scope to encompass

comprehensive health care (all primary care and supportive/referral services).

Economic support for certain very-high-cost services, such as the care of long-term illness (physical or mental), associated rehabilitative activities, and certain elaborate diagnostic or therapeutic procedures in tertiary care, should come from general government revenues (possibly with some reasonable state control over their rational use). On the other hand, the cost of certain nonessential services, such as private rooms in hospitals or much prosthetic (cosmetic) dentistry, could be borne by personal payments or voluntary insurance. In the course of time it may be feasible to shift from social insurance to general revenue financing of the whole health system without endangering its political stability.

Requirements for the proper economic support of modestly organized health systems are much greater in developing countries than in industrialized countries; yet, within economic limits, great improvements are possible. Reorientation could well begin with a review of national taxation policy, which probably requires revision to draw substantially greater revenues from individuals, corporations, and businesses with high earnings. The basic objective must be to increase public revenues from the sections of the economy that are the most capable of yielding them. From the stock of public revenues collected, the allocation of funds to the several branches of government should probably be modified.

As a practical and proved method for channelling the flow of money from the private into the public sector of health service financing, statutory (governmental) health insurance should be considered. Initially, coverage would apply only to a fraction of the population with stable employment; but periodic insurance contributions would still augment the public sector of health services. As stated by a joint ILO/WHO Committee on Personal Health Care and Social Security in 1971 (*81*): "When the financing of personal health services is being planned, consideration should be given to the possible contribution of personal health care programmes under social security to the overall national health resources."

It is claimed by some that insurance of industrial workers for health care aggravates the already serious urban concentration of doctors. In the short run, this may be true; but one must realize that, in the absence of health insurance, employed industrial and commercial workers (and their families) simply use private sector health services, thus enhancing private sector income. Moreover, health insurance provides economic support for enlargement of the national supply of health manpower and other resources.

To be administratively feasible, social insurance contributions might initially be required only from firms employing a minimum number of workers (e.g., not less than 10), with payments collected periodically from both employer and employee. It must be emphasized that these funds need not be used, as in most industrialized countries, to pay fees to private doctors and hospitals. As already demonstrated in many Latin

American and Eastern Mediterranean countries, social insurance funds may be used for supporting health services in well-organized frameworks for both ambulatory and hospital care. These frameworks need not be autonomous (as they usually are today), but should be under the direction of the ministry of health and coordinated with all other organized health services.

Further strengthening of economic support for health services in these countries should come from local community sources: voluntary donations of labour and supplies should be encouraged to the maximum. Such support, however, does not warrant any reduction of financing for the health sector from higher levels of government.

Moderately organized health systems

Within such systems in industrialized countries, national health insurance (or social security) financing already provides a great deal of economic support. With certain improvements, however, these insurance programmes could make a better contribution towards attaining the goal of health for all. The elaborate administrative procedures now used, covering 90% or more of the population and excluding 10% or less, would hardly seem justified any longer (in spite of their historical rationale). Health care coverage should be extended to the entire population of these countries, with the necessary financial inputs from general revenues. Moreover, the cost-sharing or co-payments now required for access to primary care—intended to discourage unnecessary demand—have not been shown to accomplish their objective; it is more likely that they selectively deter persons of low income from seeking necessary medical attention promptly. These co-payments should therefore be minimized, as they have been in many countries of this type, to maximize access to primary care.

The allocation of funds (either from health insurance or general revenues) by the central government to the provinces should be modified to give greater support to ambulatory services. The increasing allocations now going to hospitals should be reduced and gradually stabilized. Also, in order to encourage more economical management of hospitals, the share of their costs met from central sources should be reduced and the share contributed by the local bodies that own and operate them should be increased. *Prospective budgeting* (which pays the hospital a global sum each month for its total operations, based on a budget review, sound standards of staffing, and a reasonable occupancy level) is now used in several countries, and the same mechanism could be applied elsewhere to replace *per diem* payments, which encourage excessive lengths of hospital stay (*68*).

Greater central financial support should be given for the care of long-term (primarily aged) patients, a cost burden that now falls too heavily on local governments in some countries, resulting in inadequate services.

In developing countries with moderately organized health systems, economic support for health services has already been strengthened by health insurance programmes for employed workers—mainly in industry, but sometimes in agriculture. Further strategies may nevertheless be recommended. As in the case of developing countries with modestly organized health systems, higher levels of tax should be imposed on affluent individuals and enterprises. In some of these countries, special taxes have been imposed on agricultural and mineral products at the point of export, and these might be increased. Enforcement of more rigorous tax collection is also a basic requirement. In addition, bigger allocations should be made to the health system from available public revenues.

Where the basic structure of health insurance financing has already been established, population coverage should be extended in order to channel greater proportions of health funds from the private to the public sector. (This would also mobilize a greater share of health expenditure under organized patterns of delivery, where efficiency is greater.) Health insurance organizations that are now autonomous should be integrated with ministries of health as rapidly as possible; the feasibility of doing this has already been demonstrated in several countries.

The use of public lotteries for financing charitable hospitals, which is extensive in countries of this type, may be questioned, because it draws money predominantly from persons of low income, and only a small fraction of lottery income is devoted to support of health resources. Instead, voluntary local contributions of labour and supplies should be encouraged (*88*).

Highly organized health systems

Such systems in industrialized countries have already had almost all their costs absorbed by government. As a result, health services are available to the entire population; but, of course, there is a need for improvement in their quality and efficiency. Accordingly, somewhat greater shares of the national budget might be allocated to the health sector to provide higher salaries for medical and allied personnel and technical equipment of better quality. Public financial support for the cost of essential prescribed drugs should be established as soon as possible.

In developing countries with highly organized health systems, it is obvious that system improvements depend mainly on overall economic development. At present, financial support for health services is derived from different sources for the various population groups. Social insurance derived from industrial enterprises plays a large part in financing services for urban workers; voluntary insurance cooperatives may support care for rural people, supplemented by private payments. Eventually, health funds from all sources should be unified, so that they may be distributed on the basis of social needs.

A calculation of the aggregate funds now contributed to the health system by various private payments could be made, and these amounts (and eventually larger sums) could be collected regularly from all people to establish health insurance funds. These could first be organized on a local community basis and consolidated later into larger funds.

The central government should make grants to provinces and local communities to equalize support of health resources (which is now uneven in different local areas). Such a policy should not discourage local self-reliance, but could demonstrate the health benefits that can be supported by greater earnings. In countries with a decentralized administrative system, regional authorities might levy taxes. To prevent excessive regional differences and an overall escalation of expenditure, such decentralized taxation should be nationally regulated.

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In all these strategies for enlarging and rationalizing the economic support of health care in different types of country, the focus has been on increasing the financing of the health sector and the efficient use of funds without regard to the organization of agencies or the patterns of health care delivery. It must be realized, however, that there are vast differences in the implications of public sector financing compared with private sector financing; a small private sector, as discussed earlier, may be justified in any health system as a sort of safety-valve to relieve the pressure felt by persons dissatisfied with the public system.

The predominantly social (in contrast to personal) economic support of a health system, however, has many advantages for the total population. It permits a systematic arrangement of health resources so that output can be more effective and efficient. Social financing also permits greater emphasis on prevention and primary health care; implementation of the team approach to the use of health manpower, which can be much more efficient with the time of physicians and other scarce personnel; regionalized relationships among facilities in various geographical areas for the particular benefit of rural populations; and economies in the use of various drugs, equipment, and supplies. Hospital inpatient care need not be used for services that could be less expensively provided on an ambulatory basis. Social financing and controls, in summary, permit the organization and allocation of resources in ways that correspond reasonably to the health needs of individuals and groups, as these are judged by application of objective human and social criteria.

8. Reorientation of health system management

Throughout previous chapters, references have been made to certain aspects of health system management. Here we shall examine more carefully the various components of management, in so far as they require reorientation in different types of national health system if the goal of health for all is to be achieved. These aspects, it will be recalled, include leadership, decision-making, and regulation.

General Principles of Management

Management is widely understood to be concerned with the operation or running of organizations—maintaining their continuity so that their purposes can be fulfilled. It is perhaps less well appreciated that management also has a strategic component, aimed at renewing and changing the existing organization when necessary. Changing the existing situation means that managers must have the ability and strength to overcome resistance to change: accordingly, managers should have a clear vision of future goals. Progress will be more likely if objectives can be shared at all levels of societal structure, from community groups to national policy-making bodies. To make proper headway for health system reorientation towards health for all, therefore, strong emphasis has been placed by WHO's Member States on the formulation of national health policies and the sustained reinforcement of health leadership (*55*).

For health managers, or any member of a health service staff performing some managerial functions in addition to technical tasks, it is no longer sufficient to be trained in formal management sciences—in budgeting and accounting skills, or in public law and regulations that affect their own scope of activities. What is equally if not more important is to prepare them in *leadership skills* to deal with competing professional and societal groups, both inside and outside the health system. They must become sensitive to the fundamental nature of organizations and be prepared to cope with the complex relations they will face in attempting to make progress.

As discussed earlier, authoritarian leadership in organizations is being replaced in many places by a democratic and participatory

leadership style; thus, all members of an organization can develop an interest in the success of the organization's work. Although all members should be invited to participate in policy formulation, decisions on operations should, of course, first be considered by those most affected by them.

A number of benefits may be gained from this new leadership style, such as the greater range of ideas and information brought to bear on decisions. It has also been observed that, once a decision is made, there will be greater moral commitment to it, even if the option selected by the responsible decision-maker is not favoured by all participants. The same general model can be useful for involving community members in decision-making about social action programmes. The relevance to community participation in the primary health care concept is obvious. It is also seen in the team approach to programming sociomedical care for individuals or population groups (the disabled, aged, malnourished, etc.). In guided self-care, even assignment of the leadership function is changing according to the competence of people in the community vis-à-vis the problem or aspect to be handled.

Health planning occurs early in the decision-making process. The WHO managerial process for national health development (*95*) calls for several sequential steps. The first is health policy formulation in respect of priority goals, including the planning of action suited to the social needs and economic conditions of the country. Health programming and health programme budgeting follow, to translate policies into health strategies for reaching more specific objectives: this requires preferential allocation of health resources and financing. Next come plans of action and detailed programming, which define specific targets, as well as technology, manpower and other resources, financial means, organizational infrastructure, and time required for implementation through a health system. Thus the output of health planning should constitute a basis for health system planning itself. As noted earlier, changes in priorities for planned health objectives also require relevant changes, for example, in health resources development and health care delivery.

Several other aspects of health programme *operation and implementation* should be considered. It is always necessary, of course, to have mechanisms for the exercise of authority and the coordination of different parts of health systems in order to achieve health programme objectives. Depending on the size of the organization, it is nearly always necessary to delegate certain responsibilities from the centre to the periphery. Then there must be *supportive supervision and review mechanisms* to ensure that responsibilities are carried out in an appropriate manner. (Needless to say, competent and motivated personnel must be available if many responsibilities are to be delegated peripherally.) In any organization it is important to strike a balance between centralized control and decentralized responsibility for programme implementation. Decentralized responsibility always involves the risk that errors will be made; but it can also mean that tasks will be performed devotedly. The risk of managerial error can be reduced by

strengthening staff members' abilities with training and guidance—not only in management generally, but also in the management of health systems, which have several unique features.

Every health system requires *regulation* to ensure that standards are being met and that operating procedures are moving in the right direction towards a particular goal. As noted earlier, regulation may be managed or informal, but there may be some overlap between the two: thus managers may make use of informal regulation, and vice versa. The regulatory process usually provides feedback of information which enables management to consider necessary changes—for instance, in resource allocation, patterns of health care delivery, health legislation, and logistics of supply.

Thorough *monitoring and evaluation* of organized programmes in general, and health programmes in particular, are further aspects of management that require careful attention. A programme may be evaluated with regard to several features:

—*Relevance* relates to the rationale for adopting health policies in response to social and economic realities, and to introducing programmes, activities, services, or institutions in response to certain human needs and health policy objectives.

—*Adequacy* implies that sufficient attention has been paid to previously determined courses of action, such as preferential allocation of resources to certain health system components (e.g., primary health care) or specific health programmes (e.g., maternal and child health care).

—*Progress* concerns the comparison of actual and scheduled health programme delivery, and the identification of reasons for achievements or shortcomings.

—*Efficiency* expresses the relationship between the results obtained from a health programme or activity and the efforts put into it by way of resources, finance, health processes, technology, and time.

—*Effectiveness* describes the effect of a programme, service, institution, or support activity in reducing a health problem or improving an unsatisfactory health situation; thus, effectiveness measures to what extent the predetermined objectives and targets have been attained.

—*Impact* is an expression of the overall effect of a programme, service, or institution on health development and on related social and economic development (*94–96*).

Monitoring and evaluation must be built into the entire managerial process for national health development and applied on a continuing basis. Those responsible for this should ensure that other parties involved in health care delivery, whether more centrally or more peripherally located, are kept informed of the results of evaluation so that they may take appropriate action. Thus, whatever methods of evaluation are available in a country, their use provides the possibility of

feedback to management (at both policy-making and operational levels) of information on the health system's performance. This is necessary if health programmes are to be modified and improved in order better to meet their objectives. It is obviously important to report evaluative findings objectively, which may not always be easy under certain political circumstances. In the long run, however, conscientious evaluation can contribute a great deal not only to a health system's effectiveness, but also to the economy of its operation.

Evaluation, of course, requires information; therefore mechanisms for furnishing that information are essential. In a national health system, the collection, analysis, and dissemination of information constitute an integral part of management—often known as a *management information system.* The process of information gathering and elaboration is relatively expensive; it is therefore important to identify clearly who the probable users will be and what kind of information they are likely to need. For example, information might be required by health managers at different levels, by people involved in health matters in other sectors, and by community leaders and the general population. Selectivity is therefore vital in deciding what information should be collected to support managerial processes. Moreover, the information need not be more precise than the process it supports: approximate information in good time is better than precise information too late.

For decision-making related to the development and operation of health systems, three basic categories of information are required: on health needs, on health resources, and on actual utilization of various types of health care. Health needs, resources, and use may be balanced in many ways; there is no ideal solution for all times and places. Instead, the politician must make choices from options presented by the health planner or manager.

The perceived needs of populations for health care change with time and in relation to social and environmental developments; likewise, technological capabilities and their availability change. Thus a new balance between needs, resources, and use has to be struck at intervals. Experience shows that the development and operation of national health systems becomes more effective when the information base is scientifically sound. Therefore epidemiology and sociology (together with demography and economics, their intellectual cousins) are widely used for generating data. Methods of interpreting such data have been simplified and it is now feasible to use them for decision-making at various levels, including that of primary health care (*33, 42, 43, 78, 97*).

Action Required in Different Types of Health System

In the light of the above-mentioned basic principles for effective health system management, one can appreciate that various strategies would be necessary for reorienting management in the health systems of different countries.

Modestly organized health systems

It will be recalled that, in affluent industrialized countries having modestly organized health systems, the arrangements of all system components are highly pluralistic. This means, of course, that management is very complex, and an overriding principle must be to strengthen coordination among the multiple health agencies and programmes. Health planning is largely at the local level and devoted principally to controlling the construction of hospitals or modifying the supply of hospital beds. Greater initiative in planning health services (i.e., going beyond the development of resources) should probably be taken at the national level. In the organization of financial support for certain health activities, there has in fact been national-level planning, however, it has only been applied to selected parts of the health system (e.g., particular diseases or population groups), rather than to comprehensive services or even to the full scope of primary health care.

Efficient administration of the health system requires a great deal of coordination among agencies. At all levels, many different agencies are responsible for various programmes and there is a need for comprehensive authorities or coordinating bodies, such as national health councils (and their equivalents at other levels). Policy-making bodies at the national and lower levels should include representatives of the general public, as well as technical experts. This has been required by law in some programmes and is consistent with the basic principle of the national health council concept propounded in a WHO working paper (*112*).

The regulation of all health facilities (hospitals, health centres, pharmacies, etc.) should be the responsibility of government agencies, adequately staffed and financed for these functions. (The current fragmentation of many regulatory processes among numerous voluntary and public agencies creates unnecessary burdens for the facilities being regulated.) Minimum standards for all health resources and services should be formulated.

Any national programme for financing health services should also serve as an instrument for the reasonable regulation of quality and economy. If services are provided that are of poor quality—or that do not answer to a genuine medical necessity—payment for them should be adjusted appropriately. Regulation should ensure that all hospitals and other health care facilities, regardless of their ownership or sponsorship, are available to all people solely on the basis of their health needs and the technical capability of the facility. The law should require that no patient is turned away on the grounds of income level, race, creed, or other nonmedical considerations.

The strategy of administration and regulation of health services should be to encourage the development of patterns of health care delivery in team-work settings. All health services and programmes should be evaluated periodically by responsible health authorities at the local level. This should be based on outcome measurements where

possible; otherwise, measurements of the health care process should be used. To permit such evaluations, appropriate information systems should be developed (with due consideration paid to the privacy of patients).

In developing countries with modestly organized health systems, the management process requires great strengthening. The planning of national resources, for example, is often a responsibility of the ministry of health, and yet decisions on the training of physicians may be made independently by the universities or even private medical colleges. Standards for health resources and services, on which much planning is based, should not simply be derived from other countries or drawn from abstract principles; they should be founded on observations and experience within each country. Ministry of health planning should, of course, be integrated with the work of national planning agencies.

At central, regional, provincial, and local levels, the multiple agencies and programmes concerned with health should be coordinated, preferably by the ministry of health and its subdivisions. At the top level at least, coordinating national health councils, or their equivalents, representing all major health-related organizations, public and private, should be formed. If feasible, similar councils should also be set up at lower levels. Channels of communication should be established with equivalent councils in other fields, such as agriculture, education, and general community development. In the countries under discussion there is typically a great deal of authority at the national level, with relatively little delegated to the local level. In cooperation with other sectors, therefore, efforts should be made to create a local government infrastructure, including the health sector. Training courses in local health management should be held periodically at the local level.

Because of the large private sector in this type of country, careful regulation is required; this should be applied not only to private premises (small private hospitals, clinics, pharmacies, etc.), but also to public sector health facilities under the auspices of various government agencies. Public facilities are sometimes used for private patients beyond a permissible limit; this requires surveillance. Enforcement of regulations on the allowable extent of private medical practice must obviously be carried out with great care and discretion. The performance of health personnel in the public sector should be controlled by emphasizing an educational rather than a punitive approach. Awards should be given for meritorious work and widely publicized.

Citizens' advisory bodies (or health councils, as mentioned above) should be established at every political level. Their members, in addition to performing advisory functions, could be encouraged to do voluntary work in the health services, such as assisting at health centres or health posts and promoting campaigns for improved environmental sanitation or immunization.

The health system should be evaluated periodically, at each level of work, by personnel from the level above it (supportive supervision); this, of course, requires a proper system of information. At the national level

in each country, a centre (or network) for health development should ideally have overall responsibility for evaluation activities, as well as for research on health service quality standards.

Moderately organized health systems

In moderately organized health systems in industrialized countries, the management process tends to be more comprehensive, largely on account of the long-standing operation of national health insurance programmes. Health planning at both national and local levels could be strengthened by closer links between the planning authorities and the health care financing programmes; this should provide leverage for the implementation of planning policy. At central and local levels, health system administration should ideally be unified under public health officials. The current separation of ministry of health responsibilities from the medical aspects of social insurance programmes is administratively wasteful and makes it difficult for these two major programmes to reinforce each other. Responsibility for supervising the delivery of all health services should be vested in the official local health agency, regardless of the source of financing. This agency should have special responsibility for strengthening relationships between ambulatory care facilities and hospitals, in the interests of maximizing preventive care and health promotion. To ensure the maintenance of quality standards, the regulation of health facilities should be strengthened along lines similar to those discussed for the previous type of system. Regular evaluation by both outcome and process measurements should be carried out by local health authorities, as discussed above. Similarly, appropriate information systems should be established to facilitate both programme management and evaluation.

These strategies for improved management in industrialized countries with moderately organized health systems would also apply in developing countries with such systems. Since many developing countries have strong social security programmes for limited population groups, the tasks of interagency coordination are especially great. Coordination of various sorts is also required in health planning, administrative supervision, regulation, and evaluation. The very large consumption of self-prescribed drugs is a special problem in these countries. Appropriate regulation and control over the operation of pharmacies and other stores selling drugs are therefore required. Sometimes pharmacies are registered simply as business establishments under a ministry concerned with commerce; they should, however, also be recognized as health facilities under the ministry of health.

Highly organized health systems

In highly organized health systems in industrialized countries, the managerial process is less complicated because of the high degree of unified administration under a ministry of health. Centralized planning,

standard-setting, and supervision are the hallmarks of these health systems. The supply of physicians is especially large, and major managerial responsibilities are assigned to them which, in other countries, would be borne by nonmedical personnel. Since most physicians have had very little training in management, the education of purely administrative personnel in greater numbers might improve the managerial efficiency of the health system. Further strengthening of the technical capability of national health management staff, through close collaboration with national health development centres or networks (*113*), would seem desirable.

Regulation in the traditional sense (i.e., the control of private activities by public authorities) is limited, since the private sector is so small. Within public sector health services, however, somewhat equivalent regulation is required to ensure the maintenance of standards in local facilities. Furthermore, as a form of quality review, channels for the consideration of patient grievances could be extended. Difficulties may be discussed within the political structure and also aired in the press; but with the encouragement of feedback from patients, problems might be more readily corrected. The form that community participation takes in this type of country differs from that in other types; in the general political machinery, the population is theoretically fully represented at various administrative levels. Special advisory bodies in the health system might, in addition, promote improvements in service.

In developing countries with highly organized health systems, the great emphasis on local self-reliance has meant that administrative leadership from central and even provincial levels is relatively weak. Greater management skills are required at these two levels for planning, administration, regulation, and evaluation. While adjustment of standards and policies to varying local conditions has obvious advantages, local communities can be further helped by the promulgation of minimum standards for health resources and services. In these countries, in which traditional healing plays a large role in parallel with modern health science, it is especially important to have reasonable regulations, adjusted to the criteria of both types of health service. Mechanisms for the production of national and regional health-related information are quite deficient; such information is required for effective planning and evaluation, and for monitoring progress over the years.

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At the beginning of this chapter, a number of general principles of health system management were discussed. With respect to the reorientation of management, certain strategies require special emphasis in all phases of the management process.

Community participation is basic in all managerial decision-making. It is the people, of course, whom the health system is intended to serve, and so their spokesmen should participate in the managerial processes

that guide the operations of the system. Their involvement not only can contribute to sound decision-making, but also can help to ensure their cooperation in programme development and operation (*108*). Community participation can likewise strengthen efforts to promote guided self-care as part of the delivery of primary health care.

Emphasis should be placed on a *democratic decision-making process.* Whenever a certain interest group—for example, peasants, industrial workers, doctors, merchants, or teachers—is to be affected by a decision, representatives of that group should be consulted. Unilateral decisions by a health authority are bound to engender discontent or opposition. Soliciting the reactions of all affected parties in advance, whether the idea is accepted or not, will help to foster a cooperative attitude later on (*4*).

Another ruling principle of sound management is the concept of *intersectoral activities.* In all health system components there must be connections with other social sectors; resource production draws manpower from the whole population, economic support draws funds from the total economy, and so on. Management must therefore consciously communicate with other sectors at every stage (*72*).

Last, but not least, emphasis should be placed on *health management training* in all countries. This is important if health systems are to be reoriented in directions more relevant to community health needs and capabilities. It is also important to train staff to measure the results of health system reorientation, in terms of coverage, effectiveness, and efficiency of health care. In this regard, several methodological proposals have recently been developed and their usefulness verified in practice (*23*, *24*, *103*). The above principles will be further elaborated in Part 3 of this book.

Part 3

Implementation of reorientation

9. The process of reorientation of a health system

Fundamental Requirements for Solutions

The fundamental requirements for the solution of health system problems in the face of many constraints can be defined easily enough. The implementation of these solutions, of course, is much more difficult; it must vary according to conditions in each country and involves many strategies.

In countries in which per capita GNP is still relatively low, economic development is clearly fundamental. Attainment of a New International Economic Order requires a spectrum of strategies in virtually all countries; initiatives are required far beyond the sectors of agricultural and industrial production and health. Economic development does not mean, however, that the health sector will automatically benefit *directly* from an increase in national resources; this will depend on the share allocated to it. Hand in hand with economic development, there must be political commitment to allocate or reallocate resources, particularly to primary health care. In addition, political steadfastness is needed to ascertain that economic support will continue to be available through the stages of implementation when the pattern of resource allocation is changing.

Explicit statements of political commitment to the reorientation of health systems and the initiation of actual measures may evoke strong countervailing forces; implicit, or hidden, resistance is also to be expected, particularly from the professional side. In some societies, strategies directed at the reorientation of health systems may even have the opposite effect to that intended. The more affluent minorities in society, who may have greater initial control of resources, may attract new and additional resources, leaving the underprivileged even further behind. This unfortunate course of events may be observed in all societies. A crucial determinant, therefore, is whether a political system promotes or enforces a change in the social system that enables the underprivileged and underserved to participate actively and have their say in the reorientation of their health services (*4*). This justifies the increasing concern with conscious community involvement in, and social control over, the development and operation of national health systems.

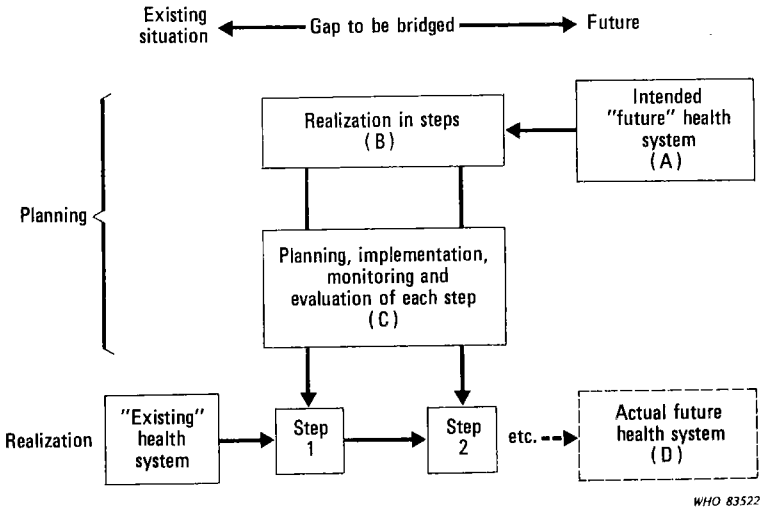
Economic development and social change, however, are not always prerequisites for the reorientation of health systems. Many countries are already economically developed and have already achieved the stage of equal distribution of health resources—and yet their health services are still in need of reorientation. The reasons for this are usually of a technical nature—for example, the need to unify more or less independent services into a single functional whole, to strengthen the primary health care component, to improve the functions of health teams and facilities, or to control costs.

Bridging the Gap Between the Existing Situation and the Future

Building and rebuilding existing health care complexes into health systems in which primary health care is the main function and the main delivery agent may—as indicated in previous chapters—require considerable changes. Every plan intended to achieve some improvement must be introduced into an existing situation; and usually there is a large gap between this existing situation and the future goal. The purpose of the reorientation process is to bridge this gap. The most practical way of doing so is to follow a series of steps, moving in the direction of the desired future (see Fig. 3). The concept of the desired future, however, has to be defined as clearly as possible before the first step is taken.

As a first step, a solution should be chosen that is viable in a given situation and represents a necessary movement towards the initiation of further development. The nature and pace of subsequent steps will depend, again, on the situation. After the implementation, monitoring,

Fig. 3. Bridging the gap between the existing situation and the future health system



and evaluation of one step, the next will be initiated, and so on. However, at each consecutive step in this process of reorientation, one should keep open the possibility of choosing a new course for the future and an appropriate new phase of development on the basis of experience gained and new points of view.

There may often be great resistance to change. For this reason, one single step to bridge the gap will usually prove insufficient to obtain the acceptance and cooperation needed from a group that is large enough to initiate the reorientation process and keep it going. A number of steps may therefore be required. This may lengthen the process, but there are circumstances in which it is unavoidable. Allowance should therefore be made for these steps—in such a way that they are feasible in a particular set of circumstances.

As already mentioned, the starting-point of the reorientation process is obviously the existing situation; thus, situation analyses on the spot are needed. Such analyses should bring to light elements of the present situation into which the intended process of reorientation might be assimilated. Since these elements will vary from place to place and from time to time, it is extremely unlikely that ready-made solutions will be found. This means that, in general, no single solution can be recommended in advance but that the choice may vary according to the situation on the spot and the particular problems identified.

It is important that the process of reorientation—once initiated—should be kept going, even if it extends over a long period of time. Yet, in most cases, this process is unplanned; one may observe that it is frequently broken off before the first step is completely realized and evaluated. At the same time, different solutions are introduced. Such an unfortunate course of events is usually caused by political pressure or political instability; as a consequence, resistance to change will be strongly enforced, in some cases even to the point of stagnation. A further disadvantage is that an unguided process of reorientation is rather difficult to manage and—if the situation escalates—can even become uncontrollable.

Managed reorientation is therefore to be preferred. This requires proper timing, which means that no more changes are introduced than are strictly necessary during a given period; but it also means making sufficient allowance for future requirements so as to leave open the possibility for further change. In this way, the dynamics of unguided development can be reduced.

Changing the Health System as a Whole

Problem-oriented and continuous action should be directed towards reorienting the health system as a whole, bearing in mind that there is mutual interdependence between health system components, people, and the environment. However, this is certainly not only a technical matter; creating room for change always depends on human action. Initiatives for reorientation can usually be effected only if sufficient cooperation is

obtained. That is to say, the process of reorientation should be initiated and guided in such a way that the initiative will be taken over by a group that is sufficiently large and strong to bear the responsibility for permanent development. This means that a collective will for change and leadership has to be created.

Reorientation strategies need not be confined to the public sector. In many countries, improved organization of resources, financing, and management may also be feasible within the boundaries of the private sector, with an ultimate impact on policies in the overall health system. Channels for coordination of all parts of a health system, such as national health councils (*112*), can promote useful action in the many organized entities functioning in most health networks.

Changing the health system as a whole does not mean that everything should be tackled at the same time; that would be a major deviation from the recommended development approach in feasible steps. Moreover, a fully integrated approach will not usually be possible at the existing level of technology and overestimated human capability. The recommendation is to take one feasible step at a specified time and not undertake more than is necessary; however, the consequences for the future of each intended step should be carefully considered. Moreover, the consequences of one step, at one point within the health system, should be considered with respect to all related components elsewhere in the system. Furthermore, every intended action should, of course, be checked with regard to its feasibility. It is probably best to apply a penetration strategy or mixed scanning strategy, which reorients only those elements within the total system that are necessary to make room for the initial steps.

Leadership

To renew and change an existing situation and guide a lengthy process of reorientation towards the realization of long-term goals, special managerial capabilities are needed. The essential requirements can easily be traced on the basis of the preceding discussion. An open mind is essential. The real needs of the people should be taken as a starting-point, and the technical skill should be available to consider any proposed solution to an identified problem within the context of the whole system. Orientation towards the future is necessary alongside a full appreciation of the strengths of the present situation. Strategic thinking should be strongly developed, together with interest and ability in running health operations. A strong will and technical capability are also required to overcome resistance to change.

As stressed earlier, leadership is essential to obtain the involvement and support of a group that is large and strong enough to accomplish the intended reorientation, in spite of anticipated resistance. Feasible strategies for gaining such support obviously depend on countless aspects of the history, structure, and dynamics of each country. A common feature of all strategies, however, is the strengthening of problem awareness up to the point of collectivization and design of

courses of action, so that the desired future becomes clear and, accordingly, a collective commitment to change can be created.

Decision-making Processes

Effectively and efficiently organized decision-making may be beneficial to the reorientation process. Any attempt to steer the existing health system towards the desired future should be tailored to a particular situation. Drafting a plan of change may be necessary for many reasons. A plan is written confirmation of the policy intentions for the future. It will provide a firm basis for checking their feasibility, in particular from the economic point of view; it is also required to obtain support. However, the plan of action document should never become an end in itself. On the contrary, a written plan should be considered the result of a collective commitment to reorientation created by a process of arousing interest within society to tackle the solution of its health problems.

Participation in planning is therefore essential. Those who will be involved in implementing the plan should participate in the preceding planning process from the beginning. In this way planning may also provide the means for developing constructive relationships within the health sector, as well as between sectors; it may also stimulate more sensitive behaviour towards the various interested parties, as well as a more conscious appraisal of problems and policy issues and their possible solution. These advantages should not be underestimated. On the other hand, the rationality of planning should not be overemphasized: such an attitude would cause expectations to rise too high.

Planning behaviour is characterized more by negotiation than by rationality: health planning is the subject of adaptation, compromise, bargaining, and reconciliation of conflicting interests. To see whether progress is being made within the process of implementation and realization, each step should be monitored and evaluated. Monitoring and evaluation are to be effected as an integral part of the whole process of reorientation and have to be designed, therefore, as a process in themselves. As participation in planning is an essential feature to initiate the process of reorientation and keep it going, the organization of planning should not be neglected. However, any planning mechanism should be related to the characteristics of particular settings in the political, administrative, and management structure of an individual country.

For purposes of coordination, national health councils could be formed and preferably should act as driving forces to stimulate collaboration. Such councils could be established in different ways and at all levels of administration, down to the community level. Mobilizing expert knowledge by establishing national health development centres or networks (*113*) would certainly contribute to strengthening the collective will to change and identifying technically sound options, which would subsequently be reviewed and decided on through political negotiations.

Designing or redesigning the health system should have a legal basis. Especially in countries with a relatively large private sector, a legislative foundation is indispensable. National governments may develop the appropriate legislation.

In principle, the health legislation should cover all basic aspects of a health system. First it should refer to the rights and obligations of health system users. Secondly, legislation may be needed to define the demands to be fulfilled by practitioners and to guarantee their rights (including hours of work, tariffs, wages, and salaries). Furthermore, legislation should be developed on the quality and volume of health care delivered. This type of legislation should cover the whole spectrum of health care and comprise regulations on the ways in which priorities should be set and resources structured and allocated. A legislative basis should also be provided for all management processes and mechanisms that need to be introduced, including formal and social control over the system. To complete these legislative requirements, regulations on the financing of health services will be needed.

Legislation should serve to stimulate the development of the health system into the desired patterns; for this reason regulations should not be too specific. Very detailed regulations may frustrate the process of development rather than stimulate it. It is usually preferable to formulate guidelines in a general manner and to specify qualitative and quantitative norms in terms of upper and lower limits, leaving enough room for local initiative and adaptation to specific circumstances.

Initiating Reorientation

The first question to be answered is: At what point should the process start? Generally speaking, reorientation should be initiated by strengthening problem awareness up to the point of its collectivization and attempting, by following this path, to create a collective will for change. The intensity of approach and its duration will depend on the problem concerned and the context within which it has to be solved. However, there are a few general strategies for initiating reorientation:

—The process may begin at the top and move downwards, or begin at the base and move upwards.

—The point of introduction may be outside the actual domain of the health services or within it.

—Special importance may be attached to the political channel or to the management channel.

In practice, none of these strategies should be applied in its pure form or in isolation. In most cases the combination should be used that appears to be the most suitable in the given circumstances.

From the top downwards

Depending on the political context, the process of reorientation is usually initiated at the top and moves downwards. Where resources are

in short supply the solution of the allocation problem requires central decision-making. Moreover, if there is a strong political commitment at the top to reorient the existing health services system in accordance with health for all goals, the process should indeed be initiated at that level (*75*, *76*). However, in spite of the importance of strong political commitment at the top, organizational change—and in particular organizational action—can certainly not be effected by central government initiative alone. The disadvantages of this approach are the lack of knowledge of local circumstances, bureaucratic procedures, and lack of flexibility.

From the base upwards

From the standpoint of reorientation, health care should be seen as the responsibility of all concerned—i.e., of the community as a whole. Therefore the possibility must always be kept open for initiatives to come from the base level (*27*, *104*). Such a policy is founded on the principles of self-reliance and self-help. As we have learned from the constraint analysis, one of the main concerns is the absolute shortage of resources, aggravated by unequal distribution between the privileged urban areas and the impoverished rural or other socially and geographically remote areas. It is important in this respect to anticipate the inherent danger mentioned earlier in this chapter that, if the general situation is gradually improving, the more affluent minorities of society—who have greater initial control of resources—may attract new and additional resources (*77*). In such a case, the opposite effect to the realization of the goal of health for all may result, and the underprivileged may become even more disadvantaged. Therefore central government should, in general, be reluctant to try to solve all the problems of local communities; instead, the communities should be encouraged to develop their own leadership and fight for themselves if circumstances so require.

From outside the domain of the health services

One starting-point for reorientation is the initiation of action outside the domain of the health services. In applying such a strategy, the priority is first to develop health-related sectors, such as agriculture, cattle-breeding, transport, or education. In many countries, such a strategy would be directly beneficial to the population living in underprivileged areas; as a consequence, it would be desirable not to allocate additional resources to the health field until a certain degree of development is reached in the priority areas. Until this point is attained, only the most essential changes in the existing situation should be allowed. However, adoption of this strategy will require a capacity on the part of the health authorities to provide political and managerial leadership at the transectoral level (*5*, *13*, *72*).

From inside the domain of the health services

The reorientation process can, of course, be initiated within the health services sector; indeed, this is the approach we might expect to be the most frequently adopted. There are many variations.

In areas without hospital facilities, the process of reorientation could be initiated within communities—i.e., the rural villages or urban neighbourhoods. For this, community participation is needed, of course. An alternative approach would be to assimilate the strengths of the existing local health services, which would entail developing from the available units a network of outposts in the villages and urban neighbourhoods (*9*). In all these cases no hospital should be built until the outreach among the population has become satisfactory.

In areas in which a local hospital already exists, that facility may be used as the springboard for reorientation. Usually the application of such a strategy will require a complete alteration of the functions of the hospital and a corresponding change in its organization (*53*, *57*, *102*). Outreach in the community should be organized by the development, in a series of steps, of a network of primary health care centres with satellite outposts in the villages and urban neighbourhoods.

By the political channel

While political commitment is considered to be of overriding importance, reorientation should not always be initiated via the political channel. If, by chance, the leading politicians are not aware of the problems in the health field or are not willing to give priority to their solution, it is hardly feasible to launch the process. In such circumstances, the group that feels responsible should first concentrate on creating among the leading politicians a political will for reorientation. Generally stated, politicians are eager to obtain quick results; this should be considered as fact and duly taken into account in formulating strategy.

By the management channel

As pointed out earlier, it is probably in the handling of renewal and change that the developing world could profit most from management skills. Particularly in countries in which the managers, rather than the politicians, stay in office, their contribution should be to ensure the continuity of the process. Reorientation of health systems could therefore also be initiated via the administrative management system, due consideration being given to the political aspects. In this respect it would be to the great advantage of a country for the most capable managers to be prepared to accept leading positions in the most critical areas of the management system.

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So far, we have concentrated on the organizational and functional patterns of health systems as factors governing suitable starting-points for the reorientation process. However, with regard to overcoming the time constraint, it is important to determine for the various areas the time it will take to achieve the desired reorientation (lead time) as a basis for decisions on where and when to start. It is an obvious conclusion that areas showing the longest lead times are the most crucial. Administrative reform, renewal of health education systems, and augmenting the supply of appropriately trained manpower and appropriate technologies are among the areas of transition that are the most critical in this respect. Initiation of the reorientation process in these areas, however, should always be accompanied by reorientation in areas of transition that may deliver quick results.

The Target Territories of Reorientation

Traditionally, in a health system three functional levels of care may be distinguished: primary, secondary, and tertiary. Every level of care requires a corresponding level of administration and has a corresponding population base—the higher the level, the larger the population base.

Since a health system should respond to community needs as a whole, the target territory of reorientation should be situated as far down the hierarchical structure as possible—i.e., as close as possible to the community it is intended to serve (*93*). A community is defined as a group of people who share specific social or cultural ties—though not necessarily bound to a specific geographical location. For this reason we shall distinguish between localized communities and dispersed communities. A dispersed community is one whose members share common characteristics but are spread over several geographical areas. In rural areas, communities may travel (like nomads), or settle close together in villages. In urban areas, one may find communities living in neighbourhoods. The place of primary health care is in the community, so it is the community that should be most directly interested in acquiring this care. In addition, communities in impoverished rural or other socially and geographically remote areas should be encouraged to strive for their own welfare. Thus, on the grounds of self-interest and self-reliance, the community should be taken as the first target territory of reorientation. Further advantages of this approach are that: it is the most direct way to reach the underprivileged; it is responsive to the needs of the people; it creates an integrated approach to primary health care; and it is of relatively low cost to governments.

Health care should, indeed, be physically close to the community; on the other hand, the projected health system must, at the very least, be able to provide a full range of essential health care components. These factors will determine the minimum size of the *health services area.* The minimum population base must be large enough for a self-supporting health service infrastructure (including, in addition to peripheral health teams and facilities, either a general hospital or an aggregate of hospitals

that can be considered as representing a general hospital). This minimum size of the health services area will, of course, vary as a result of physical circumstances, population distribution, and other social, economic, political, and cultural factors. The economic factor will often be decisive. If resources are very scarce, they will have to be spread over a much larger population group. From this it may be generally assumed that the target territory of reorientation will be located at the intermediate level of administration and that it must have operational service units for both primary and secondary care. From the point of view of quality of care, coherence of services, and cost control, the health services area should be accepted as the second target territory of reorientation. Usually, such an area will include different communities; close collaboration between the local and intermediate levels of administration is therefore essential.

Although the community and the health services area can be indicated as *direct target territories*, the actual reorientation of a national health system will also require simultaneous countrywide action and international cooperation. Thus a comprehensive approach to reorientation should be seen from four points of view:

—the community
—the health services area
—countrywide action
—international cooperation.

The community

To launch the process of reorientation there must be a certain awareness of the size and severity of the problem. It is more likely that such awareness exists at the top of the management system than at the bottom, though this may depend on the characteristics of the country. Professionals are probably aware of the problem sooner than laymen. At the community level especially—i.e., at the village or urban neighbourhood level—people may not recognize their health problems or may not be familiar with the opportunities available to overcome them. Sometimes there might be a local initiative; this should be supported—and if local initiatives are lacking, attempts should be made to create them. The identified needs as they are felt by the community should be taken as the starting-point for the reorientation process. To show to the community, at this early stage in the process, that some of their problems could be solved, an overall impression should be presented of the potential resources that could eventually serve as starting-points for development. It is vitally important not to overlook any of these potentials. For this reason, careful attention should be given to the way in which people in communities are used to solving their own problems, and action should start from there. This approach will ensure that technology is harnessed to the requirements of the people, as identified by the people themselves (*4*, *14*). Potential resources may be natural resources, the community's craft and skills, labour, creativity, individual

talents, and education (in the sense of knowledge not formally acquired) (*108*).

There are many ways of intensifying and spreading initiatives within a community, depending on the social and cultural characteristics involved. In many countries the most appropriate avenue has proved to be the *formation of an initiative group*, which may be transformed into a community health council at a later stage in the process. The health council should always be linked to the community development council, if this exists, to facilitate intersectoral cooperation. In some countries it may be necessary to involve local leaders in order to gain entry into a community.

Education is a predominant feature of the managerial process. It enables people to realize their own capacity to help themselves and to learn to guide their own process of reorientation in the direction of the desired future. With respect to the implementation and realization of the planned reorientation, starting at the community level, there are at least three areas of interest that should be dealt with: (1) the selection of community health workers and their training; (2) the installation and maintenance of facilities in the community; and (3) the supply of materials and drugs, as well as the possibility of raising money.

The health services area

Initiating the process of reorientation at the community level is the most direct way to reach the underprivileged. However, communities cannot operate in isolation: they need support from the health services. Vital to community health programme development, therefore, is the establishment of a *supportive health system* (*41*). Consequently the existing health system as a whole needs to be reoriented so that essential health care required by communities can be made available, with specific channels for referrals. The community needs the confidence of knowing that there is a referral system available to accommodate health problems with which the community health worker is unable to cope. The services created by communities should therefore first of all be linked to or integrated with the health system, so that community health workers become members of primary health care teams and obtain supportive supervision.

The most efficient strategy—and probably also the most effective—would be for the reorientation process to be undertaken in communities and in health services areas simultaneously. In this way, the combined effort of the communities, the government, and all agencies—including the private sector in a particular area—is utilized. To ensure that this effort achieves its desired end, the process should proceed, as already discussed, from the strengthening and collectivization of problem awareness towards creating a collective will for change.

The process could be triggered by the communities, the government, or any other agency, and politicians in the area could be of great help in getting it started. Any single initiative should be supported and used as

a basis to work on; if such initiatives are lacking, the national government should take the lead. It is important at the area level to check whether problems are recognized by the health professionals, health care delivery institutions, and health financing agencies, as well as by the associations representing their interests. The support of the large group of health care workers who are doing the actual job is indispensable: experience so far has confirmed this observation in all types of country. Possible resistance from this side should be anticipated. If problem awareness among the professionals is found to be weak, strong attempts should be made to involve this group before further steps are taken; if necessary, pressure may be exerted by the communities and the government. In such circumstances it may take a considerable time for the requisite problem awareness to be stimulated to such a level that an initiative group can be formed in which health professionals are represented and which is large and strong enough to force the initiative through in spite of resistance.

Mobilizing public, professional, and governmental support in order to create a collective will for change requires open and two-way communication among the people, institutions, and organizations that have to work together (*99*). At the community level, such communication is relatively easy to realize; but this is not always so at the level of the health services area. If necessary, therefore, appropriate arrangements should be made. In many countries, the establishment of an area health council as part of the local authority framework would be a logical solution. Around this body a consultative and advisory machinery could be built up, consisting of a network of working groups and project teams dealing with different subjects. By implementing this gradually, more scope could be created to intensify and spread interest throughout the area.

It is important that vertical liaisons should be established, with consultative platforms at the community level in particular, but also at the national level. In addition, horizontal liaisons should be formed to permit intersectoral action (*72*). The area health authorities will always be in need of technical advice and information; they may be able to provide this themselves, or obtain it from institutions at the national level. Another avenue would be to mobilize the expert knowledge that might be available in the area. This could contribute to strengthening the collective will for change.

To establish with sufficient certainty that proposed solutions are justified, *demonstration projects* could be undertaken. To this end, certain communities have to be selected. It is important that each demonstration should be well prepared and feasible in practice. The projects should be managed in such a way that they have a clear demonstration effect or present a challenge to other communities. The progress made and the results achieved should be monitored, evaluated, and publicly discussed, and gradually the number and size of the experiments could be extended. This approach could even be adopted as a strategy to introduce actual changes (*3*, *10*, *98*).

Planning and programming efforts should, in general, be considered the result of a collective commitment to the desired reorientation of the health system. Areas of attention include reorganization of the infrastructure of primary health care to reach underprivileged communities, improvement of the utilization and functioning of primary health care, reorientation of the health system in the area as a whole into a support system for primary health care, revision of manpower training and use, ensuring the installation and maintenance of facilities and an adequate supply of materials and drugs, and, finally, economic support, which should be brought into line with the priorities set.

Countrywide action

Reorientation of health systems should be a countrywide activity and that requires countrywide support. Each country should create the conditions to facilitate its reorientation process. In most countries, the main problem will be to create a collective will for reorientation at the national level and to intensify and spread this throughout the country. In particular, it will be difficult to keep the process of implementation and realization going for the many years required to bridge the gap between the existing situation and the desired future. To this end, many countries have found it very useful to set up national health councils (*112*) representing all major organizations and interest groups concerned with health, as well as other sectors related to health. The prime minister (or his deputy) would be the logical chairman of such a body, to ensure intersectoral coordination and control. In any case, the minister of health should take the initiative in forming such a council and play an active role in its chairmanship (e.g., as deputy chairman or executive secretary).

For sound policy decisions on the optimum future configuration of all system components, health systems research (or health services research) is often advisable. The skills of academic centres, certain individuals in the government, and the occasional external consultant can be helpful in the performance of such research. To coordinate the research (and provide the relevant technical expertise), ministries of health have found it of value to establish national health development centres or networks (*113*), in which specialists in the health sciences and social sciences are brought together to elaborate scientifically sound health system options. These centres may also have responsibilities for supportive participation in national health planning and for training the relevant specialists.

In addition, the health services administration and management system and related planning machinery may have to be strengthened, particularly at the intermediate and local levels. Vertical liaisons may have to be improved and horizontal liaisons established between the health sector and other, relevant sectors. More suitable and efficient health management processes and mechanisms may also be introduced. As stated earlier, the target areas for reorientation are the communities

and the health services areas, and the health services should be organized as supportive systems for the communities. This process of reorientation will therefore require the combined efforts of the communities and the health services within a particular area.

The process of reorientation usually cannot be started in all areas of a country at one and the same time—in most cases, an insufficiency of resources would prevent such an approach. Yet, under such circumstances, any dispersion of efforts should be avoided. In general, therefore, the selection of a limited number of priority areas in which to initiate reorientation is inevitable. Such an approach might prevent interruptions in the process arising from a lack of resources or availability of capable management, or both. To test the validity of certain organizational solutions, controlled trials should be conducted in the different priority areas. Experience acquired in different places and in different circumstances should be carefully analysed, compared, and used for further progress. On the basis of this experience, the process of reorientation could be intensified step by step in these areas; meanwhile, it could be extended by developing initiatives in other areas.

National governments should support the organizational activity at the lower levels. Simple but instructive guidelines, based on legislation, should be made available, indicating how the process of change could be initiated, continued, and evaluated. Information should be provided about the different possibilities for solving problems, and assistance should be offered in developing appropriate technologies. Specially trained consultants should be sent to the periphery to support local initiatives. These specialists should serve as active participants, contributing to the creation of group situations in which it is possible to cooperate to find solutions to problems. This role of guide is expressly directed towards the implementation phase of the reorientation process. The active participant should start from the standpoint that actual change occurs only when the consequences of the solutions found are acceptable to the group that must implement them.

National governments should allocate resources to primary health care in accordance with the policies accepted, and continue to do so consistently in the course of an implementation and realization process of long duration. Other crucial areas of transition are the introduction of change in the educational system, the supply of appropriately trained manpower, and the development of appropriate technologies, as discussed in preceding chapters. In planning the reorientation of any aspect of a health system, it is wise to propose more than one possible course of action. The availability of options can give decision-makers greater confidence in the wisdom of the policies formulated.

International cooperation

The goal of achieving an acceptable level of health for the entire population of the world has gained growing support recently; and it is increasingly being realized that this objective can be attained only

through intensive cooperation between countries, whatever their present level of socioeconomic development and the health status of their people. However, it has been learned from past experience that even the most rational worldwide agreements, such as the Global Strategy for health for all by the year 2000, are insufficient in themselves to create the necessary initiative on the part of governments to ensure implementation of desirable change. This may often be due to lack of opportunity; but it can also arise from a lack of will to apply certain recommendations.

The need for a national will has therefore been emphasized as a prerequisite for technical cooperation in the field of health, together with maximum global mobilization of resources to create the opportunity to assist those in greatest need. The important principle of developing national self-reliance in health matters is increasingly being kept in sight in technical cooperation. Accordingly, "the concept of . . . doing something *for* countries is being abandoned and replaced by cooperation *with* countries and the fostering of cooperation *among* countries so that together a lasting impact is made on health development" (*52*).

Self-reliance in health has been strengthened by the recent development of various types of solidarity contracts—partnerships in technical cooperation between developed and developing countries (e.g., bilateral contracts) as well as among developing countries themselves (concepts reflecting "solidarity based on similarity") (*11*).

With respect to national health systems and their reorientation, WHO can cooperate with countries on several levels (*54*). In the issue of major policy documents, such as those cited in this study (e.g., *86*, *91*, *93–96*), it can disseminate to the whole world judgements and recommendations made in concert by health leaders; such statements may obviously contribute to policy decisions and actions in many countries. Through its mobilization of technical expertise, WHO can also cooperate with countries in conducting reviews and analyses of their national health systems. Many of these systems, as noted in this study, are very complicated, and the perspective of an outside observer can enhance the objectivity of a system analysis. Only after careful and comprehensive analysis of whole national health systems can a country's health leaders plan the appropriate strategies for reorientation.

With its multiple mechanisms for promoting an exchange of ideas, WHO can help in communication between countries on experience gained in the reorientation process. Furthermore, through joint action with other organizations of the United Nations system (such as UNICEF and UNDP) and various international, intergovernmental, and nongovernmental bodies, WHO is continuing to promote an *international doctrine* (*36*) embracing the common goals of health for all, the primary health care approach, and relevant national health systems reorientation—these being the necessary prerequisites for improving the health situation of the world's population.

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KLECZKOWSKI, B. M. & PIBOULEAU, R., ed. *Approaches to planning and design of health care facilities in developing areas*, Vol. 1, 2, 3, and 4. Geneva, World Health Organization, 1976, 1977, 1979, and 1983 (WHO Offset Publications, Nos. 29, 37, 45, and 72).

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MAHLER, H. Hospitals and health for all by the year 2000. *Canadian journal of public health*, **70**: 347–349 (1980).

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MAHLER, H. Partnership for health for all. *WHO chronicle*, **35**: 203–207 (1981).

Discusses some crucial prerequisites for the immediate implementation of the Global Strategy for health for all and the potential of the partnership ties that exist between the Member States and WHO in this field.

MAHLER, H. Use your WHO. *WHO chronicle*, **34**: 455–460 (1980).

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SCHAEFER, M. *Intersectoral coordination and health in environmental management: an examination of national experience.* Geneva, World Health Organization, 1981 (Public Health Papers, No. 74).

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WHITE, K. L. ET AL. *Health services: concepts and information for national planning and management*. Geneva, World Health Organization, 1977. (Public Health Papers, No. 67).

A summary of observations and interpretation from the World Health Organization/ International Collaborative Study of Medical Care Utilization, with particular emphasis on the implications for health policy-makers, planners, and administrators.

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A critical review of the relevance and practical applicability of systems analysis to health management at the country level.

WHO Technical Report Series, No. 600, 1976 (*New trends and approaches in the delivery of maternal and child care in health services*: Sixth report of the WHO Expert Committee on Maternal and Child Health).

Redefines health problems and reviews approaches to the adaptation of health care delivery systems in the light of recent social and environmental changes, in order to determine the kinds of care needed and the priorities for maternal and child health care.

WHO Technical Report Series, No. 622, 1978 (*The promotion and development of traditional medicine*: report of a WHO Meeting).

An assessment of the relevance and practicality of incorporating traditional medicine into formal national health systems.

WHO Technical Reports Series, No. 625, 1978 (*Financing of health services*: report of a WHO Study Group).

Using case material as well as general principles. suggests ways in which primary health care could receive more financial support.

WHO Technical Report Series, No. 633, 1979 (*Training and utilization of auxiliary personnel for rural health teams in developing countries*: report of a WHO Expert Committee).

This report aims at helping national authorities to formulate plans of action to develop and improve their primary health care through the training and utilization of front-line and intermediate workers in health teams.

WORLD HEALTH ORGANIZATION. *Alma-Ata 1978: primary health care. Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978*. Geneva, 1978 ("Health for all" Series, No. 1).

One of the most basic documents setting out the primary health care approach at a conceptual level.

WORLD HEALTH ORGANIZATION. *Development of indicators for monitoring progress towards health for all by the year 2000*. Geneva, 1981 ("Health for All" Series, No. 4).

This publication proposes four categories of indicator: health policy indicators, social and economic indicators, indicators of the provision of health care, and indicators of health status. The information requirements of the proposed indicators are presented, with an analysis of the sources, feasibility, and relevance of each. Finally, the use of these indicators for monitoring and evaluating strategies for health for all at national, regional, and global levels is discussed.

WORLD HEALTH ORGANIZATION. *Formulating strategies for health for all by the year 2000: guiding principles and essential issues*. Geneva, 1979. ("Health for All" Series, No. 2).

A basic document setting out, in conceptual terms, what countries can do to establish or reorient health systems in line with primary health care principles.

WORLD HEALTH ORGANIZATION. *Global Strategy for health for all by the year 2000.* Geneva, 1981 ("Health for All" Series, No. 3).

Following the "Alma-Ata" and "formulating strategies" documents, this statement was adopted at the 34th World Health Assembly in May 1981 with the purpose of moving the primary health care approach world-wide and within countries into the practical stage.

WORLD HEALTH ORGANIZATION. *Health programme evaluation: guiding principles for its application in the managerial process for national health development.* Geneva, World Health Organization, 1981 ("Health for All" Series, No. 6).

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A report of the Technical Discussions at the 1973 World Health Assembly focusing on the relevance of modern management technology to the solution of problems encountered by countries in the delivery of health services.

WORLD HEALTH ORGANIZATION. *Sixth report on the world health situation, 1973–1977.* Part 1. Global analysis; Part 2. Review by country and area. Geneva, 1980.

A basic reference for information on countries' health systems, as well as for the regional and global health situation.

WORLD HEALTH ORGANIZATION. *The managerial process for national health development: guiding principles for use in support of strategies for health for all by the year 2000.* Geneva, 1981 ("Health for All" Series, No. 5).

These guiding principles for the development of a total managerial process describe the common components of formulation of national health policy programming, programme budgeting, a master plan of action, implementation, evaluation, reprogramming, and information support, as well as interrelationships between the components and mechanisms to provide continuity in the process. The need for system support is recognized, as well as the fact that the real world seldom orders itself as logically and clearly as this statement of principles would suggest.

ZWAAN, A. H. VAN DER. Regionalization: a longitudinal case study of inter-organizing. *Social science and medicine*, **15A**: 41–48 (1981).

The conceptual framework provides an introduction to a case study report. Subsequently there is extensive analysis of some salient observations on the process of organizing a regional health care federation.