Editors: T. L. Hall & A. Mejía

# health manpower planning

principles

methods

issues

world health organization, geneva

# HEALTH MANPOWER PLANNING:

## Principles, Methods, Issues

Edited by

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CONTENTS

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# Introduction

David TEJADA-DE-RIVERO [1]

With growing awareness not only that access to health care is a basic human right but that health is a valuable national asset, a primary aim of social development, and an essential means to sound economic and social progress, the crucial question that decision-makers at the highest level have to consider is not whether their country can afford to improve health services but whether it can afford not to do so.

A parallel realization is that achieving and maintaining health in a society is a task on a much broader scale than medical care and involves knowledge and skills beyond those available within the health sector and most certainly beyond those available within the health team as traditionally conceived and constituted. This is in no way to be interpreted as implying that the health sector did not, cannot, or should not play a crucial role in a country's efforts to bring health to its people. It implies merely that, with a closer look at the past, a realistic view of the future, and a strong resolve to eliminate conflicts of interest, leaders in the health sector can achieve a more positive role for that sector—whose only justification is the improvement of health and whose survival will depend on its capacity to bring about such an improvement.

Since the health industry is essentially labour-intensive, manpower constitutes a critical component. This being so, one of the greatest challenges in the health field today is that of managing this manpower in a way that will make it less costly but yet fully capable of meeting what is a stated goal in most societies, the development of a more accessible, more equitable, more effective health care delivery system. This task involves more than a mere focusing on numbers, because manpower is a resource that can be used in a multiplicity of ways and the manner in which it is employed is as important as, and sometimes more important than its numerical supply. Health manpower planning is thus also concerned with the type and quality of education, the workplace, and the organization of health manpower. In essence, its objective is to provide the right type of education and training for the right number and type of people needed to render effectively and safely the right types of service when and where required by the population.

[1] Assistant Director-General, World Health Organization, Geneva.

Reshaping the health manpower complex so that it is responsive to a nation's requirements for health care is essentially a triple process involving planning, production, and management, with all three functions harmoniously geared to achieving the single goal of providing health services to the entire population. Unfortunately, more often than not this goal becomes lost in the mad scramble of institutions and professional groups to perpetuate themselves and in excessive preoccupation with input rather than output, with the efficiency of component parts rather than the effectiveness of the whole. The result of this is that the needs of the system acquire a higher priority than the needs of the people to be served.

* * *

The origins of this book go back to 1970 when WHO convened a Scientific Group on the Development of Studies on Health Manpower and requested it (*a*) to conduct a review of the development and methods of health manpower studies and (*b*) to recommend to WHO future lines of research. In its review the Scientific Group found that, despite the many attempts at health manpower planning in recent years, the abundance of data collected, and the often sophisticated methods employed, the impact on policy formulation and implementation seemed to have been relatively small. Moreover, the methods used were often inappropriate or the efforts sporadic and not adequately integrated into an ongoing health planning system related to socioeconomic plans. On the basis of these and other findings, the Scientific Group recommended that WHO should promote health manpower planning in Member States.[1] The present publication is one of the responses to that recommendation.

It is also in consonance with the Twenty-ninth World Health Assembly's request (*a*) that WHO collaborate with Member States in the formulation of national health policies that are responsive to health service requirements and in the strengthening of health manpower planning as an integral part of overall health planning in the context of their socioeconomic conditions, and (*b*) that WHO intensify efforts to evolve the concept of an integrated process of health services and manpower development and to collaborate with Member States in the creation of a permanent mechanism through which the concept can be applied.

The purpose of the book is to bring together and analyse information on the various aspects of health manpower planning, to set out the principles of health manpower planning as an integral part of overall health planning in the context of socioeconomic development, to highlight the more common difficulties experienced in the conduct of such planning,

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[1] WHO Technical Report Series, No. 481, 1971 (*The development of studies in health manpower*: report of a WHO Scientific Group).

and to describe the component parts of the planning process as well as the techniques that can be used, including their potential benefits and limitations. The book also focuses on selected key issues such as health manpower distribution, utilization, and migration.

The Scientific Group also expressed the view that there was an urgent need for supplementary manuals providing more specific guidelines on selected issues, and this recommendation was included in the Sixth General Programme of Work (1978–1983) of WHO. Accordingly, this book focuses primarily on planning principles and approaches but leaves the details of how to plan for subsequent publications. The preparation of guidelines in health manpower planning has already been initiated.

It is hoped that, besides those directly concerned with health and health manpower planning, health administrators, educators, policy-makers, statisticians, persons serving on health advisory bodies and, in the case of some chapters, legislators and members of the informed public will find this book relevant to issues with which they are concerned. The book is primarily directed towards the needs of the developing countries, but most of the principles and many of the techniques are also relevant in developed countries.

This book was prepared in full recognition of the fact that there are as many health systems throughout the world as there are countries, that each country is unique in its population structure, its patterns of morbidity and mortality, its cultural values, its political institutions, its resources, and its manner and level of economic development, and that each country has therefore to find its own particular path to better health. In doing so, however, it would do itself a disservice if it ignored the international experience and knowledge that have accumulated. In some countries the practice of health manpower planning has by now become a standard regular activity of the state and an integral part of health planning (e.g., the USSR and Eastern European countries), while in many other countries, both developed and developing, manpower studies have been carried out in the past two decades (Canada, Colombia, Peru, Sri Lanka, Thailand, Turkey, the United Kingdom, USA, etc.) and manpower plans have been prepared. While this volume does not claim to constitute the sum of such experience and knowledge in the field of health manpower, it goes a long way towards synthesizing current thought in this field and can thus be useful to each country, whatever its particular nature.

It is proposed to supplement this book by a second volume focusing on the specific experience of selected countries and particularly on planning styles in different sociopolitical settings.

CHAPTER 1

# Health manpower planning: an overview

Alfonso MEJÍA [1] & Tamás FÜLÖP [2]

## The Health Manpower Problem

In a study made in 1973, the WHO Executive Board expressed the belief that the average health care consumer received less care in that year than he had received 25 years earlier when WHO was created.[3] Numerous spectacular advances have been achieved during the interval, as the Director-General of WHO said in the same year,[4] such as an increase in life expectancy. However, the gains are almost entirely attributable to a reduction in mortality among the young through the mass application of public health measures and are of little benefit if most individuals cannot hope to receive a reasonable amount of health care during the additional years of survival. The reason for this failure may be found in the anomalies in present health care and health manpower planning.

A rational approach to health manpower planning could do much to obviate some of those anomalies. A few of the anomalies may be cited:

- A newly expanded regional hospital system, completed at great cost with a foreign loan on which commercial interest rates are paid, stands unused for lack of nursing personnel.
- Over half of the graduates of a ministry of health six-month training programme for environmental sanitation personnel were lost permanently to the health sector owing to failure by the ministry to create the necessary jobs in time.
- Health authorities in developing countries lament over the many physicians who emigrate following graduation while at the same time citing with pride the high pass rate of these graduates in licensing examinations in developed countries.
- Health and political authorities, in their desire to avoid providing rural communities with "second-class" health care, oppose the use of

[1] Chief Medical Officer, Health Manpower Systems, Division of Health Manpower Development, WHO, Geneva.

[2] Director, Division of Health Manpower Development, WHO, Geneva.

[3] WHO Official Records, No. 206, 1973, p. 103-115.

[4] PITCAIRN, D. M. & FLAHAULT, D., ed., *The medical assistant. An intermediate level of health care personnel*, Geneva, World Health Organization, 1974 (Public Health Papers, No. 60), p. 11-12.

non-professional personnel in such areas, hence ensuring that the population will be without any health care at all.

● The gift by a developed country of a modern university hospital to a developing country has become a double liability to the recipient—a major drain on its health budget and a teaching facility inappropriate to local training needs.

● One government agency has funded the development of a large number of training programmes for medical assistants, while another, in charge of reimbursements for health services under the social insurance system, has declined to approve payment for the services of these assistants working under medical supervision.

● In order to cover the payroll of an overstaffed health system, the budgets for drugs, equipment, and the maintenance of facilities have been cut to the point where the productivity of the staff is severely compromised.

● Unwilling to jeopardize the "quality of care" by expanding its medical school capacity to meet its national needs, a country has ended up by relying on large numbers of immigrant physicians urgently needed in their home countries and ill-equipped to practise medicine in the host country.

● Despite 50% of vacancies in the entering classes of the existing three schools of pharmacy, a 50% student attrition rate, and a 50% loss of graduates owing to insufficient market demand, a new school has been opened and the duration of studies increased in order to "improve the quality of training".

● Three different schemes for training and using peripheral health workers are under development simultaneously but independently, each competing for government support to be extended nationally.

● Over one-third of the people in one continent are without medical care despite a reasonably good overall doctor/population ratio.

● Forty-two new medical schools have opened in one country in four years.

These are actual anomalies occurring in both developed and developing countries, though mainly in the latter. Similar examples of inadequate or non-existent health manpower planning, with all their foreseeable tragic sequelae—unnecessary human suffering, wasted resources, frustration, and lost opportunities—could take up pages. These are not the actions of stupid or malevolent persons, for health is one of the few fields where everyone takes the same side—against disease—and the field is unusually blessed with intelligent and highly trained individuals. Rather, they are the result of such factors as the intrinsic complexity of the health sector, the strong professional tradition that emphasizes individual and institutional autonomy as against an integrated team approach to providing care, distrust of planning and of planned change, and poor performance

in implementing such plans as are prepared. Combined with this has been a failure to grasp the manpower aspects of health care problems.

Good examples of effective manpower planning and use could and indeed will be cited later on. Their number is increasing rapidly as more and more countries come to realize the central role their human resources must assume in the fulfilment of national aspirations and plan accordingly.

The essence of the health manpower planning problem is what it has always been—that of trying to provide a supply of health manpower adequate to meet society's increasing demand for health care. Recently this demand has been increasing especially rapidly in virtually all countries; high population growth, rising social expectations, and socioeconomic development stimulate the demand for more services, and advances in health technology and the shift in the pattern of disease from the acute illnesses of youth to the chronic illnesses of the aged stimulate the demand for a greater variety of services.

The rapid growth of the health industry, particularly in a few highly developed countries, has led to a demand for health manpower from outside those countries. As a result certain categories of health professionals have become, as it were, international commodities that are moulded in an educational pattern for the most part designed to serve the needs of industrialized societies in the Western world. This situation has important implications for health manpower planning and development in developed and developing countries alike.

The main failure of the health systems in many countries is their inability to provide the basic types of health service needed by the population as a whole. Thus, while a few segments of the population may be well served, the majority are served poorly or not at all. That this situation is both untenable and preventable is becoming apparent to an increasing number of people.

This situation is the result of many factors, the main one usually being the low priority given to health care among the various measures taken to promote social and economic development. But while this may be the greatest constraint, the onus of failing to make the health system work for the benefit of the population as a whole lies directly on the health system itself. Within that system, the problem is compounded by the fact that its components function largely in isolation from each other. The result is a fragmented approach that leads to policies, plans, and activities that overlap wastefully or conflict with each other and, in many instances, tackle the wrong problems.

The lack of manpower and of other resources is the most obvious constraint to the development of the health sector. Within the health system the health manpower component accounts for the major part of

the budget. Yet most countries, however developed they may be, appear to experience a dearth of health workers. This shortage, compounded by inefficient utilization of the health workers that are available, serves to highlight the urgent need to define the functions and tasks to be performed and the type of preparation and amounts of manpower needed to carry them out. This calls for close coordination of two major components of the system: health care delivery and health manpower development. Unfortunately, such coordination is lacking in most countries, resulting in the fragmented approach mentioned above.

One result of this situation is the irrelevance of services to the priority needs of people, as manifested by excessive emphasis on the cure of disease in individuals as opposed to the preservation of health in the community. Whether this is a consequence of the dominant position that physicians have traditionally held in the community or a cause of that dominance is open to question. Whatever the case, private sector health services in many countries have been permitted to grow out of all proportion. At the same time, the overshadowed public sector continues to overemphasize expensive hospital care, which caters primarily for a part of the urban population, usually the richer part, at the expense of the rural population and the urban poor.

Lack of coordination exists not only between the two major components of the health system but also among the subsystems within each component. In relation to health manpower, the lack is visible in the gap existing between manpower planning and manpower production, administration, and management. Each function, however sophisticated the methods used, tends to proceed independently of the others, with detrimental results for the health system as a whole.

## The role of manpower planning

Manpower is the critical resource in a labour-intensive industry such as health. Important as it is, however, manpower is only a means and cannot be considered an end in itself, since it is health services and not manpower that people demand. Furthermore, while it is a necessary resource input, it is by no means the sole one. Health manpower is thus at one and the same time an integral part of and a subsystem within a country's health system. It is an organic element among the resources needed for the overall national health plan aimed at improving the quality of life of the entire population.

Manpower requires the longest preparatory period of all the health resources and cannot be improvised. It is also subject to a certain inherent inertia, in that the rigidity of the health and education systems and the attitudes of health workers do not make for easy mobility or conduce to

improving geographical and occupational distribution. Nor can manpower be stored or discarded. If it is to be available at the proper time, it has to be planned for in advance in the right amount and type—no more and no less than is needed. Because they are subject to obsolescence, manpower abilities and skills also need to be maintained by means of permanent supervision and continuing education.

The complete absence of health manpower planning or bad planning has led to acute shortages of services in some countries and areas and to surpluses and imbalances in others. Some countries produce more health workers than they can economically absorb, while others appear to have an insatiable appetite for them within a situation of underproduction relative to effective demand. This leads to the immigration of certain categories of manpower. The imbalance between the supply of and the demand for health manpower is a result of a basic lack of coordination between the providers of health services on the one hand and the producers of health manpower on the other. Health manpower is not a commodity whose production can be left to the imperfect functioning of laissez-faire market mechanisms.

## Health manpower planning in perspective

The explicit, comprehensive application of planning techniques to the solution of health manpower problems is a relatively recent phenomenon, even though implicit planning has been in existence for many years, especially in the socialist countries. It is only in the last decade or so that countries have sought deliberately to link their training plans with the needs of the health sector. In the Soviet Union, which has one of the longest experiences of health manpower planning, in the mid-1950s planning became primarily oriented towards meeting service needs instead of being primarily related to medical school and other health training institution capacities.[1] The situation is similar in the other socialist countries as well. In the West, planning tended to be episodic, crisis-oriented, and often limited in scope. In the last few years, however, planning studies have become popular, aided by rapidly evolving survey techniques and computer-assisted analysis, but the national capacity to use the new information for decision-making, policy formulation, plan implementation, and evaluation has lagged behind the developments in methodology. Moreover, all too often imbalances have developed in the amount of information collected on different aspects of the manpower situation, most notably between supply and demand. These imbalances in turn have weakened the overall effectiveness of planning efforts and tended to discourage those involved in them.

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[1] POPOV, G. A. *Principles of health planning in the USSR*, Geneva, World Health Organization, 1971 (Public Health Papers, No. 43).

Since 1948 WHO has provided extensive assistance to its Member States in areas related to health manpower, such as in promoting statistical indices, collecting morbidity, mortality, facility, and manpower data, training health personnel, and developing guidelines for national health planning. Widespread concern about the supply and effectiveness of health resources has led various countries to undertake national health manpower studies [1] of one or more occupational categories, and WHO has received an increasing number of requests for assistance with such studies. WHO has also organized a series of meetings in its different regions for the exchange of views on health manpower planning and related topics and for the assessment of the experience so far gained in this domain.[2]

A recent development in health planning, and therefore implicitly in health manpower planning, has been the country health programming concept. This involves the systematic assessment of health problems in their national context, the identification of areas susceptible of change, the determination of the methods and resources best suited to bringing about change, and the fixing of responsibility for providing the resources. The resources may be national or originate from sources external to the country (including WHO), but the overall responsibility remains that of the country concerned.

The approach to country health programming involves an intensive effort of familiarization, communication, and planning spread over a short period of time, usually in the form of workshops utilizing a multidisciplinary team of national and international experts. This is supplemented by the development of a health project formulation "package",[3] a programmed approach to health project management including manpower management.

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[1] Countries that have undertaken significant recent work in health manpower planning include: Argentina, Bahrain and the United Arab Emirates, Bulgaria, Canada *, Chile *, China, Czechoslovakia, Colombia *, Cuba, Ecuador, France, German Democratic Republic, Hungary, India, Indonesia, Israel, Nigeria, Peru *, Poland, Philippines, Republic of Korea, Sri Lanka *, Switzerland, Thailand, Turkey *, United Kingdom, United Republic of Tanzania, USA, USSR, Viet Nam, and Yugoslavia. (Those with an asterisk have completed and published comprehensive studies.)

[2] These are reported on in documents issued by the WHO regional offices: for Africa (Methodology of health team manpower planning. Report of a symposium organized by the Regional Office for Africa of the World Health Organization, Brazzaville, 29 May–3 June 1972, document AFRO 4106, 1972); for South-East Asia (L. A. Simeonov: Better health for Sri Lanka. Report on a health manpower study, document SEA/PHA/149, 1975); for Europe (The demographic aspects of health manpower. Report on a Working Group convened by the Regional Office for Europe of the World Health Organization, Paris, 16–21 June 1971, document No. EURO 4103, 1971; Methods of estimating health manpower. Report on a symposium convened by the Regional Office for Europe of the World Health Organization, Budapest, 15–19 October 1968, document No. EURO 0289, 1969); and for the Western Pacific (First Regional Seminar on Health Manpower Planning, sponsored by the World Health Organization Regional Office for the Western Pacific, Manila. 24–28 September 1973. Final report, document No. WPRO 4104, 1974). For the Americas there are several publications: MILLBANK MEMORIAL FUND & PAN AMERICAN HEALTH ORGANIZATION. Health manpower and medical education in Latin America: report of a round table conference, New York, 1963. *Milbank mem. Fd. Quart.*, **42**, No. 1, (1964) pp. 11–66; MINISTRY OF PUBLIC HEALTH OF COLOMBIA & COLOMBIAN ASSOCIATION OF MEDICAL SCHOOLS (1968) *Study on health manpower and medical education in Colombia: Proceedings of an International Conference on Health Manpower and Medical Education, Maracay, Venezuela*, Washington, Pan American Health Organization, 1967; *First Pan American Conference on Health Manpower Planning, Ottawa*. Washington, Pan American Health Organization, 1974 (Scientific Publication No. 279).
See also: WHO Technical Report Series, No. 481, 1971 *(The development of studies in health manpower*: report of a WHO Scientific Group).

[3] BAINBRIDGE, J. & SAPIRIE, S. *Health project management. A manual of procedures for formulating and implementing health projects.* Geneva, World Health Organization, 1974 (Offset Publication No. 12).

Basically in the form of a manual, it offers health planners and administrators a set of procedures for planning and implementing health projects, spelling out exactly what has to be done and by whom at each stage.

Despite the great variations between countries in the scope, methodology, and sophistication of manpower planning, several lessons have emerged from experience that appear to have wide applicability. These lessons, which will receive considerable attention in this book, include the following:

(1) planning is unlikely to be effective if due account is not taken of the social, economic and, especially, political circumstances in which it takes place;

(2) health manpower planning is an integral part of comprehensive health planning and should not become an independent activity;

(3) the three components of the health manpower development process —planning, production,[1] and management—must be brought into closer and more functional relationship with each other and with health services development if manpower policy is to be implemented;

(4) manpower studies or reports of commissions, however sophisticated, do not necessarily lead to the development, much less to the implementation of a plan, or to an integrated process of health manpower development unless the necessary social, economic, and political conditions and a definite national political will are present.

## The Planning Process [2]

### Definitions and objectives

Planning is the administrative instrument that provides a rational basis for decision-making. When aspirations exceed resources choices must be made, and if decisions are to be made intelligently and productively they must be based on a careful assessment of options. Perhaps the most important contribution planning can make is in the allocation of scarce resources so as to ensure that health services are made available equitably. Planning involves:

— the identification and analysis of problems,

— the formulation of alternative options,

— the selection of the appropriate solution,

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[1] Health manpower cannot be produced, but the conditions for its development can be created. It is in this sense that the word "production" is used here and in the rest of the chapter.

[2] See *Planning and programming for nursing services*, Geneva, World Health Organization, 1971 (Public Health Papers, No. 44); *Modern management methods and the organization of health services*, Geneva, World Health Organization, 1971 (Public Health Papers, No. 55); *Administration of environmental health programmes. A systems view*. Geneva, World Health Organization, 1974 (Public Health Papers, No. 59); POPOV, G. A. *Problemy vračebnyh kadrov*, Moscow, Medicina, 1974.

— the determination of the technical methods to be used, whether in the form of services or of physical changes,

— the definition of programme objectives and of the future action to be taken.

Plans need to be spelled out by programming, i.e., by a detailed allocation of tasks and resources and a detailed description of methods of implementing one or more specified objectives within a given time. Planning and programming provide the basis for programmed management which, in health services as elsewhere, involves:

— obtaining the human and financial resources necessary to implement the chosen plan,

— defining the tasks (of organizations as well as of individuals and groups) in such a way as to make use of the available skills,

— developing and increasing skills and capabilities,

— motivating people to accept the objectives and to work towards them by the chosen means,

— monitoring, controlling, and evaluating so as to adjust the methods chosen in the light of experience.

Planning and management interact in practice. Communication and decision-making are necessary for both planning and management, and information is an essential ingredient of each. Certain basic definitions are presented below.

*National health planning* is the process of defining community health problems, identifying needs and resources, establishing realistic and feasible priority goals, and setting out the administrative action required to reach those goals. It is an integral part of *national planning for socio-economic development*—a continuous, systematic, coordinated process for the utilization of a country's resources in manpower, money, and materials for formulating and achieving social goals and development. It involves the combination of sectoral plans for health with those for education, agriculture, industry, public safety, transport, etc.

The term "human resources" has been used interchangeably with the term "manpower", but it may also be defined in broader terms. *Human resources* comprise the skills, knowledge, and capabilities actually or potentially available for the economic and social development of a community, whereas *manpower* is usually restricted to persons who have received, or are receiving, education and training for specific occupations.

The concept of *health manpower* generally includes: the number of individuals available for, and undergoing training in, the different health occupations; their demographic characteristics; their social characteristics