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FINANCING HUMAN RESOURCES FOR HEALTH

Report of an
Interregional Seminar

Bangkok, 6-10 March 1989

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INTERREGIONAL SEMINAR ON FINANCING HUMAN RESOURCES
FOR HEALTH

Bangkok, 6-10 March 1989

REPORT

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I. INTRODUCTION

It's an ill wind that blows nobody any good. This old English proverb is the reason why we are here today.

The ill wind of worldwide economic downturn and indebtedness blowing through many countries has led to austerity measures and structural readjustments. In many countries they have resulted in budgets in the health sector which show zero growth or have actually been reduced. At the same time the global acceptance of the goal of Health for All by the year 2000 and the promotion of Primary Health Care have created expectations in the community for expanded services, easier access and improved coverage which have served to strain the health resources even further. Everywhere there has been an escalation of health care costs so that today even industrialized affluent countries are no longer able to support all new and sophisticated technology that is available in the health sector. Obviously something must be done to solve the conflict of rising expectations and reduced resources.

In the health sector the good thing about all this is the fact that it has required governments to look more carefully into how to better allocate resources to the various components within the health system and how to get more out of these resources. The purpose of this seminar is to look into how this might be done for what is probably the most important of these components, namely: health manpower.

Dr H. Nakajima¹, Director-General
of the World Health Organization

Background

Developing countries continue to face the formidable problem of how to achieve substantial improvements in the health status of their rapidly growing populations. More developed and rich countries encounter an acute problem of a different nature: that of effectively dealing with the rapidly rising cost of health care while at the same time covering the needs of special groups, i.e., aging populations. More resources for health would alleviate such problems in both groups of countries. However, the recent economic difficulties experienced by many countries have reduced the prospects - more significantly in some countries than in others - for generating substantial increases in resources for health from national economic growth and international sources. While the problems confronting different countries vary in intensity and context, all countries

¹Opening Address delivered on the occasion of the opening of the Interregional Seminar on Financing Human Resources for Health, Bangkok, 6-10 March 1989.

face a common challenge: how to make the best use of their current and prospective resources to achieve "Health For All" objectives in the context of their own national development objectives. Human resources generally consume more than 60 per cent of recurrent health expenditures and are regarded as among the most important resources for health. It follows that the efficient use of human resources is crucial to the achievement of these objectives.

WHO has long advocated and supported the systematic development of human resources for health and has implemented activities towards this end. However, it became clear that a new approach to human resource development was needed in response to changing health needs and economic environments. In 1986, WHO and the Council for International Organizations of Medical Sciences jointly sponsored the Conference on Health Manpower Out of Balance in Acapulco, Mexico. In reviewing the human resource situation in many countries, the Conference revealed that in both developed and developing countries, serious imbalances in the quantity and distribution, as well as between policy goals and their realization, do exist. Future policies should rectify these imbalances.

Recognizing the urgency with which human resource imbalances ought to be addressed, the Fortieth World Health Assembly adopted a resolution² urging Member States "... to undertake, as a matter of priority, the strengthening of their health manpower policies and systems...". The resolution requested WHO to provide support to countries to undertake necessary actions. As a first step, WHO organized the Interregional Workshop on Economics of Health Manpower Development in Support of Primary Health Care in Manila in June 1987.³ The major conclusions agreed during the workshop included promoting studies related to the economic analyses of human resource policies, strategies and plans with a view to improving the mobilization, allocation and utilization of internal and external resources for health.

Responding to these challenges, a new programme area, Human Resources Policy Analyses (HPA), was created within the Division of Health Manpower Development of WHO Headquarters in April 1988, with financial support from the Government of Japan. The overall goal of the programme is to promote the achievement of self-sufficiency by Member States through building institutional capacity to undertake human resource policy reviews, policy revision or formulation, and implementation and evaluation of actions leading to improved policies in the development of human resources for health.

This Interregional Seminar was planned in order to initiate and support the activities at country and regional levels. The orientation was directed to economic analysis of human resources for health in the context of strengthening ministries of health and institutions and the Seminar was implemented as part of the WHO/DANIDA Programme on Strengthening Ministries of Health for Primary Health Care. Costs were covered by DANIDA, by the Government of Japan through the WHO/Japan Programme on Human Resources Policy, and from the WHO regular budget through the Regional Office for South-East Asia and the Regional Office for the Western Pacific.

²WHA40.14, Promotion of Balanced Health Manpower, 1987.

³The report, unpublished WHO document: WHO/EDUC/87.191, 1987, is available upon request.

Objectives of the Seminar

The objectives of the Seminar were:

- (1) to promote the analysis of trends and the identification of financial, as well as managerial problems in the allocation and use of human resources;
- (2) to strengthen the capability of countries to undertake policy analysis in the field of human resources for health;
- (3) to develop approaches for the use of such analysis in influencing human resource policies and strategies at national and local levels;
- (4) to improve operational management of the finances devoted to human resources; and
- (5) to create an international linkage for exchange of information and expertise related to human resource development strategies.

Seminar design

The Seminar brought together 36 participants from 22 countries in five WHO regions:

- South-East Asia - Bangladesh, India, Indonesia, Myanmar, Sri Lanka, Thailand;
- Western Pacific - China, Fiji, Japan, Lao People's Democratic Republic, New Zealand, Papua New Guinea, Philippines, Republic of Korea;
- Europe - Hungary, Spain, United Kingdom;
- Eastern Mediterranean - Jordan; and
- Africa - Congo, Ethiopia, Gambia, Ghana.

In addition, eight temporary advisers in the fields of health economics, health policy, and public health served as facilitators. The Seminar was also attended by five observers. The Director-General and the Regional Directors of the Regional Office for South-East Asia (SEARO) and the Regional Office for the Western Pacific (WPRO) officially opened the Seminar. The Secretariat team consisted of staff from WHO/HQ, SEARO, WPRO and the Offices of the WHO Representatives in Bangkok and Barbados. (The list of participants appears in Annex A.)

The Seminar was designed to maximize discussion and sharing of experiences among participants regarding country-specific problems, underlying factors affecting such problems, and approaches that have been adopted or are being considered for adoption to deal with such problems. In addition, the Seminar was designed to facilitate the consideration of a wide range of policy options, planning approaches and management tools for human resource development.

During the Seminar, the following four steps were taken. Firstly, previously-prepared country reports illustrating the present situation and problems of human resources were presented. They were reviewed in small-group sessions and the highlights were then presented to the plenary. Secondly, the common factors arising from the country reports were discussed in the small groups and again presented in the plenary. Thirdly, participants developed their own country-specific approaches to priority issues or problems. Lastly, future direction was discussed in the plenary. Temporary advisers and the WHO Secretariat acted as facilitators during the process. Also, to provide the theoretical framework of the discussion, four background papers were presented by the temporary advisers. The composition of the small groups was interregional in order to include the widest possible variety of issues and experience. The Seminar design in relation to the agenda and programme of work (Annex B) is summarized in Annex C. The abstracts of the background papers appear in Annex D.

The highlights of the four background papers follow:

(1) Economic issues in human resource planning

The background paper "Economic issues in human resource planning" was prepared for the introduction to the Seminar. It stressed the need for the application of basic economic and management principles in planning. Various issues were discussed including:

- the quantitative assessment of demand and supply of health personnel;
- the financing of health care, particularly the recurrent costs and cost-containment strategies;
- the geographical distribution of health personnel;
- the management of health personnel and the determination of its management tasks; and
- the role of human resource planning within overall health planning.

In addition, the principles relevant to the determination of public/private sector responsibilities and roles, as well as principles of cost-effectiveness, were discussed.

(2) Economic approaches in health manpower planning

The second background paper "Economic approaches in health manpower planning" was prepared to provide the basis for economic/financial analysis of human resources. It sets out the main elements of a hypothetical three-year plan to secure measurable improvements in health performance in the context of mature health systems where the issues of motivation and of managing staff time effectively become more important in view of rising public expectations. On the demand side, these elements include:

- setting aims;
- defining management responsibilities and improving incentives;
- generating resources for investment;
- improving information and staff distribution;
- improving information systems; and
- improving productivity and human resource management.

On the supply side, these elements include:

- retaining and motivating existing staff;
- identifying possible sources of supply; and
- ensuring that past investment in human resources is used effectively.

(3) Health manpower implications of health insurance developments in Europe and in Asia. Mutual lessons?

The third paper, "Health manpower implications of health insurance developments in Europe and in Asia. Mutual lessons?" was prepared to provide information on the trends of financing health care. It highlights the trends of expansion of health insurance in Europe and Asia. Then, as the implication of such trends, the need for high quality health personnel with a very broad knowledge and understanding in social sciences, management, economics and information in effectively dealing with the evolving developments in health care, and health care financing systems in specific countries, is mentioned. The paper then describes some of the most relevant courses for a short-term approach to improve the quality of health personnel in the fields of health economics, health manpower planning, health management processes, and health management information systems.

(4) Health policy considerations in human resource development

The last background paper, "Health policy considerations in human resource development" was prepared to provide a policy framework for changes being introduced. It highlighted the importance of appreciating the implications for human resource development in the transition from private to public objectives of health care systems. In the context of "Health For All", three particularly important transitions are: planning based on need rather than demand or utilization, attention to the most cost-effective mix of health personnel, and attention to equity of health status rather than just equity of access to health care. Three principal policy vehicles were identified to achieve this transition:

- greater control over the governance structures of the dominant professional groups, especially with respect to regulations of conditions of practice considered allowable;
- development of policies that focus on meeting potential disease prevalence rather than on continuing to serve existing use patterns; and
- greater attention to financial and organizational incentives for optimal deployment of health personnel.

Opening statements

His Excellency Mr Suthas Ngermuen, Deputy Minister of Public Health, Royal Thai Government, stressed the importance of human resource development in achieving "Health For All" objectives. He noted that the health development policy in Thailand emphasized self-reliance at the village level with extra support being provided to the more disadvantaged population groups. In addition to infrastructure development, innovative strategies focusing on the involvement of the community was developed to take advantage of local resources (including financial), and to reorient human resources for health to support primary health care and social development. Economic support for health development must come not only from the government itself, but also from individuals, families, communities, the private sector and non-governmental sectors. Discussions on the economic support for health for all should first consider, in the context of equity, issues concerning the efficient use of available resources, particularly human resources for health (since these consume a major portion of the cost of delivering health care).

Dr Hiroshi Nakajima, Director-General, World Health Organization, noted that something must be done to solve the conflict of rising expectations, escalating costs and constrained resources for health. This critical situation has urged governments to look more carefully at how to improve the allocation of resources to the various components within the health sector, and how to get the most out of these resources, particularly for what is probably the most important, namely, human resources. Dr Nakajima recalled the relevant WHO activities already undertaken and stressed the need for further analysis and development of human resource policy. He concluded his address by emphasizing that finding solutions to human resource problems calls for innovation. Moreover, the solutions must be realistic and sustainable. Action must start with the participants from Member States of WHO. Only then can WHO respond, to the best of its ability, to help sustain such actions.

Dr U Ko Ko, Regional Director, WHO Regional Office for South-East Asia, observed that health personnel typically consume 60 to 70 per cent of the operational budget for health. Hence, some of the largest economic gains will result from a more efficient use of such resources. Yet today, with few exceptions, many countries are still experiencing serious human resource imbalances manifested, for example, by an oversupply of physicians and an undersupply of other categories of health personnel, as well as by inadequate preparation and inappropriate orientation of health personnel relative to their expected roles and functions. All these result in under-utilization or inappropriate use of human resources for health and consequently represent inefficient use of limited resources. Improving efficiency of personnel in the delivery of health care, therefore, can save

resources that can serve to finance further improvements of the health levels of the population. Dr Ko Ko stressed the need to take an integrated approach in human resource development which should be in harmony with the overall socioeconomic development and equity of health.

Dr S. T. Han, Regional Director, WHO Regional Office for the Western Pacific, saw great significance in the fact that the Director-General of WHO, together with the directors of the two most populous regions of the Organization, opened a meeting on AIDS and a meeting on human resources on the same day. On the one hand, AIDS entails new challenges that people in the health field face and will continue to face as we approach the 21st century. On the other hand, the development and optimal utilization of human resources for health represent the key component of the means to deal with these challenges. The new era in world health is likely to be characterized by a more complex set of problems whose solution requires innovative and creative approaches. This means that WHO and its Member States need to develop new tools to optimize the use of their meagre resources since we have to face present problems and, at the same time, prepare to meet evolving challenges of the future. One of the most critical of these resources is human resources. Therefore, the success or failure in identifying ways by which countries can re-examine and change existing policies on the training, planning and management of the health workforce will determine whether the full creative powers of human resources can be brought to bear on the health problems of the future.

II. PRIORITY CONCERNS IN HUMAN RESOURCES FOR HEALTH

Financing the health workforce is not merely to be understood as the application of financial techniques to the present problems. Instead, the Seminar adopted the broader concept of "financing" which means the generation of financial resources through achieving greater efficiency in the health sector, generation of additional resources from the private sector through various financing schemes, and the extraction of more public-sector resources from the economy for reallocation to new, expanded health activities to meet "Health For All" goals and objectives. The system chosen for generating resources (e.g., fees, health insurance) and for remunerating human resources has important social and economic effects. In particular, the impact on health-related behaviour of households (e.g., the impact of fees on utilization of care) and providers (e.g., the impact of pay incentives on work effort), constitute important elements of analysis within this broader concept. The Seminar also took note of the need to consider the broad spectrum of interrelationships in the health sector, with particular emphasis on planning, production, management and policy, towards a more integrated approach to human resource development.

A review of country reports revealed the existence of a wide range and diversity of human resource problems, of the factors underlying them, and of the policies and approaches that have been adopted, or are being considered for adoption, to deal with such problems. The variety of concerns reflected in the country reports and the discussion during the Seminar evolved around the following six areas. In order to provide some illustrations under each area of concern, country-specific problems drawn from country reports are shown in Annex E.

(1) Optimal human resource input mix

Taking into account other resource inputs, what categories of human resources, with what skills, should be employed to produce the needed health care services? The technical possibilities of human resources for producing health, relative costs of those resources, as well as any budget constraint affecting the production of services, will determine the most cost-effective input mix.

The Seminar also recognized that due to changing health needs and technology, as well as orientation in health care delivery, the traditional mix of different professions, e.g., physician/nurse, which may have been appropriate in the past, may no longer be optimal at present or in the future. As such, the Seminar stressed the need for countries to explore various input substitution possibilities between different categories/skills and between human resources and other resource inputs with the explicit aim of maximizing the provision of health care services. Budgetary constraints often tempt decision-makers to substitute cheaper but equally effective inputs for more expensive resources. The Seminar recognized, however, that there are also constraints to such substitutions, some more difficult to handle than others. For example, the potential for substituting nurses for physicians may be hampered by social, cultural and legal factors such as acceptance of traditional roles among the professionals, and the existing legal restrictions on the tasks performed by different categories of health professionals.

(2) Production of health personnel

From the goal of an optimal human resource input mix, one derives targets for the production of different categories of personnel and skills. The question of how these resources and skills should be produced needs further study. Such concerns are based on the observation in many countries of the mismatch between the outputs of the education/training sector and the requirements for health-care service delivery. The currently less-than-optimal human resource mixes are manifested in a variety of forms depending on specific country imbalances. These include:

- imbalances between physicians, nurses and other health personnel;
- imbalances between types of skills (i.e., between specialists and general practitioners); and
- shortages or surpluses of specific categories of health personnel (e.g., tendency for over-specialization in some countries and a clear lack of specialists in others, or the lack of preventive health orientation among graduates).

Some of the factors underlying these imbalances include the lack of coordination between the health service sector and educational and training institutions, inappropriate curricula and teaching technology, lack of training facilities and qualified teachers, and in some cases the unregulated growth of private medical education/training institutions. A final important cause of imbalance is likely to be the lack of linkage between the structure of incentives in the health sector and that in the other sectors of the economy. The Seminar concluded that there is a need for countries to reassess their policies regarding the production of health personnel and to explore different options for reforming the education/training sector that are appropriate and feasible in their country-specific situations.

(3) Managerial efficiency

Apart from working towards an optimal mix of the health workforce and the satisfaction of the ensuing production targets, what measures can be taken to ensure that health personnel truly meet adequate performance standards? The Seminar recognized the need for developing more appropriate indicators to monitor constantly the performance of human resources for health. Management inefficiencies exist in one form or another in all countries. Such inefficiencies are manifested in variations in productivity of human resources among similar health care institutions, poor logistics, uneven success in mobilizing community participation (and resources), lack of coordination with other health-related sectors, and lack of complementary inputs. Factors identified to underlie such inefficiencies include:

- inadequate monetary and non-monetary incentives for personnel;
- inadequate or inappropriate management and leadership skills among managers;
- unclear aims and targets;
- unclear delineation of responsibility and accountability for achieving aims and targets; and
- incomplete costing of needed inputs.

In addition, the existing management structure which defines decision-making responsibilities among various levels of decision-making may not be entirely appropriate in dealing with problems specific to certain health care institutions and locations. In view of these diverse factors that influence managerial efficiency, the Seminar concluded that there is a need to review within each country, depending upon its circumstances, the managerial structures and processes and to assess various options for upgrading management skills and modifying incentives for personnel.

While the major focus of the Seminar was on identifying areas of concern specific to human resources for health, the Seminar also recognized that policies in other parts of the health care sector have important implications for human resource development. Hence, the Seminar took account of these broader health sector concerns. These concerns revolve around the following:

(4) Health Care Service Structure Focus and Utilization

What health care services should be produced in what health care institutions and in what locations? What population groups and what health problems/diseases should be given priority in the provision of health care services? How can we ensure that the services offered are effectively used by the population? Underlying these concerns is the fact that the efficient utilization of the appropriate health care services by the population most in need is likely to generate greater health status improvements than would otherwise be the case.

During the past decade or so, innovations in the health field that focused on the primary health care approach to achieve "Health For All" objectives necessitated a change in orientation of the health care delivery system. Such a change involved:

- a greater consideration of "need" rather than demand/utilization in the determination of what health care services to produce;
- the emphasis on primary health care units rather than hospitals in infrastructure development;
- the reorientation of services from curative to preventive and promotive health care;
- the higher priority given to high-risk population groups in the provision of basic services;
- the greater efforts to increase health care services in rural rather than urban areas; and
- the move to adopt an effective referral system in place of free access.

While many countries have initiated major moves, many still feel that much more effort needs to be made. In particular, the problems of lack of access to health care services in rural areas because of the concentration of services in the urban areas have yet to be fully resolved.

(5) Organization of the health care service (public-private sector mix)

How should the health care services be organized in terms of delivery and financing? What is the appropriate role of government as provider, funder and

regulator? There is a wide variation among the countries represented in the Seminar in the way their health care services are organized. Such differences reflect their diverse socioeconomic characteristics, as well as the variety of paths upon which their health systems have evolved. Correspondingly, individual countries are considering different directions with respect to organization. Countries that started out with a dominant public sector are now considering how the private sector might be expanded in both delivery and finance. On the other hand, countries which started out with a large private sector are now considering how the government's role can be expanded either through direct provision and financing of health care services, or in controlling/regulating the private sector to achieve public sector objectives.

The Seminar recognized that modifications of the current organization of the health sector involves far-reaching consequences, some of which are not entirely obvious. There is clearly a need for countries considering a change in the organization of the health care delivery system and financing modes to assess carefully the various options for their far-reaching impact on efficiency and equity. Moreover, the organization for delivery and financing that might work in some countries may not work in others with different circumstances.

(6) Intersectoral allocation of public sector resources

How much of the national budget should be allocated to the health care sector relative to the non-health care sectors? While it is generally felt in some countries that the health care sector allocation from the national budget is less than it should be, the Seminar recognized that the case for more budgetary resources for the health sector based on sound economic arguments has rarely been made. On the other hand, it is also clearly recognized that while sound economic arguments are necessary to provide policy-makers with a better basis for making decisions, these alone may not always be sufficient. Other factors, e.g., political, are also crucial in such decisions. The challenge that health sector administrators face is to demonstrate that sound economics can also be good politics.

The Seminar recognized that each of these major categories of health sector concerns has important implications for human resource financing and development. Policies that modify the health care structure in response to changing needs and priorities may necessitate corresponding modifications in health personnel/skill mixes. Policies that attempt to modify existing organizational patterns in delivery and finance affect the manner in which resources are extracted from the economy and may or may not generate additional resources for more or new activities. Furthermore, they have important implications for overall efficiency and equity. Finally, given existing organizational patterns of delivery and finance, resources available for health care may be expanded or reduced, depending on the success of health administrators in convincing the heads of governments to allocate more resources for health from the national budget.

III. FRAMEWORK OF ANALYSIS

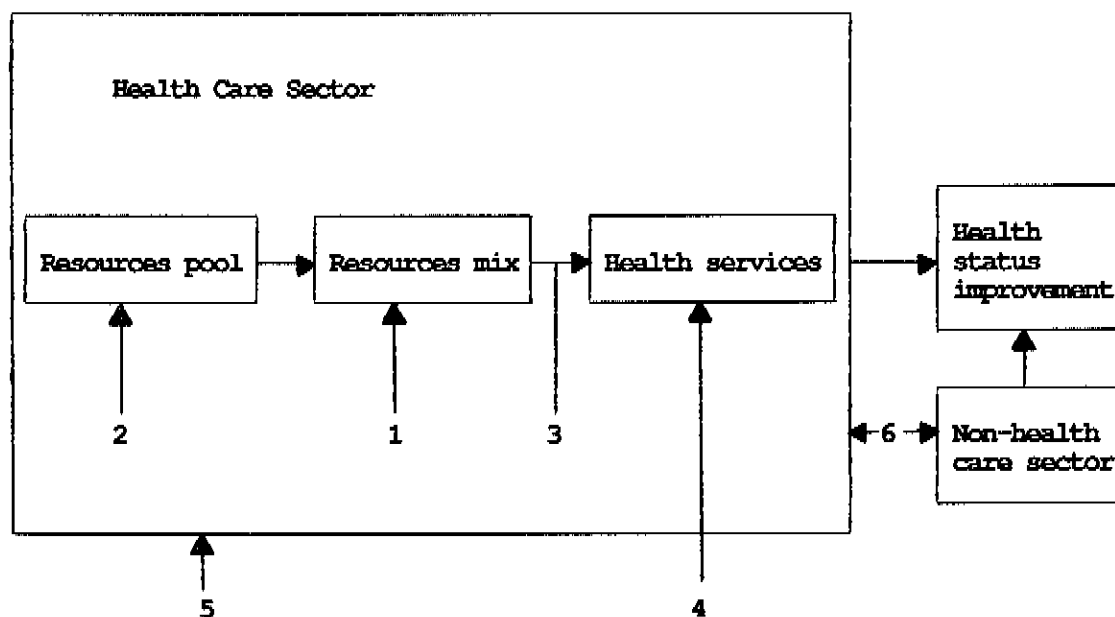
- CONCEPTUAL FRAMEWORK AND COMMON FACTORS

The Seminar recognized the need to address issues in financing human resources within a wider framework of analysis. Such a framework must offer a wider view of the various interrelationships between different components of the health sector, of the various policy intervention points, and of the policy choices that decision-makers must confront and assess.

In the context of these broad considerations, the Seminar identified and discussed a number of priority concerns and issues requiring innovative solutions. Specifically, the Seminar identified common as well as country-specific problems in human resource development as well as their underlying factors. It considered the broader aspects of

the health sector and their implications for human resource development, and proposed a policy, planning and management framework by which all these various concerns can be viewed and analysed in an integrated fashion.

As presented in the Seminar, the interrelationship of the six areas of concern outlined in the previous section can be illustrated in Figure 1.



Human resource concerns

1. Human resource input mix
2. Human resource production
3. Managerial efficiency

Other health sector concerns

4. Health services structure and focus
5. Organization of health care sector
6. Intersectoral allocation of resources

Figure 1. Interrelationship of six areas of concern

The improvement of health status can be brought about by health services generated by the combination of resources which are drawn from the pool of resources. In the case of human resources, the concerns would be the human resource input mix, human resource production, and managerial efficiency. The health services are influenced by structure and focus, and the health care sector in general is influenced by its organization. The health status can be improved by both health services and by non-health care sectors and the interaction of the health and non-health sectors are defined by the intersectoral allocation of resources.

The framework was found useful for viewing the wide spectrum of interrelationships among different health sector components and of the policy choices where the principles of economics, finance and management can be applied. It emphasized the production relationships (input-output) between:

- health status improvements and health care services;
- health care services and human resource and other resource inputs; and
- human resources of specific categories and skills and the resource inputs in their production.

In such a framework, health status improvements are seen as being jointly determined by the utilization of health care services and various health-related outputs of the non-health care sectors (i.e., environment, nutrition, etc.). Viewed in this light, a question arises as to the relative impacts on health improvements of health care service vis-a-vis non-health care outputs, and how much, therefore, should be allocated to the health sector vis-a-vis non-health care sectors to achieve maximum health improvements.

Taking first health care services as an input to health improvements, the question arises as to what combination of health care services should be provided, on whom should they be focused, and how best the population can utilize such services to achieve the largest and most equitable improvements in health status. The Seminar took note of the global response to such questions in terms of the reorientation of health care structure and focus towards the primary health care approach which resulted in commitment to "Health For All". For individual countries, the task is to monitor constantly the specific policies and activities that have been adopted to effect such reorientation to see whether the objectives of efficiency and equity are being met in the context of health for all.

Subsequently, taking health care services as the output, the question arises as to how these can be produced efficiently. There are basically two ways of looking at this issue. One is to consider the situation whereby health services targets are set by decision-makers: an optimal balance of different professional categories to achieve the targets will have to be found so as to minimize cost. The other is to imagine the case where health care budgets are fixed: in this case, human resources are to be combined in such a way that maximum output of health is achieved.

In both situations, the optimal mix depends on the possibilities for substitution of one professional category by another and on the relative costs of human resources. Thus, the consideration of the issue of optimal resource input mix requires a reassessment of the criteria health administrators use in determining, for example, the number of health personnel with specific skills that are required, the staffing patterns, etc. Have the relative costs (prices) of these inputs, as determined by economy-wide structure of prices for various inputs, been considered in addition to technological factors and professional judgements? It has been pointed out repeatedly, for example, that the difficulty in posting health personnel in rural areas is due, among others, to inappropriate monetary and non-monetary rewards. Yet it has become clear that the type of rewards that the health sector provides for its personnel, i.e., its wages policy, may have little relation with the cross-sectorial structure of wages.

If health personnel are inputs to the production of health care services, they are also the outputs of the human resource production sector, i.e., health professional education/training sector. The questions then are whether this sector is producing the optimal number of graduates of appropriate skills, and whether they are being produced at minimum cost. The issue of optimal input mix comes into the picture again: what is the most efficient way of combining educational facilities, instructional aids, teaching personnel, teaching technology, etc., to produce the human resources possessing the required skills at a particular level/circumstance of service? Let us also add here that, apart from combining resources optimally, measures should also be designed for health personnel to respond to performance standards. In other words, one should see to it that resources are used effectively.

Beyond this view of human resource development is a still wider spectrum of interrelationships and issues. First, how should the health care services be organized in terms of delivery and financing? Various combinations of private-public delivery and financing of specific health care services are possible:

- publicly provided and publicly financed;
- publicly provided but privately financed;
- privately provided but publicly financed; and
- privately provided and privately financed.

The issue that must be addressed, given specific country situations, is what health care services are appropriate for governments to provide and finance given limited resources, and what types of health care services can best be left to private markets. The role of government in the delivery and financing of health care services, however, is not confined to that of direct provider and funder, but also to that of regulator of private markets to ensure that private activities are consistent with public objectives.

IV. CONCERNS RELATING TO PLANS OF ACTION

The priority concerns provided a basis for the Seminar to focus on the specific issues and the framework of analysis also provided a forum on which specific interventions could be delineated. Before coming to the country-/issue-specific approaches, the following concerns at macro level were addressed.

First, with respect to health care services, the question arises as to an appropriate basis for determining what health care services are to be provided? The Seminar discussed the issue of the relative merits of different criteria for planning health care services:

- perceived needs of the population;
- professionally determined needs;
- actual demand or utilization; or
- priority disease burdens.

Views were expressed as regards the merits and shortcomings of each of these alternative criteria and the Seminar reached a consensus that the selection of criteria is very much influenced by the health policy of the country concerned and further policy analysis within each country is required to address this question.

Secondly, with respect to input mix in the provision of health care services, while it is generally recognized that there is a need to reduce the cost of maintaining the same quantity and quality of services, it was also widely agreed that due to the complementarity of inputs, cutting costs in one input, say on drugs or supplies, could in fact reduce the efficiency of the health workforce. The proper perspective to adopt, therefore, based on economic principles, is to achieve the least cost in producing the same quantity and quality of health care services by exploring substitution possibilities between different categories of human resources and between human resources and other inputs. However, it was noted that reorienting the structure of the health workforce has vast implications which include the aspects of labour relations, health policy, and financing. Innovative approaches would therefore be needed. At the implementation stage of such restructuring, full studies on potential constraints should be regarded a prerequisite.

Thirdly, with respect to financing, the Seminar noted that there are alternative schemes other than reliance on general tax revenues to finance health care services. These typically include user charges, social insurance, community social insurance, and private health insurance. Each of these schemes, and within each scheme depending on the

manner in which it is designed, has different impacts on efficiency and equity. They also differ in terms of administrative feasibility and consumer preferences. Deciding on the most appropriate combination of financing modes for each country requires a thorough policy analysis of the probable impacts of each combination. The Seminar also noted that the experience of many countries (in Europe as well as in Asia) with a particular scheme, for example on health insurance, may not always provide proper guidance for the development of similar schemes in countries with different characteristics and situations.

A set of issues that might be called the micro dimension of human resources was also mentioned. The hypothesis is that there are some basic elements (incentives and disincentives) that govern the behaviour of workers and managers in a health care system and, therefore, affect the overall efficiency and effectiveness of the system. These incentives or disincentives are shaped by a complex and interactive set of forces. Some of these are:

- management and leadership skill and styles;
- career paths, civil service rules and work rules;
- the flow, cost and control of information;
- educational backgrounds and styles of education;
- risk-taking behaviour; and
- resistance to or acceptance of change.

A careful and detailed analysis of a system's workers and managers and their styles will go a long way in helping one understand what is happening within the health care system. However, as observed in one background paper, these micro dimensions of human resource policy analysis have not received the attention they deserve. Much of the failure to achieve intended results of human resource plans may be traced to the structure of incentives and disincentives to behaviour that health workers and managers face daily.

Within this broad consideration of the micro dimensions of human resource development, the Seminar considered some of the key elements to the management of human resources to achieve measurable improvements in performance within a definite short time-frame. These elements include:

- setting of aims and targets;
- defining management responsibilities and accountability;
- developing appropriate performance indicators;
- improving information systems;
- providing in-service training to deal with specific needs; and
- providing incentives for cost-effectiveness.

V. PLAN OF ACTION

The participants in the Seminar reviewed their country-specific problems, identified priorities, and formulated a plan of action for each participant to develop and take back to his country. Such activities are expected to lead to the initiation of activities that, cumulatively, will have impact on human resource policy development and implementation in the respective countries.

The activities proposed, while varying according to country-specific priorities, generally revolved around the following:

- (1) workshops, seminars and conferences to increase awareness of critical human resource issues and policy choices;

- (2) research, which includes situation analysis of human resources; review of legislation in response to changing health needs; review of human resource policies; review of incentive structures; review of medical/nursing education in line with changing health care orientation; research on substitution possibilities among various human resource categories/skills; and study of the behaviour of professional groups and their impact;
- (3) development of an appropriate information base, with particular attention to performance or productivity indicators and unit costs of services and inputs;
- (4) training in economics, finance and management for planners, policy analysers, managers and workers; training for specific personnel (e.g., nurses and volunteer health workers) for specific tasks (e.g., care for the elderly, chronically ill and disabled);
- (5) experiments, e.g., on training and supervision of health personnel and referral systems.

A summary of plans of action proposed by each country (team) is illustrated in Annex F. In the figure, planned activities are categorized into three main areas, planning, management and policy relating to the development of human resources for health. These areas correspond to the main responsibilities within the Division of Health Manpower Development.

Each of the proposed activities requires international collaboration, as well as resources, for its implementation. In this regard, the Seminar discussed international collaboration, and how this may be initiated and funded. External funding was thought to be an appropriate source of support for activities such as workshops and seminars and for temporary advisers/consultants for designing training, research and information systems. However, for more long-term and sustained activities, governments will have to mobilize human and financial resources at the national level. The Seminar noted that the following requirements for long-term sustainability of efforts towards human resource development should be met and planned for:

- (1) appropriate information base needed for policy analyses, planning and effective management;
- (2) trained personnel who can conduct such analyses, develop plans and carry out management responsibilities; and
- (3) development of institutional capabilities for data-gathering, policy analyses, integrated human resource planning, and management.

These will serve as an infrastructure to support the country-specific activities undertaken by each country.

The Seminar expressed the need for the Organization to continue with initiatives for stimulating activities in the field of human resource financing and development such as technical assistance, workshops, training, research, policy analyses, and networks for exchange of information. In addition, the Seminar expected WHO to assist Member States to mobilize international resources to finance national initiatives.

VI. CONCLUSIONS

Action by countries

The Seminar adopted conclusions in addition to country-specific plans of action. The principal conclusions were that countries should:

1. combine traditional health personnel planning with financial, organizational and managerial planning for human resource development for health. This means a move away from the narrow view of personnel planning as the balancing of supply and requirement numbers, and towards an integrated approach identifying available and potential resources, and matching them most effectively with population needs;
2. undertake situation analyses of the financing, training, distribution and productivity of their human resources for health. These studies should develop indicators for performance measurement, and identify possible areas for improvement and innovation;
3. identify, evaluate and implement policy options to achieve improvements in financing, training, distribution and productivity of human resources for health, with due regard to national objectives for improved health status; and
4. give increased attention to health economics and the study of financing systems for health care, and their influence on human resources development; and to the appropriate roles of planning and price mechanisms in human resource allocation.

In addition, the Seminar also concluded that countries should:

5. improve coordination between ministries of health and education, finance and planning, to review the educational content as well as the output levels of training for health professionals in order to match supply with health needs and resources;
6. establish human resource planning and development processes which facilitate flexibility in resource use for health care, encourage greater productivity, and expand opportunities for community inputs in human resource strategies.

Action by WHO

In determining the role of WHO, the Seminar concluded that WHO should support countries in the above activities by:

1. increased levels of technical cooperation for human resource development, including the preparation and completion of studies, workshops, development of training materials, and creation of networks for exchange of information on successes and failures resulting from policy changes;
2. acting as a catalyst in developing mechanisms at regional and interregional levels to monitor countries' progress in improving the availability and effective use of human resources for health, and analyse and disseminate this information;
3. mobilizing support for related training and education, particularly for national capacity to analyse the economic and health status impact of actual and potential changes in human resource policy; and
4. developing a leading role in the mobilization and coordination of international support for the above activities.

Epilogue

Following the Seminar, an informal consultation was held in Bangkok on 11 March 1989 to evaluate the Seminar and design the activities to be initiated by WHO on the basis of the Seminar recommendations. The participants in the informal consultation agreed that work on a more focused selection of topics with a homogeneous group of participants would be desirable and that the outcomes should then be reviewed by a conference with wider scope and participants.

The informal consultation also reviewed the conclusions adopted by the Seminar and recommended the WHO Secretariat to collaborate with Member States, with full involvement of the Regional Offices, in the following five priority areas:

- (1) National workshops on the topic of their highest priority;
- (2) Country situation analyses of human resources;
- (3) Policy analysis regarding human resource planning;
- (4) Methodological developments in:
 - economic analysis of human resource policies;
 - appraisal of human resource policies and alternatives through economic analysis;
 - review of the policy initiatives;
 - health manpower mix;
 - measuring productivity.
- (5) Intercountry exchange of information and experience on the specific issues.

The views are reflected in the actions taken by WHO Headquarters and resulted in the following (planned) activities by the end of September 1989.

- (1) Caribbean Seminar on Policy Analyses and Leadership Development in Human Resources for Health, Georgetown, Guyana, 11-15 December 1989
- (2) Consultation on Economic Aspects of Human Resources for Francophone Africa, Douala, Cameroon, 29-31 January 1990
- (3) National Workshops on selected topics are planned in China, Myanmar, Thailand and other countries.
- (4) Support for national studies is also being discussed in several countries.

The Seminar therefore served as a starting point for a sequence of activities as planned, and from this viewpoint WHO is very grateful for all the assistance it has received.

Annex AInternational Seminar on Financing Human Resources for Health
Bangkok, 6-10 March 1989List of participants

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Mr A. Creese, National Health Systems and Policies, Division of Strengthening of Health Services

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Annex B

International Seminar on Financing Human Resources for Health
Bangkok, 6-10 March 1989

Agenda

1. Opening
2. Election of Officers
3. Adoption of Agenda
4. Review of country reports
5. Presentation of background papers
 - 5.1 Economics, human resources, and health manpower policies: Economic issues and perspectives
 - 5.2 Economic approaches in health manpower planning
 - 5.3 Health manpower implications of health insurance developments in Europe and Asia
 - 5.4 Health policy considerations in human resources policy
6. Analysis of factors influencing human resources policy
7. Country-specific approaches
8. Final discussion and future directions
9. Closure

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Interregional Seminar on Financing Human Resources for Health
Bangkok, 6-10 March 1989

Programme of Work

DAY 1 : Monday, 6 March 1989

- 09.00-09.45 Registration
09.45-10.00 Objectives, Structure, Working Method of Seminar, Election of Officers, Adoption of Agenda - Dr H. Nakatani
10.00-10.45 Presentation of background paper: Economics, human resources and health manpower policies: Economic issues and perspectives - Professor Guy Carrin
10.45-11.00 Refreshment break
11.00-12.30 Review of country reports

12.30-13.30 Lunch

13.30-14.45 Presentation of background paper: Economic approaches in health manpower planning - Professor Nick Bosanquet
15.00-15.30 Official opening of the Seminar
- The Hon. Deputy Minister of Public Health, Royal Thai Government
- Director-General, World Health Organization
- Regional Director, WHO Regional Office for South-East Asia
- Regional Director, WHO Regional Office for the Western Pacific
15.30-15.45 Refreshment break
15.45-17.00 Review of country reports

DAY 2 : Tuesday, 7 March 1989

- 09.00-10.45 Highlights of country reports - Dr Oscar Gish
10.45-11.00 Refreshment break
11.00-12.30 Presentation of background paper: Health manpower implications of health insurance developments in Europe and Asia - Professor Dr Detlef Schwefel
Presentation of paper: The trend of morbidity and mortality profile of Thailand; A projection to the year 2000 - Dr Somsak Chunharas

12.30-14.00 Lunch

14.00-15.30 Common factors arising from country reports
15.30-15.45 Refreshment break
15.45-17.00 Common factors arising from country reports

18.30 Reception hosted by Director-General, World Health Organization

DAY 3 : Wednesday, 8 March 1989

- 09.00-10.45 Common factors arising from country reports
10.45-11.00 Refreshment break
11.00-12.30 Presentation of background paper: Health policy considerations in human resource development - Professor Jonathan Lomas

12.30-14.00 Lunch

14.00-15.30 Policy options for issues in financing human resources
15.30-15.45 Refreshment break
15.45-17.00 Country-specific approaches

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DAY 4 : Thursday, 9 March 1989

09.00-10.45 Country-specific approaches
10.45-11.00 Refreshment break
11.00-12.30 Country-specific approaches

12.30-14.00 Lunch

14.00-15.30 Report to plenary
15.30-15.45 Refreshment break
15.45-17.00 Report to plenary

DAY 5 : Friday, 10 March 1989

09.00-10.45 Report to plenary and discussion on draft summary of Rapporteur
10.45-11.00 Refreshment break
11.00-12.30 Adoption of conclusions and closure

12.30-14.00 Lunch

Annex CSeminar design in relation to the Agenda and Programme of Work

Objectives	Agenda	Programme of Work
	1. Opening 2. Election of officers 3. Adoption of Agenda	Day 1 (AM, PM) (PL)
1. To promote the analysis of trends and identification of financial, as well as managerial problems in the allocation and usage of human resources	4. Review of country reports	Day 1 (AM, PM) - Review of country reports (SG) Day 2 (AM) - Highlights of country reports (PL)
2. To strengthen the capability of countries to undertake policy analysis in the field of human resources for health	5. Presentation of background papers	Day 1 (AM, PM) Day 2 (AM) Day 3 (AM) - Presentation of background papers (PL)
3. To develop approaches for the use of such analysis in influencing human resource policies and strategies at national and local levels 4. To improve operational management of the finances devoted to human resources	6. Analysis of factors influencing human resources policy 7. Country-specific approaches	Day 2 (PM) - Common factors arising from country reports (SG) Day 3 (AM) - Common factors arising from country reports (PL) Day 3 (AM) Day 4 (AM) - Country-specific approaches (SG) Day 4 (PM) Day 5 (AM) - Country-specific approaches (PL)
5. To create an international linkage for exchange of information and expertise related to human resources development strategies	8. Final discussion and future directions	Day 5 (AM) - Draft summary of Rapporteur and discussion (PL)
	9. Closure	Day 5 (AM) (PL)

SG : Small Group

PL : Plenary

AM : morning

PM : afternoon

ABSTRACTSome thoughts about
ECONOMIC ISSUES IN PLANNING OF HUMAN RESOURCES FOR HEALTHby Professor Guy Carrin
University of Antwerp

1. Introduction

Human resources constitute an important source of productive investment in developing countries. Investments in human resources for health (HRH) have to be regarded as **indirect** investments in the population's standard of living and general well-being.

The main components of HRH planning consist of quantitative assessment of demand and supply of health manpower, determining the principles of financing of health manpower, planning of the geographical distribution of personnel, management of health personnel, and the determination of its management tasks, determining the role of HRH planning within overall health planning.

Supply of manpower can, in the first instance, be approximated via the availability of training positions in schools for medical and paramedical personnel. But that, of course, is too mechanistic a procedure. Three further issues are important here. **First**, the appropriate mixture of categories of health personnel needs to be carefully planned. In other words, the possibilities for **substitution** between these categories need to be clarified beforehand. For instance, the respective roles of traditional versus modern medicine, the roles of highly-skilled medical personnel versus primary health care workers, and, finally, the role of self-care should be addressed. It is evident that the appropriate substitution depends on the specific health need one tries to satisfy. The issue of substitution is closely linked to that of cost-containment policies. In fact, substitution policies boil down to striving for cost-effective use of resources. HRH planning should also identify **incentive** mechanisms for decision-makers (e.g., fixed hospital budgets, allowing for some degree of competition between health care providers, etc.) that enable substitution policy to succeed in practice. **Secondly**, the appropriate **contents of training** ought to be studied. Here, we should emphasize that sufficient attention should be paid to health needs and health care for rural populations. This is not to deny that urban health care is unimportant. Rather, any "urban bias" in medical training ought to be corrected wherever necessary. **Thirdly**, thought should be given to devising the appropriate **incentives** for health personnel. For instance, in order to improve supply of personnel and work efficiency, one should see to it that the monetary rewards and the environment (at work and at home) for health personnel are appropriate. A case in point is the barefoot doctor scheme in China that came under stress after the introduction of the "responsibility system" (the system that links monetary reward to productivity). It became much more rewarding for a number of barefoot doctors to work in the agricultural sector. In economic jargon, the **opportunity cost of the barefoot doctor** or his "foregone benefits" became too high. This then was one of the causes of the drop of 1.6 million barefoot doctors in 1975 to 1.28 million in 1986 (for a recent article on this issue, see M.E. Young, Impact of the rural reform on financing rural health services in China, Health Policy, 1989, 11, pp.27-42). **Price incentives** also matter for the mix of preventive and curative health services. If no specific payment or reward for preventive health services is introduced, preventive health services will suffer. Again, the latter was observed in China.

In planning the **demand** for manpower, one should certainly examine first the disease pattern in the country and its regions in order to forecast the needs of the

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population. Here, one should investigate whether the latter, maybe more "theoretical" needs, match the "felt" needs of the population. Otherwise, distortions may be built into HRH planning too quickly. At this point also, substitution possibilities between categories of personnel ought to be scrutinized. Of course, one should also take account of the socioeconomic determinants of demand for health care and manpower. For instance, the **pricing** of health services may have an impact on the demand pattern. Also, **income** or purchasing power is an important determinant of demand. Furthermore, the **quality** of health services is likely to affect demand. Note that quality is sometimes measured by attendance at work by health personnel. An example recently witnessed in Mali was that of a health centre trying to increase the quality of certain services by having essential drugs dispensed by a pharmacist at the centre itself. Initially, demand increased but dropped later on after the pharmacist had been absent on several occasions for a long period of time. Neglect of such factors in HRH planning may contribute to disequilibrium between demand and supply. Thus, the arrival of new specialized manpower in rural areas will not provoke intensive demand for its services, if the quality of services is mediocre.

Planning the **financing** of health manpower is an integral part of HRH planning. Let us first make a distinction between investment costs and recurrent costs associated with the **medical training**. The former comprise the fixed costs of the basic training and subsequent postgraduate training (costs of buildings, training hospital, medical equipment, etc.). The magnitude of these costs is usually rather important. Hence, careful screening of the domestic financial capacity and of international aid is necessary. Serious lack of financial capacity may well necessitate overseas training of physicians. Recurrent costs may be important as well. They consist of the yearly costs due to the maintenance of the training infrastructure. In addition, salaries of training personnel have to be financed on a recurrent basis. Again, the potential of domestic financing versus international financing has to be examined.

There is also the issue of **financing** the recurrent costs due to the **functioning** of health manpower, viz., salary costs. Which types of medical personnel will be financed by the government's public health budget? Will any salaries be financed at the community level? If yes, what will be the system of cost-recovery?

The **geographical distribution** of health manpower is another important element in the planning process. All too often, the presence of health personnel in urban areas is disproportionate with respect to the population served. Reallocation towards rural areas is to be enhanced. One solution which is sometimes suggested is compulsory rural service. The final aim of such a measure may be laudable. However, what will the productivity of personnel be, once located in rural areas? The appropriate incentives should be studied so as to make such a measure effective. For instance, have material incentives (pay, housing, possibility for children's education, etc.) been worked out? Are medical personnel allowed to combine public service with private practice?

Ensuring effective health manpower is certainly not confined to the mere "production" of health personnel by the education system. There is, **first**, the subsequent need to manage health manpower, once they take up their duties. They have to be given specific targets (of quantity and quality of services) to attain. Hence, a task schedule proves to be imperative. While executing its duties, personnel needs to be **effective**. The latter implies a system of **monitoring** and **evaluation**. In other words, a system of performance measurement needs to be implemented (applied to malaria surveillance, see S. Kaewsonthi, Cost and performance of malaria surveillance in Thailand, Social Science and Medicine, 1984, vol. 19, no. 10). Given society's basic investment in educating medical personnel, this investment can be made even more profitable by **upgrading skills** through short-term postgraduate training, for instance. In Section 6, we provide some thoughts about the cost-effectiveness of alternative training programmes. **Secondly**, management tasks by health manpower have to be carefully developed. A minimum amount of training in these management tasks needs to be incorporated somehow

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in the graduate and/or postgraduate training. In Section 4, we will expand on the management tasks for health personnel. **Thirdly**, HRH planning should certainly not be isolated from other planning procedures within **health planning**. One of the main concerns here is that along with HRH planning, **complementary** inputs should be planned as well. For instance, allowing for the supply of health personnel without considering, say, the supply of pharmaceuticals and vaccines, will turn out to be inefficient.

Let us also add here that from **society's** point of view, HRH planning is a worthwhile undertaking if it does not receive an excessive role within overall socioeconomic policy. Indeed, health manpower is an input into health production, next to other broader inputs like nutrition, education, family planning, etc. This means that government should strive towards an optimum use of health manpower and other resources. In economic jargon, one would say that government policy should take account of the **opportunity costs** of alternative (medical and non-medical) investments in health. We remind the reader that the opportunity cost consists of the foregone benefits by allocating resources towards a particular project or investment. This means then that health manpower policies are beneficial if their benefits exceed the benefits of alternative resource uses.

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ABSTRACT

ECONOMIC APPROACHES IN HEALTH MANPOWER PLANNING

by Professor Nick Bosanquet
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Health services face a serious loss of confidence at all levels and in most countries. Policy-makers see them as a form of consumption rather than investment and are concerned with rising costs. Staff in health services are an aging local workforce with poor motivation. Patients are concerned about lack of quality. Health services are the relative who came to stay : unwanted but always remained there.

Current associations are with "cost", "deficit", "queue" and "programme failure". The paper looks at ways in which the association could be changed to "success", "confidence" and "performance". Any plan for improvement has to start from a realistic view of the specific problems of mature health services. On the supply side, the stock of trained manpower becomes more important relative to the flow of new entrants. Staff have high seniority but low motivation and may be affected by promotion blockages. Problems of staff retention and wastage become more important : and there is often pressure to increase the academic level of basic training, further reducing the supply of new entrants.

Demands become more varied as well as growing. These are likely to be particular pressures in a mature system from new developments of hospital care in urban areas. The private sector may be expanding and costs are rising as budgets are cut. Such a mature system may be faced with a vicious circle where rising costs are met by reducing service standards which erode confidence and lead to further reductions in budgets. In such a context, what would be a three-year plan to raise useful service activity by 10 per cent with the same real funding and manpower? The problems of a mature system threaten the achievement of health targets set out in Health For All by the Year 2000. What would be a productivity based approach to creating resources?

Such an approach would start from six key questions which form an audit of a health manpower system:

1. What are the aims of health services?
2. Which managers are responsible for achieving them?
3. How are resources going to be generated for investment?
4. What are the key performance indicators?
5. Do we know how many people we employ and what their skills are?
6. Are there some small feasible steps in improving staff conditions?

These questions can be linked to six specific changes which are at the heart of a productivity basis approach.

1. Aims and targets for improving health and promoting activity can be set on an annual basis.
2. Executive or general managers can be given responsibility for reaching the targets and the incentives to do so.

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3. Cost improvement programmes can generate resources for investment. In all countries, changes in patterns of settlement and of disease create pressures towards investment in new services and the development of new sites : yet mature systems become more inflexible. There could also be joint initiatives with the private sector and with aid agencies to create a margin for investment.

4. A simple information system can be developed on staffing and workload. For clinics, this can be in terms of attendances and for hospitals in terms of throughput and length of stay. Measures of patient dependency can also be developed in hospitals. Such a system can produce "performance indicators" for clinics and hospitals and can also be used for staff allocation.

5. A simple data base on staff can be developed creating for individuals a computer file which is continuously updated by events such as post-basic training, transfer and promotion. This can be a useful inventory of the skills already available to health managers.

6. Personnel practices can be improved so as to establish a more positive approach to human resources management. Job descriptions and schemes of service can be updated so as to give people more information on working conditions and career prospects. There would be movement towards greater choice in the transfer system and a phased programme for improving staff accommodation. Improving transport is vital to better use of staff time.

Of these changes, the first three are absolutely essential to the immediate improvement of health services and it is hard to see how standards can be maintained without them in the face of rising cost and declining performance such as mark a mature system. Unless managers have aims to work towards, and incentives to reach them, health services will experience a decline in their local productivity. Unless some resources are freed for investment, established patterns of service are likely to become less and less relevant to the needs of the population. Health services can only improve their image and their record of success if productivity gains are used to finance new high benefit programmes.

In a mature system, changes on the demand side of manpower planning become more important relative to the supply side. The focus shifts from increasing total numbers to securing better utilization of existing staff time. Health services have to become more effective as primary employers. But there are also some important decisions in supply planning. Sensible decisions can be taken on the long-term structure of the nursing profession to retain the pyramid with a relatively small number of highly qualified staff at the top. There are many pressures to squeeze out the middle group of enrolled nurses.

There can also be more cost-effective mixes of investment concentrating on training of less qualified staff and more detailing analysis of labour supply and means of adding to it, through use of part-time staff especially in larger cities. Approaches to planning based on population ratios are increasingly irrelevant.

Policy for the supply side comes to be about retaining and motivating existing staff, mapping possible sources of supply and ensuring that past investment in human capital is used effectively. There are a number of specific steps which employers can take to influence training programmes apart from the policies already mentioned for setting the context and for ensuring better use of existing stock.

1. They can shift the balance of training towards in-service and post-basic training which has much greater flexibility and capacity for contributing to immediate manpower needs. In the past, post-basic and in-service training may have accounted for, at most, 10 per cent of expenditure on training. It may well be desirable to shift policies so that 30 per cent of total expenditure is accounted for by post-basic and in-service training.

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2. Within such a context, it will be possible to develop training programmes for smaller groups of staff which may prevent particular bottlenecks. Specific shortages may be taken for problems of general shortage. For example, there may be shortages of midwives with particular training required to work in rural areas. Within the hospitals, there may be particular shortages of staff to work in operating theatres. As demands become more complex, supply policy comes to be about supplying a number of different groups in order to ensure a balanced staffing structure, rather than simply about adding to the supply of personnel qualified to a basic level.
3. Finally, there may well be a strong case for recruiting aides to give support to trained and qualified personnel. This approach is particularly relevant for nursing staff, where support from portering staff and nursing aides may save many hours of trained nursing time : but it is also relevant for other staff such as pharmacists and scientific technicians.

Health services face radical changes in budgetary outlook and in public expectations. The era of rapid expansion in funding and staffing is drawing to a close and even where growth continues, the increment is a reduced proportion of total staffing. The paper sets out the characteristics of a mature manpower system in health services. Issues of motivation and of managing staff time effectively become more important, as staff are under pressure to meet rising public expectations. The paper sets out the main elements of a three-year plan to secure measurable improvements in health service performance, and which will take account of these new challenges on the demand side.

ABSTRACTHEALTH MANPOWER IMPLICATIONS OF HEALTH INSURANCE DEVELOPMENTS
IN EUROPE AND ASIA. MUTUAL LESSONS?

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European trends: Almost all European countries are now covered by far-reaching non-profit health insurance schemes within a broader context of social insurance. The extension of the coverage of social insurance including health insurance in Europe more or less followed the pattern below:

- (1) from workers to nations;
- (2) from accidents to unemployment insurance;
- (3) from voluntary to compulsory insurance;
- (4) from control to confidence and right;
- (5) from cash to kind;
- (6) from workers to the self-employed;
- (7) from poor to rich, from weak to strong;
- (8) from self-help to institutions;
- (9) the state played a rather unclear role;
- (10) political parties played a rather undetermined role;
- (11) socioeconomic factors were not decisive;
- (12) diffusion was not a major factor.

Asian trends: Asia has some particularly interesting health insurance plans. Starting about 10 years ago in a predominantly private-provider system with high shares of out-of-pocket payments by the consumers, full coverage by national insurance is expected to have been achieved as early as July 1989 in the Republic of Korea. Thailand's health insurance is organized differently: a multiple system has been complemented by a voluntary health care programme which mainly benefits the rural self-employed. The Philippines are now discussing options for extending the coverage of health insurance to the more than 30 million Filipinos not yet covered. These three Asian systems add some interesting and complementary as well as correcting features to the 12 tendencies of public or national health insurance development encountered in Western Europe.

- (13) from free riders to participants due to co-payments and deductibles;
- (14) from slow development to rapid change as in the Korean case;
- (15) from compulsory back to voluntary participation as shown in Thailand;
- (16) from disease to health to development in the same system;
- (17) from research to information about health and health care;
- (18) from information to management of health care;
- (19) the dialectics of progress will benefit many a country.

These trends show that developments may have different paths in spite of some universal uniformity, and that we can learn from each other although we also could and should try to follow new and innovative ways.

Health personnel quality implications: The trends of public or national health insurance in Europe and Asia have a bearing on the quality of health personnel. A very broad knowledge and understanding in social sciences, management, economics and information is required to cope with our tasks ahead. We would also get this result when analysing trends in morbidity, demography, technology, etc.

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Training course material: It is in the areas below that WHO Headquarters and some of its Regional Offices and their collaborating centres have developed and tested courses for training and upgrading health personnel to be able to respond to actual needs.

- **Health personnel planning**: The WHO "Guidelines for Health Manpower Planning", developed by Dev K. Ray et al., were assessed rather positively by the participants during four seminars in Portugal. Evaluations show that the "Guidelines" are a very good instrument for training and retraining professionals. Even a relatively close adherence to the training modules provided - with only minor national modifications - leads to convincing results.
- **Health management**: Some time ago, the Managerial Process for National Health Development (MPNHD) was one of the favourite issues promoted by WHO. Even from its uninauguration, it was questioned whether this process was not too technocratic and top-down oriented to cope with pluralistic political structures and policy issues. Simply preparing a plan document would not suffice. Rather, an iterative and interactive process of continuously linking the main issues of strategic management would be more relevant. Based on several German-speaking experiences of adapting MPNHD, future plans include more health orientation of policies and the tools necessary for policy formulation, implementation and evaluation, such as health systems indicators, management information systems, and scenario techniques. There seems to be a considerable felt need for courses which exemplify such iterative and interactive problem-solving cases.
- **Health economics**: As recent surveys have shown, health economics is a subject that attracts widespread interest and action in many countries. Training modules for health economics have been developed by a large group of health professionals. After considerable debate about content and form, the modules now cover the following five topics:
 - relationship between the health sector and the economy;
 - health policy implementation and performance;
 - encouraging efficient behaviour by consumers and providers;
 - priority-setting and strategy selection;
 - equity, equality and reduction of status differentials.

Some European countries eagerly took up the modules. Even though a proper evaluation is still missing, the health economics modules of the WHO Regional Office for Europe are certainly a highly important contribution from Europe to improve the quality of human resources for health elsewhere as well.

- **Health (management) information**: One especially important bottleneck for good planning and management is the scarcity of good and relevant data in a situation where too much useless information is available. Training material is to be developed soon.

Conclusion: Improving the quality of available human resources for health by relevant short-term courses is certainly an essential step to a reasonable personnel policy. Longer-term public health training courses such as are offered, for example, in Baltimore, Liverpool, London, Manila or Nairobi, might be even better provided that they really address the issues mentioned here in sufficient depth and length. Nevertheless, there are certain opportunity costs. In some cases, it might be much better to think more intensively about the proper professional mix in health institutions.

ABSTRACT

HEALTH POLICY CONSIDERATIONS IN HUMAN RESOURCE DEVELOPMENT

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The role of the public sector is firmly established in the health care systems of most developed countries. In some, there are rallying cries for a return to a greater private sector role, but the recognition of access to health care, or even access to health, as something of general public interest and of societal value, makes it unlikely that the dominant role of the public sector in health care systems will be significantly eroded. Specific policies vary but the general intent is to bring private interests under public control.

The transition from private to public objectives has not yet really taken place for the health care systems of most countries. In much of the developing world, it is still early enough in the development of the public role that valuable lessons can be learnt from the developed world's mistakes. There are three main areas of lessons for the transition, all of which are closely connected to the fact that the increasing government involvement inevitably requires committing a significant proportion of public funds to health care in the future.

First, the use of demand, through current utilization data, that is unadjusted for its misrepresentation of need is an inappropriate planning objective. The appropriate objective is to plan on the basis of priority health care needs which, although difficult to measure, will target planned investment in manpower types and numbers to the optimal array for maximum return for the health status of the population.

Second, when the system is fully private, then it may be no concern to government if individuals choose to use for a service an over-qualified (and therefore presumably over-priced for that particular service) provider. However, with significant public funds in the system, greater consideration of the most cost-effective personnel for a particular service is warranted.

Finally, one does not merely wish to have medical care equally available because it has no value except insofar as it produces health in the population. Therefore, it is safe to assume that what is really desired for equity is comparable health across all income and geographic divisions - Health For All. Equitable access to care is merely a convenient marker for this objective, but the ultimate goal must still be equitable health across income, social and geographic divisions.

Not surprisingly, the focus on individual patient encounters, and the economic interests presented by private systems, actually discourages consideration of the broader picture which is required to address the three issues outlined above.

In terms of policy areas that can be used to bring about this transition, human resource development is most often thought of as only a series of educational policies for ascertaining the appropriate numbers, training mix and supervision of personnel. It is, however, a far broader policy area than this, as implied by the above required transitions. In addition to the health manpower planning and supply area which has historically been thought to capture the entire field, there are two additional separate but highly interdependent policy areas of importance : the governance and regulation of

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health personnel, and the financing incentives and organizational structure of the system. Many of the problems of human resource development for health can be attributed as much or more to the failure to recognize the importance and interdependence of all three of these areas, as to the failure to promulgate appropriate policy in the manpower planning and appropriate policy in the manpower planning and supply area. It is these three policy vehicles that can be used to bring about the transition in objectives.

Governance structures provide primary professions with monopolistic self-regulatory rights which facilitate exclusion of other groups from their domains of activity. The public or government role is most often handicapped by the fact that they do not directly control the governance structures that allow for such protectionist professional policies. Gaining some control over these governance structures is, therefore, one of the vehicles that must be sought in changing health care system objectives from private to public interests.

Much of the human resources planning in health care mirrors the assumption of private preferences as the determinant of policies by basing projections of future requirement on extrapolation of current demand for services. Underlying this planning is the assumption that manpower should be produced in the numbers and mix required to continue the current pattern of privately negotiated provision, even if that includes unnecessary services or use of inappropriate personnel for some services. The attraction of this "demand-based" approach is in the ready availability of data on current utilization levels which, with a manipulations for productivity levels of the various categories, can be used as a proxy to measure the demand (read requirement) for manpower. An alternative, but methodologically more challenging, approach is to make the planning "need-based". The assumption underlying this approach is that government has the responsibility to produce only the numbers and mix required to most cost-effectively prevent or service those episodes of ill health that can be resolved by health care interventions. The requirement for manpower is then related to (a) epidemiologic measures for the level and nature of ill health among the population; (b) clinical studies which define what effective interventions exist for that ill health; and (c) studies of the most cost-effective personnel who can deliver those services to prevent or treat that ill health.

Finally, any system of financing health care will provide certain incentives. Sometimes, these incentives will be toward the appropriate use of manpower, while other incentives may work against desired manpower roles. These financial incentives will affect both who gets used and at what levels of use for particular health problems. As public and governmental roles become more comprehensive (and as cost-containment concerns emerge), particular attention should be paid to such incentives as possible policy avenues to achieve a more efficient use of the existing pool of health manpower.

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Illustrative country-specific problems under each
broad area of concern
(based on country reports)

(1) Human resource input mix

1. Under-utilized health facilities due to lack of certain types of medical personnel; inadequate supplies of drugs, equipment and maintenance of health facilities; ratio of physicians to paramedics disproportionate (Bangladesh).
2. Poor mix of staff in rural areas - many facilities are staffed by junior and unskilled nurses. Urban hospitals are overstaffed while rural facilities are understaffed (Gambia).
3. Nurse shortage hinders expansion of MCH and EPI services in rural areas; lack of skilled staff at secondary facilities to attend to referrals and supervise primary level services (Gambia).
4. Inadequate number of doctors and nurses; inadequate quality of some personnel (too old or lack of professional qualifications) (China).
5. Inadequate number of doctors, many vacancies unfilled (Fiji).
6. Staffing based on standard ratios rather than on utilization of facility, leading to maldistribution of manpower; insufficiency of drugs and non-availability of complementary inputs, i.e., radiology and surgery specialists (Indonesia).
7. More than 60 percent of operational cost of rural services are accounted for by salaries of personnel. These salaries are indexed. Hence as salaries increase, the share of other expenditures are reduced thereby affecting input mix. Overstaffing and understaffing at some facilities, hence the need to study staffing mixes (Papua New Guinea).
8. Inappropriate mix of high, intermediate and auxiliary level personnel (South Korea).
9. Shift to primary care system necessitated shift in manpower input mix. Overall cost of physicians decreased but overall cost increased due to the increase in the number of personnel working in PHC centres and the increase in salary of physicians and nurses due to extended working schedule (Spain).
10. Introducing new categories of care providers for the growing elderly population (Japan).

(2) Production of human resources for health

1. Imbalance of human resources such as co-existence of overproduction of physicians in general and undersupply of services generated by physicians for specific population and for geographic areas (Bangladesh, Japan, Philippines).
2. Training in secondary medical education inadequately equipped in facilities, laboratory and housing accommodation for both students and teaching staff. Reforms governing curricula in medical colleges and secondary medical schools are being implemented. Short-term courses through television and correspondence have been organized to supplement regular training (People's Republic of China).

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3. Declining quality of medical education due to decline in teaching staff. Nursing training not oriented to community health aspects (Ghana).
4. Medical education characterized by increasing orientation towards specialization in curative services. Training of doctors not adapted to the needs of the rural areas particularly in the field of preventive and promotive health. Need to review medical and health education, curriculum and training programmes (India).
5. Excess supply of paramedics. Need to close schools of nursing selectively by enforcing accreditation standards (Indonesia).
6. Lack of physicians in the rural areas partly due to the content of training and curriculum (Japan).
7. Need for better learning experiences and materials for the medical and nursing students to enable them to adapt their skill to the country's health needs (Thailand).
8. Shortages of nurses and midwives due partly to lack of teachers in addition to lack of incentives and promotion plans (Jordan).
9. Training structure not suitable to needs: more doctors are trained but not enough nurses. Need to examine quantity of production and quality of education (Laos).

(3) Managerial efficiency

1. Centralized system of management for budgetary, personnel and support systems leads to a host of problems including difficulty in implementing and monitoring programmes nationwide; difficulty of staff control, accountability and supervision; and unreliable supplies of drugs and other supplies. Decentralization has been initiated with the creation of three health administrative regions each with a management team (Gambia).
2. Lack of career ladder to higher level training as an incentive for all categories of health personnel (Bangladesh).
3. Lack of incentives: long hours and low pay (Fiji, Hungary).
4. Inadequate salary, housing and social amenities in rural areas, lack of career prospects, lack of job description and goal setting (Gambia).
5. Lack of arrangements for career development of professionals (India, Indonesia).
6. Inadequate data on personnel, on demand and supply of personnel (Philippines, Republic of Korea, United Kingdom).
7. Poor supervision of health personnel leading to poor quality of performance (Papua New Guinea).
8. Existing human resource legislation often prevents full utilization of human resources (Thailand).
9. Inappropriate coordination among facility planning, logistic support, operational budget and human resources, which leads to managerial inefficiency (Indonesia).

Annex E(4) Health care service structure, focus and utilization

1. Uneven distribution of health services and personnel by region, by rural-urban areas (all countries).
2. Large amount of resources in rural health services are going into curative services (Papua New Guinea).

(5) Organization of health care services

1. Insurance coverage will induce high demand for services; need to plan the utilization of health personnel (Republic of Korea).
2. Need for health care financing as hospitals become autonomous; need to devise payment schemes for the poor (Gambia).
3. Need for supplemental funds from the private sector to meet costs of health care and training of health personnel (Bangladesh).

(6) Intersectoral allocation of public resources

1. Limited budget for medical education; need resources to improve school facilities (China).
2. Public resources for health highly sensitive to economic performance. During the economic crisis, budgetary allocation for health declined as a proportion of the total budget (Ghana).
3. Need for more allocation to health sector. Low priority of health sector and other social sectors relative to other sectors (Papua New Guinea).
4. New problems arise in terms of resource allocation for health when government structure is decentralized. The health sector is often too weak to compete with other sectors (Indonesia, Papua New Guinea).

Note: This annex reflects only the views of participants expressed in the country reports as well as in their presentations and does not represent the official views of the country concerned.

Annex FProposed country plans of action by participants

	Planning	Management	Policy
Bangladesh	Studies on skill mix, behavioural analysis and utilization		Review of human resource policy based on findings of study
China			Establishing policy on alternate financing mechanism to expand production of human resources through national policy workshop
Congo			Review of policy on use of mid-level human resources in community
Ethiopia	Overall health manpower planning, including need/demand analysis		Human resource policy review objectives and setting economic appraisal of various policy options
Fiji	Policy on both short- and long-term basis (short term, i.e., filling vacancies)	Training of human resource managers Examining incentive schemes for health workers	(long term) Review of human resource legislators Appraising various financing mechanisms to ensure monetary resources to support human resources
Gambia	Human resource planning with special emphasis on shortage, maldistribution and high dependency for expatriate staff		Review and change of human resource policy based on planning exercise
Ghana	Methodological development of qualitative aspects of human resource policy		Develop policies to prevent brain drain

Proposed country plans of action by participants

	Planning	Management	Policy
Hungary		Training in health sector management	Change in financial mechanisms in health sector to ensure capital/manpower balance Review of wage policy in health sector (salary by productivity)
India			Review of human resource policy with special reference to mid-level workers, career development and incentives
Indonesia	Study on health manpower mix on recurrent cost of human resources		Study on national mechanism to strengthen human resource policy while decentralizing policy responsibility
Japan	Study on alternative human resources for care of the elderly		Review and change of existing regulations to support alternative provision of services for the elderly
Jordan	Human resource planning for nurses		
Lao People's Democratic Republic	Studies on health manpower mix, low productivity and maldistribution		Review and change of human resource policy based on results of study
Myanmar	Developing new planning tools which look at optimal "Health Manpower Mix"		Better policy coordination by establishing HMD coordinating committee Resource Allocation Change on the basis of recommendations of committee National Workshop on Human Resource Policy with special reference to "Health Manpower Mix"

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Proposed country plans of action by participants

	Planning	Managment	Policy
New Zealand		Increasing linkage of health policy-makers and health professionals in economics	
Papua New Guinea		Review of present decentralized management of mid-level workers	
Philippines		Review of present incentive scheme and working conditions	Review of present policy on human resource regulations to increase service provision by private sector
Republic of Korea	Human resource planning of PHC providers		Review of human resource policy after full coverage of health insurance scheme
Spain		Review of labour relations in health sector	Establish human resource policy
Sri Lanka			Review of existing human resource policy to increase productivity and alleviate maldistribution
Thailand	Study on task and productivity analysis for mid-level workers Study on impact of social insurance on health manpower planning		Review of human resource policy Review of human resource legislation to ensure policy decision
United Kingdom	Collecting information and developing indicators	Developing model for human resource management	Review of human resource policy by project group

Note: This table reflects only the views of participants during the Seminar and does not represent the official views of the country concerned.

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