DOCUMENT RESUME

ED 337 371 SO 021 218

| | |
|---|---|
| TITLE | Coordinated Health and Human Resources Development: Report of a WHO Study Group. Technical Report Series No. 801. |
| INSTITUTION | World Health Organization, Geneva (Switzerland). |
| REPORT NO | ISBN-92-4-120801-5 |
| PUB DATE | 90 |
| NOTE | 60p. |
| AVAILABLE FROM | World Health Organization, Distribution and Sales, 1211 Geneva 27, Switzerland. |
| PUB TYPE | Reports - Research/Technical (143) |
| EDRS PRICE | MF01 Plus Postage. PC Not Available from EDRS. |
| DESCRIPTORS | *Case Studies; Cooperative Programs; Developed Nations; Developing Nations; *Developmental Programs; Foreign Countries; Health Needs; Health Occupations; Health Personnel; *Health Programs; *Health Services; *Human Resources; International Programs; *Labor Force Development; Labor Needs; Medical Care Evaluation |
| IDENTIFIERS | *World Health Organization |

ABSTRACT

This report explores the theory and practice of coordinated health and human resources development as a concept that can help guard against the production of inappropriate categories or numbers of health personnel. The report concentrates of what can be done to make education and training programs more directly responsive to the priority needs in the health services. The report opens with a brief explanation of terminology followed by a review of the evolution of various policy objectives that have influenced the production of health personnel. Changing objectives move from policies designed to increase the numbers of doctors and nurses, through concern with the use of auxiliaries, to greater emphasis on community oriented and community based training. The most extensive section reviews findings from 25 case studies reported from 17 countries. Each study provides a brief overview of the country concerned and the mechanisms affecting personnel planning, production, management, and distribution followed by examples of how the mechanisms have worked in practice. The report concludes with a series of recommendations to WHO (World Health Organization) and to countries on the further promotion of coordinated health and human resources development. (DB)

SO 021 8

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 165 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries; promoting the health of mothers and children; combating malnutrition; controlling malaria and other communicable diseases including tuberculosis and leprosy; having achieved the eradication of smallpox, promoting mass immunization against a number of other preventable diseases; improving mental health; providing safe water supplies; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides, and pharmaceuticals; formulating environmental health criteria; recommending international nonproprietary names for drugs; administering the International Health Regulations; revising the International Classification of Diseases, Injuries, and Causes of Death; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

* *
*

The *WHO Technical Report Series* makes available the findings of various international groups of experts that provide WHO with the latest scientific and technical advice on a broad range of medical and public health subjects. Members of such expert groups serve without remuneration in their personal capacities rather than as representatives of governments or other bodies. An annual subscription to this series, comprising 12 to 15 such reports, costs Sw. fr. 100.– (Sw. fr. 70.– in developing countries).

*This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of the World Health Organization*

# Coordinated health and human resources development

Report of a
WHO Study Group

World Health Organization
Technical Report Series
801

World Health Organization, Geneva 1990

WHO Library Cataloguing in Publication Data

WHO Study Group on Implementation of Integrated Health Systems and Health Personnel Development
Coordinated health and human resources development : report of a WHO study group.

(World Health Organization technical report series ; 801)

1.Health manpower 2.Health planning I.Title II.Series

ISBN 92 4 120801 5 (NLM Classification: W 76)
ISSN 0512-3054



PRINTED IN SWITZERLAND

90/8569 - Schüler SA - 7000

# CONTENTS

## WHO STUDY GROUP ON IMPLEMENTATION OF INTEGRATED HEALTH SYSTEMS AND HEALTH PERSONNEL DEVELOPMENT

*Geneva, 6–10 November 1989*

*Members*

Dr J. Alvarez-Manilla, Director, Centre for Educational Research and Services, National Autonomous University of Mexico, Mexico City, Mexico

Dr V. Cucić, Professor of Social Medicine, Medical Faculty, Belgrade, Yugoslavia

Professor E. Ezzat, Dean, Faculty of Medicine, Suez Canal University, Ismailia, Egypt

Dr A. Khalid bin Sahan, Damansara Height, Kuala Lumpur, Malaysia (*Chairman*)

Dr S. Kupe, Head, Department of Nursing Education, University of Botswana, Gaborone, Botswana (*Rapporteur*)

Dr M. Prywes, Chairman, Center for Medical Education, Ben Gurion University of the Negev, Beersheba, Israel

Professor V. Panich, Dean, Faculty of Medicine, Prince of Songkla University, Songkla, Thailand

*Representatives of other organizations*

*Aga Khan Foundation*

Dr N. Abbasi, Director, Primary Health Care, Aga Khan Health Services, Karachi, Pakistan

*International Council of Nurses*

Ms K. McInerney, Nurse Consultant, International Council of Nurses, Geneva, Switzerland

*Secretariat*

Dr E. Goon, Director, Division of Health Manpower Development, WHO, Geneva, Switzerland

Dr A. Goubarev, Scientist, Health Manpower Planning, Division of Health Manpower Development, WHO, Geneva, Switzerland (*Secretary*)

Dr T. Hall, Prevention Sciences Group, University of California, San Francisco, CA, USA (*Temporary Adviser*)

Dr R.-L. Kolehmainen-Aitken, West Newton, MA, USA (*Temporary Adviser*)

# COORDINATED HEALTH AND HUMAN RESOURCES DEVELOPMENT

## Report of a WHO Study Group on Implementation of Integrated Health Systems and Health Personnel Development

### 1. INTRODUCTION

A WHO Study Group on Implementation of Integrated Health Systems and Health Personnel Development met in Geneva from 6 to 10 November 1989. The meeting was opened on behalf of the Director-General by Dr E. Goon, Acting Assistant Director-General and Director, Division of Health Manpower Development. He spoke of WHO's work to promote the concept of integrated development of health systems and health personnel so that health services would be staffed by appropriate numbers and types of health workers within a unified system. Among other tasks, the Study Group would have to review current understanding of that concept and its contemporary relevance, as well as considering ways of ensuring that human resources for health meet service needs.

Since 1976 it has been the stated policy of the World Health Organization and its Member States to promote coordinated health and human resources development (COHHRD). COHHRD is the latest of several acronyms devised in an attempt to embody the concept as accurately and succinctly as possible.[1] While the name itself has changed—mainly as the result of a deeper understanding of the process—the basic concept remains the same. Consequently, in the hope of avoiding further terminological confusion, the COHHRD expression alone is used in this report, even in referring to the concept when a different expression would have been used originally. The aims of the Study Group were to review experience throughout the world in the application of this concept and to make

[1] The original concept of "integrated health services and health manpower development" (HSMD) underwent word changes, first to "health systems" and subsequently to "integrated health systems and health personnel development" (HSPD). The substitution of "coordinated" for "integrated" makes it clear that the objective is coordination and not necessarily administrative or functional integration.

recommendations for the future. The Study Group's findings, conclusions and recommendations should be of interest to health policy-makers, educators, administrators and planners.

The Study Group had three main objectives:

1. To review current understanding of the COHHRD concept and its relevance to contemporary conditions.
2. To review current applications of the COHHRD concept at the national level, especially the formulation, coordination, communication, implementation, and evaluation of human resources policies related to health system development.
3. To make recommendations to WHO and to Member States for future action.

The primary focus of the report is the COHHRD process—definition, accomplishments, problems and future needs—and it deals only to a minor extent with specific issues related to training needs, priorities and methods.

## 2. CONCEPTS AND DEFINITIONS

The Study Group identified a number of terms and concepts that were fundamental to its review, and accepted the following definitions.

**Health for all by the year 2000** (HFA) expresses the commitment by WHO's Thirtieth World Health Assembly "that the main social target of governments and WHO in the coming decades should be the attainment by all the citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life" (*1*). HFA does not mean the elimination of all disease and disability, or that by the year 2000 every country will be able to provide its citizens with all potentially useful health services. The ability to provide such services will continue to be strongly correlated with overall social and economic development.

HFA has enormous implications for human resources development and will affect decisions about the numbers, types, distribution, orientation, qualifications, interrelationships, salaries, and patterns of utilization of most health workers. HFA makes the entire community the focus of concern and changes health care

expectations. HFA aims to establish a global framework for the delivery of care relevant to all health systems, irrespective of their level of development.

**Primary health care** (PHC) is the key instrument, or strategy, for attaining health for all by the year 2000. PHC is defined as "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination" (*2*). PHC relates to the continuum of a promotive, preventive, curative and rehabilitative health service and not just to what some have termed "first-level ambulatory care".

HFA and PHC provide the setting and rationale for the coordination of health and human resources development.

The term **human resources for health** refers to all persons, with or without formal health-related training, who contribute in a substantial way to the promotion, protection and restoration of health. They may work in the public or private sector and may or may not be paid for their services. Most health care workers will have received training, will work in an organized system, and will be reimbursed for their services, but the above definition also includes volunteer community health workers with little or no formal training. Human resources for health must not be considered in isolation from the purpose they serve—improved health.

The **human resources development process** should ideally be both multidisciplinary and intersectoral. The diverse institutions, organizations and interest groups involved in this process, as well as their terms of reference, functions, resources, and constraints, constitute an integrated system—the human resources system. The development process encompasses three broad functions:

1. **Human resources planning** "is the process of estimating the number of persons and the kinds of knowledge, skills, and attitudes they need to achieve predetermined health targets and ultimately health status objectives" (*3*). Over the years this function has been broadened to include **human resources policy**, where "policy" refers to statements made by relevant authorities intended to guide the allocation of resources and effort. The policy and planning function is as concerned with the qualitative aspects of human resources for health as with the quantitative aspects of supply and requirements.

Health services and human resources policies are key instruments leading to the implementation of decisions affecting the delivery of health care.

2. **Human resources education and training (production)** refers to "all aspects related to the basic and postbasic education and training of the health labour force. Although it is one of the central aspects of the health manpower [development] process, it is not under the health system's sole control" (*3*). The "production" system includes educational and training institutions, which are increasingly the joint responsibility of both the health and the education services. Although the term "production" is still used and presents little confusion, the Study Group preferred the term "education and training".

3. **Human resources management**, defined as the "mobilization, motivation, development, and fulfillment of human beings in and through work" (*4*), has recently received attention as an important and challenging concept in human resources development. It "covers all matters related to the employment, use, and motivation of all categories of health workers, and largely determines the productivity, and therefore the coverage, of the health services system and its capacity to retain staff" (*3*). Management also encompasses programmes for in-service and continuing professional education and evaluation. The critical importance of management is now acknowledged, and ways of improving it and its effect on productivity have been studied extensively.

A **health system** is the complex of interrelated elements that contribute to health in homes, educational institutions, workplaces, public places, and communities, as well as in the physical and psychosocial environment and in the health and related sectors. A health system is usually organized starting at the most peripheral level (community level or primary level of health care), and proceeds through the intermediate (district, regional or provincial) to the central level. The Study Group preferred a broad definition of health system ranging from countries in which most health services were provided by a single, integrated health authority, to those in which there were many smaller subsystems, often with little or no formal connection. Wherever a country may lie along this continuum, the actions of each part of the health sector are likely to have an effect, directly or indirectly, on the rest of the sector.

A **district health system** is a more or less self-contained segment of a national health system and comprises the population living within a clearly defined administrative and geographical area, either rural

urban, and all institutions and sectors whose activities contribute to improved health. In many countries, policy implementation within the district health system presents special problems (*5*).

COHHRD implies that the three human resources development functions described above are carried out in close coordination with the development of the health system as it moves towards the objective of health for all. In practice, however, a country may have achieved good coordination in one geographical area or set of institutions but little coordination elsewhere. COHHRD is a never-ending process in which each part of the cycle affects and is affected by the other parts (see figure, page 12). Human resources planning defines health system requirements for health workers and translates these into policies; human resources production provides education and training; and human resources management ensures that health personnel are used effectively and that their skills are maintained, evaluated and upgraded through continuing education to meet evolving job expectations. Experience gained at each stage of the process is valuable for the operation of the whole system.

## 3. HEALTH AND HUMAN RESOURCES DEVELOPMENT IN PERSPECTIVE

### 3.1 Evolving policies and priorities

COHHRD first came under formal consideration in the mid-1970s in response to concerns about the inability of most countries to produce health personnel appropriate to their requirements. In 1976, WHO submitted to the Twenty-ninth World Health Assembly a detailed review of its efforts to promote training, along with a proposed plan of action. This plan was subsequently endorsed by the World Health Assembly, which requested the Director-General "to intensify efforts to develop the concept of integrated health services and manpower development so as to promote manpower systems that are responsive to health needs, and to collaborate with Member States in introducing a permanent mechanism for the application of the concept and in adapting it to the requirements of each individual country" (*7*).

With the adoption of this resolution WHO formally embarked on the promotion of COHHRD. The events leading up to this commitment to COHHRD, and those that have occurred since, are

Interrelationships in health systems and human resources development*






*Modified from reference 6.

described in several excellent reviews (*6*, *8*, *9*). Some of the key points in those documents are presented below.

As part of their central thesis, Fülöp & Roemer (*9*) argue that the COHHRD concept was a logical, if somewhat belated, response to the persistent need of most Member States to ensure that health personnel were appropriate in numbers, skills and motivation to meet the health needs of their peoples. To simplify their task they use four time periods, roughly corresponding to WHO's General Programmes of Work from 1948 to 1980. During this 33-year span they identify eight policy objectives related to human resources development, objectives which mostly reflected the way health problems were defined during each of the periods under review. In the earlier years each objective tended to replace its predecessor, while more recent objectives have tended to supplement previous ones and, in the process, acquire a higher priority. The following are the eight objectives and the approximate time period during which each was emphasized:

1. *Increased quantity of conventional health personnel*, with special emphasis on increasing the supply of doctors and nurses (late 1940s to late 1960s).
2. *Improved level of education of all types of health personnel*, reflecting the desire of many newly emerging nations not to accept what they perceived as "second class standards" of health care (1950s to mid-1960s).
3. *Cross-national equality of health personnel training* sought to establish comparable standards of medical and nursing training that might eventually lead to international standards of licensure (late 1950s to mid-1960s).
4. *Equitable geographical distribution of health personnel* would ensure that health services were provided to the entire population and not just to the privileged in the urban areas (1950s, with emphasis on conventional health personnel; 1960s to 1970s, with increasing emphasis on auxiliary personnel).
5. *Efficiency in production and use of health personnel* emphasized improved efficiency through greater use of auxiliaries, health teams, better management practices, and teacher training (measures taken, roughly in the above sequence, up to the 1980s).
6. *National planning of health personnel* entailed the use of planning techniques to ensure that appropriate categories and numbers of health personnel were produced (1960s to mid-1970s, with the

gradual recognition that purely theoretical planning had little impact on decision-makers).

7. *Relevance of health personnel to national needs* attempts, through a reorientation of planning, training and utilization of health personnel, to serve the strategy for implementing the worldwide commitment to health for all. In the case of education, for example, this would mean greater emphasis on community-oriented and community-based training. Although WHO has long sought to increase the relevance of training to service, efforts to achieve this have intensified since the 1970s. Despite this emphasis, the search for relevance in many countries has been more evident in theory than in practice.
8. *Integration of health services and human resources development* is the central focus of the Study Group's investigation. The need for integration was implied during the 1950s and made more explicit in the 1960s, but only in 1976 did it become official WHO policy.

In summary, during WHO's earlier years many developing countries first sought to increase the number of health workers and then to improve their quality. This often meant trying to adopt or adapt the patterns in more developed countries. With the realization that these developments still left much of the population unserved, attention shifted towards improving the efficiency of training and utilization, and then towards better planning. Improved planning, emphasized in the 1960s and pursued actively until now, has nevertheless had only limited impact on human resources development.

During the 1960s and 1970s, much human resources policy and planning tended to be overly concerned with numerical targets to the detriment of qualitative aspects such as competency levels, assigned tasks, conditions of employment, motivation, and management capabilities. Economic, distributional, and political realities were often overlooked or minimized to such an extent that planned targets were manifestly unrealistic. Workforce profiles tended to resemble an hourglass, with large numbers of high-level professionals at the top and support personnel with limited training at the bottom, and relatively few with intermediate technical and nursing skills. Planners had tenuous links with policy-makers, human resources management was often deficient, and many countries lacked effective mechanisms for policy formulation and implementation. Many participants in the human resources development process tended to maintain their commitment to

traditional patterns of service delivery and professional training. There was excessive emphasis on hospital-based training, on high technology, and on curative services. There was too much reliance on didactic teaching methods and slow adoption of more effective c .nmunitv-based and student-centred methods. Training for the different occupational categories was compartmentalized even though they were expected to work as teams. It was almost as if the health services system and the human resources system, despite their seeming interdependence, were unalterably independent of each other, with each sector free to develop according to its own traditions and priorities.

As these problems became evident, WHO evolved and began to promote the application of the COHHRD concept of linking health systems and human resources development so that the requirements of the former become guideposts for policies and plans bearing on the latter. The central objective is to ensure that human resources are "relevant" to the health needs and demands of the population. Although this principle of integration may seem obvious, the development of the education and health services along two separate historical paths has created problems almost everywhere in the world (*9*).

### 3.2 Promotion of COHHRD by WHO and its Member States

The COHHRD concept has been difficult to implement. Since the Twenty-ninth World Health Assembly formally endorsed COHHRD in 1976, WHO has had to work hard to promote its adoption by Member States. When first introduced, COHHRD offered the hope of a better, more rational way to analyse and solve human resources problems. However, for those who wished to implement the concept, there were the three challenges of how to explain it, how to gain acceptance for it, and how to apply it successfully. In the first case, COHHRD suffered from being a concept and not a method. The concept was designed to produce a desired product, but the methods to translate the general objective into results must vary depending upon the specific situation. As long as COHHRD remained a concept, without clearly defined methods, products, or measures by which it could be evaluated, it was difficult to explain.

The second challenge was more formidable, that of gaining acceptance. COHHRD represented an ideal which flew in the face of

everyday reality and the inertia of tradition. Human resources development should strive to satisfy health system requirements for personnel, just as the health system should strive to satisfy the needs of people. When resources are scarce, however, which people, which needs, and which methods of meeting these needs should be given priority? The seemingly rational criteria proposed by COHHRD for making choices were often lost in a sea of other considerations such as tradition, politics, ideology, drive for power or status, corruption, and inertia. For most countries, the objective of health for all and its implications for human resources development implied a major change in the societal values that influenced decision-making, values that were not easy to modify.

### 3.2.1 *Building a consensus and communicating ideas*

The Twenty-ninth World Health Assembly formally committed WHO to ensure that its programme for human resources development fully supported the development of general health services (*10*). This original commitment was preceded and followed by numerous statements and actions designed to build support for the COHHRD concept (*9*), and coordinated health systems and human resources development has figured prominently in WHO Programmes of Work since that time. WHO and Pan American Health Organization publications on human resources development have given increasing attention to the need for COHHRD and its practical application. The report of a WHO Expert Committee on Health Manpower Requirements for the Achievement of Health for All by the Year 2000 through Primary Health Care was especially relevant to building the consensus for COHHRD (*11*).

### 3.2.2 *Promoting high-level coordinating and policy bodies*

During the late 1970s, WHO recommended and encouraged its Member States to create national health councils able to help with the formulation, review, coordination, and evaluation of human resources plans and policy. This recommendation was proposed directly to countries, figured prominently in WHO country reviews, and was included in all documents that envisaged WHO collaboration with Member States. In some cases these councils were to have only an advisory role while in others they were to have policy-making responsibilities. In either event it was thought that such

bodies, with high-level representation from all the principal interest groups (different development sectors, institutes, universities, nongovernmental organizations, and professional bodies), could generate the kind of linkages and policy consensus that would make COHHRD an integral part of all health development efforts.

In a complementary effort during the early 1980s, WHO worked with selected Member States to promote what came to be called national health development networks (*12*). These networks were designed to bring together all those within a defined geographical region who were concerned with promoting health sector development, including human resources. In some cases these networks were primarily for communication and coordination, while in others it was hoped that they would have an active role in shaping policies and carrying out joint programmes.

With some notable exceptions, the results of these efforts have been disappointing. The many problems related less to the administrative arrangements than to the shortage of skills to make them work. Often there was a lack of shared, specific objectives to give meaning to the intended coordination and communication. The councils tended to be unduly dependent on the initiative of those who established them, and when the leaders changed they ceased to function. They were also plagued with high staff turnover, absenteeism, weak agendas, and limited secretariat support. Even when these problems were not overriding, many of the bodies met only sporadically or not at all. If their role was advisory, senior representatives were apt to attend irregularly or to send junior replacements. Only if they had a policy-making role might attendance be better—if only to safeguard individual and organizational interests. The clear lesson was that in the absence of the political will to change, and a reasonable consensus on the values which were to guide change, these councils were unlikely to have much effect.

### 3.2.3 *Country case-studies and reviews*

Country case-studies and reviews have contributed significantly to WHO's efforts to promote COHHRD.

1. They present an opportunity for WHO to help countries to find ways of applying the COHHRD concept to the solution of national problems.

2. They help WHO to monitor progress and problems related to human resources development, and to modify its efforts accordingly.
3. Cross-national reviews provide information of direct relevance to countries seeking to benefit from others embarked upon the same human resources development effort.

A recent WHO publication, designed "to serve as a general guide to countries contemplating a comprehensive, action-oriented review of human resource development in order to improve their national health systems" (*13*), provides a suggested method and illustrative information. The annexes contain four case-studies which demonstrate the remarkable amount of information that can be generated in a short time about how a country goes about planning and to what effect.

A related effort involved a trend analysis review, conducted by WHO in 1984–1985, to measure progress achieved by Member States in the human resources field towards implementation of the strategy of health for all. The survey, which involved countries from all six WHO regions, provided solid evidence of significant progress and of the many problems that countries still face in their efforts to make human resources more relevant to health needs (*14*). Numerous consultation documents and country reviews have examined specific topics and provide a rich source of information on how different countries have addressed similar problems (*4*, *15–19*).

### 3.2.4 *Promotion of innovative programmes*

WHO has actively promoted a number of innovative educational and service delivery programmes designed to demonstrate the value of COHHRD and encourage its adoption. One result of this effort has been the formation of the Network for Community-oriented Educational Institutions for Health Sciences. By 1989, this organization had united over one hundred community-oriented educational institutions, most of them relatively new, in order that they might help one another, and to gain acceptance of and accelerate the pace of change by encouraging other educational programmes to reorient their efforts. The first participants were mainly medical schools (*19*). In 1987 a similar network of community-based nursing programmes was created. Allied health programmes are also interested in forming a network. The impact of these networks on both education and services is likely to be far

greater than their membership size would suggest, and they may contribute significantly to the application of COHHRD and the speed of change.

WHO has also promoted innovative educational tracks in established institutions for the education of health personnel. Whereas the Network was founded by new institutions and many subsequent members were also new institutions, older, more conventional institutions seemed to have most difficulty in moving away from well-established patterns of hospital-based, patient-oriented care. In 1986, a WHO-sponsored conference in New Mexico brought together people from a number of the established institutions working on innovative tracks, to allow an exchange of experience and to strengthen their resolve (*20*).

### 3.2.5 *Training and educational support for COHHRD-related work*

WHO has allocated substantial resources to developing and disseminating improved educational methods and materials (*21*, *22*), and to the training of personnel involved in COHHRD-related activities. WHO's commitment to training was reinforced in 1983 by the Executive Board's resolution (EB71.R6) urging Member States to take action to improve their use of WHO fellowships in support of HFA. The priority areas during the period 1984–1989 included human resources policy and planning, management, curriculum design and evaluation, the preparation and use of teaching and learning materials, continuing education programmes, and health information systems.

## 4. REVIEW OF COHHRD IN PRACTICE

The Study Group assessed world experience with COHHRD by means of case-studies carried out in selected countries. Completed studies were received from seventeen countries[1] from all six WHO regions, reflecting very different social, economic, and political circumstances.

---

[1] Bahrain, Brazil, Costa Rica, Egypt, France, Indonesia, Israel, Kuwait, Malaysia, Mexico, Mongolia, New Zealand, Nigeria, Papua New Guinea, Poland, Thailand, and Yugoslavia.

## 4.1 Diffusion of the COHHRD concept

### 4.1.1 *Understanding and acceptance*

At the official level there is broad acceptance of the HFA goal through the strategy of PHC and of the importance of COHHRD. WHO has successfully promoted the COHHRD concept, but the main problem has been to put it into practice.

Some WHO regions felt that the presentation of COHHRD as a new concept with a new label may have hindered its acceptance. UNESCO has for years expounded a similar concept, and it was a major issue in the Faure report (*23*). Latin American countries were applying the COHHRD concept for over a decade before its formal endorsement by WHO, and the Colombian Study on Health Manpower and Medical Education (1964–1967) (*24*) sought to base planning efforts on COHHRD principles. The medical school at Beersheba in Israel, founded in 1972, and benefiting from WHO technical input, was also firmly rooted in the concept.

COHHRD is relevant to all countries, but particularly to developing countries, where there is an obvious gap between what *is* and what *should be*. There is no consensus that COHHRD is equally relevant throughout the full spectrum of economic and social development, or that a country's failure to integrate health systems and human resources development will necessarily result in wastage and lost opportunities.

COHHRD is only of relevance if Member States, as well as their educational and service institutions, understand that human resources have no meaning in isolation, but are an instrument for delivering necessary health care. If this is accepted and acted upon, then health personnel planning, production, and management will be coordinated. If countries do not accept this or cannot act on this understanding, then they will be obliged to bear the substantial cost of human resources inappropriate to their health needs.

### 4.1.2 *Country case-studies*

Twenty-five case-studies were reported from seventeen countries. Case-study authors[1] were asked to give a brief overview of the country concerned and the mechanisms affecting personnel planning, production, management, and distribution. They were also asked to give two examples—if possible, one favourable and one less favourable—of how the mechanisms had worked in practice. As might be expected, the following summaries reflect the enormous diversity of problems encountered.

*Bahrain*

Case-study 1: A College of Health Sciences was established in order to increase rapidly the supply of Bahraini health personnel. The project was highly successful in achieving this goal. Some disciplines are almost fully subscribed, while others have spare capacity. The problem to be solved was clear and finite, and coordination between the parties was good. Bahrain is now able to

---

[1] The case-study authors are recognized experts in the area of health systems and human resources development, and work in government, academic institutions, and other organizations. The principal authors, listed by country, are as follows: *Bahrain:* Dr A.M. Fakhro, Minister of Health, and Dr R. Fulaifil, Undersecretary, Ministry of Health, Manama. *Brazil;* Dr F.E. de Campos, Associate Professor, Federal University of Minas Gerais, Minas Gerais. *Costa Rica;* Dr G. Miranda, Executive President, Social Security Systems, and Dr L. Asis, Chief, Health Planning Department, Social Security Systems, San José. *Egypt;* Professor E. Ezzat, Dean, Faculty of Medicine, Suez Canal University, Ismailia. *France:* Professor J.F. d'Ivernois, Director, and Dr P. Klotz, Department of Health Sciences Education, University of Paris. *Indonesia;* Dr A. Gani (et al.), Chairman, Faculty of Public Health, Department of Public Health Administration, University of Indonesia, Jakarta. *Israel;* Dr M. Prywes, Chairman, Center for Medical Education, Ben Gurion University of the Negev, Beersheba. *Kuwait;* Dr M.A. Shah (et al.), Assistant Professor and Chairman, Health Information Administration, Faculty of Allied Health Sciences and Nursing, Kuwait University, Kuwait. *Malaysia;* Professor A.M.M. Roslani, Dean, School of Medical Sciences, Penang. *Mexico;* Dr G. Soberon Acevedo (et al.), Secretary of Health, Mexico City. *Mongolia;* Professor G. Jamba, Rector, State Medical Institute, Ulaanbaatar. *New Zealand;* Ms S. Shaw, Assistant Secretary, Workforce Development, Department of Health, Wellington. *Nigeria;* Professor O. Ogunbode, Dean, Faculty of Health Sciences, Ilorin. *Papua New Guinea;* Dr R.-L. Kolehmainen-Aitken, Officer in Charge, Policy and Planning Coordination, Department of Health, Boroko. *Poland;* Dr A. Wojtczak, Head, Department of International Health, Medical Centre for Postgraduate Education, Warsaw. *Thailand;* Professor V. Panich, Dean, Faculty of Medicine, Prince of Songkla University, Songkla. *Yugoslavia;* Dr V. Cucić, Institute for Social Medicine, Medical Faculty, Belgrade.

offer training support to other Gulf States in a number of disciplines, including training for doctors to meet regional requirements.

Case-study 2: The effort to replace foreign doctors with Bahrainis was less successful. A Central Training Commission was established to carry out comprehensive planning, but, despite nominal high-level participation by all major parties, the lack of effective authority over budgets slowed progress for some time. The Commission has since been given responsibility for budget review, and even for budget development, management problems are being addressed, and some progress is being made. The primary lessons were to recognize the importance of not planning in isolation, but of involving those who are responsible for implementation, and the need for comprehensive data.

*Brazil*

Case-study 1: Many established doctors have several jobs, so that newly qualified doctors may be underused or even unemployed. When a doctor holds many posts in both the public and private sectors the result is service fragmentation and numerous referrals between these sectors. Efforts have been made to commit doctors to a single specialty, to integrate services previously in separate ministries, and to decentralize services to agencies closer to the population. This last measure has led to further fragmentation as each sector develops its own personnel policies, and there is often poor liaison between those institutions training health personnel and those where they will later be employed. The slow, transitional approach to reform has not worked well and it may be preferable, if politically feasible, to implement a single, sectorwide policy to reduce multiple job occupancy.

Case-study 2: Understaffing and lack of management have adversely affected the performance of the health sector. A National Conference on Human Resources for Health took place in 1986 to discuss problems and make recommendations. Academic Centres of Support were formed which prepared training modules and offered courses to update management and technical personnel. The courses promoted beneficial contacts between the Centres and the service provider network. These courses will need to be updated regularly.

*Costa Rica*

Case-study 1: Previous studies revealed dissatisfaction with the organization and delivery of ambulatory care. In 1987, a model pilot

programme was rapidly implemented, and patients were invited to choose their own doctors. The programme got off to a difficult start because of inadequate coordination between the health and education sectors, lack of agreement on goals, and insufficient time for orienting clinic staff.

Case-study 2: A pilot family medicine clinic was set up within the health and social security system. The social security system provided therapeutic services, where the patients could choose their own doctors, while the Ministry of Health funded preventive services and student teaching. This programme got off to a good start and has demonstrated the benefits of careful planning, close co-ordination, and appropriate personnel training.

*Egypt*

During the 1930s and 1940s the Ministry of Health was responsible for health services and human resources development. An extensive network of health centres was developed, staffed by doctors trained for this task. This system became progressively undermined with the creation of new universities which followed the model of the industrialized countries. The medical graduates became less suited to the centres and by the 1950s and 1960s the most able sought specialization, often abroad, and tended to avoid Ministry service. Despite sporadic efforts to revitalize the health centre programme and to reorient medical education, the general situation has improved little. Several conferences were held and changes were recommended, but few of these have been implemented. A National Health Council was set up more than a decade ago to improve coordination, but became less effective with ministerial changes. In 1977, a small community-oriented medical school was started in Suez in an effort to make training more relevant to service, but its impact on the health system remains small. There are currently about 4000 health care centres, many of which do not function well, and most of the health budget still goes into hospital care. The Ministry of Health is attempting to improve the situation through better management.

*France*

Case-study 1: Medical student enrolment increased rapidly after the introduction of an open admissions policy in 1967. In response to the uncontrolled increase in the supply of doctors, restrictions were introduced in 1972. A committee of representatives of different

interest groups was formed to control and coordinate medical school admissions and hospital attachments. In time, annual admissions dropped from about 11 000 to 4400. Although the policies worked eventually, the coordinating committee has had difficulties and the Ministries of Health and Education have had to negotiate compromises. Whether admissions will continue to be kept under control is uncertain.

Case-study 2: Most medical graduates specialize and there is a shortage of general practitioners. Several interministerial commissions with broad representation made recommendations to improve the situation, but implementation has been slow and the results have been limited. The low income and status of general practitioners, divided management, lack of funds for training, and overlap and confusion among the various commissions remain outstanding problems.

*Indonesia*

Human resources requirements had been projected to the year 2000 and the priority had been to increase the number of paramedical personnel. Owing to an economic recession and a reluctance to work in less popular areas, many graduates are now unemployed. Other problems have included an inability to recruit and retain doctors in remote areas, low staffing levels and productivity, and poor motivation of staff due to lack of incentive. Policies are under review or being implemented to improve motivation and productivity, and harmonize staffing levels, using the Indicators of Staffing Needs established during a number of projects. Human resources planning and management are complicated by inadequate information and the bureaucracy involved in authorizing and financing posts.

*Israel*

A tripartite agreement between the Ministry of Health, the Ben Gurion University of the Negev, and the Kupat Cholim (Labor Union Health Insurance) was signed in 1973 to establish the University Center for Health Sciences and Services in the Negev (UCHSS), which was opened in 1974. The basic aim was to integrate primary, secondary and tertiary health services in the Negev and link them closely with educational planning. One person was in charge of both health services and the education programme and was appointed Director of Health Services for the entire region as well as

Dean of the Faculty of Health Sciences. The UCHSS is now sixteen years old and the implementation of the programme has generally been a success. Primary care is promoted and the students gain clinical experience during their first year. The basic sciences and clinical medicine are integrated, with problem-based teaching, self-tuition and community orientation—with active participation of the students. The integrated service and training system is now established, although fewer than half of the graduates choose to remain in the region. A single leader, team implementation, wide consultation, and the recognition of students as the leading edge for change are factors in the programme's success. Despite this success, the programme has been hampered by the need for each of the regional authorities to consult with the Ministry over major decisions.

*Kuwait*

The case-study traces efforts over more than twenty years to introduce health personnel planning and improve health services. Initial planning was handicapped by inadequate data, lack of experience, and poor coordination. Training of health personnel has fallen far short of planned targets. Planning, coordination, and data have improved, but owing to training deficiencies, the lack of appeal of certain careers to Kuwaitis, and unrealistic assumptions, implementation targets have not been met.

*Malaysia*

Case-study 1: Medical schools along traditional lines were established in 1963 and 1972. Instruction was based largely in hospitals and university departments. Partly in response to concern about the lack of relevance of existing medical education, a third medical school was founded in 1979 where community-based and problem-oriented instruction was emphasized. Such instruction now accounts for more than one-fifth of the medical school timetable. Community-based learning is now a reality, and although the universities' desire to retain autonomy has slowed further developments, increased dialogue and flow of information between the parties are helping to sustain change.

Case-study 2: In 1986 the Government established for the first time national priorities for research and development, with medicine in second place behind agriculture. Within the health sector there was limited implementation of priorities during the first year. To

rectify this, a seminar was convened with representation of interested parties. Good communication was established and priorities were defined, including for the first time health systems research.

The two Malaysian case-studies demonstrate the importance of a national will for change and good communications.

*Mexico*

This long and complex case-study describes the evolution of human resources development, particularly during the past twenty years. The primary focus is on medical education, although major developments in other areas are also mentioned. The route to integrated human resources development, covering planning, production, and management, has been a long and tortuous one, described in three stages:

1. The *intuitive stage* (1910–1970) was marked by efforts to link professional education with the need to recruit staff—measures such as compulsory social service for graduates and the development of mechanisms to train and upgrade health staff.
2. During the *academic stage* (1971–1982) there was increasing recognition that health needs could not be met by doctors alone and that an imbalance existed between production and needs. For example, in a single decade the number of medical schools increased from 30 to 57 and, at its peak, the annual supply of doctors rose by 19.6% compared with a 3.4% population growth. There were four times as many applicants as vacancies for specialty training. As a result of these pressures attempts were made to coordinate the educational and health sectors.
3. The current *organic stage* began in 1983 with the National Development Plan, and there is growing evidence that personnel programmes are being incorporated into more comprehensive schemes of human resources development and that multisectoral links are being forged by all concerned. The progressive decentralization of health services and the creation of an Inter-institutional Commission for the development of human resources for health have been important developments. Working groups where the education and health sectors meet have been established within states. The many obstacles to these developments, as well as recent efforts to train doctors and nurses for leadership in primary health care, are described in the case-study.

The Mexican case-study shows that, despite all the difficulties, important progress is being made. By the 1980s, national and state mechanisms existed to plan policy and, in some cases, to direct or oversee its implementation. The following are some of the key points to have emerged from this experience:

—mid-term and long-term strategic plans are essential for change, since anything less means acceptance of the *status quo*;
—communication and coordination among all interested parties are essential;
—shared information need not reduce administrative autonomy, as feared by the universities, but allows all concerned to work towards reasonable solutions; and
—human resources planning must not occur solely at the institutional level, but also at a higher level in the system and should be done by trained interdisciplinary personnel working in a stable setting.

As PHC became increasingly important, it was clear that some of the work had little to do with direct medical care and hence required the involvement of non-medical personnel. The Mexican example also shows how the nature and composition of the various coordinating bodies will depend mostly on the size and administrative structure of the country. In Mexico, with a population of 80 million and a federal structure, much of the policy-making and planning necessarily take place at the state and district levels.

*Mongolia*

Despite considerable progress, the health system still has shortages of personnel and equipment, unequal staff distribution, and insufficient ambulatory care facilities. To overcome these problems, the medical curriculum was recently updated to embrace new concepts of health care. Much work has gone into improving the quality of paramedical training, and a unitary system to raise the standard of qualifications of medical staff has been established. Continuing education courses are offered regularly at base facilities and in rural areas. Planning procedures have evolved in which all those concerned with the provision of health care can take part.

*New Zealand*

Case-study 1: This study describes the generally successful efforts to reform medical and nursing education, to increase the involvement of the indigenous Maori and Polynesian communities (about 12% of the population) in the health system, and to make health services more relevant to their needs. Three major workshops initiated these efforts—for the Maoris and for doctors in 1985, and for the nurses in 1987. The meetings were preceded by many months of work by a steering committee which consulted with all interested parties. Several hundred applications were received for the doctor and nurse workshops, and participants were broadly representative of both the health sector and diverse sections of the New Zealand population. The reports were unanimous in calling for major changes, and were widely publicized and discussed. Their implementation is proceeding, although at a rather slow and uneven pace.

Case-study 2: This study describes efforts to update health system management structures and methods. A one-day workshop was organized during the visit of an overseas management expert. This workshop resulted in the creation of a Health Services Management Development Unit. A Top Management Programme was introduced in 1988 and an Advisory Group to the Unit, as well as several management training schemes, were established.

Both case-studies took place during a turbulent period of rapid change in New Zealand's health system. There was agreement about the need for change, but significant disagreement about its pace and direction. Much of the success so far achieved can be attributed to wide consultation and the active involvement of all concerned, as well as to good communication throughout the implementation phase. Although slow and cumbersome at times, this process ensures that proposed changes are both acceptable and practicable.

*Nigeria*

With a diverse and predominantly rural population exceeding 100 million, an annual growth rate of 3%, per capita income of under US$ 200, and high morbidity and mortality, Nigeria needs better primary health care. Until the mid-1970s, however, Nigeria's medical schools provided a traditional hospital-based, didactic education. In 1978, the Government decided that new medical schools should train doctors to meet community needs, with the emphasis on primary health care. A few of the second-generation

medical schools developed innovative community and problem-based learning programmes, and other medical schools have moved gradually in this direction so that the community medicine component of the average curriculum has increased from 3% to about 10%. Although change continues, it has been neither uniform nor easy. Traditional schools fear a decline in the quality of teaching, and lack of data masks the size of the problems. Moreover, mechanisms for linking federal and state initiatives are inadequate. The study concludes that Nigeria needs estimates of national requirements according to occupation; that national quotas should be established for the various professions before action is taken to integrate training; and that human resources development should be brought under an umbrella organization, just as university education is under the National Universities Commission. The promotion of primary health care will require the clear identification of those responsible as well as greater funding of training within villages.

*Papua New Guinea*

This detailed case-study describes the benefits and unexpected problems affecting human resources development that arose after a major shift of administrative authority from the national to the provincial level. Although decentralization was first proposed in the mid-1970s, central opposition delayed full implementation until about 1983. This delay had a profound effect upon health personnel policy and planning. At the national level, the quality of the data on health personnel had fallen and at the provincial level had become very uneven, so that estimates might be unrealistic. Some provinces gave little consideration to human resources. The ability of wealthier provinces to supplement salaries from their own funds and to seek increases in public service gradings ran the risk that salary differentials would develop between provinces that could affect personnel deployment. Finally, a loss of national ability to plan and coordinate training led to an unpredictable output of graduates, uncertain prospects for employment, and a declining ability to provide in-service and continuing education.

Although decentralization has generally resulted in efficient and effective management in most provinces, the effects on human resources development have been largely harmful to working relations between the national and provincial levels. The priority

during the past few years has been to develop supportive relationships within the workforce and coordinated policies, plans, and standards based on broad consultation. The internal organization and structure of the Department of Health are being examined to make it more responsive to provincial needs.

This study is of particular interest since Papua New Guinea is beset by the many problems of developing countries. With a population of 3.5 million, speaking more than 840 languages, and where up to a third of the inhabitants belong to population groups that have had little more than fifty years of contact with the outside world, Papua New Guinea has had both the advantages and difficulties of not having an established health system upon which to build. In the past, each tribal group looked after its own health needs as best it could with little reliance on central government. This self-sufficiency is now breaking down rapidly and new relationships are being forged, but at the price of much of the sense of community that existed previously.

*Poland*

This study describes the shift in emphasis from an increase in the quantity of health personnel in the early postwar period, to an improvement in the quality of training and performance. The medical school curriculum was lengthened, a two-year internship was introduced and later reduced to one year, more use was made of provincial hospitals for instruction, the number of examinations was reduced, and less emphasis was given to didactic instruction. The changes have been generally successful and medical faculties not only work reasonably well with provincial and lower level hospital authorities, but also are more familiar with community health problems—although in the process it has become more difficult to carry out basic medical research.

*Thailand*

Case-study 1: The Ministry of Health has tried, as yet relatively unsuccessfully, to slow down the increase in the number of medical specialists and to boost the number of general practitioners (GPs). The National Medical Council is responsible for specialist training, but lack of integrated planning, poor definition of GP responsibilities, reluctance to certify experienced GPs without

formal examination, low status and pay of GPs, and failure of the National Medical Council to recognize that most GPs will hold non-specialist posts in small hospitals, have resulted in little change in the situation. Acceptance of COHHRD in this context, even in principle, is blocked by opposing social, cultural and professional pressures. Primary health care and HFA policies favour an increase in the number of GPs at the expense of specialists, which would run counter to certain vested interests. Inflexibility and bureaucracy may impede the implementation of plans, especially in the absence of widespread support for change.

Case-study 2: In the early 1970s, problems of shortage and maldistribution of doctors arose, and a "brain drain" became apparent. By the end of the decade there was general agreement about the causes of these problems and their remedies. Study workshops helped to establish an effective COHHRD network, documentation was good, and decisions were taken to expand and reform medical training. A pilot programme showed that the quality of medical graduates was not compromised by a shortened and revised curriculum, and these changes were gradually extended. This experience showed that COHHRD can be effective with careful planning, good information, efficient administration and an appropriate use of pilot programmes. However, despite this success, the first case-study seems to imply that COHHRD efforts will probably be insufficient to take on projects that call for substantial change in opposition to vested interests.

The Thai experience also illustrates the importance of nongovernmental organizations in deciding policy. In one example, for about 15 years new medical graduates have been required to work for three years in a rural location. This led to the formation of an association of rural doctors which helps to guide and support those performing their rural service. It also provides a useful link between practitioners, the medical schools, and government.

The Ministry of Health has also used its need for research and technical advice as a means to further COHHRD, and has convened many groups of experts drawn from clinical, epidemiological and other disciplines to advise on specific health problems or research priorities. Through their discussions, which aim to provide practicable and affordable recommendations, these experts—often from universities—gain first-hand experience of the importance of COHHRD.

*Yugoslavia*

Case-study 1: Various policies were considered to improve the distribution of primary health care personnel in Belgrade. Significant redistribution was achieved by transfer of both personnel and patients to underused centres. Some doctors resisted these changes even when their new posts were closer to home. Maldistribution of personnel is difficult to correct, especially if there is limited time—as was the case in Belgrade—and if staff have become well established in their locations.

Case-study 2: Many attempts were made to establish a General Medicine Centre designed to improve the training and status of GPs. These attempts failed despite nominally high-level support and considerable effort. Some of the reasons were that:

—the practice of general medicine depended too heavily upon GPs alone;
—the effort was not sufficiently sustained;
—decision-making was diffuse and *ad hoc*;
—decision-making bodies did not have the power to implement agreed changes; and
—the service and educational institutions worked almost completely independently.

Yugoslavia is yet another example of a common situation where there has been a slowing down or even reversal of early efforts to promote primary health care. Since the 1920s there has been a strong movement to establish health centres in most communities and to staff them with trained personnel. With greater opportunity for postgraduate specialization, there have been fewer non-specialist doctors available to fill these posts. The diversity of the Yugoslav population and a high degree of regional autonomy make agreement on the preferred approach to primary health care, and hence to human resources development, very difficult.

## 5. LESSONS LEARNT FROM THE APPLICATION OF COHHRD

### 5.1 Validity of the COHHRD concept

Human resources for health should be relevant to the particular health system, and the health system, in turn, should be relevant to

the health needs and demands of the population—within the limitations of available resources. Until the introduction of school and university training of health personnel, those who provided health services learnt as apprentices that training and practice were fully integrated. This integration has gradually been lost, and now the task is to bring it about once again. The central problem is to find ways to realize this aim in a world where low priority is given to the goals of equity and maximum achievable effectiveness.

The COHHRD concept appears, in fact, to be widely applicable to issues quite apart from health, and it may be unrealistic to expect that COHHRD can be achieved in any country independently of what is happening in the economic and other sectors.

## 5.2 Usefulness of the COHHRD concept

For COHHRD to be a realistic objective, most people involved in the human resources development process must have the following characteristics:

1. They must share similar goals for the health system, which, in the context of the 1978 Alma-Ata conference and subsequent developments, implies a shared commitment to strive towards health for all by a strategy of primary health care.
2. They must see COHHRD as being part of a *positive sum game*. This implies that most or all parties can gain from integrated COHHRD, in contrast to the more traditional view of COHHRD as a *zero sum game*, in which for every winner there must be a loser.

Even a cursory review of the history of human actions, including those affecting the health sector since 1978, gives reason to question the likelihood of this being the case. In many countries, the actions of institutions and individuals have hardly begun to bring about the changes necessary if the national goal of health for all is to become reality. With differing goals and limited resources, many institutions and individuals continue to see COHHRD as a zero sum game which is either won or lost.

## 5.3 Outcome and evaluation of COHHRD

In 1976, Fülöp stated:

> As the main aim of the integrated health manpower development process is to contribute to the strengthening of health services, there is only one yardstick

> for measuring the effectiveness and efficiency of this process: how far and with what results has it contributed to the development of health services and thus to the improvement of the health status and quality of life of the population. That is the real meaning of the so-called [COHHRD] concept. (*6*)

This yardstick, as is true of most attempts to evaluate what happens in a social sector programme, is hard to apply. Indeed, it could be argued that there are other more important determinants of health status, such as efficient food distribution and good sanitation, than the characteristics of a nation's health services. However, in the reviews and country case-studies, there is an overall impression of gradual progress because of increasing awareness and application of the COHHRD concept. In addition to the case-studies, the personal experiences of Study Group members, while not truly representative of global experience, are interesting and informative.

### 5.3.1 *Health personnel policy and planning*

The case-studies from Bahrain, Egypt, Kuwait, Malaysia, Mexico, and Papua New Guinea describe efforts to influence national planning and policy. In Bahrain and Kuwait, efforts to address well-defined problems and to take prompt corrective action as obstacles arose were generally successful. By contrast, in Egypt efforts have been thwarted by insufficient and inconsistent use of established coordinating and policy-making mechanisms. Experience in Malaysia confirms the importance of strong leadership and the likelihood that most change will occur by small increments. Since leaders can seldom shift the entire system, opportunities for change must be seized when they occur. Mexico has the longest and most complex history of efforts to bring about change, and although the COHHRD mechanisms now seem to be functioning reasonably well, the path has not been easy. Persistence, the use of pilot bodies and programmes to test out new ideas and of technical advisory committees for specialized help, emphasis on long-range planning and strategy, and the involvement of senior officials throughout the process have all contributed significantly to progress. The Papua New Guinea study illustrates what can occur when a commendable policy, decentralization, is implemented, but a specialized function, human resources policy and planning, is lost in the reorganization.

### 5.3.2 *Improved ambulatory care*

The two Costa Rican studies suggest that advance planning, coordination and training can contribute to success, but that complex projects requiring changes in attitude and behaviour take time. In Botswana, in the face of a shortage of both doctors and hospitals, a candid assessment of needs and resources led to a decision to train primarily nurses and community health workers, who would be cheaper than doctors. Training and deployment of these and other health workers proceeded in line with COHHRD principles, and considerable progress has been made towards meeting the basic health needs of the population.

### 5.3.3 *Educational programmes*

The studies in Bahrain, Israel, New Zealand and Poland describe generally successful programmes which demonstrate the merits of broad and sustained consultation about necessary changes. The Bahrain, Israel and Poland studies also illustrate the benefits of joint health ministry and university management of at least part of an educational programme, and the importance of linking such a programme with the service programme that will later employ the trainees. The experience in Malaysia, Mexico, Nigeria and Thailand shows both what can be achieved and the difficulties encountered when traditional educational programmes are changed. In all four countries some progress was made, but, despite nominal high-level support, change was slow and often limited to a few institutions. In Bahrain and Mexico, national health councils made an important contribution to progress. Pilot programmes of community-based instruction in several Mexican medical schools did not automatically lead to wide-scale application of the new approach. They did, however, serve to promote ideas, to test methods, and to develop leadership skills—in essence, to influence progressively the traditional educational system.

### 5.3.4 *Doctor surplus*

The French and Mexican studies show that when there is a large surplus of doctors, the health establishment can join forces to bring about change despite consumer, health sector, and even health ministry opposition. However, despite successful efforts to change

policy, it seems that a critical situation must be reached before action is taken.

### 5.3.5 *General and family practice*

France, Thailand and Yugoslavia all tried to strengthen the role and the numbers of family practitioners, but with only limited success—witness to the difficulty of bringing about changes in status, pay, and image of a professional category in the face of a strong drive towards urban specialization.

### 5.3.6 *Personnel redistribution*

The Yugoslav study describes the difficulties of redistributing personnel once maldistribution has occurred. Personnel distribution should be relatively easy to direct in the early stages of health system development and is easy to monitor over time. If maldistribution does occur, even the application of COHHRD principles may have little effect on the situation.

### 5.3.7 *Research*

The Thai study shows how, by taking opportunities to combine forces and make a good case for change, health sector power can be increased in the never-ending struggle for resources. Botswana is carrying out field research and programme evaluation to assess the effectiveness of its PHC activities and personnel. The results of these investigations will be used to improve personnel training and management, and to promote community participation.

Surprisingly, not one of the case-studies makes explicit reference to COHHRD, or previous terms, even though this was the central concept of the exercise. While this is probably unimportant for an assessment of COHHRD accomplishments, it does illustrate the difficulty of relating the COHHRD concept to what happens in practice.

## 5.4 The contribution of WHO to the application of COHHRD

WHO has encouraged technical cooperation with countries, country reviews, training and fellowship activities, and the

establishment of networks to promote innovative change. Frequent reference to COHHRD has also been made in official pronouncements and publications explaining COHHRD principles and their practical application.[1]

The individual or overall impact of these efforts is hard to assess. In an evaluation survey carried out in 1985–1986, WHO found that neither investigators nor local health workers could make any judgements about the effectiveness of WHO's efforts to promote COHHRD in the 12 countries studied (*14*). Similarly, the 25 case-studies described in this report show no evidence of the effect of WHO's efforts to promote COHHRD. However, such an absence of evidence is probably of little importance in assessing WHO's impact, since COHHRD calls for major changes in thought and action, and these in turn are likely to be gradual and the result of many diverse efforts quite apart from those of WHO. It is probably unrealistic to expect that WHO's impact could be measured separately among all the other forces acting on countries in such a broad undertaking as COHHRD.

WHO has made a substantial contribution to COHHRD by helping to create and sustain networks of innovative community-based educational programmes in several disciplines.[2] The support of WHO has had a positive impact both on the network participants themselves and, because of their influence, on some of the more traditional programmes in their home countries. The number of innovative programmes has since grown rapidly, and although there are few compared with the number of medical and nursing schools worldwide, their influence is disproportionately great.

WHO has been instrumental in the promotion of health and human resources development activities at the district level. The district is especially important because of its operational role in the delivery of care, the broad variety of skills available for community-based programmes, and the extensive education and training that take place at district level institutions.

WHO is also beginning to play a significant role in mobilizing additional support from external sources for human resources

---

[1] A selection of WHO publications on these topics appears on the inside back cover of this report.

[2] Such networks include the Network of Community-Oriented Institutions for Health Sciences, the Global Network of WHO Collaborating Centres for Nursing Development, and a network of projects linked through the WHO Health Learning Materials Programme.

development. WHO collaboration with international banks and nongovernmental organizations has enabled countries to develop projects and obtain resources for COHHRD-related activities.

The Study Group identified some ways of increasing the effectiveness of WHO's support for COHHRD, as outlined in section 7.1, p. 47. In addition, it felt that WHO country representatives would benefit from being better informed about the importance of COHHRD and its networks and should be more active in its promotion. The representatives could also help with the exchange of information about institutions involved in COHHRD and with the linking of the educational and health care delivery systems.

## 5.5 Problems with the implementation of COHHRD

The Study Group identified 12 major areas where problems had arisen.

### 5.5.1 *Decision-making*

Most decision-making is rational, but sometimes the reasons for making a particular decision are not explicitly stated, are not even recognized by those in authority, or differ from those used by planners. Unfortunately, when implementing COHHRD, as with many other precepts of health planning, it is often assumed that most of the important reasons for choosing among options will be self-evident to well-informed people of common sense. It is important to acknowledge that both individuals and organizations hold many complex and often contradictory values which are powerful determinants of action. A good leader must understand this environment in order to devise ways of enhancing the importance of some values and minimizing that of others. Ultimately, ways must be found of providing all affected groups with at least some benefits from the desired change. Values and rewards are especially important considerations that enter into the rational basis for decision-making.

*Values*. The behaviour of both individuals and institutions is powerfully influenced by the values they hold. As a result, complex and controversial endeavours will usually encounter covert, if not open, opposition. For example, a proposed immunization programme is unlikely to be at odds with community values, and

hence would gain support without difficulty. The objective of HFA, however, is a far more complicated issue and may elicit strong, though covert, opposition, especially if seen as a threat to the allocation of existing resources. Moreover, the different value systems and attitudes of the various participants in the COHHRD process, such as professional associations, educational institutions, and health facilities, can make consensus difficult to achieve. The case-studies from Egypt and Thailand illustrate some of these problems.

*Rewards.* As with values, various interest groups and institutions have quite different reward systems which shape their behaviour. COHHRD implies that all groups will benefit, whether tangibly or not, from work directed at meeting the health care needs of the population. However, the size and nature of these rewards will vary according to occupation, and such discrepancies can hinder cooperation among those concerned with health personnel production and management.

### 5.5.2 *Political and financial support*

Political or financial support may be lacking because of low priority being given to planned change or fear of the possible effects of such change. Authorities rarely generate so much opposition as when they advocate major changes in the production and management of health personnel. Sadly, this immediate and vigorous opposition by established interest groups can hardly be matched by the much slower, more diffuse support that might eventually come from those likely to benefit from change. As political support diminishes, so, too, does financial support. Two examples are illustrative. The first concerns the demise in the 1970s of a national unit in a large country which collected and published data on human resources for health. As this unit came into full operation, established interest groups became increasingly concerned about the pressures that might build up for government-led change. This concern was converted into political pressure. Using the ostensibly rational argument that the unit was merely duplicating existing, private-sector data collection activities, the unit's budget was progressively reduced until it could no longer carry out its intended functions.

The second example concerns Latin America where, during the 1960s, many governments became more conservative and tended to

see innovative community-based training and service delivery programmes as a potential threat. This in turn led to reduced financial support and fewer opportunities for new leadership to gain advancement.

### 5.5.3 *Problem definition*

The way in which a problem is defined helps to identify its solution. In simple terms, if policy-makers believe that a lack of care is due largely to a perceived shortage of doctors, the search for a solution will probably centre on ways to increase their supply. COHHRD requires an open mind and a readiness to examine all types of evidence before reaching a diagnosis and searching for solutions.

### 5.5.4 *Planning capability*

Despite considerable progress with COHHRD planning, the limitations are still conspicuous. The principal problems are:

- lack of or limitations on planning methods;
- lack of skilled, long-term personnel for planning;
- excessive emphasis on the quantitative at the expense of the qualitative aspects of planning, resulting in posts being filled by inadequately or inappropriately trained staff;
- poor communication between planners and policy-makers;
- insufficient attention to long-range strategic planning; and
- failure to take into account economic and managerial realities.

Insufficient and inappropriate training in human resources development have hindered the acquisition of planning skills. Besides advanced skills in planning, those involved in this field must also have a sound knowledge of policy analysis, data collection and management, economics, epidemiology, and the social and political sciences. While part of this training may be theoretical, it should also be taught in the practical context of tackling human resources development problems. Good communication skills are also required at every stage of the planning process.

### 5.5.5 *Data systems*

The Study Group, in its review, found frequent references to data system deficiencies in many countries. These included limited data

coverage, slow, incomplete or erroneous reporting, inappropriate, inaccurate or irrelevant data, and antiquated or even unserviceable arrangements for data storage and retrieval. While these problems seriously hinder planning, they are perhaps of even greater consequence for programme and human resources management. Human resources development policy is often difficult to establish, and once *in situ* takes a long time to be changed or redirected. Consequently, if there is a long delay between an event and information being available for the policy-maker, the resulting decisions may be irrelevant or even counterproductive. The recommendations of a WHO Study Group on this specific topic should make a valuable contribution to easing the problem (*25*).

### 5.5.6 *Participation*

COHHRD, like HFA itself, is founded on the assumption that the health system is designed to meet the needs of the whole population. These diverse needs will only be met if all involved have a chance to participate in the COHHRD process. Hierarchical planning, or sometimes a lack of democratic institutions or experience in making them work, has often undermined efforts to achieve COHHRD. Moreover, the tendency to compartmentalize health personnel according to their specific disciplines, such as medicine, nursing, or dentistry, complicates the process of integrated planning for the entire health team.

The problem of insufficient participation and involvement is complicated by the many ministries, agencies, institutions, and groups that have an interest in human resources development. New coordinating bodies may be created with little consideration given as to how they will relate to or replace existing ones. Institutional and territorial jealousies are recognized barriers to effective policy coordination.

A further impediment to involvement, at least at the higher levels of the system, is the lack of stable mechanisms to facilitate communication and coordination. There is a need for each country to create a permanent mechanism for the functional integration of health services and personnel development. The absence of such mechanisms in many countries remains a major obstacle to COHHRD. WHO has promoted the development of high-level coordinating bodies in a number of countries, but for the most part they have been ineffective. Reasons include:

- failure to sustain high-level participation;
- changing membership and political priorities;
- irregular meetings which are eventually suspended;
- failure to find consensus values upon which to base policy;
- excessive time spent on minor problems, and too little on major ones; and
- inadequate or uncoordinated staff work between meetings.

However, where these bodies have been effective there has been better problem definition and policy coordination, improved links between the health and education sectors, high-level commitment leading to policy implementation, and proper evaluation.

Several WHO studies describe the many mechanisms used by Member States to improve coordination (*12*, *13*), and future evaluations may identify improved predictors of success or failure. There remains the need for better mechanisms at all levels of decision-making. The challenge is to convince participants that COHHRD is a positive sum game where nobody loses.

### 5.5.7 *Costs*

Health personnel salaries usually account for about two-thirds of health sector costs, and the costs of professional education weigh heavily on university budgets. In the drive to meet health care needs, educators, planners and administrators often ignore the recurrent costs implicit in their projections of personnel requirements. Even when economic considerations are taken into account, future need is often based on the most optimistic assumptions. As a result, hospitals remain closed or understaffed because of financial constraints, educational and service programmes become top-heavy with high-cost professionals, and the service sector becomes highly vulnerable to economic recession and to the unanticipated impact of an aging population, new technologies, and price changes in the international markets. Better COHHRD demands greater economic awareness and sensitivity in all areas.

### 5.5.8 *Human resources management*

Integrated human resources planning, production, and management, in an often confusing and hostile environment, can make heavy demands on a country's managerial expertise—already a scarce commodity. The Interregional Consultations on Health

Manpower Management, held in Tashkent (*4*) and Bangalore, provide examples of the effects of poor management, and lament the lack of investment to improve it. In order to address these concerns, WHO has produced publications and documents on training and the preparation of performance indicators (*26–30*).

### 5.5.9 *Technology*

Both WHO and its Member States are aware that many countries adopt clinical, educational, and administrative technologies inappropriate to their circumstances. Examples include the use of advanced clinical and diagnostic technologies without the money to maintain them, and the uncritical adoption by a poor country of a health service structure designed for a wealthy country with a very different health system and pattern of disease. The desire to modernize is understandable, but such inappropriate technology can seriously impede the implementation of COHHRD.

### 5.5.10 *Parallel development of health and human resources systems*

Some notable early COHHRD successes have foundered because of slow progress in related areas. One example is that of the Cali medical school in Colombia, which, in the early 1970s, modified its curriculum towards more community-based teaching. However, in the absence of parallel changes in the way that health personnel were paid and employed, most of the graduates of this promising new system were obliged to revert to traditional patterns of medical practice. The new medical graduates of the University Center for Health Sciences and Services in the Negev, Israel, and the Aga Khan University in Pakistan—trained intensively in community health —risk the same fate. In both countries, local authorities and the universities are together seeking ways to ease and contain the problem. In any country there will always be a few institutions willing to experiment with change, and in most cases it is the educational institutions that are more innovative than those responsible for service delivery. Ultimate success depends upon coordinated change taking place throughout the entire system.

### 5.5.11 *Leadership*

Many obstacles to COHHRD could be overcome or eased if there were strong political and technical leadership. The lack of such

leadership could be further complicated by an inward-looking defence of prestige, power, and position by the organized health professions at the expense of the greater good. This reluctance to seek a just balance between the legitimate needs of a profession and those of society in general has been a major obstacle to reform.

### 5.5.12 *Human resources development research*

Extensive research has been carried out, especially in the industrialized countries, on diverse aspects of human resources development. Although much of it is poorly designed or of limited relevance beyond national borders, some of the results have wide applicability. A lack of concise summaries and difficulty of access to this information slow the dissemination of potentially valuable experience. Moreover, research into the major recurrent problems that affect human resources development could greatly benefit COHHRD.

Beyond its role in programme evaluation, research generates new knowledge and improves decision-making. Simply by participating in research, people are obliged to work together in multidisciplinary teams, to be more precise in their identification of problems, and to maintain concern about the effectiveness of the system in which they work.

## 5.6 Country attitudes towards COHHRD

It is apparent that there is no single way to promote and implement COHHRD; the starting point for countries varies widely and each must find its own best route. Consequently, country attitudes towards COHHRD and its application vary enormously. Some countries are indifferent or, at the other end of the spectrum, antagonistic, but most fall into one of five broad categories:

1. Relations between institutions concerned with health and human resources development are largely ceremonial.
2. Reciprocal representation exists among the various institutions but there is little discussion or joint action.
3. Joint reciprocal appointments exist between the various teaching and service institutions to allow communication and cooperation in areas of mutual concern.
4. Training and service institutions either share or are separately responsible for training in designated service areas.
5. A single authority has responsibility for all training and service provision.

Of those countries that have at least attempted to promote COHHRD, most probably fall into the first two categories. The goal for the future is that each country should move from its present position, wherever that may be, to a level lower down on the above list of categories—at least to level 4.

COHHRD is not intended to bring about revolutionary or radical change. In society, goals are reached as a result of many small changes that take place over time. Change is more likely when COHHRD is applied to the solution of finite, well-defined problems, although major system changes are sometimes necessary before progress is possible. The case-studies show repeatedly how easy it is to underestimate the time required to achieve even relatively small objectives. Planners tend to have a strong technical bias and may not fully appreciate the human implications of change, or think that they are somehow less important in the health sector than in others.

## 6. CONCLUSIONS

The COHHRD concept is concerned not only with education and training, but equally with policies, planning, and management. COHHRD also implies that a country's health system encompasses all activities that promote health and a better quality of life, such as prevention and treatment of disease and disability, and is thus concerned with far more than the simple delivery of medical care.

COHHRD focuses attention on both the health system and its human resources. The health system should strive to meet the predominant needs of the entire population and not just certain sectors—an aim embedded in the commitment of Member States to the attainment of health for all by the year 2000 through a strategy of primary health care. The term "human resources for health" encompasses all those who contribute to the objectives of the health system, whether or not they have formal health-related training or work in the organized health sector. The effectiveness of the health system will depend mostly upon the degree to which human resources development and health system development occur concurrently and with the closest possible coordination.

## 6.1 The evolution of COHHRD

Interest in human resources development existed long before the formal introduction of the COHHRD concept by WHO in 1976. This subject took on new importance, however, with the 1978 Declaration of Alma-Ata. It became clear that the objective of health for all by the year 2000 could only be achieved by a strategy of primary health care, which, for most countries, would require substantial changes in the health system and health care personnel. If the widening gap between the health and human resources development systems is to be reduced, policy and planning in the two systems will have to be more closely coordinated. Since the early 1980s, both WHO and its Member States have been intensifying their efforts to promote COHHRD in their policies and programmes. The Study Group concluded that the degree to which a country's human resources are relevant to the needs of the people would be determined by its ability to apply COHHRD.

The essential ingredients for success in applying COHHRD are:

- agreement on the main problems to be addressed and their underlying causes;
- the political will to implement change;
- the active involvement of those affected;
- persuasive and sustained leadership;
- coordination of efforts;
- well-qualified and well-managed staff; and
- sufficient resources to implement change.

## 6.2 The role of WHO in COHHRD

Since its inception, WHO has been a catalyst in the development of health systems and human resources for health. Successive World Health Assemblies have reaffirmed that, without coordinated human resources development, the health for all strategy will not succeed. WHO's promotion of COHHRD as a means of closing the gap between training and service has been substantial. The impact of WHO's contribution in any particular country is difficult to assess, however, owing to the many factors that influence the outcome of work in human resources development.

# 7. RECOMMENDATIONS

The Study Group proposes the following recommendations for the further promotion of coordinated health and human resources development.

## 7.1 Recommendations to WHO

The Study Group recommends that, while no short phrase can fully express what is now understood by integrated health systems and health personnel development (HSPD), WHO and its Member States should consider adopting the term *coordinated health and human resources development* (COHHRD), which reflects both the concept and WHO's evolving terminology.

**1. WHO should reaffirm and further strengthen its commitment to coordinated health and human resources development.**

In response to Resolution WHA42.3 in 1989 on strengthening technical and economic support to countries facing serious economic constraints, WHO cooperation with countries has been intensified in order to accelerate the implementation of primary health care based on national plans of action. Human resources development policies, programmes, plans, and long-term strategies are fundamental to the success of this initiative. The Study Group therefore recommends that WHO should investigate ways of increasing its support of country initiatives in coordinated health and human resources development. At the same time, WHO should strengthen its staff capabilities and internal coordination at country level. By this example, WHO can be a model to Member States for the application of COHHRD.

WHO should investigate what funds are available for COHHRD from bilateral, international, and nongovernmental organizations. Working together with these organizations, WHO could organize training and workshops and mobilize expertise and funds that would enable countries to design, fund and implement COHHRD. The active involvement of international funding agencies in human resources development policy and planning could benefit those countries now coping with the effects of economic recession.

At the country level, WHO could work to improve communication and collaboration between those involved in human

resources development within different ministries and non-governmental bodies. By such efforts, WHO would help to generate and sustain high-level support for COHHRD and make its implementation easier throughout the health system.

**2. WHO should provide technical cooperation for the development and support of institutions and individuals, for the development and distribution of products, and for data collection and research in support of COHHRD.**

*Development and support of institutions.* WHO could do much to strengthen the often very fragile mechanisms of human resources development. Greater technical cooperation in the design and operation of suitable institutional mechanisms, the establishment of closer links between units with complementary functions, and the development of practical work programmes that address human resources issues, are all means to this end. WHO should continue to give priority to help with the design and implementation of medium-range and long-range strategic human resources development plans. As it has done in other fields, WHO could also help set up a network of people and institutions involved in COHHRD for the exchange of information and expertise.

*Development and support of individuals.* WHO, through its collaborating training and research centres, should intensify its support for advanced national and regional training in areas relevant to the three core functions of human resources development (see page 9), such as social and political science, epidemiology, health economics, educational methods, and legislation. Conferences, workshops, staff exchanges and tours of appropriate facilities could also help to develop the requisite skills and perspective of the trainees. Those with leadership potential should be identified as early as possible in order to give them special training and apprenticeships, both in their home countries and abroad. Whenever possible, the trainees should come from each of the sectors relevant to COHHRD so that teamwork can flourish at all levels.

*Development and distribution of products.* Much could be done to help Member States apply human resources development methods and techniques to problem-solving. WHO could develop and make available improved planning methods and teaching materials, recommend data sets, establish procedures for the efficient use of

information technology, and be a clearing house for relevant information. WHO could compile an inventory of significant COHHRD achievements and failures, and examples of long-range strategic human resources plans, and also encourage the publication of case-studies describing COHHRD in practice. Useful products developed by Member States could be identified and brought to the attention of others. WHO's product development efforts could be directed more to the application of COHHRD ideas and technology to the solution of common and practical problems.

*COHHRD research and data.* WHO should promote more research into the implementation and evaluation of COHHRD and help Member States to improve their data collection, management, and analysis, as well as their ability to conduct research. Assistance could also be given with the design and implementation of data systems and the identification of priorities for human resources development research. WHO could offer greater technical cooperation on specific research projects and provide research training and a forum for the discussion and dissemination of research findings. Help could also be given to Member States to enable them to demonstrate and document the ways in which a lack of sound human resources development restricts their ability to provide necessary health care.

## 7.2 Recommendations to countries

**1. Countries should review their human resources development efforts and, by identifying areas that need to be strengthened, formulate clear and up-to-date national human resources policies at the highest level.**

Target areas include:

- Situation analysis. New ways should be found to ensure that all concerned, including community representatives and students, are involved in the early identification and resolution of problems likely to impede COHHRD.
- Human resources management. Of the three areas—human resources policy and planning, education and training, and management—management is probably in greatest need of strengthening. Management training is particularly important at the district level where most of the operational decisions affecting human resources development are made.

- Policy development. National health plans must be translated into human resources policies that are clear, compatible, politically acceptable, and administratively feasible.
- Promotion of desirable and parallel changes in the human resources development and the health service delivery systems. Without parallel changes in these systems, staff trained in new approaches and technologies may find no opportunity to practise their skills.

**2. Countries should give more attention to staff development in both the service area and the educational system to allow training for leadership roles in human resources development.**

Such personnel would need diverse technical skills and, above all, be motivated to introduce change. To accomplish these objectives the Study Group recommends that countries should:

- strengthen the training of those with responsibility for human resources development, with particular emphasis on skills in policy-making, planning, economics, the social sciences, and management;
- train personnel, as far as possible, in a multidisciplinary environment, since, irrespective of administrative position, they will often need to work as a team; and
- identify and recognize individuals and institutions making a significant contribution to human resources development; such recognition, perhaps supplemented by appropriate rewards, is an inexpensive way to highlight the importance of COHHRD and encourage participation in the process.

The above recommendations, applied to the relatively small number of people directly concerned with human resources development, are also relevant to the far larger number of people with clinical and administrative responsibilities working in the health sector.

**3. Countries should develop and maintain bodies with sufficient authority to ensure the timely formulation, implementation, coordination, and evaluation of policies affecting the development of human resources for the health sector.**

These bodies should have inter-institutional and, where necessary, intersectoral representation, and student and community

participation would often be desirable. Furthermore, they should have adequate secretariat support, in most cases from units concerned principally with human resources issues. Concrete problems that sustain the interest and involvement of all participants should be addressed.

Human resources development occurs at all levels of the health system, and district health systems, in particular, will have an important role in most aspects of COHHRD—especially in the areas of human resources management, legislation and regulation, continuing education, and career development.

**4. Countries should seek ways to increase interest and ease participation in human resources development.**

Effective COHHRD requires the informed participation of many public and private sector interest groups, including representatives of the professions and the general public. Accepting the principle that "all who serve teach and all who teach serve", educational institutions and teachers should be challenged to involve themselves in the community and health workers should be encouraged to teach students. Student involvement in all aspects of human resources development helps to keep the process alive.

Medical specialists, social scientists and community leaders can also make an important contribution to solving health problems as members of task-specific or standing advisory committees. Such groups are an inexpensive way of getting expert advice on problems related to human resources development, and provide a forum for interdisciplinary dialogue. As the participants become more familiar with the social, epidemiological, economic and human resources aspects of their task, they may also become influential advocates of change.

## REFERENCES


1. *Handbook of resolutions and decisions of the World Health Assembly and the Executive Board*, Vol. II, 1973–1984. Geneva, World Health Organization, 1985 (Resolution WHA30.43, 1977).
2. *Alma-Ata 1978: primary health care. Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978*. Geneva, World Health Organization, 1978 ("Health for All" Series, No. 1).
3. HALL, T.L. & MEJÍA, A., ed. *Health manpower planning: principles, methods and issues*. Geneva, World Health Organization, 1978.

4. *Report of the second WHO interregional consultation on strengthening health manpower management, Tashkent, USSR, 22–26 April 1985*. Geneva, World Health Organization, 1985 (unpublished document HMD/85.4; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
5. *Report of the interregional meeting on strengthening district health systems based on primary health care, Harare, Zimbabwe, 3–7 August 1987*. Geneva, World Health Organization, 1987 (unpublished document WHO/SHS/DHS/87.13, Rev. 1; available on request from Strengthening of Health Services, World Health Organization, Geneva, Switzerland).
6. FÜLÖP, T. New approaches to a permanent problem. The integrated development of health services and manpower. *WHO Chronicle*, **30**: 433–441 (1976).
7. *Handbook of resolutions and decisions of the World Health Assembly and the Executive Board*, Vol. II, 1973–1984. Geneva, World Health Organization, 1985 (Resolution WHA29.72, 1976).
8. FÜLÖP, T. *Analytical review of the World Health Organization's health manpower development programme, 1948–1980*. Geneva, World Health Organization, 1981 (unpublished document WHO/EDUC/81.182; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
9. FÜLÖP, T. & ROEMER M.I. *International development of health manpower policy*. Geneva, World Health Organization, 1982 (WHO Offset Publication, No. 61).
10. *Twenty-fourth World Health Assembly, Geneva, 4–20 May 1971, resolutions and decisions*. Geneva, World Health Organization, 1971, p. 77 (WHO Official Records, No. 193).
11. WHO Technical Report Series, No. 717, 1985 (*Health manpower requirements for the achievement of health for all by the year 2000 through primary health care*: report of a WHO Expert Committee).
12. *National health development networks in support of primary health care*. Geneva, World Health Organization, 1986 (WHO Offset Publication, No. 94).
13. FÜLÖP, T. & ROEMER, M.I. *Reviewing health manpower development: a method of improving national health systems*. Geneva, World Health Organization, 1987 (Public Health Papers, No. 83).
14. FÜLÖP, T. Health personnel for "health for all": progress or stagnation? *WHO Chronicle*, **40**(5): 194–199 (1986).
15. *Implementation of health manpower policies, plans and programmes: future perspectives. Report of an Interregional Consultation, Jakarta, Indonesia, 14–19 October 1984*. Geneva, World Health Organization, 1986 (unpublished document WHO/EDUC/86.186; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
16. BANKOVSKI, Z. & MEJÍA, A. *Health manpower out of balance: conflicts and prospects*. Conference papers, conclusions and recommendations. Geneva, Council for International Organizations of Medical Sciences, 1987.
17. *Report of an interregional workshop on economics of health manpower development in support of primary health care, Manila, Philippines, 22–26 June 1987*. Geneva, World Health Organization, 1987 (unpublished document WHO/EDUC/87.191; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
18. *Report of an interregional seminar on financing human resources for health, Bangkok, 6–10 March 1989*. Geneva, World Health Organization, 1989

(unpublished document WHO/EDUC/89.199; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
19. RICHARDS, R. ET AL. *Innovative schools for health personnel. Report on ten schools belonging to the Network of Community-Oriented Educational Institutions for Health Sciences*. Geneva, World Health Organization, 1987 (WHO Offset Publication, No. 102).
20. KANTROWITZ, M. ET AL. *Innovative tracks at established institutions for the education of health personnel: an experimental approach to change relevant to health needs*. Geneva, World Health Organization, 1987 (WHO Offset Publication, No. 101).
21. WHO Technical Report Series, No. 783, 1988 (*Learning together to work together for health:* report of a WHO Study Group on Multiprofessional Education of Health Personnel: the Team Approach).
22. GUILBERT, J.J. *Educational handbook for health personnel*, rev. ed. Geneva, World Health Organization, 1987 (WHO Offset Publication, No. 35).
23. FAURE, E. *Learning to be — the world of education today and tomorrow*. Paris, UNESCO, 1972.
24. *Study on health manpower and medical education in Colombia*. Washington, Pan American Health Organization, 1967 (unpublished document; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
25. WHO Technical Report Series, No. 802, 1990 (*The role of research and information systems in decision-making for the development of human resources for health*: report of a WHO Study Group).
26. FLAHAULT, D. ET AL. *The supervision of health personnel at district level*. Geneva, World Health Organization, 1988.
27. GOURLAY, J. & WHITE, D. *Training manual on health manpower management*. Geneva, World Health Organization, 1988 (unpublished document WHO/EDUC/88.195; available on request from Human Resources for Health, World Health Organization, Geneva, Switzerland).
28. WHO Technical Report Series, No. 783, 1989 (*Management of human resources for health*: report of a WHO Expert Committee).
29. MCMAHON, R. ET AL. *On being in charge: a guide for middle-level management in primary health care*. Geneva, World Health Organization. 1980 (revision in press).
30. ROTEM, A. & FAY, J. *Self assessment for teachers of health workers. How to be a better teacher*. Geneva, World Health Organization, 1987 (WHO Offset Publication, No. 97).

# WORLD HEALTH ORGANIZATION
# TECHNICAL REPORT SERIES

*Recent reports:*

| No. | | Sw. fr.* |
|---|---|---|
| 743 | (1987) **The biology of malaria parasites**<br>Report of a WHO Scientific Group (229 pages) | 32.— |
| 744 | (1987) **Hospitals and health for all**<br>Report of a WHO Expert Committee on the Role of Hospitals at the First Referral Level (82 pages) | 12.— |
| 745 | (1987) **WHO Expert Committee on Biological Standardization**<br>Thirty-sixth report (149 pages) | 20.— |
| 746 | (1987) **Community-based education for health personnel**<br>Report of a WHO Study Group (89 pages) | 12.— |
| 747 | (1987) **Acceptability of cell substrates for production of biologicals**<br>Report of a WHO Study Group (29 pages) | 5.— |
| 748 | (1987) **WHO Expert Committee on Specifications for Pharmaceutical Preparations**<br>Thirtieth report (50 pages) | 9.— |
| 749 | (1987) **Prevention and control of intestinal parasitic infections**<br>Report of a WHO Expert Committee (86 pages) | 12.— |
| 750 | (1987) **Alternative systems of oral care delivery**<br>Report of a WHO Expert Committee (58 pages) | 9.— |
| 751 | (1987) **Evaluation of certain food additives and contaminants**<br>Thirtieth report of the Joint FAO/WHO Expert Committee on Food Additives (57 pages) | 9.— |
| 752 | (1987) **WHO Expert Committee on Onchocerciasis**<br>Third report (167 pages) | 24.— |
| 753 | (1987) **Mechanism of action, safety and efficacy of intrauterine devices**<br>Report of a WHO Scientific Group (91 pages) | 12.— |
| 754 | (1987) **Progress in the development and use of antiviral drugs and interferon**<br>Report of a WHO Scientific Group (25 pages) | 5.— |
| 755 | (1987) **Vector control in primary health care**<br>Report of a WHO Scientific Group (61 pages) | 9.— |
| 756 | (1987) **Children at work: special health risks**<br>Report of a WHO Study Group (49 pages) | 9.— |
| 757 | (1987) **Rational use of diagnostic imaging in paediatrics**<br>Report of a WHO Study Group (102 pages) | 14.— |
| 758 | (1987) **The hypertensive disorders of pregnancy**<br>Report of a WHO Study Group (114 pages) | 16.— |
| 759 | (1987) **Evaluation of certain food additives and contaminants**<br>Thirty-first report of the Joint FAO/WHO Expert Committee on Food Additives (53 pages) | 9.— |

* Prices in developing countries are 70% of those listed here.

760 (1987) **WHO Expert Committee on Biological Standardization**
Thirty-seventh report (203 pages) ..... 28.—

761 (1988) **WHO Expert Committee on Drug Dependence**
Twenty-fourth report (34 pages) ..... 6.—

762 (1988) **Training and education in occupational health**
Report of a WHO Study Group (47 pages) ..... 6.—

763 (1988) **Evaluation of certain veterinary drug residues in food**
Thirty-second report of the Joint FAO/WHO Expert Committee on Food Additives (40 pages) ..... 6.—

764 (1988) **Rheumatic fever and rheumatic heart disease**
Report of a WHO Study Group (58 pages) ..... 8.—

765 (1988) **Health promotion for working populations**
Report of a WHO Expert Committee (49 pages) ..... 8.—

766 (1988) **Strengthening ministries of health for primary health care**
Report of a WHO Expert Committee (110 pages) ..... 12.—

767 (1988) **Urban vector and pest control**
Eleventh report of the WHO Expert Committee on Vector Biology and Control (77 pages) ..... 9.—

768 (1988) **WHO Expert Committee on Leprosy**
Sixth report (51 pages) ..... 8.–

769 (1988) **Learning together to work together for health**
Report of a WHO Study Group (72 pages) ..... 9.—

770 (1988) **The use of essential drugs**
Third report of the WHO Expert Committee (63 pages) ..... 8.—

771 (1988) **WHO Expert Committee on Biological Standardization**
Thirty-eighth report (221 pages) ..... 26.–

772 (1988) **Appropriate diagnostic technology in the management of cardiovascular diseases**
Report of a WHO Expert Committee (41 pages) ..... 6.—

773 (1988) **Smokeless tobacco control**
Report of a WHO Study Group (81 pages) ..... 11.—

774 (1988) **Salmonellosis control: the role of animal and product hygiene**
Report of a WHO Expert Committee (83 pages) ..... 11.—

775 (1989) **WHO Expert Committee on Drug Dependence**
Twenty-fifth report (48 pages) ..... 6.—

776 (1989) **Evaluation of certain food additives and contaminants**
Thirty-third report of the Joint FAO/WHO Expert Committee on Food Additives (64 pages) ..... 8.—

777 (1989) **Epidemiology of work-related diseases and accidents**
Tenth report of the Joint ILO/WHO Committee on Occupational Health (71 pages) ..... 9.—

778 (1989) **Health guidelines for the use of wastewater in agriculture and aquaculture**
Report of a WHO Scientific Group (74 pages) ..... 9.—

779 (1989) **Health of the elderly**
Report of a WHO Expert Committee (98 pages) ..... 12.—

780 (1989) **Strengthening the performance of community health workers in primary health care**
Report of a WHO Study Group (46 pages) ..... 6.—

781 (1989) **New approaches to improve road safety**
Report of a WHO Study Group (62 pages) ..... 8.—

782 (1989) **Monitoring and evaluation of oral health**
Report of a WHO Expert Committee (69 pages) ..... 9.—

783 (1989) **Management of human resources for health**
Report of a WHO Expert Committee (61 pages) ..... 8.—

784 (1989) **The use of synthetic antigens for diagnosis of infectious diseases**
Report of a WHO Scientific Group (73 pages) ..... 9.—

785 (1989) **Health surveillance and management procedures for food-handling personnel**
Report of a WHO Consultation (47 pages) ..... 6.—

786 (1989) **WHO Expert Committee on Biological Standardization**
Thirty-ninth report (184 pages) ..... 22.—

787 (1989) **WHO Expert Committee on Drug Dependence**
Twenty-sixth report (32 pages) ..... 4.—

788 (1989) **Evaluation of certain veterinary drug residues in food**
Thirty-fourth report of the Joint FAO/WHO Expert Committee on Food Additives (66 pages) ..... 9.—

789 (1990) **Evaluation of certain food additives and contaminants**
Thirty-fifth report of the Joint FAO/WHO Expert Committee on Food Additives (48 pages) ..... 6.—

790 (1990) **WHO Expert Committee on Specifications for Pharmaceutical Preparations**
Thirty-first report (79 pages) ..... 9.—

791 (1990) **Pesticide application equipment for vector control**
Twelfth report of the WHO Expert Committee on Vector Biology and Control (58 pages) ..... 8.—

792 (1990) **Prevention in childhood and youth of adult cardiovascular diseases: time for action**
Report of a WHO Expert Committee (105 pages) ..... 12.—

793 (1990) **Control of the leishmaniases**
Report of a WHO Expert Committee (158 pages) ..... 18.—

794 (1990) **Educational imperatives for oral health personnel: change or decay?**
Report of a WHO Expert Committee (43 pages) ..... 6.—

795 (1990) **Effective choices for diagnostic imaging in clinical practice**
Report of a WHO Scientific Group (131 pages) ..... 16.—

796 (1990) **The use of essential drugs**
Fourth report of the WHO Expert Committee (57 pages) ..... 8.—

797 (1990) **Diet, nutrition, and the prevention of chronic diseases**
Report of a WHO Study Group (203 pages) ..... 26.—

798 (1990) **Chemistry and specifications of pesticides**
Thirteenth report of the WHO Expert Committee on Vector Biology and Control (77 pages) ..... 9.—

799 (1990) **Evaluation of certain veterinary drug residues in food**
Thirty-sixth report of the Joint FAO/WHO Expert Committee on Food Additives (68 pages) ..... 9.—

800 (1990) **WHO Expert Committee on Biological Standardization**
Fortieth report (221 pages) ..... 26.—

# SELECTED WHO PUBLICATIONS OF RELATED INTEREST

| | *Price** *(Sw. fr.)* |
|---|---|
| **Learning together to work together for health.** Report of a WHO Study Group on Multiprofessional Education of Health Personnel: the Team Approach. WHO Technical Report Series, No. 769, 1988 (72 pages) | 9.– (6.30) |
| **Strengthening the performance of community health workers in primary health care.** Report of a WHO Study Group. WHO Technical Report Series, No. 780, 1989 (46 pages) | 6.– (4.20) |
| **Management of human resources for health.** Report of a WHO Expert Committee. WHO Technical Report Series, No. 783, 1989 (61 pages) | 8.– (5.60) |
| Abbatt, F.R. & Mejia, A. **Continuing the education of health workers. A workshop manual.** 1988 (x + 185 pages) | 35.– (24.50) |
| **Community-based education of health personnel.** Report of a WHO Study Group. WHO Technical Report Series, No. 746, 1987 (89 pages) | 12.– (8.40) |
| Fülöp, T. & Roemer, M.I. **Reviewing health manpower development. A method of improving national health systems.** Public Health Papers, No. 83, 1987 (xi + 138 pages) | 13.– (9.10) |
| **Health manpower requirements for the achievement of health for all by the year 2000 through primary health care.** Report of a WHO Study Group. WHO Technical Report Series, No. 717, 1985 (92 pages) | 8.– (5.60) |
| **The role of research and information systems in decision-making for the development of human resources for health.** Report of a WHO Study Group. WHO Technical Report Series, No. 802, 1990 (54 pages) | 8.– (5.60) |

Further information on these and other World Health Organization publications can be obtained from Distribution and Sales, World Health Organization, 1211 Geneva 27, Switzerland.

* Prices in parentheses apply in developing countries.

The coordinated development of health systems and of those who work within them is fundamental to the efficient organization and appropriate staffing of health services everywhere. This report presents the wide-ranging review and recommendations of a WHO Study Group which met to discuss current understanding and applications of integrated health systems and health personnel development. Considerable emphasis is given to the evolution of the concept of coordinated health and human resources development (COHHRD) whereby the health and educational services work together to plan. train and manage the numbers and types of required health personnel. The results of efforts to put COHHRD into practice and some of the lessons learnt are illustrated by case-studies reflecting the varied experience in different countries. The important role of WHO in promoting the concepts and ideas inherent in the COHHRD process is stressed. The report also emphasizes that the application of COHHRD cannot succeed without a positive desire for change within countries, supported by appropriate resources from governments and other bodies committed to higher standards and better delivery of health care. The report concludes with recommendations both to WHO and o countries on the further promotion of coordinated health and human resources development.

Price: Sw. fr. 8.—
Price in developing countries: Sw. fr. 5.60

ISBN 92 4 120801 5