EM/MIN.CNS.HSMD/6

February 1978

AN INTEGRATED APPROACH TO HEALTH SERVICES DEVELOPMENT AND MANPOWER TRAINING: THE LATIN AMERICAN EXPERIENCE

By

Dr Luis Fernando Duque *

*Vice-Minister of Health
COLOMBIA

AN INTEGRAL APPROACH TO HEALTH SERVICES DEVELOPMENT AND MANPOWER TRAINING: THE LATIN AMERICAN EXPERIENCE

Luis Fernando Duque, M.D., M.P.H.
Viceminister of Health
Bogotá, Colombia

INTRODUCTION:

According to the instructions received, the main emphasis of this document was to be placed on the description of fundamental coordination mechanisms that may have been used in Latin America between the Health and Educational Sectors for manpower training for health programs. Experiences to which I shall refer later on. However, it is of considerable relevance both to review the present situation of manpower training in the health care area, as well as to explain my ideas regarding the orientation and guidance that it should receive in the future.

Addressing you, such a distinguished group of wellknown health and educational leaders, coming from what we consider in my country the "Nearest East"; I have to insist on the basic, critical and unestimable importance that human resources have to any country wishing to introduce changes in its health care delivery system.

Any health care delivery system regardless of its structure and orientation, should be supported by:

1. Health Policies, clearly defined or implicit in the decisions to be taken as well

as in those that are not taken. Those policies are based on the Government's political philosophy, and provide the starting point for any health program, in accordance with the national plans for social and economical development.

2. Technology, to be applied for the development of health programs, not only according to technical criteria, but counting also with social ethics.

3. Administrative and Management Capacity, to allow for an optimal utilization of every resource available.

4. Economic resources, depending on the country's economic capacity and on the priority assigned to the health sector within the national development plans.

5. Physical resources, such as equipments and facilities, which at the same time are conditioning factors to policies, according with existing facilities. They should also be the result of the policy and the type of technology chosen by any particular country, considering its future development of plans and health programs.

6. Human Resources, the last in our list but not the least important. On the contrary, the delivery of the health services largely depends on the type, number and quality of those men and women who are in charge of providing the services, which result in a successful health program.

In the first place, because the delivery of health care is the result of a human interaction and should continue to be so, if we wish to keep the universal legacy of the

medical schools born in Cos and Shangai, whose principles continue to be in force all over the world.

This humanistic approach of the art and knowledge to conduct health programs, and provide the basic right to health services to everyone, taking into account that everybody has the right to wellbeing in order to play properly his role within the community; cannot be furnished without the spirit and the mystic of that quiet legion of men and women who consider that is man himself rather than health per se, the ultimate scope of their task. Man as a whole and each and every man without exception.

Politics, administrative capacity and technology, establish the degree of utilization of economic and physical resources. Thus, these factors are intimately bound to the type, quality and vocational guidance of the men and women working in the health field.

Before ending this brief introduction, I would like to underline that most of the ideas that will follow were taken from the "PanAmerican Conference on Human Resources in Health Care" (1) which met in Colombia in 1975, sponsored by the Panamerican Federation of Medical Schools Association.

Let us review four major topics of the Latin American reality:

- Current situation of health care delivery
- Medical training

- Current trends in health care
- Relationship between health care and education for the training of human resources to be used in the health sector.

1. HEALTH CARE

Since the past few years Latin America has been engaged in a truly formidable effort to provide integral health services to its population, mainly to the marginal and depressed sectors. Besides, and at the same time, a serious engagement has been undertaken in many countries, to update the health care administration structures.

At the bottom of all this renewal movement is the concept that health is a basic human right and, as such, it is for the State to asure its proper exercise by guaranteeing the delivery of basic and primary health care services, at least to those groups with difficult access to it by themselves, and who cannot justly request them from anybody else.

Furthermore, there is increasing awareness that the provision of health services in a country should follow a political and technical programing, by establishing priorities with social justice, and defining technical and administrative mechanisms and systems with scientific criteria. These facts together result in the urgent need to update the health sector.

Therefore, a considerable effort has been made to implement health planning both

at national level (National Offices for Economic and Social Planning) as well as the health sector level (Planning Offices at the Health Ministries). Despite the fact that this effort has achieved a substantial improvement in Latin America and already shows material profits, our target appears to be very far away due to the prevalence of two major determinants in the health condition of Latin American communities: undernourishement and inaccessibility to health services. They prevail as a result of poverty, unjust income distribution and unfair wellbeing conditions. And all these, take place in a continent where the flame of liberty started to burn more than a century and a half ago, in the midst of innumerable natural richness, fertile lands and a variety of climates!

Quickly reviewing the present health care situation in Latin America we, may encounter the following outstanding points:

1.1. The demographic conditioning of medical care is evolving as follows:

- A fast decrease in mortality rates,
- Birth rate decrease which started in several countries in the middle sixties. In Colombia, for example, a group of scientists has indicated from 1964 to 1975 the gross birth rate has decreased from 43.7 to 30.7 per thousand, which despite the fact that the population has increased approximately 6.000.000 in the same period, the number of births has decreased from 772.000 in 1964 to 721.000 in 1975 (2)
- The birth rates dropped in the last year quicker than the mortality rates (3) bringing as a consequence the decrease of vegetative growth rates

and a change in the age structure, in such a way, that the percentage of children below fifteen is decreasing slowly but continously, and the percentage number of people in productive ages is increasing.

- High migration from rural to urban areas.

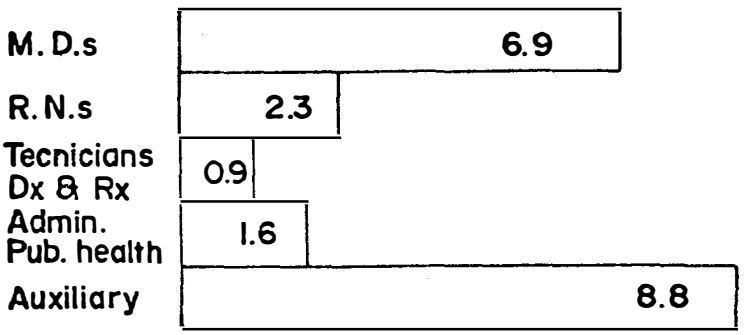
1.2. As a result of preventive campaigns against infectious diseases and the incipient modification of the population pyramid, the mortality structure shows a transitional condition as compared to that of more developed and less developed countries. Among the four top death causes in many Latin American countries there are, the enteritis, the upper respiratory tract diseases in children which have been the long term traditional patrimony of developing nations; and the cardiovascular illness and cancer, patrimony until a short while ago, of the industrialized countries.

1.3. There is a clear unbalanced situation between the quantity, quality and coverage of the services in urban and rural areas and within the cities between the population integrated to the economical development process and the marginal groups who, in many cases have less real access to the health services than those living in the rural area.

1.4. There is a larger underutilization of physical resources in the rural areas than in the urban areas.

1.5. Notwithstanding the effort made in several countries to train technical and auxiliary personnel, there is still a serious gap in relation to the number of physicians and the number of nurses and paramedical personnel.

RATES OF HEALTH MANPOWER PER 10000 INHABITANTS
LATIN AMERICA 1970 (4)



1.6. Considerable progress is observed in many countries in the efficient use of hospital facilities. In Colombia although the number of hospital beds per inhabitant has decreased, there is an increase in the rate of admissions, due to the technical improvement and more efficient use of hospital beds with shorter stays.

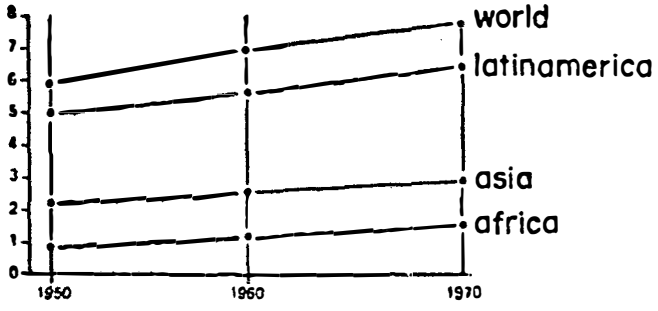
HOSPITAL UTILIZATION IN COLOMBIA (5)

YEAR	BEDS PER 1000 pop.	ADMISSIONS PER 1000 pop.	OCCUPATION %	AVERAGE STAY (days)
1957	2.6	37.2	63.2	15.0
1975	1.9	52.7	65.2	7.8
DIFF 1957 1975	-27 %	+ 42 %	+ 3 %	-52 %

2. MEDICAL TRAINING

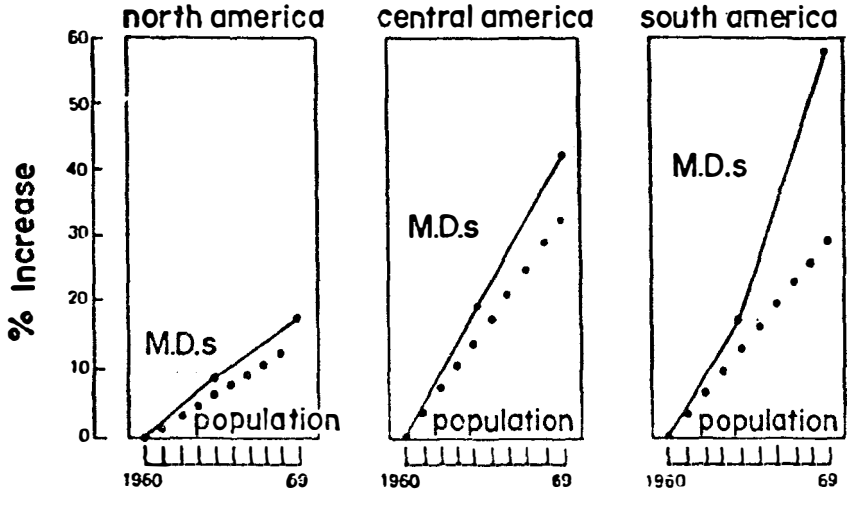
During the sixties there was a fast increase in the number of students admitted to our medical schools, together with the opening of new schools, to such extent that among the developing areas LatinAmerica is the only one showing such an increase in medical training.

M.D./10000 INHABITANTS (6)



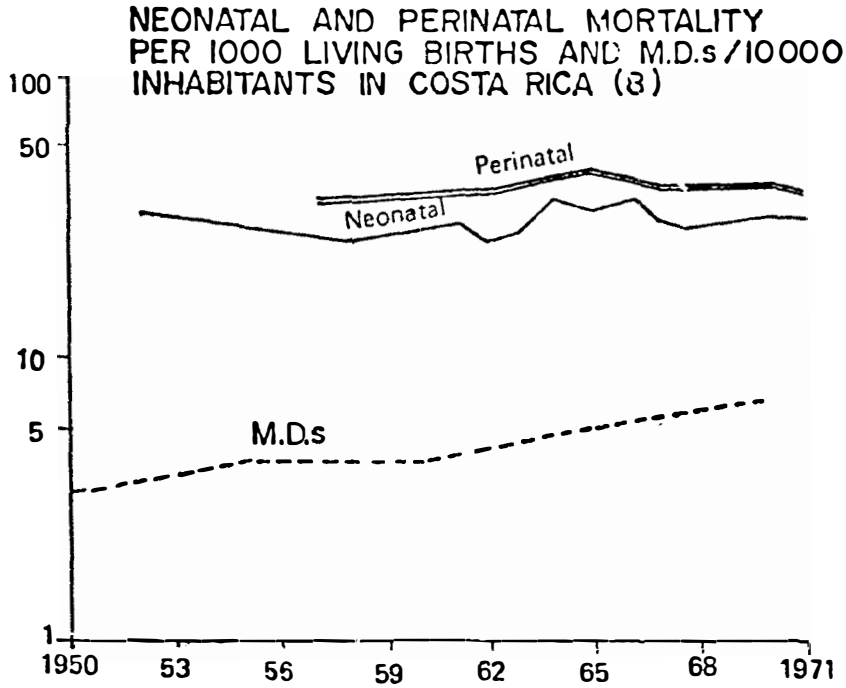
This increase is proportionally higher in South and Central America where it has offset the percentual population growth.

INCREMENT OF M.D.s AND POPULATION IN THE THREE AMERICAN REGIONS (7)



Unfortunately, this effort has not improved as expected the coverage of the delivery of health services in LatinAmerica, nor has it made medical care more accesible to the rurd areas or to the depressed zones of the cities.

Furthermore, the most sensible variables to coverage and quality of health care delivery,such as neonatal and perinatal mortality, show very little improvement as compared to the amount of doctors in many countries.



Everyday there is more awareness of the fact that the policies followed by the educational sector in order to largerly increase the number of physicians, without encouraging the training of paramedical and auxiliary personnel, who are so deeply related with an efficient delivery of health services; together with their opposite approach to that of the health sector policies and programs, have contributed to mantain a series of negative characteristics which have deteriorated health care delivery in Latinamerica such as:

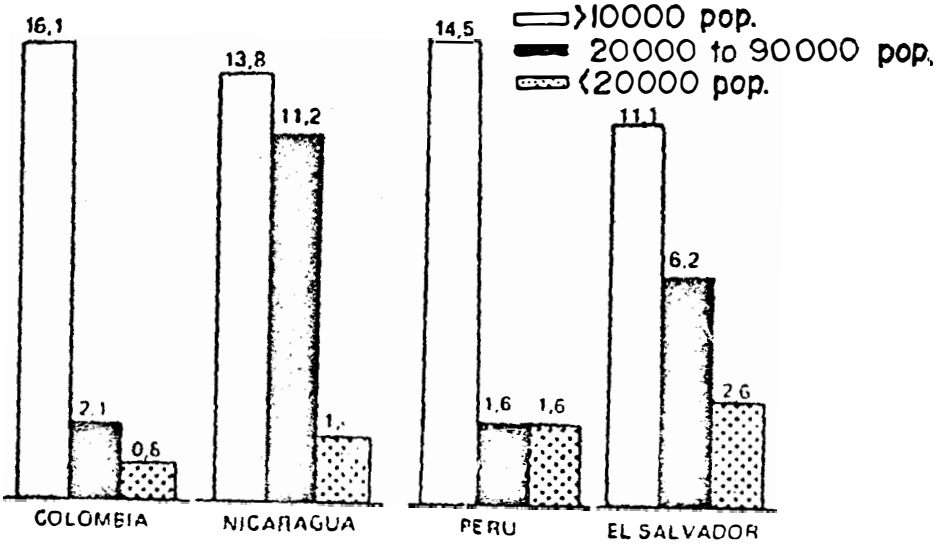
2.1. Prevailing traditional patterns in health care directed towards individual medical care with prevalence of curative medicine and in-hospital care of

patients.

2.2. Maintenance of health service structures based on the premise that the care for every type of illness should be provided always by professionals.

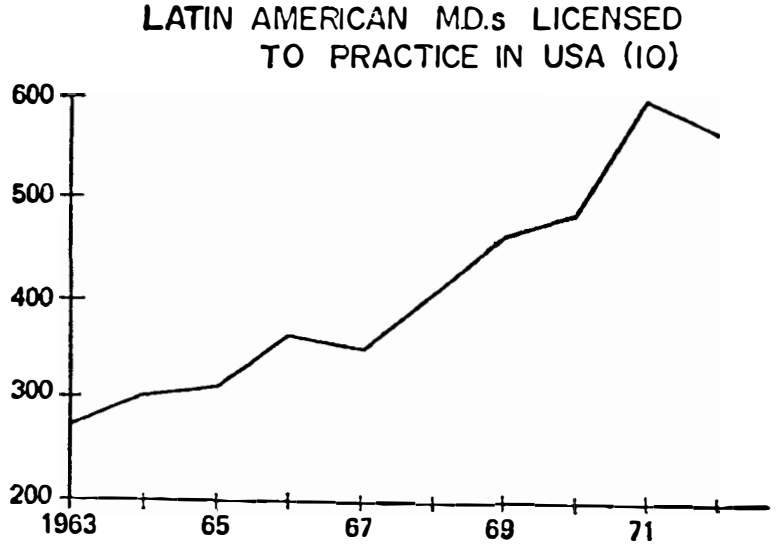
2.3. Concentration of physicians in the urban areas with the consequent deterioration of the quality of the service and even of medical ethics has not resulted in better accesibi But, what is worse the urban concentration of physicians to the health service by city dwellers, on the contrary, a large nucleus of urban population has less access to health care than many of the rural sectors.

M.D.S / 10000 INHABITANTS
ACORDING TO POPULATION AREAS (9)



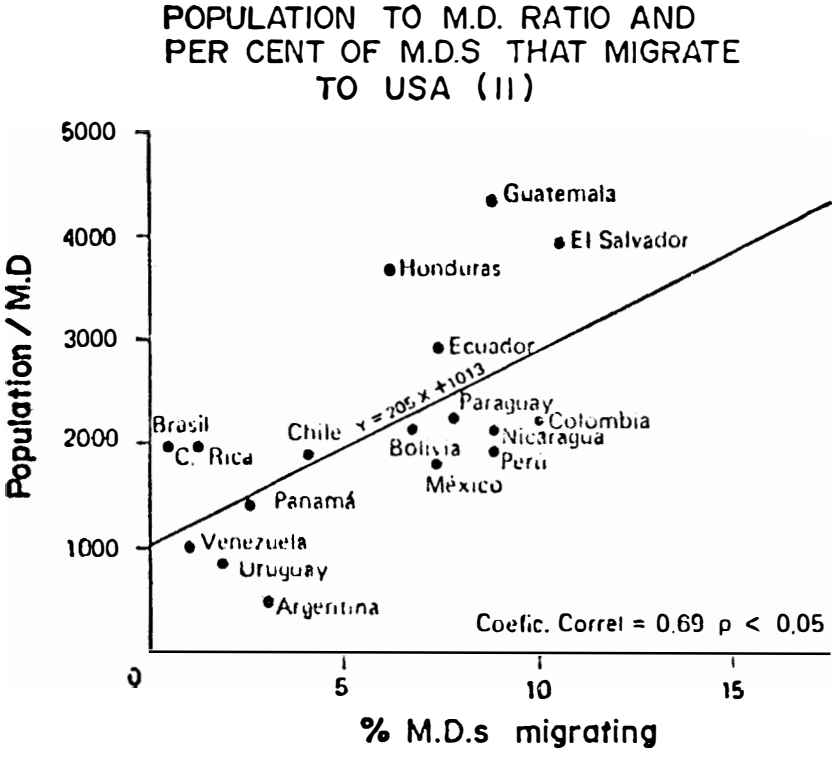
2.4. Quantitative as well as qualitative unemployment and underemployment of doctors.

2.5. Physician migration mainly to the United States*



This migration seems to favor those countries having the lowest ratio of physicians per inhabitant.

* This migration flow has been drastically cut by the recent USA legislation (Public Law 94 - 484, Oct. 12 1976, Health Professions Educational Assistance Act 1976).



2.6. Increasing trend towards specialization.

2.7. Massive student admissions to medical schools have resulted in high attrition rates (15%) with considerable economic loss and professional frustration.

3. CURRENT TRENDS IN HEALTH CARE IN LATINAMERICA

As mentioned before, important changes have taken place during recent years regarding the policies and health care delivery programs in Latinamerica and there are many more to come in the near future.

These changes consist mainly in the development of integral health systems covering as a whole; health care promotion, preventive medicine, medical care and rehabilitation. This way we hope to abolish the old concept which divides prevention tasks from those of treatment.

As a pattern of political and administrative organization there is a widening tendency towards the creation of national health systems involving all kind of hospitals and health centers into a unique system directed in policy and administration by the Ministry of Heaith.

The hospitals and health centers may retain their legal identity and status, and their self-management but always within the frames of the policy and technical standards issued by the Ministry. Thus, in many cases a consistent health policy for an entire country has been achieved together with a beneficial descentralization which allows for the adjustment of such a policy to the prevailing circumstances, possibilities and needs of each location.

The national health systems in their operational form tend to adopt shemes of progresive care, of care levels and of organization of all available resources, based upon the concept of regionalization of health service delivery.

MINISTRY OF HEALTH — NORMATIVE LEVEL

- Issues health policies
- Defines general technical standards
- Supervises and evaluates sectional health services

SECTIONAL HEALTH SERVICES — STATE AND SECTIONAL ADMINISTRATION LEVEL

- 32 in total. One in each state or section of the country.
- Adjusts ministerial policy to local circumstances of the state or province.
- Directs, supervises and evaluates regional health divisions.
- Appoints directors to university hospitals (tertiary level of health care) and to regional divisions (secondary level).

REGIONAL HEALTH DIVISONS — SECONDARY CARE LEVEL

- 104 in the country. Variable number in each sectional health service.
- Manages regional hospitals (secondary level care) and outbound programs.
- Supervises and evaluates local health units.

LOCAL HEALTH UNITS — PRIMARY CARE LEVEL

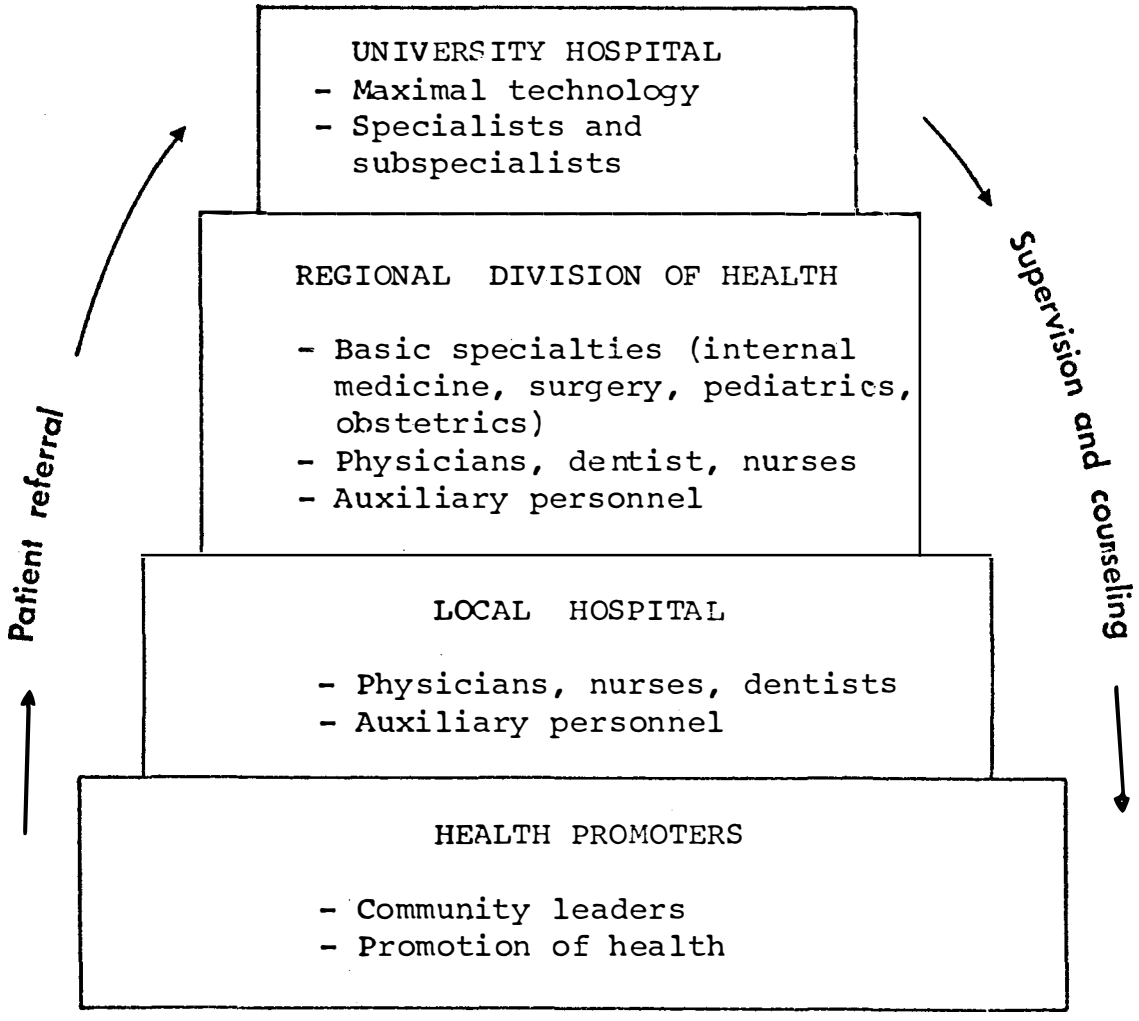
- Formed by a local hospital and several health centers
- Provides primary care

HEALTH PROMOTERS — COMMUNITY LEVEL

- Community leaders serving as liason between the community and the local health units.
- Promote health care and direct people who need of medical care towards health centers.

These national health systems provide the use of human resources to be accomplished through health teams formed by different professionals and technicians, in such a way that each one is capable of providing part of the health care service required, according to the urgency or the complexity of the patient's health problem or of the requirements of a community. Therefore if the problem is a simple one it will be taken care of at local level, if it requires more specialized care or diagnosis it will be referred to higher levels in the system up to the university hospitals.

LEVELS OF HEALTH CARE IN COLOMBIA



A health organization on the above premises is based on:

3.1. Forming health teams with a large participation of technical and auxiliary personnel. I would like to make reference to two documents of considerable relevance:

a) "We have pointed out the priority assigned to persons and communities lacking today of every type of health care, or even worse, having no access at all to such a care. With complete awareness of the situation, and of the quality of the problems, we acknowledge the urgent need to share with auxiliary health personnel properly trained and working under professional supervision, the responsabilities consistent with their experience. This way we would be fullfilling the social and humanitarian aspects of our task" (III Special Meeting of Health Ministers of the Americas 1972).

b) "It is not feasible to reach high coverages by following the traditional patterns of health care that are using physicians and other high technical professionals as the primary human resource".

"To start such services requires the training and utilization of a large number of basic and middle level personnel, who will be assigned to carry out tasks that traditionally have been reserved to professional levels regarding health promotion, prevention of diseases, care and rehabilitation of patients, thus shifting from the concept of MEDICAL CARE PROVIDED BY PHYSICIANS, TO THE CONCEPT OF HEALTH

CARE PROVIDED BY HEALTH TEAMS"

"It is increasingly evident that to continue delivering health services based upon physicians and other professionals is unreasonable, besides being costly and unfeasible within the Latin American context". (Pan American Conference on Human Resources and Health Care Delivery, 1975). (12)

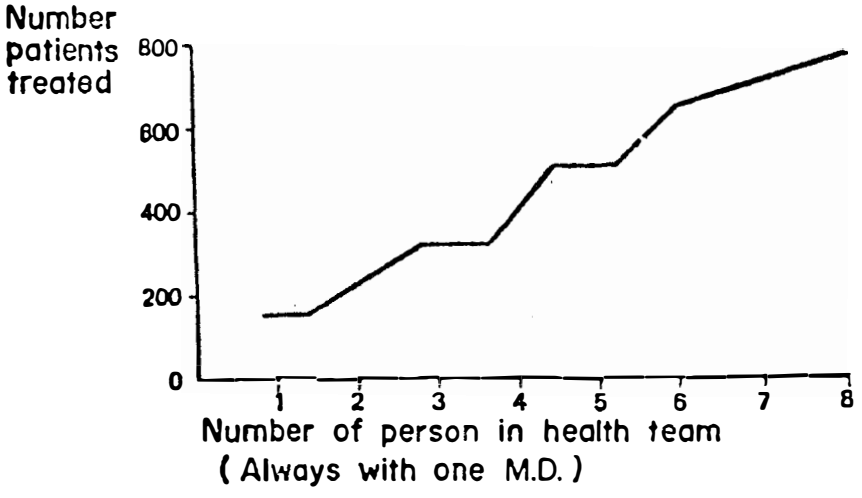
3.2. The use of every/of auxiliary technician or professional to their highest level of capability, both, because it is the way to encourage personal self-fulfillment and personal self-esteem, as well as because it represents a more efficient utilization of human resources.

3.3. Adequate communication between the different health care levels is also required, so that patients referrals. lab specimens and supervision can duly operate.

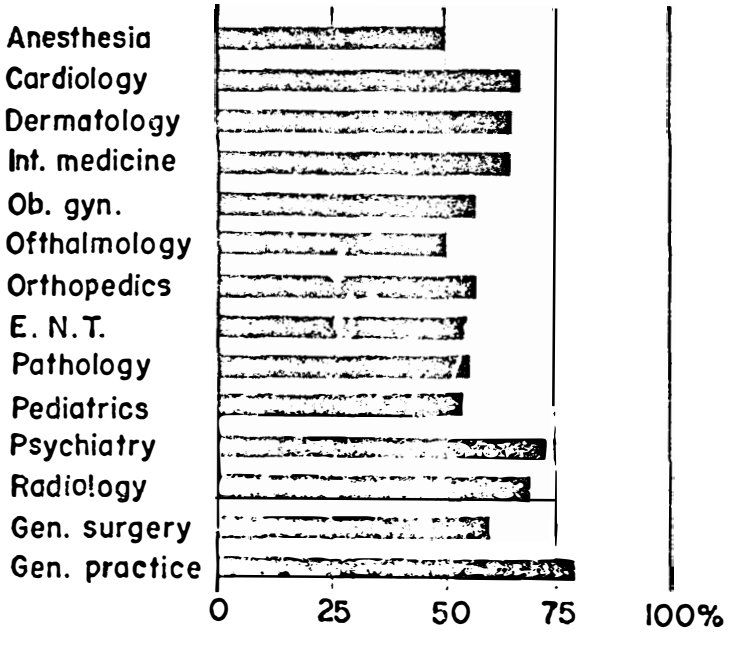
3.4. Adequate and frequent supervision of the technical and auxiliary personnel, together with a permanent continous education programs in-service.

This organization of health services, which is being adopted in several Latin American countries, is fed with the experiences from other regions, that indicate how in health teams with one physician, the efficiency level of each of the other member is similar to that of 0.9 physicians, and how a large component of the medical activity, such a diagnosis and treatments, maybe undertaken by auxiliary personnel or by personnel different from the physician.

PRODUCTIVITY OF HEALTH TEAMS OF ONE PHYSICIAN AND SEVERAL AUXILIARIES GERMANY 1973 (13)



% OF ACTIONS THAT CAN BE DELEGATED TO NON-MEDICAL PERSONNEL

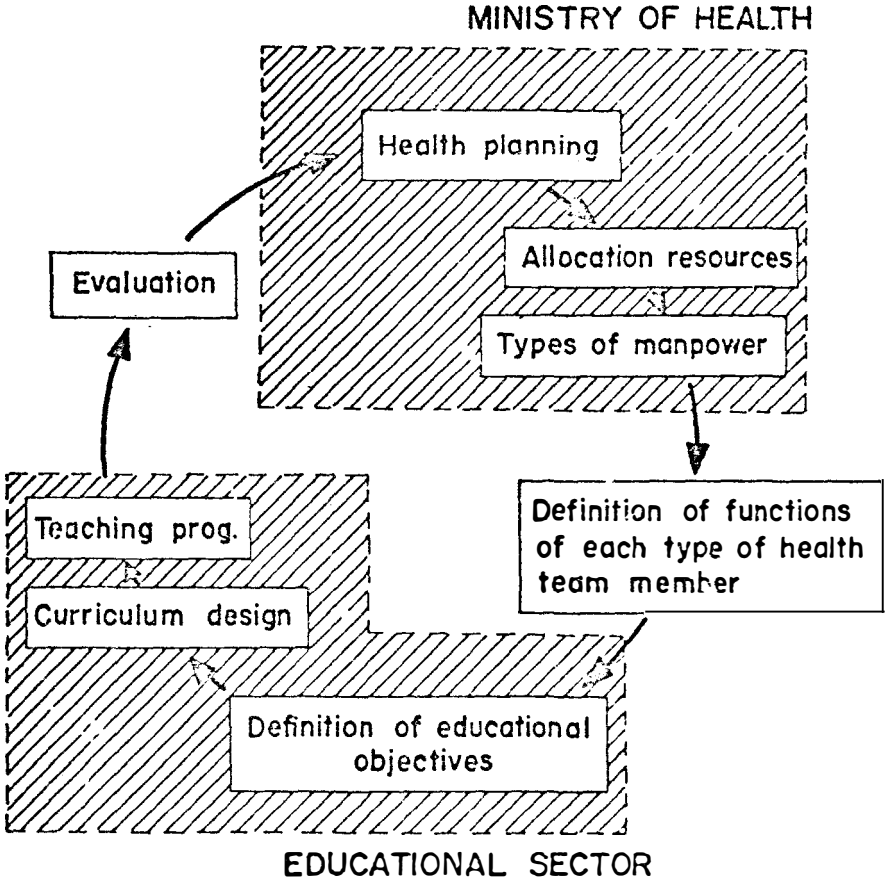


4. RELATIONSHIP BETWEEN THE HEALTH AND EDUCATIONAL SECTORS FOR THE TRAINING OF HUMAN RESOURCES TO BE USED IN HEALTH CARE DELIVERY SERVICES.

Since the early sixties the LatinAmerican Governments have been stating the need to coordinate the health and education sectors for the training of health personnel. The first meeting of Health Ministers of the Americas held in Washington in 1963 recommended "Theestablishment of inter-institutional units between the Ministers of Education, the University authorities, the Public Health leaders and the organized professions for the study of training programms for the professional required by Health Plans".

Unfortunately, the achievements have not been too many in the majority of the LatinAmerican nations, as it was shown in the conclusions of the Third meeting of Health Ministers of the Americas, held in Santiago, Chile, nine years later: "The training of the highest level of human resources for the health delivery service remains separated from the health sector in many countries and is managed by the educational sector." At the above mentioned Conference on Human Resources and Health Care, held in Medellín, Colombia, in 1975, recomendation 10.1 states that it is necessary to "Create at the earliest possible time, coordination or integration organisms (between the health and educational sectors) at the proposed national and regional levels with a scope of focussing the specific problem of the training of human resources to be used in the delivery of health care."

This lack of coordination has shown by the fact, common in many Latin American countries that the Ministries of Health have assumed as their own the task of defining the different types of personnel for health services, and the universities and other educational institutions have jealously maintained the definition of the educational goals and the curriculum design, leaving as "nobody's land" the definition of task assignements for each one of the members of a health team and the evaluation of the trained personnel and the training system.



Eventhough the situation mentioned still prevails, important efforts are being carried out in some countries which are begining to produce positive results. I am going to summarize briefly the experience in Chile, Mexico and Colombia.

CHILE

This country has the oldest coordination mechanism in Latin America, "The National Commission of Training and Health Care", created by Government decree and formed by:

- The Health Minister as chairman
- Three officers from the Ministry of Health: The General Director of Health, the Chief of the Technical Department and the Chief of the Ministry's Planning Office,
- Four Medical Schools Deans, appointed by the Medical Schools Association of Chile.
- The President of the Chilean Medical Association, and
- One delegate from the National Health Council.

In the instances when the Commission is considering matters not directly related to Medicine but to other health professions, automatically includes as ful. members, the President of the corresponding professional Association and the Deans of the corresponding Schools.

The functions which have been assigned to this Commission by law are the following:

1. To study problems requiring a coordinated action between the Public Health Sector and the Universities.

2. To determine the needs of human resources for the health sector and find the solutions directed towards their fulfillment.

3. To suggest the standards for the drafting of agreements between the Public Health Sector and the Universities, and study the existing agreements making suggestions on the pertinent modifications.

4. To propose standards and regulations for the continuous education programms.

5. To acknowledge the teaching capacity of the educational centers, the number and distribution by specialties of trainees supported by public funds, and decide on the distribution and allocation of the scholarships given annually by the National Health Service.

6. To review the regulations for scholarships and the physicians appointed to the Regional Health System, an to suggest the pertinent modifications.

7. To study the National Regionalization Plan for teaching and health care, to issue its regulations, establish its basic performance standards and evaluate it periodically.

8. To propose standards related to extra-curricular activities of students in health professions, hired as auxiliaries by the National Health System.

9. To maintain through its Executive Secretariat, a complete file of the reports issued by the Medical Schools Association of Chile in reference to scholarships

granted, regionalization of teaching and health care and post-graduate courses offered in all professional and technical schools in Chile.

According to many authorized spokemen, the rather spectacular of the Chilean integrated teaching and health care as the milestone of a Unique National Health System, is largely due to the efficient operation of this Commission.

University autonomy has had a strong tradition in Latin America. Often it has clashed with the national interest and is not infrequent that the universities go unrestrained without due regard to well defined manpower needs in the country. The existence of such a Commission provides a permanent forum of interinstitutional analysis of the country's reality, with the universities counting with an objective and updated view of the current and future needs. Thus, they jointly take decisions with the administrators of health programms, a factor that has introduced rationality elements for the curriculum design and for the university admission policies. The great value of this Commission has been well demonstrated by its survival through different periods of deep political changes in Chile.

MEXICO

Almost ten years ago the Mexican Government created by government decree a commission in charge of coordinating the activities of the Public Health Sector and

the powerful Social Security System. This commission includes members appointed by the Ministry of Health and by the Social Security entities, among them the President and/or the Executive Director of the Mexican Association of Medical Schools and the Dean of the Medical School of the National University of Mexico.

The functions of this commission are similar, although not as specifically defined as those of the Chilean commission. However, in contrast to the Chilean commission it has not decision power, it is only an advisory body.

The Mexican Social Security System represents a major economic and political power as it includes a large network of health services covering many hospitals throughout the nation. Thousands of physicians are employed by the System.

In order to assure an adequate coordination with the manpower training entities the Social Security System established a few years ago a powerful Direction of Education and Research, directed today by a full-time highly qualified physician who works next door to the general Medical Director. The Direction office which counts with a very efficient staff, has the task of defining the type, number and quality of human resources required by the system as well as providing their in-service training and post-graduate courses. It also grants national scholarships, as well as foreign scholarships, which are later discussed by the interinstitutional Commission. The importance and success of this Office was clearly shown when it became the support of the recent approach of the Mexican Social Security System towards a major emphasis in family and community health care.

An important result achieved by this Direction and its relationship with the Interinstitutional Commission was the creation of the new profession of Health Technicians, who are students finishing second year of medical school and who are unable to continue. These technicians are licensed and then incorporated in the health teams.

COLOMBIA

Colombia, as most of the Latin-American nations, has a powerful Association of Medical Schools, which in itself is a good element to achieve an adequate coordination between the Health and Educational Sectors.

The Ministry of Education and the Ministry of Health, together with the Colombian Association of Medical Schools have signed a series of agreements, which cover a wide range of activities.

Historically, the most important agreement signed by the Ministry of Health, and the Colombian Association of Medical Schools was that through which the "National Research for Human Resources for the Delivery of Health Services" was carried out, sponsored by the Milbank Memorial Fund and the collaboration of the Pan-American Health Organization.

This research study was suggested by a group of outstanding Colombian medical leaders and by doctor Alexander Robertson, Director at that time of the Milbank Memorial Fund.

It was carried out in 1965 as a joint venture of the Ministry of Health and the Association of Medical Schools, and included a national morbidity survey, a research on human resources available in the health area regarding type, number distribution and main characteristics of such resources. This study became an important landmark in the medical history of the country, as it was the turning

point for many of the deep changes that have been taking place in Colombia and in the area of management of human resources for the Health Sector.

In the years following, the Office for the Development of Human Resources of the Ministry of Health was organized and became so strong that in 1975 grew to be the head of one of the six sub-systems of the National Health System: the Direction for the Development of Human Resources.

This Office, which has an interprofessional team, advises the Minister in Policy making, and supervises the implementation of programs and projects at regional level.

The following tasks are being performed by this Office at present:

- Forecasts the type and number of professionals, technicians and auxiliary personnel required in the National Health System.
- Maintains an updated inventory of the type, number and labor characteristics of all personnel working under the National Health System.
- Performs the analysis and proposes the adequate training model, e.g. educational goals, minimum curriculum contents, etc.
- Promotes and coordinates the continuous education programms.
- Performs the analysis of the utilization of human resources in the health sector in the whole country.
- Scholarship program.

The coordination mechanisms within this subsystem operate at different levels:

- Sectional health services.
- Ministry of Health
- Interministerial Coordination

There are Training and Educational Commissions at sectional level, formed by the Regional Health and Social Security authorities, and by the universities. These Commissions have the task of studying the general and specific manpower needs for the health programms in their area, including institutional requirements (hospitals, social security institutions and universities) in regard to different types of personnel (professionals, technicians and auxiliaries). Besides, they make up some programs related to continuos education and the regional scholarship plan.

Each Commission makes out an annual plan and the combination of all the regional plans becomes the annual plan for the whole country, which is made up at the Ministry of Health, previous consultation with a Council formed by representatives from both the Ministries of Health and of Education, the Social Security Institute, the National Planning Department and the Colombian Association of Medical Schools.

The coordination mechanisms described above are operating successfully since several years ago but have left out some of the basic aspects in the definition of the training policies, which do not depend from the Health Ministry.

That is the reason why, the National Government created by decree at the end of

last year the "National Council for the Training of Human Resources for the Health Sector", depending from the Ministry of Health to be used as a coordination tool between the health, education and labor sectors for the training of human resources for Health Care Delivery Services at post-graduate, professional, technical and auxiliary levels.

The Council is formed by:

- The Minister of Health, or the Vice-minister, as chairman
- The Minister or Vice-minister of Education
- The Minister of Labor and Social Security or the Director of the Institute in charge of Manpower Training.
- The Director of the Institute in charge of graduate programs, at the Ministry of Education.
- The Director of the Colombian Association of Medical Schools.
- The Director of the Human Resources Office from the Ministry of Health, with voice but without vote, who acts as Secretary.

When the Council discusses a subject different from a medical profession or trade, a representative of the corresponding area attends the meetings.

The Council's functions are:

1. To propose to the Health, Education and Labor and Social Secutiry Ministries the manpower training policies for the health sector, according to the general health policies defined by the Ministry, and including the needs of the country and the employment availability.

2. To be the advisory body to the Ministries of Health and Education, as well as to all the Institutes depending from the Ministries of Education and Labor.

3. To promote interinstitutional studies regarding the different aspects of the training utilization and evaluation of human resources of the health area.

4. To study and judge on the convenience and requirementsthat have to be met to create programs which pretend the training of types of personnel different from those already existing in the country.

5. To study and judge on the convenience and requirements to be met for the creation of new training institutions or programs for health personnel, compulsory both for the official as well as the private educationl sectors.

6. To issue recomendations on final educational goals, and on the minimum contents of the training and educational programs for health personnel, according to the functions assigned by the Ministry of Health for each type of personnel. This also applies to the official and private sectors.

7. To promote the mechanisms and studies necessary to carry out an adequate evaluation of teaching problems based on the performance of graduates.

The mentioned decree also states that it is compulsory for any official entity to obtain the previous concept of the Council for the creation of any new institutions or educational or training programs for health personnel, as well as for the renewal of the license of those programs that are already operating

with authorization from the Government.

The Colombian Government has shown that for the proper operation of coordination mechanisms the following factors are required:

1. A strong and well developed health planning subsystem.

2. Objective and scientifically conducted studies on the National Health needs and conditons, and on the type, number distribution and working conditions of the health personnel.

3. A well structured counterpart of the educational area, serving as agent or representative of educational entities, which in Colombia and in general in Latin America have been the Associationsof Medical Schools.

4. Coordination mechanisms at different levels both for policy making and program execution, consistent with the different levels of the National Health System. A coordination mechanisms is also necessary at the highest political level involving the Ministries and entities which in a way or another are related to the training and employment of human resources in the health area.

5. A clear definition of the concrete responsabilities of the entities training or employing such human resources.

The lack of this definition had been one of the major obstacles interferring with a desirable coordination, and this has been solved with the creation of

the National Council for the Training of Human Resources for the Health area.

As a practical conclusion I would like to suggest the following recomendations regarding the oepration and responsabilities of the coordination mechanisms:

RESPONSABILITIES OF HEALTH AND EDUCATIONAL* SECTORS FOR MANPOWER TRAINING IN THE HEALTH AREA.

FUNCTION	RESPONSIBLE SECTOR
1. Policy making and health plans	MINISTRY OF HEALTH Consistent with the economical and social development policies.
2. Definition of functions for each type of personnel.	MINISTRY OF HEALTH According to the programs and structure of the health sector.
3. Definition of the different members of the health teams.	HEALTH AND EDUCATIONAL SECTORS Based on the functions assigned to each member and the available training; the participation of the community is very convenient.
4. Decision on the number of the different types of manpower to be trained.	EDUCATIONAL SECTOR Previous consultation with the health sector on employment opportunities, and based on facilities available and projected.
5. Definition of educational goals.	EDUCATIONAL SECTOR Based on the analysis of tasks assigned by the Ministry of Health.
6. Curriculum design	EDUCATIONAL SECTOR Based on the designed educational goals.
7. Implementation of teaching and training programs.	EDUCATIONAL SECTOR
8. Evaluation of teaching and training programs and of trained personnel.	BOTH SECTORS
9. Continuous education programs	BOTH SECTORS: based on the evaluation of the scientifical results and of the changes of health programs

*Considering as Educational Sector all the institutions which train health personnel.

BIBLIOGRAPHY

1. Duque, L.F. (Editor) "Recursos Humanos y Salud"
Editorial Bedout. Medellín, Colombia. 1977

2. Londoño, J. J. et al. "Descenso de la Fecundidad y Planificación Familiar en Colombia, 1964 - 1975".
Corporación Centro Regional de Población. Bogotá, Colombia. 1977.

3. McNamara, R.S. "Lecture on Population Problem"
Banco Mundial, Washington, 1977.

4. Organización Panamerciana de la Salud (OPS). "Facts on Health Progress".
P.A.H.O. Sci. Publ. 227 : 45, 1971.

5. Colombia. Ministerio de Salud. "Informe al Honorable Congreso de la República de Colombia. 1976 - 1977"

6. Organización Mundial de la Salud (OMS)
World Health Statistics Report. 27 (2) : 84 - 108, 1974.

7. Organización Panamericana de la Salud (OPS)
"Facts on Health Progress". P.A.H.O. Sci. Publ. 227 :51, 1971

8. Organización Mundial de la Salud (OMS)
World Health Statistics Annual and World Health Statistics Report. Passim.

9. Navarro, V. "El Subdesarrollo de la Salud o la Salud del Subdesarrollo".
Federación Panamericana de Asociaciones de Facultades de Medicina.
V Conferencia Panamericana de Educación Médica. Caraballeda, 1974.
Mimeo. Cuadro 3.

10. American Medical Association. Council of Medical Education. "Medical Licensure Statistics". 1963 - 1972.

11. Educación Médica y Salud. 7 (3 - 4) : 318, 1973.

12. Duque, L.F. (Editor) "Recursos Humanos y Salud".
Editorial Bedout. Medellín, Colombia. 1977. Pag. 154.

13. Maxwell, R. "Health Care: The Growing Dilemma".
McKinsey Co. New York. 1974. Pág. 24.

14. Technomics, Inc. Oakton, Va. USA. 1975

As a long time medical educator and now as a member of the directing team of the Public Health in my country, I sincerely wish that this Ministerial Consultation results in clear answers to the questions that the Ministries of Health and Education have in reference to the training of human resources to be used in the health sector and to the coordination mechanisms that should exist between both sectors. It is also my desire that the experiences lived in the Latin American countries maybe useful for the achievement of such important goals.

Bogotá, January 1978