MAKING MEDICAL PRACTICE AND EDUCATION MORE RELEVANT TO PEOPLE'S NEEDS: THE CONTRIBUTION OF THE FAMILY DOCTOR

A working paper of the WORLD HEALTH ORGANIZATION and THE WORLD ORGANIZATION OF FAMILY DOCTORS

From the joint WHO-WONCA Conference in Ontario, Canada November 6-8, 1994
Preamble

Steady and sustainable progress towards relevance, quality, cost-effectiveness and equity in health care delivery requires the active mobilization of the entire health workforce. The medical workforce, whose influence on health care expenditures and on decisions regarding health care reforms is well recognized, has a special responsibility.

Family doctors, in particular, are seen as holding pivotal positions in ensuring the delivery of comprehensive, continuous, coordinated and personalized health care. Their role, along with other primary care providers, is seen as very important in making the optimal use of health resources. In future health care systems their role is likely to become even more prominent if they are able to improve the coordination of individual health and community health services.

By providing for this future role of family doctors, medical schools and the medical profession in general will also provide themselves with the opportunity to develop strategies which improve the relevance of medical education and medical practice in meeting people's health needs.

In deciding to join forces in promoting these concepts and approaches, the World Health Organization (WHO) and the World Organization of Family Doctors (WONCA) encourage health policymakers, health care organizers, leaders in medical education, and representatives of professional associations and of the community to share a common vision and establish working relationships for the achievement of health for all.

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World Health Organization

The World Health Organization (WHO) is an inter-governmental organization within the United Nations System. WHO was created in 1948 and has 189 Member States.

Defined by its Constitution as the directing and coordinating authority on international health work, WHO has as its aim "the attainment of health." It lists specifically a number of responsibilities. These include:

- to assist governments, upon request, in strengthening health services;
- to establish and maintain such administrative and technical services as may be required, including epidemiological and statistical services;
- to provide information, counsel and assistance in the field of health;
- to stimulate the eradication of epidemic, endemic and other diseases;
- to promote improved nutrition, housing, sanitation, working conditions, and other aspects of environmental hygiene;
- to promote cooperation among scientific and professional groups which contribute to the enhancement of health;
- to propose international conventions and agreements on health matters;
- to promote and conduct research in the field of health;
- to develop international standards for food, biological and pharmaceutical products; and
- to assist in developing an informed public opinion among all peoples on matters of health.

In 1977 the World Health Assembly decided that the main social target of governments and of WHO should be the attainment by all the people of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. This was the birth of the "Health for All by the Year 2000" movement.

"Health for All by the Year 2000" does not mean that disease and disability will no longer exist, or that doctors and nurses will be taking care of everybody. What it does mean is that resources for health will be evenly distributed, and that essential health care will be accessible to everyone with full community involvement. It means that health care begins at home, in schools and at the workplace, and that people will use better approaches for preventing illness and alleviating unavoidable disease and disability. It means that people will realize that they have the power to shape their own lives and the lives of their families, free from the avoidable burden of disease, and aware that ill-health is not inevitable.

Right from its inception WHO has given the highest priority to ensuring that there are sufficient numbers of properly trained health personnel to carry out national health programs. Over the years, this priority has been refined and expanded. It now includes not only human resource planning but also considerations of the optimal mix of different categories of health professionals to deliver the most effective service of an acceptable quality. WHO has also been successful in promoting the use of sound educational principles to ensure the relevance of training curricula and effective learning.
World Organization of Family Doctors

The World Organization of Family Doctors (WONCA) is the accepted name for the World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians.

At the 5th World Conference held in Melbourne in 1972, WONCA was formally inaugurated and now comprises over 55 Member Organizations from more than 45 countries. Full membership is available to national colleges, academies or organizations concerned with the academic aspects of family practice. Family doctors can be part of this world organization by becoming direct members. WONCA has expanded rapidly in recent years and through its members represents more than 150,000 doctors worldwide.

The object of WONCA is to improve the quality of life of the peoples of the world through fostering and maintaining high standards of care in family medicine by:

- providing a forum for exchange of knowledge and information between member organizations of family doctors.
- Encouraging and supporting the development of academic organizations of family doctors.
- Representing the educational, research and service provision activities of family doctors before other world organizations and forums concerned with health and medical care.

WONCA's mission is to improve the quality of life of the people's of the world through fostering and maintaining high standards in family medicine.

To achieve these aims, WONCA employs a range of academic strategies including:

- The development of basic medical education, specific training and continuing education.
- The definition of standards through research, and the development of systems of classification and quality assurance. WONCA is committed to reform medical practice and medical education.
- The opportunity to collaborate with WHO in promoting specific action within member states.
- The reorientation of health care systems through the contribution of member organizations acting in partnership with health planners and policy makers.
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## PLANNING COMMITTEE

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The conference was hosted by the Department of Family Medicine at the University of Western Ontario, London, Canada.
EXECUTIVE SUMMARY

To meet people’s needs, fundamental changes must occur in the health care system, in the medical profession, and in medical schools and other educational institutions. The family doctor (general practitioner/family physician) should have a central role in the achievement of quality, cost effectiveness, and equity in health care systems. To fulfill this responsibility, the family doctor must be highly competent in patient care and must integrate individual and community health care. The cooperation between the World Health Organization (WHO) and the World Organization of Family Doctors (WONCA) towards this vision is historic.

Introduction

From November 6 to 8, 1994, WONCA and WHO convened at London, Ontario; a Strategic Action Forum involving 60 government health officials, medical educators, family doctors, and public representatives from around the world. The conference was hosted by the Department of Family Medicine at the University of Western Ontario. The purpose of the meeting was to identify specific actions to make health care, medical practice and medical education more relevant to people’s needs thereby contributing to the Health for All goals.

The primary purpose of this report is to examine the role of the physicians in the health care system, especially family doctors. Although, WONCA and WHO recognize the important contributions of other health care providers, especially nurses and public health officers, this report focuses on the contributions of physicians in the health care team. In fact, if family doctors are to be successful in meeting the needs of their patients and the communities in which they live, they must work effectively in teams with other health care providers.

Through plenary and small group sessions, participants analyzed the major challenges in health care, medical practice and medical education necessary for nations to obtain the greatest improvement in health for their investment. From this analysis, participants developed a vision of health care, medical practice and medical education that is responsive to the needs of individuals and communities. They then developed a strategic action plan to help government, medical educators, family doctors and the public to attain that vision.

People throughout the world can obtain more health value for their investment if they address the key challenges stated in chapters 1-3. Such barriers interfere with the development of optimal systems of health care, medical practice and medical education. Fundamental to this optimal system is the assertion that everyone in every nation has an individual need for personal care. Communities and nations also have a need for their citizens to have a health care system which meets the needs of the population as a whole.

The achievement of an acceptable standard of health for individuals and populations is hampered by unequal access to medical care and preventive services, inefficient health care systems, rising costs, especially in tertiary care hospitals and the rapid growth of the physician workforce, its maldistribution and its inappropriate generalist/specialist mix.

The undergraduate training of doctors mainly in hospital settings, where disease orientation predominates and the context of illness is given little emphasis, results in graduates unfamiliar with personal, community-based care. This is compounded by the lack of postgraduate training for this type of care in many countries.

Research funding is directed largely to biomedical research, with too little devoted to health services research, research in primary care and population research.
Vision of Optimal Health Care, Medical Practice and Education

Central to Health For All goals is a fundamental assertion that all nations should seek to improve the length of productive life of the population and reduce disparities in health status among population subgroups. Many variables, including per-capita income, housing and education influence health status. Nevertheless, how the health budget is invested also makes a significant difference.

This report is based on an underlying premise that health care, medical practice and medical education today must be made more relevant to people’s needs. Priorities for health care, medical practice and medical education must be guided by the prudent use of financial, human and technical resources that are shown to improve health. Data presented in the first three chapters of this report provide evidence for the role of family doctors in meeting these goals.

Optimal Health Care

1. Cost-effective public health and personal services provided: Countries can obtain the greatest value for their health expenditures and respond to people’s needs by having a delivery system which ensures that all citizens receive a set of essential and proven cost-effective public health and personal services.

2. Financing policies promote health: Effective financing policies must be in place that reward systems and providers for improving the health of the individual and community and place a premium on cost-effectiveness. Public and private sector financing of personal care should reward preventive care, effective treatment of acute illness and management of chronic disease in a way that maintains a person’s optimal function and independence. Financing should emphasize such elements as quality, continuity, and coordination-of-care, as well as accessibility, acceptability and consumer satisfaction.

3. Primary care emphasized: Quality primary medical care should be available to all. Adequate infrastructure such as clinical facilities, medical equipment, records and staffing should be universally available.

4. Appropriate utilization of secondary and tertiary care services: Individuals seeking care by a specialist physician should have initial contact with a generalist. The physician and the patient together should have adequate information regarding quality of care, likely outcomes, and cost to determine whether consultative services of a specialist physician are necessary.

5. Health workforce properly educated and distributed: The health care workforce should be properly trained and distributed to deliver essential public health and individual services in a way that is acceptable to the people served and achieves geographic coverage.

6. Adequate physician workforce planning data: Planning to match the physician supply and specialty mix to health care system requirements should be done in conjunction with an analysis of requirements for other health care workers. The allocation of public funding for physician training should be guided by an accurate analysis of health care system requirements and an accurate inventory of the current supply, demographic composition, specialty mix and geographic distribution of the physician workforce. Such inventories should be collected in a uniform manner so that comparisons can be made within and between nations.

7. Public funds train more family doctors: Given people’s needs for quality primary care services, countries should move towards a system in which a majority of practicing physicians are family doctors. To attain this goal, public funding should be shifted to train more family doctors and other community-based primary care and public health providers and fewer specialist physicians.
8. **Medical practice is responsive to individuals and communities:** Optimally, medical practice should be person-centered, health oriented and community-based. The systems of medical practice and public health should be closely linked to most effectively promote the health of individuals and the communities in which they live. Ideally, family physicians should combine many aspects of both functions. Medical practice requires physicians who are competent as caregivers, decision-makers, communicators, managers and health care team members.

9. **Every person should know their family doctor (or primary care provider) and be known personally by him/her:** The primary care provider should know the person, and understand their living situation, family and community. The majority of an individual’s health problems can be addressed by this provider who also coordinates care provided by other members of the health care team. The person eventually develops a sustained trusting relationship with their provider.

10. **Well-trained family doctors provide quality primary care:** A well-trained family doctor can respond appropriately to most of the health problems that most people have most of the time. All family doctors are trained to care for sick people, reliably exclude serious illness, and provide care for chronic illnesses. They are trained to take into account the interactions of biological, family, social and environmental systems. These skills should be derived from the unique needs of individuals and communities in each country. All those who practice as family doctors should receive appropriate training, and be allowed to practice to their full capacity in the delivery system, receiving appropriate professional status and reimbursement for their services.

11. **Medical education is responsive to people’s needs:** The medical education system should be responsive to the priority needs of individuals and communities at a national and regional level. Physicians should be trained in sufficient numbers and appropriately deployed, and acquire the competencies needed to provide quality and cost-effective medical care. Medical education by itself should not determine or predict medical practice. Rather, changes in medical practice should determine changes in medical education.

12. **Undergraduate medical education and medical practice are closely linked:** Medical schools should refine their mission, strategic plan, admissions policy, faculty composition, curriculum, and training sites and take initiative to eventually influence the future working environment of the graduate to meet the health care system requirements in communities to be served. Students should be exposed to the range of health problems people face in the community. Every medical school should make the longitudinal teaching of primary care an integral part of the undergraduate curriculum. Family doctors can provide basic education in family medicine, a generalist dimension to the teaching of other specialties, and provide students with role models for an informed career choice.

13. **Family doctors are trained in a relevant spectrum of skills:** Every medical school should make the teaching of primary care an integral part of the undergraduate curriculum and provide greater incentives for new graduates to choose a career in family practice. Medical schools and other institutions should establish or support strong postgraduate programs in family medicine. Established family doctors without specific postgraduate training, and other physicians intent on meeting the broad health needs of the population they serve should be provided with additional training in the principles and practice of family medicine.
14. Medical schools emphasize primary care, health services and population research: Medical schools, in partnership with health authorities, professional associations and communities, should proactively engage themselves in teaching, research and other activities to improve the future health care system so that it is more responsive to societal values and improve people’s health. Given people’s needs, medical schools should place more emphasis on health services, primary care and population-based research.

Specific Recommendations

Countries can be most responsive to people’s needs and obtain the greatest value for their health expenditures by ensuring that all citizens receive an essential set of cost-effective public health and personal medical services provided by an adequately trained and geographically distributed health care workforce. To attain this vision, most nations will have to make major changes and re-allocate resources in health care, medical practice and medical education. Such changes are necessary if health care, medical practice and medical education are to meet the needs of the people.

Recommendation Number One:

ACCEPT THAT HEALTH CARE MUST CHANGE
Fundamental changes must occur in health care systems to make them more equitable, cost effective, and relevant to people’s needs. The family doctor should have a central role in the achievement of these goals by being highly competent in providing quality essential individual care and by integrating individual and community health care.

Recommendation Number Two:

LINK FUNDING POLICIES TO DEFINED NEEDS
Tools should be developed and used to define people’s health needs both as individuals and members of communities. Health care funding should be linked to needs. In particular, defined needs should influence the proportion of available resources spent on primary, secondary and tertiary care and public health services.

Recommendation Number Three:

REWARD EFFECTIVE PUBLIC HEALTH AND PRIMARY CARE
Quality public health services and individual care should be available to all as a matter of national policy. Financial incentives should be available to those systems and providers delivering cost-effective public health services and individual care, where health is shown to be improved. Appropriate levels of investment should ensure that standards of infrastructure in primary care are equivalent to those prevailing in hospital settings.

Recommendation Number Four:

IMPLEMENT WORKFORCE REFORM
Normally, a majority of doctors should be family doctors. Where necessary, national policies should be adopted to achieve this goal as quickly as possible.

Recommendation Number Five:

DEFINE THE STATUS & ROLE OF FAMILY DOCTORS
The status of primary care should be enhanced and the role of the specifically trained family doctor within it defined. There should be balanced medical representation of generalists and specialists throughout the health care management system.
Recommendation Number Six:

USE SPECIALIST SERVICES MORE APPROPRIATELY

Appropriate use of specialist services should follow an initial contact with a primary care provider who should be able to provide independent, well-informed advice on both the need to refer and the choice of options available, having regard to likely outcomes, quality and cost. Such referral systems should be introduced and sustained by interprofessional consensus, contractual agreements and financial incentives.

Recommendation Number Seven:

TEST NEW MODELS OF INTEGRATED CARE DELIVERY

Field test projects should be conducted that experiment with different models of health care that integrate the functions of individual care and public health. Models tested should support practice patterns which emphasize quality, which provide care which is personal, comprehensive, coordinated, and longitudinal, which take account of the health needs of individuals and communities, and which integrate care with that provided by other professionals.

Recommendation Number Eight:

USE BOTH COMMUNITY AND PRACTICE BASED ANALYSIS OF PEOPLE'S NEEDS TO PROVIDE RELEVANT STANDARDS OF PRACTICE

Medical practice should be targeted to people's needs. National and community data should be balanced by the practice based needs analysis of individuals and families to provide relevant standards of practice.

Recommendation Number Nine:

USE WELL-TRAINED FAMILY DOCTORS TO PROVIDE BETTER QUALITY CARE MORE COST EFFECTIVELY

Everyone should have a primary care provider thereby making essential individual services available to the entire population. A specifically trained family doctor can respond appropriately to most of the problems that most people have most of the time. Whenever possible, family doctors should be used exclusively as doctors of first contact. Not only are they uniquely qualified for the task but represent the most effective means to control the unnecessary and untimely use of specialist services.

Recommendation Number Ten:

ENCOURAGE ALL PATIENTS TO IDENTIFY WITH AN INDIVIDUAL FAMILY DOCTOR

Every person should know the name of their primary care provider; every person should be known by name by a primary care provider. Identifying with an individual family doctor should be promoted as a matter of personal and professional responsibility but reinforced by financial incentives and contractual requirements.

Recommendation Number Eleven:

ESTABLISH COLLEGES/ACADEMIES OF FAMILY DOCTORS IN ALL COUNTRIES

Colleges, academies, or other independent self-regulating professional associations of family doctors should be established in all countries. Membership should aim to include all physicians working at the primary care level. These colleges/academies should assure the public that family doctors are responsive to the needs of their communities and seek to maintain high standards of care by their members.
Recommendation Number Twelve:

FAMILY DOCTORS SHOULD DEMONSTRATE THEIR CONTINUING COMPETENCE USING VALID AND RELIABLE METHODS OF SELF ASSESSMENT

Family doctors should devise standards for all aspects of family practice based where possible on published research evidence including both quantitative and qualitative aspects. Doctors should apply these standards to their own performance provided the methods of evaluation employed are valid and reliable. Such systems should enable doctors to demonstrate their continuing competence - for example for the purposes of recertification.

Recommendation Number Thirteen:

ENSURE THAT REMUNERATION SYSTEMS OF PHYSICIANS DO NOT DISTORT HEALTH CARE PRIORITIES BASED ON NEED

Systems of funding and physician payment should support optimal medical practice as envisaged in this report. A thorough analysis of existing systems and possible alternatives should be undertaken.

Recommendation Number Fourteen:

JUDGE MEDICAL EDUCATION BY ITS RELEVANCE TO PEOPLE’S NEEDS AND ITS APPLICABILITY TO MEDICAL PRACTICE

The medical education system should be able to demonstrate explicitly the manner in which it responds to the needs of people - at the level of the individual, the community and the nation. Medical education should respond to those needs by training doctors who, in sufficient numbers, are capable of providing equitable, relevant, quality, and cost effective medical care. The medical school should contribute in shaping a socially responsible health care system. National quality standards for medical education should be developed and valid and reliable methods of applying them should be devised. The social accountability of the medical school as an institution is of particular importance.

Recommendation Number Fifteen:

RECOGNIZE FAMILY MEDICINE AS A SPECIAL DISCIPLINE

Formal recognition of Family Medicine as a special discipline in medicine - already accepted in many countries - should now become universal.

Recommendation Number Sixteen:

BASIC MEDICAL EDUCATION (UNDERGRADUATE) SHOULD PROVIDE A RELEVANT FOUNDATION FOR SUBSEQUENT SPECIFIC TRAINING

Medical schools should continuously refine their mission, strategic plan, admissions policy, faculty composition, curriculum, examinations and teaching settings to meet the needs of people and medical practice in communities to be served by their graduates. The aim of basic medical education should be to produce graduates capable of undertaking further specific training in any chosen discipline - including family medicine. Basic medical education alone is insufficient training for family doctors. Competency in family medicine requires postgraduate training.

Recommendation Number Seventeen:

THE DISCIPLINE OF FAMILY MEDICINE SHOULD BE TAUGHT IN EVERY MEDICAL SCHOOL AND PROVIDE A GENERALIST/SPECIALIST BALANCE

Every medical school should have a department of family medicine. All specialist teaching should include a generalist dimension including referral, shared care, discharge and follow up. In addition, equal emphasis should be placed on primary care teaching in a family practice setting. All students should experience the continuity of individual health and illness within a community context. The involvement of balanced numbers of family doctors as teachers and role models should enable students to make an informed career choice.
Recommendation Number Eighteen:

EVERY COUNTRY SHOULD PROVIDE SPECIFIC POSTGRADUATE TRAINING IN FAMILY MEDICINE

Every country should aim to establish programs of specific training in family medicine which should follow basic medical education and which should endeavor to meet the needs of a balanced workforce.

Recommendation Number Nineteen:

CONTINUING MEDICAL EDUCATION SHOULD FOCUS ON PERFORMANCE IMPROVEMENT

Continuing medical education (CME) should be centered on the performance of doctors in meeting people's needs. As part of their professional task all doctors should actively participate with their peers in a continuous review of their own performance in the light of published standards, guidelines and research. CME should include where necessary a commitment to change existing practice in response to the needs of individuals and communities. Each discipline, including family medicine, should accept responsibility for planning and delivering its own CME programs.

Recommendation Number Twenty:

MORE EMPHASIS SHOULD BE PLACED ON HEALTH SERVICES, POPULATION BASED AND PRIMARY CARE RESEARCH

Publicly funded research should give a higher priority to health services, primary care, prevention and population based research that directly affects health outcomes. Medical schools should initiate such research in partnership with health authorities, professional associations, communities and individual family doctors. Data from research should be rationally applied to health care policy.

Recommendation Number Twenty-One:

INFORMATION AND EXAMPLES OF EXCELLENCE SHOULD BE GATHERED AND DISSEMINATED

Information should be exchanged between governments, medical schools, professional associations and other relevant bodies for sharing creative solutions to problems in health care systems, medical practice and health education.

PROGRAM FOR PREPARATORY ACTION

As a result of this conference and the recommendations in chapter five, further negotiations between WHO and WONCA should take place. Responsibility should be delegated and 'lead assignments' should be given to key individuals and organizations:

- Convene regional conferences to further these recommendations.
- Convene a consultative conference on systems of funding and physician payment.
- Devise a program to establish in member states:
  - a department of family medicine in every medical school
  - postgraduate training programs in family medicine
- Develop WHO Collaborating Centers for Family Medicine.
- Launch a joint WHO/WONCA world survey of family doctors (current status and trends).
- Devise projects on integrated delivery of primary care.
- Develop an information center that provides project support, documents, and consultant teams relevant to the reform of medical education and medical practice and the role of the family doctor.
References


CHAPTER ONE:
CHALLENGES FOR HEALTH CARE SYSTEMS

Governments, the private sector and the public have an interest in and fundamental responsibility for promoting the health of the world's population. To do so requires each nation to devote a share of its resources:

- to improve social, economic, educational, environmental, public health and all other conditions affecting health,

- to ensure that the public has access to a basic set of health services that first and foremost emphasizes primary health care (Table 1), and

- to ensure an adequate supply of appropriately trained physicians and other health workers to provide these services.

Although not the focus of this report, it is important to acknowledge that a fundamental government strategy to improve its population's health is to invest in sustained economic growth policies, improve the educational system and promote the rights and status of all citizens, particularly women, minorities and the poor. Such economic growth, education and human rights policies are part of the WHO's recommendations to improve health. These strategies are important for all nations, regardless of their socioeconomic status at development.

During the past 40 years, life expectancy has improved more than during the entire previous span of human history. Life expectancy in developing countries increased from 40 years in 1950 to 63 years in 1990. In 1950, 28 of every 100 children worldwide died before age five. By 1990, that had fallen to 10 per 100.

Table 1
Definition of Primary Health Care

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford. It forms an integral part of both the country's health system, of which it is the central function and main focus, and the overall social economic development of the community.

Primary health care includes at least:

- education concerning prevailing health problems and the methods of preventing or controlling them

- promotion of food supply and proper nutrition

- an adequate supply of safe water and basic sanitation

- maternal and child health care, including family planning

- immunization against the major infectious diseases

- prevention and control of locally endemic diseases

- appropriate treatment of common diseases and injuries

- provision of essential drugs


Nonetheless, progress in economic development and health has been mixed. The *1993 World Development Report: Investing in Health* from the World Bank concisely summarizes the progress to date and the challenges that remain. (Figure 1, Table 2). Between 1975 and 1990, world child mortality declined from 135 to 96 per 1,000 and world life expectancy at birth increased from 60 to 65 years. Yet, both the World Bank and WHO global health reports document the remaining and enormous global health problems. For example, child mortality rates are 10 times higher in developing countries. If child mortality rates in developing countries were reduced to the level of developed countries, 11 million fewer children would die annually. Almost half of child deaths in developing countries are preventable, the result of diarrheal and respiratory illness exacerbated by malnutrition.

Throughout the world, seven million adults die annually from conditions that could be inexpensively prevented or cured.

Furthermore, both developing and developed countries face new health challenges. The growing toll from AIDS, drug-resistant malaria and tobacco-related deaths from cancer, heart and lung disease may erase recent gains in longevity. Progress in reducing childhood deaths will create new demands for health systems to provide quality care to a growing adult and elderly population while controlling escalating costs.

Medical care and medical education represent a sizeable public investment by most nations and although they have contributed to only a fraction of the recent gains, they can have a significant impact on improving health status. Investments in the health workforce, that currently may consume up to two-thirds of a nation’s health budget, need to be carefully considered to ensure an appropriate number, type and distribution of health professionals to provide the required individual and public health services. However, several major problems need to be addressed to improve the quality of medical practice and medical education.

In 1978, the nations of the world gathering at the International Conference on Primary Health Care in Alma-Ata, (in the former Soviet Union), sponsored by the World Health Organization (WHO) and the United Nations International Children’s Fund (UNICEF), articulated this vision. The Alma-Ata Declaration (Appendix 1) called for Health for All that would permit all people to lead a socially and economically productive life. It called upon WHO, UNICEF, and other international organizations, governments, the private sector and the public to support national and international commitment to improve health status and reduce disparities in both health status and access to health services. The Alma-Ata Declaration acknowledged the need for countries to provide essential health services to their entire populations and to have an appropriate health care workforce, including physicians, “suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.”

In 1981, a global strategy to attain Health for All was formulated and adopted by the community of nations (Table 3). Since that time, progress has been mixed. Many countries have endorsed the Health for All goals and some impact has been...

Figure 1 - Demographic regions used in this Report

Table 2 - Population, economic indicators and progress in health by demographic region, 1975-90

<table>
<thead>
<tr>
<th></th>
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<td>4.6</td>
<td>135</td>
<td>97</td>
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<td>2,190</td>
<td>-0.1</td>
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<td>60</td>
<td>62, 70</td>
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<tr>
<td>Demographically developing group*</td>
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<td>2.2</td>
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<td>11</td>
<td>73, 76</td>
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<td>Established market economies (EME)</td>
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<tr>
<td>FSE and EME</td>
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<td>15</td>
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<tr>
<td>World</td>
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<td>50.0</td>
<td>4,000</td>
<td>1.2</td>
<td>135</td>
<td>96</td>
<td>60, 65</td>
</tr>
</tbody>
</table>

Note:  Child mortality is the probability of dying between birth and age 5, expressed per 1,000 live births; life expectancy at birth is the average number of years that a person would expect to live at the prevailing age-specific mortality rates.

* The countries of the demographic regions Sub-Saharan Africa, India, China, Other Asia and islands, Latin America and the Caribbean, and Middle Eastern crescent.

documented, such as improved immunization rates or increased attention towards environmental concerns. Overall, average life expectancy at birth increased from 60 to 65 years between 1975 and 1990. For other countries, little or no progress has been made. In 1988, a midpoint progress review was conducted in Riga, now Latvia. Citing this mixed review, conference participants called for the nations of the world to accelerate their commitment to Health for All.3

Although an approach to improving the quality and distribution of health services delivered by physicians and other trained health personnel is but one factor in improving health for all, it is a critical and essential one. WHO, in its 1993 global review of progress towards the year 2000 goals, noted slow progress in attempting to facilitate universal access to essential health care.4 Furthermore, WHO found that “the inadequate and uneven distribution of health personnel of different categories has frequently hindered the delivery of an appropriate mix of health care activities.”5

### Table 3
Global Strategy for Health for All by the Year 2000

**Global Targets**

1. All people in every country will have ready access at least to essential health care and to first level referral facilities.

2. All people will be actively involved in caring for themselves and their families as far as they can and in community action for health.

3. Communities throughout the world will share with governments responsibility for the health care of their members.

4. All governments will assume overall responsibility for the health of their people.

5. Safe drinking water and sanitation will be available to all people.

6. All people will be adequately nourished.

7. All children will be immunized against the major infectious diseases of childhood.

8. Communicable diseases in the developing countries will be of no greater public health significance in the year 2000 than they are in the developed countries in the year 1980.

9. All possible ways will be applied to prevent and control noncommunicable diseases and promote mental health through influencing life styles and controlling the physical and psychosocial environment.

10. Essential drugs will be available to all.


The following key findings identify five key challenges nations face as they attempt to make their health systems more responsive to public need:

Finding Number One: The achievement of a reasonable standard of health for the population is hampered by inequitable access to essential public health and clinical services, inefficient health systems, and skyrocketing health care costs. If not corrected, these deficiencies will hinder efforts to improve overall health status and to effectively respond to the major causes of premature disability and death in the 21st century.

Global spending for health care services is enormous and highly variable. The World Bank reported that public and private expenditures on health services in 1990 were about $1.7 trillion dollars, or 8% of the entire world's production. According to WHO, per capita global expenditures range from $5 to $3,500.6 The United States alone consumes 40% of the world's expenditures on health, representing 14% of its gross domestic product (GDP). In 1990, the

Investments in the health workforce, that currently may consume up to two-thirds of a nation's health budget, need to be carefully considered to ensure an appropriate number, type, and distribution of health professionals to provide the required clinical and public health services.

United States and the other economically developed countries accounted for almost 90% of total world consumption on health, for an average annual expenditure of $1,500 per person. In contrast, developing countries spent about $170 billion, or 4% of their GDP, for an average of $41 per person.


Many variables, including per-capita income, education and percent spent on health care influence health status. However, how a developed or a developing country organizes its health system and invests its health care budget does make a significant difference. According to a World Bank analysis, some countries achieve far better health outcomes with lower health expenditures.1 In this study it was shown that, while expenditures on health, per capita income and education, taken together, were good predictors of life expectancy, many countries had far better longevity than would have been predicted by these variables alone. For example, countries such as China, Sri Lanka and Greece have life expectancies five to ten years longer than would have been predicted by their expenditures, income or schooling.

In many developing countries, public dollars are often spent on high cost hospital services that disproportionately serve the more affluent urban sector. Unfortunately, expensive diagnostic and treatment services consume funds that could instead provide essential and cost-effective public health and clinical services, such as immunizations, prenatal care and screening and treatment of hypertension and diabetes. As a result, the poor have little or no access to essential clinical services. When they do, they often receive a greater percentage of costly and publicly financed tertiary care services rather than a broad spectrum of basic services. The World Bank reports that, in some countries, a single tertiary care hospital may absorb 20% or more of the Ministry of Health Budget, even though a spectrum of more effective services could be broadly delivered in small decentralized community-based facilities.

In middle income countries, public funds often subsidize private insurance that is available to only a small and affluent minority. For example, in South Africa, Zimbabwe and many Central and South American countries, those working are cov-
erred under mandatory government subsidized insurance. The remainder of the population, including the poor, have to rely on out-of-pocket payments to private doctors or government services that are largely inaccessible.

At the same time, in many of these middle income countries, as well as virtually all upper-income countries, health care expenditures are rising much faster than income. These rising expenditures are driven by the growth of specialist physicians, the availability of expensive new medical technology and expanding publicly subsidized private insurance which is reimbursed on a fee-for-service basis. In some countries, too many hospital beds have been built and too much medical equipment has been purchased, increasing pressures on medical inflation and leaving beds and equipment underutilized. The rising costs of hospital-based medical care leave little for essential clinical and public health services for the public at large.

As a result, the poor have little or no access to essential clinical services. When they do, they often receive a greater percentage of costly and publicly financed tertiary care services rather than a broad spectrum of basic services.

Perhaps the most important priority a nation can achieve with its health policies and budget is to establish a health system for the entire population that provides services which assure significant health gains for the money spent. This is typically done through both the public and private sectors.

An idealized health system is illustrated in Figure 2. The foundation of a health system is widely available community-based facilities which provide essential clinical (i.e., primary medical care) and public health services. This places the tertiary hospital system on a solid foundation of secondary hospitals, nursing homes and other facilities which deal with the most common conditions requiring institutionalization. This model also recognizes that an efficient and effective system requires people to understand and to assume responsibility for protecting their own and their families’ health.

Unfortunately, in many societies the small tip of the pyramid, tertiary hospitals, have the first claim on health resources. Their resource demands are almost inexhaustible and continually squeeze out the legitimate demands for primary care and public health. More and more resources are consumed for less and less health benefit.

On the other hand, the World Bank concluded that investments in a cost-effective package of public health and clinical services for the entire population could yield significant health gains. The World Bank’s recommended minimum essential package of public health services includes: immunizations, school-based health services, family

Finding Number Two: Financial incentives often encourage the growth of tertiary care hospitals, acquisition of costly medical and surgical equipment and the provision of services of marginal benefit rather than a the provision of cost-effective public health and clinical services of greatest health value.

These rising expenditures for medical care are driven by the growth of specialist physicians, the availability of expensive new medical technology and expanding publicly subsidized private insurance which is reimbursed on a fee-for-service basis.

The rising costs of hospital-based medical care leave little for essential clinical and public health services for the public at large.

The resource demands of tertiary hospitals are almost inexhaustible and continually squeeze out the legitimate demands for primary care and public health.
The World Bank concluded that redirecting resources that have high cost and little health gain to fund these essential public health and clinical services could dramatically improve health status without spending more money. They estimated that a limited package of public health measures and essential clinical services for the entire population could reduce the burden of disease by as much as one-third and cost as little as $12 per capita per year for developing countries. Middle-income countries could finance a similar minimum package that could reduce their burden of disease by as much as 15% for as little as $32 per capita. After providing universal coverage, countries with larger health budgets could expand their package of public health and clinical services.

Finding Number Three: Since 1955, the world’s physician workforce has grown at twice the rate of the general population and the number of medical schools has more than doubled. Physician-to-population ratios and growth rates vary widely among countries. Today, physician unemployment and underemployment is a phenomena of both developed and developing countries.

Between 1955 and 1990, the world’s population more than doubled -- from 2.5 to 5.2 billion. Dur-

At the same time, the number of medical doctors increased more than fivefold, from 1.2 to 6.2 million. As a result, the estimated physician-to-population ratio more than doubled, from 50 to 120 physicians per 100,000 population.

Physician-to-population ratios and growth rates vary widely throughout the world. The World Bank\(^1\) reported that they range from as low as 12 per 100,000 in Sub-Saharan Africa to as high as 407 per 100,000 in the former socialist countries of Europe (Figure 3). This broad range between regions masks even more significant differences between countries within regions. For example, some Sub-Saharan African countries, such as Burkina Faso and Niger, have as few as 2 to 3 physicians per 100,000 while South Africa has a ratio of over 60 physicians per 100,000. Even among the countries with highly developed market economies the range is striking. England, for example, has 140 physicians per 100,000 while Spain and Italy have rates of 380 and 430 per 100,000 respectively.

Partly as a result of this dramatic growth in the physician supply, physicians are unemployed or underemployed in both developing and developed countries. However, the reasons vary. There are an estimated 40,000 unemployed physicians in Italy and 6,000 in Spain: a phenomenon of developed countries whose physician supply approaches and exceeds 300 per 100,000 total physicians.\(^8\) On the other hand, developing countries with much lower physician-to-population ratios also have physician surpluses because they cannot afford to

---

Figure Three - Supply of physicians by demographic region, 1990 or most recent available year

**Physicians per 100,000 Population**

- Sub-Saharan Africa
- Other Asia and islands
- India
- Middle Eastern crescent
- Latin America and the
- China
- Established market ecc
- Formerly socialist eco

0 100 200 300 400 500
employ them. For example, it was reported that Mali was only able to employ 15 percent of its 53 medical graduates in 1985. India and the Philippines also have reported physician surpluses.  

Results from the most recent WHO global medical school survey in 1985 indicated that physicians were being trained in 1351 medical schools throughout the world. As a measure of the willingness of societies to invest in physician training, this is more than double the 646 medical schools in 1955. The largest rate of increase took place between 1960 and 1975, and countries continue to establish new medical schools.

This tendency to establish new medical schools is a worldwide phenomenon. Countries in all stages of development have increased the number of medical schools between 1955 and 1985. For example, Angola, Benin, Cameroon, Congo, Central African Republic, Dominica, Gabon, Guinea, Mali, Mozambique, Nepal, Niger, Somalia, Togo, Yemen, Zambia and Zimbabwe created one or more medical schools where none existed previously. Some countries dramatically expanded medical education. India increased the number of schools from 44 to 106 between 1955 and 1985; Indonesia from 44 to 106; Vietnam from 2 schools to 8; China from 40 to 114; Egypt from 3 to 11; Mexico from 18 to 57; the Republic of Korea from 6 to 31; and the Philippines from 6 to 27.

Countries with established market economies also experienced dramatic medical school expansion between 1955 and 1985. The United States went from 85 to 142 schools; Spain from 10 to 23; Australia from 4 to 10; Finland from 2 to 5; France from 25 to 37; the former West Germany from 19 to 29; and Italy from 21 to 31.

Even these dramatic increases mask the enormous investment made in medical education. Not only were new schools created, but existing ones were expanded so that the increase in the number of students was even greater than these numbers reflect. For example, the number of medical students in Mexico increased from 29,000 to 93,000 between 1970 and 1980 even though the number of schools had only doubled in the same period.

There is some evidence that the huge expansion period of medical education is coming to an end. In the United States, while medical school enrollment increased by 50% between the early seventies and mid eighties, it has remained constant since that time. Both France and Egypt reduced their numbers of medical students by half in the 1980s. Some countries that have a national coordinated approach to medical education have been able to continue training adequate numbers of medical doctors without substantially increasing the number of medical schools. For example, in England there have only been three new schools since 1945 and six have been amalgamated. The results of the World Health Organization's planned 1995 survey of world medical schools should provide additional evidence to determine if the growth in medical schools and physician training is decreasing.

**Finding Number Four:** In many countries, the shortage of generalist physicians, the surplus of specialists, and poor physician geographic distribution hamper efforts to expand essential clinical services to the entire population and control escalating costs.

In addition to a growing physician supply, both the 1993 WHO and World Bank global health reports found that virtually all countries face similar problems with the mix and distribution of their physician workforce: (1) they have too few primary care providers and too many narrowly trained specialists, (2) the physician workforce is heavily concentrated in urban areas and (3) training in such key areas as public health, health policy and health management is sparse. This section will focus on physician specialty mix and geographic distribution and their impact on health care delivery.
The key role in delivering essential individual and public health services belongs to primary care providers. They provide a broad range of "primary care services", including: 1) health promotion and disease prevention (e.g., immunizations, screening, health counseling), 2) assessment/evaluation of common symptoms and physical signs, 3) management of common acute and chronic conditions and 4) identification and appropriate referral for other needed health care services from more specialized providers. As a rule, well-trained generalist physicians can diagnose and treat well over 90% of the problems seen in the population.

Depending on how the job is defined in various countries, broadly trained primary care providers may include generalist physicians, nurse practitioners, and physician assistants. Broadly trained generalist physicians in some countries are either trained as general internists (who care for adults and the elderly), general pediatricians (who care for children and adolescents) and family doctors (who deliver babies and provide care for children, adolescents, adults and the elderly). Data from the U.S. shows that when the leading causes of morbidity and mortality are compared with postgraduate training curriculum, the generalist training (family practice, internal medicine, and pediatrics) most appropriately trains physicians to see the undifferentiated patient. Generalist physicians refer more complicated problems to "specialist" physicians, such as cardiologists, surgeons, radiologists and ophthalmologists. These specialists are trained to diagnose and treat a more narrow range of medical or surgical problems. In most countries, the family doctor is the sole "generalist" physician, as more complicated problems are referred to general internists and general pediatricians.

Working in teams, family doctors and nurses, social, mental, public and allied health professions, as well as village health workers can manage the vast majority of health-related problems in decentralized community-based settings. In a classic epidemiological study, Kark estimated that as few as one in 1,000 health related problems ever needs to be managed in tertiary care hospitals.13

Given the need to provide primary care services to the entire population, as well as the family doctor's ability to manage most medical problems, it makes sense that a majority of physicians should be trained to practice as family doctors. This may be even more important in developing countries, where it may be prudent to limit the utilization of costly hospital-based technology. Although the data on generalist and specialist physician-to-population ratios is limited, there is widespread consensus that the physician workforce in most developing and developed countries is overspecialized and there is a relative shortage of well-trained family doctors.

Although the data on generalist and specialist physician-to-population ratios is limited, there is widespread consensus that the physician workforce in most developing and developed countries is overspecialized and there is a relative shortage of well-trained family doctors.
Countries vary substantially in the percent of total physicians who are specialists and in the generalist and specialist physician-to-population ratios. For example, in an analysis of available data from ten highly developed countries, the percent of generalists was found to range from 23% to 57% of the workforce, and physician-to-population ratios varied from 62 to 191 generalists per 100,000 population and from 73 to 239 specialists per 100,000 population (Table 4). World Bank data suggested that in middle-income countries the degree of specialization can also be very high. Seventy-five percent of all Chilean physicians and 55% of Argentinian physicians are specialists. Similar specialist dominated workforces can be expected to be found in other developing nations, some of which have not yet met basic primary care needs for their populations. The implication of these ratios, in general, is that the physician workforce in most countries is becoming increasingly specialized.

In part, due to the shortage of generalists and surplus of specialists, the physician workforce is poorly distributed geographically in many countries. This contributes to barriers in access to primary care, particularly in rural areas. In developing nations, these geographic imbalances are particularly pronounced. In a recent study, Blumenthal analyzed available data comparing the highest and lowest provincial physician supply in 26 developing and 15 developed countries. Within developed countries, there is little variation in physician-to-population ratios between provinces/states. In 14 of the 15 most developed countries, the lowest physician to population ratio was at least 30% of the highest ratio (Table 5).

Among developing countries, the limited supply of physicians is disproportionately clustered in big cities, contributing to dramatic regional imbalances. In the 12 least developed countries with available data, Blumenthal found that nine countries had as few as 10 physicians per 100,000 population in some areas (Table 6). Furthermore, in nine countries, the lowest provincial physician-to-population ratio was 5% of (or 20 times less than) the urban areas with the highest ratios. Examples of these marked physician imbalances can be found in almost every de-

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**Table 4 - Physician Supply & Specialty Mix in Selected Developed Countries OECD Physician Work Force Data**

<table>
<thead>
<tr>
<th></th>
<th>Total MD /100,000(a)</th>
<th>General Practitioner /100,000</th>
<th>Specialist Practitioner /100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>200</td>
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<tr>
<td>Austria</td>
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<tr>
<td>Belgium</td>
<td>360</td>
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<td>Canada</td>
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<td>110</td>
<td>110</td>
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<tr>
<td>Denmark</td>
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<td>70</td>
<td>210</td>
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<tr>
<td>Finland</td>
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<td>62</td>
<td>188</td>
</tr>
<tr>
<td>France</td>
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<td>167</td>
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<tr>
<td>Germany</td>
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<td>234</td>
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<tr>
<td>Greece</td>
<td>340</td>
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<td>Iceland</td>
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<td>Ireland</td>
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<td>86</td>
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<td>Italy</td>
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<tr>
<td>Japan</td>
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<td>Luxembourg</td>
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<td>Netherlands</td>
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<td>Portugal</td>
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<td>Spain</td>
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<td>Sweden</td>
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<td>Switzerland</td>
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<tr>
<td>Turkey</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>140</td>
<td>67</td>
<td>73</td>
</tr>
<tr>
<td>United States(b)</td>
<td>230</td>
<td>76</td>
<td>154</td>
</tr>
</tbody>
</table>

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b. For US, percentage includes General Family Practitioners, General Internists and General Pediatricians. The percentage for General Practitioners is 27.6%
developing country. For example, in Lima, Peru in 1981 there were 190 physicians per 100,000 population; in the rural district of Apurimac, 3 physicians per 100,000—a 63-fold difference.\textsuperscript{15} Geographic imbalances in the physician workforce are, in part, a function of the mix of specialist and generalist physicians in a country. In the United States, for example, family doctors are the only physician specialty evenly distributed across all county types and sizes.\textsuperscript{16} Strategies to expand care in rural America include incentives to increase the family physician supply.

There is no consensus on what the “ideal” total physician supply, mix between generalist and specialist physicians and geographic distribution should be for all countries. Logically, more economically developed countries can afford larger physician-to-population ratios. However, in these countries, the physician specialty mix and supply should be distributed to ensure that all citizens should have access to essential individual services. That is certainly not the case in many developed countries such as the United States. In fact, during the 1980s, although an additional 150,000 physicians entered the workforce, raising the physician supply from 200 to 250 physicians per 100,000, the number of primary care shortage areas (defined as fewer than 30 physicians per 100,000 or 1 physician per 3,500 residents) actually increased.\textsuperscript{16}

Table 5 - Geographic Imbalances in Developed Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent Rural</th>
<th>Physicians per 10,000 Population</th>
<th>Ratio Low/High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>43.1</td>
<td>22.0</td>
<td>37.15</td>
</tr>
<tr>
<td>Belgium</td>
<td>3.2</td>
<td>33.0</td>
<td>49.90</td>
</tr>
<tr>
<td>Canada</td>
<td>23.8</td>
<td>20.9</td>
<td>22.37</td>
</tr>
<tr>
<td>Denmark</td>
<td>14.2</td>
<td>25.1</td>
<td>26.10</td>
</tr>
<tr>
<td>Finland</td>
<td>40.2</td>
<td>22.6</td>
<td>31.10</td>
</tr>
<tr>
<td>France</td>
<td>26.2</td>
<td>26.2</td>
<td>34.32</td>
</tr>
<tr>
<td>Germany</td>
<td>14.0</td>
<td>28.9</td>
<td>44.96</td>
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<tr>
<td>Greece</td>
<td>38.6</td>
<td>24.8</td>
<td>45.83</td>
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<tr>
<td>Japan</td>
<td>21.7</td>
<td>16.4</td>
<td>22.40</td>
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<tr>
<td>Italy</td>
<td>32.0</td>
<td>42.7</td>
<td>53.00</td>
</tr>
<tr>
<td>Norway</td>
<td>26.4</td>
<td>28.8</td>
<td>51.09</td>
</tr>
<tr>
<td>Sweden</td>
<td>16.3</td>
<td>22.0</td>
<td>35.00</td>
</tr>
<tr>
<td>Spain</td>
<td>22.9</td>
<td>38.2</td>
<td>54.10</td>
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<tr>
<td>Switzerland</td>
<td>39.1</td>
<td>15.3</td>
<td>27.20</td>
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<tr>
<td>United States</td>
<td>26.0</td>
<td>21.1</td>
<td>31.00</td>
</tr>
</tbody>
</table>

* Physician per population rates for the province or other major administrative subdivision with the highest and lowest such rates in the country.

Sources: Highest and lowest physicians per 10,000 population: national statistical reports. The number of decimals reflects the number reported in each report. Total physicians per 10,000 and percent rural: World Bank (1989).

Table 6 - Geographic Imbalances in Developing Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent Rural</th>
<th>Physicians per 10,000 Population</th>
<th>Rate Ratio Rural/Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>82.3</td>
<td>1.56</td>
<td>5.94 0.08 0.01</td>
</tr>
<tr>
<td>Benin</td>
<td>61.4</td>
<td>0.62</td>
<td>1.41 0.29 0.21</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>91.5</td>
<td>0.17</td>
<td>2.55 0.08 0.03</td>
</tr>
<tr>
<td>Burundi</td>
<td>93.5</td>
<td>0.47</td>
<td>5.36 0.29 0.05</td>
</tr>
<tr>
<td>CAR</td>
<td>55.5</td>
<td>0.43</td>
<td>0.67 0.09 0.13</td>
</tr>
<tr>
<td>Djibouti</td>
<td>20.8</td>
<td>2.40</td>
<td>2.73 0.52 0.19</td>
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<tr>
<td>Guinea</td>
<td>76.1</td>
<td>0.17</td>
<td>4.89 0.10 0.02</td>
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<tr>
<td>Malawi</td>
<td>85.4</td>
<td>0.86</td>
<td>1.51 0.03 0.02</td>
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<tr>
<td>Mali</td>
<td>81.4</td>
<td>0.43</td>
<td>2.84 0.02 0.01</td>
</tr>
<tr>
<td>Myanmar</td>
<td>83.0</td>
<td>2.67</td>
<td>3.15 0.06 0.02</td>
</tr>
<tr>
<td>Nepal</td>
<td>95.6</td>
<td>0.33</td>
<td>6.57 0.06 0.01</td>
</tr>
<tr>
<td>Niger</td>
<td>82.1</td>
<td>0.26</td>
<td>1.58 0.04 0.02</td>
</tr>
</tbody>
</table>

Sources: Total physicians per 10,000 population, percent rural: World Bank (1989). Urban and rural physicians per 10,000 population: HFA questionnaires and WHO country reports.

Among developing countries, the limited supply of physicians is disproportionately clustered in big cities, contributing to dramatic regional imbalances.
Among developing countries, physician-to-population ratios of fewer than five physicians per 100,000 and marked physician geographic imbalances (where the lowest to highest is 1 to 20) may be considered far from ideal. However, data indicate that rural regions in many developing countries also have few physicians-per-population and have marked imbalances between urban and rural physician supply.

Finding Number Five: In most countries, the number, specialty mix and distribution of the physician workforce are not based on an analysis of health care system needs. Public funds often train too many hospital-based specialists, which limit efforts to expand access and control costs. Public funding to increase the physician supply, without regard to the mix of generalists and specialists and the goal of geographic distribution, does not appear to be associated with improved health status.

Any societal investment in physician training should be evaluated on the basis of the outcome received. Interestingly enough, the relationship between the ratio of physicians-per-population and health status is not strong. For example, when developed countries are matched on other key variables such as income, education and employment levels, higher physician-to-population-ratios do not show any positive impact on key measures of the population’s health, such as infant mortality and life-expectancy. Differences in health status between developed and developing countries are due to income, education, employment, and essential public health services, rather than the total physician supply.

The efficacy of a well-developed primary care system, including a well-trained generalist physician workforce, is found in the work of Starfield. She showed that highly developed countries which were highly oriented towards primary care and had high levels of community satisfaction with the health system were more likely to have better health outcomes. Additional evidence is found in the work of Shi who found correlations between the presence of primary care physicians and measures of health within the United States. His data indicate that high primary care physician to population ratios were significantly associated with lower infant mortality rates, lower neonatal mortality rates and higher life expectancy. Higher specialist-to-population ratios were significantly correlated with higher cancer death rates and a lower life expectancy. There is a growing database that demonstrates that specialists who function as generalists and attempt to provide primary care services have more costly styles of practice, with higher rates of diagnostic tests, hospitalizations, referrals and prescribing medications with no difference in health outcomes.

Societies should be cautious in making investments in training physicians without making certain that the physicians trained are what the public needs. Governments spending public funds on physician training should place first priority on ensuring an adequate supply of generalist physicians to provide essential primary care services to the entire population. Furthermore, countries must ensure that a health system infrastructure is in place which emphasizes a primary care approach to improving health status and that a range of health professionals are available, in addition to physicians, to provide basic individual and public health services.

Fundamentally, high quality primary health care depends on the availability of well-trained family doctors as essential members of health teams in the community. As such, governments investing in physician training should adopt specific policies that increase the numbers and improve the quality of family practice training.
There is a wide variety of choices with regard to how to configure a health professional workforce. Unless these choices are explicitly made and unless they are based on the health care needs of the population there is likely to be misallocation of resources and unmet need. No health professional group practices in isolation from the others. Intelligent planning for health professional education should examine practice patterns, physician requirements and supply as a means of allocating educational resources. These practice patterns, of course, must be responsive to the goal of providing essential individual and public health services to the entire population.

While it is believed that most countries have some information about physicians and other key health professionals, attempts by the World Health Organization to obtain health care workforce data as part of monitoring key trends for Health for All by the Year 2000 have demonstrated how difficult it is to have obtain a comprehensive and reliable database. As a result, international comparisons are difficult. It is also very difficult to evaluate whether progress or is being made toward the goals established in the Alma Ata and subsequent international declarations on health manpower training. Further, the progress of various regions of the world toward the Health for All by the Year 2000 physician workforce objectives cannot be measured with any particular accuracy. Methodologies also need to be conceived to conduct research to better define the role of the family doctor in a reformed health system.

Fundamentally, high quality primary health care depends on the availability of well-trained family doctors as essential members of health teams in the community. As such, governments investing in physician training should adopt specific policies that increase the numbers and improve the quality of family practice training.

Data with regard to the total number of physicians is available for most countries. However, these data can be derived from different sources and using different definitions (e.g., all physicians versus practicing physicians) and methodologies. Sometimes, the government furnished data only provides information on physicians in the public sector. As a result, published data from different reports of a particular country may not appear to agree.

Beyond the total number of physicians, a more complete worldwide physician workforce database is lacking. For example, neither of these sources nor any other official source has been located that gives country-by-country breakdowns of such important measures as specialist and generalist supply and physician-to-population ratios, or geographic distribution. As a result, countries may have a difficult time monitoring trends and identifying problems in physician supply, specialty mix and distribution. In addition, cross-national comparisons are difficult. Furthermore, accurate and up-to-date worldwide medical education data is also sparse. The last world survey of medical education was conducted by the WHO in 1985. Beyond the basic descriptive information (e.g., number of medical schools, typical curriculum), little information is available to help assess physician workforce requirements for a given country or determine whether a country’s medical education system is being responsive to societal needs. A new world survey being developed at this time will attempt to obtain some of these key data.

It is important to underscore that sufficient information is available from which governments can begin to better match the physician workforce to health care needs. However, the lack of sufficient resources for physician and health care workforce analytical activities and the lack of agreement on methodological approaches hamper more refined physician workforce analysis and policy.

It is important to underscore that sufficient information is available from which governments can begin to better match the physician workforce to health care needs.


10 World Federation for Medical Education. World Conference on Medical Education. Edinburgh, Scotland, August 7-12, 1988.


15 Mesa-Lago C. Health Care for the Poor in Latin America and the Caribbean. Pan American Health Organization and the Inter-American Foundation.


CHAPTER TWO: CHALLENGES FOR MEDICAL PRACTICE

The first five findings outlined the challenges facing health care systems, yet there are similar challenges facing medical practice. Medicine has increasingly grown toward a complex, technological, organ-based approach which has increased cost, overspecialized the workforce, and created tension between the health care system and the public. The relationship between the physician and the patient and the community can easily be ignored in such a system but has long been recognized as pivotal to good medical care.

Students have been admonished that, “The significance of the intimate personal relationship between physician and patient cannot be too strongly emphasized, for an extraordinary large number of cases both diagnosis and treatment are directly dependent on it, and the failure of the young physician to establish this relationship accounts for much of his ineffectiveness in the care of patients.”

The challenges to medical practice in the future will be to deliver medical care to all people in a quality, affordable manner. All countries will need to establish priorities which will assure the delivery of essential services, including primary health care. The following two findings describe some of the specific challenges facing medical practice.

Finding Number Six: Medical practice has become increasingly disease oriented, organ-system centered, hospital-based and disconnected from public health delivery. The overspecialization of physicians has fragmented and created additional barriers to the provision of essential care to individuals in the context of their communities.

In most countries, medical practice dominates the health care delivery system. Despite the need to expand public health and essential individual services, the system of medical practice in most countries has become increasingly disease oriented and organ-system focused.

Hospital oriented specialists have come to dominate most health care organizations. As the physician workforce has become increasingly subspecialized, the care of patient problems has become increasingly fragmented in many countries. While the advance of medical knowledge and the specialization of the physician workforce has improved the quality of care, it has also worsened access to care, particularly for those without insurance coverage.

As medical practice has become increasingly subspecialized, it has also created a growing gulf between medicine and public health. In many countries, both physician and budget resources have become increasingly concentrated in large, tertiary care hospitals. This has often been at the expense of expanding essential services to individuals and public health services to the community. The culture of medical practice often pays little attention to preventive services and even less to community health activities. As a result, people do not receive cost-effective individual (e.g., prenatal care, immunizations) and public health (e.g., sanitation, safe drinking water) that would make the greatest positive health impact for the most people.

The World Bank has estimated that the provision of essential clinical services is possible in all countries. These services will vary from country to country but include acute treatment of common easily treated diseases, preventive services such as immunizations, family planning, infection control and health education. The estimated positive impact is significant and could reduce the current burden of disease by 24% in low income countries and 11% in middle income countries. (See Table 7.)
Table 7. Estimated costs and health benefits of the minimum package of public health and essential clinical services in low- and middle-income countries, 1990.

<table>
<thead>
<tr>
<th>Group</th>
<th>Cost (dollars per capita per year)</th>
<th>Cost as a percentage of income per capita</th>
<th>Approximate reduction in burden of disease (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Income per capita = $350)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public health</td>
<td>4.20</td>
<td>1.20</td>
<td>8</td>
</tr>
<tr>
<td>Essential clinical services*</td>
<td>7.80</td>
<td>2.2</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>12.00</td>
<td>3.4</td>
<td>32</td>
</tr>
<tr>
<td>Middle-income countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Income per capita = $2,500)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public health</td>
<td>6.80</td>
<td>0.3</td>
<td>4</td>
</tr>
<tr>
<td>Essential clinical services*</td>
<td>14.70</td>
<td>0.6</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>21.50</td>
<td>0.9</td>
<td>15</td>
</tr>
</tbody>
</table>

* The estimated costs and benefits are for a minimum essential package of clinical services, as defined in the text. Many countries may wish, if they have the resources, to define their essential clinical package more broadly.


The most highly cost-effective package of public health initiatives that were identified include:

- immunizations
- school-based health services
- family planning services and education
- nutrition services and education
- tobacco and alcohol prevention
- AIDS prevention
- environmental protection, including sanitation, food safety, water purification, safe housing, and air pollution control

The identified package of essential clinical (individual) services of high cost-effectiveness for individuals address the major causes of premature morbidity and mortality:

- prenatal, childbirth and postpartum services
- acute childhood and malnutrition exacerbated illness, including diarrhea, respiratory infection, measles and malaria
- family planning services
- tuberculosis control
- sexually transmitted disease control
- injuries and common infections

The World Bank estimated that this minimum package of public health and essential clinical (individual) services could reduce the disease burden by one-third in low-income countries (equivalent to $350 per capita income) at an estimated three percent of per capita income. The same package could reduce disease burden by 15% in middle-income countries ($2,500 per capita income) for one percent of per capita income.

In many countries, public dissatisfaction with the system of medical practice is growing. Many patients do not have a regular personal physician they know and with whom they have a sustained relationship over time. Many people are turning to “alternative” therapies, such as nutrition counseling, musculoskeletal manipulation, and psychotherapy, some of which were once in the domain of medical practice but have more recently been given little attention.

**Finding Number Seven:** To expand access to essential individual services and link medical practice with public health, many countries have attempted to increase the percentage of broadly trained family doctors in the physi-
However, in many countries, family medicine is not recognized as a specialty and does not have a valued role in the health system.

Historically, physicians have played a central role in most nations’ efforts to provide health care to all their citizens. In the first half of the century, the vast majority of physicians typically completed medical school and went directly into practice, sometimes after apprenticeship with a community-based practicing physician. They functioned as broadly trained “generalist” physicians, handling the spectrum of common problems seen in the community. The trend towards producing more narrowly trained “specialists” through additional (i.e., postgraduate) training in hospital-based settings after completion of medical school began after World War II. This trend was fueled by expanding medical knowledge, research and new technology, and was heavily subsidized by public funds.

In the 1960s, many governments, concerned about providing essential health services to the entire population, began to subsidize the establishment of new medical schools to train more physicians. While improved access to care was the goal, a hospital-based medical education oriented towards specialized and basic science, basic research, medical technology, and postgraduate specialty training programs produced an increasing supply of well-trained specialist physicians and a decreasing percentage of family doctors. Furthermore, these family doctors were characterized more by their absence of postgraduate specialty training, than by their acquisition of a broad set of skills for community-oriented, primary care practice.

Yet, countries who provide quality and affordable health care to all citizens require well-trained generalist physicians capable of caring for the broad range of health problems seen in the community. During the 1970s and 1980s, universities and medical schools in many countries were increasingly challenged to be more socially accountable for and responsive to the type and quality of their graduates and their impact on health care delivery. Some medical schools in both developing and developed countries began to reexamine their missions, curricula, and training sites to produce medical graduates better prepared to cope with the majority of people’s health problems.

In a growing number of countries, postgraduate (i.e., residency) specialty training programs in family medicine were introduced to produce well-trained generalist physicians capable of providing comprehensive, continuous, and quality, community-based care. In 1972, representatives from 13 countries established the World Organization of Family Doctors (WONCA) to enhance the education, research activities and role of the family doctor in health systems.3 Today, the membership comprises 55 national academic organizations of family doctors from 48 countries and 150,000 family doctors worldwide.

In 1993, WONCA conducted a membership survey of family practice to provide information about the worldwide development of the specialty, including the family doctor’s role in the health care system, education and certification requirements, reimbursement for practice and funding of family practice education, relevant research activities, and the history of general practice. A detailed questionnaire was sent
to at least two WONCA members in each of 48 WONCA member countries and to at least one individual member listed in the WONCA directory in 18 additional countries that do not have organizational membership but have at least one direct member. Responses were received from 52 (79%) of the 66 countries.

It is important to underscore that this survey only targeted key WONCA member countries, which represent only 48 of 189 (25%) WHO member states. However it provides useful data on the role of the family doctor.

There was consensus about the areas of knowledge and skills the family physician or general practitioner brings to his or her role. Internal medicine, preventive medicine, pediatrics, psychiatry and gynecology were mentioned by more than 90% of respondents. Obstetrics, orthopedics, simple surgery, community medicine, and public health were also mentioned by at least two-thirds of the respondents.

Family or general practitioners engage in office practice, provide emergency care, and make house calls in virtually all countries. Twenty-four hour coverage is provided in less than two-thirds of countries. Of particular note, family or general practitioners care for patients in hospitals in less than one-third of responding countries (Figure 4).

Forty reporting countries (77%) have developed formal postgraduate training programs for family physicians. Thirty-two reporting countries (62%) have developed a process for certification of family or general practitioners, and most countries only certify those with special training. Countries are evenly divided between required and voluntary certification processes. In most countries certification is permanent. Written or oral examination is the most common certification process. Examination of practice records, direct observation, and other types of performance review are also important around the world. Professional organizations and governments are the most common certifying organizations.

Thirty-five reporting countries (67%) encourage or require continuing medical education (CME). Most encourage CME by monetary or other means; only four require it as a condition for licensure.

Along with the improvements in family medicine, survey respondents also reported several concerns.

Even though most nations need to expand access to essential health services, survey respondents reported that a median of 13% and mean of 19% (range: 0-55%) of 1992 medical school graduates went into family practice. In the majority of countries, family doctors are still defined as those who do not pursue postgraduate specialty training, rather than by being the product of a generalist-oriented medical school education and a family practice postgraduate training program. In some countries, family doctors exist only in the private sector. In most countries, reimbursement for primary care services lags behind that for specialty care.

Overall, the survey results confirm that the relatively young specialty of family medicine is progressing well. The worldwide development of training, certification, continuing education, and research reflects a maturing discipline and its growing global acceptance (Figure 5). Sixty percent (26) of the 45 national family practice organizations were established since 1970, half of these (13) since 1980. The survey results demonstrate that a majority of respondents agree about the knowledge, skills, training and practice activities of family doctors and the important role they play, a finding that is captured in the WONCA publication, The Role of the General Practitioner/Family Physician In Health Care Systems, endorsed by the WHO.

This WONCA membership survey provides useful insight into the status of the family doctor. Health authorities and academic institutions in each country need to be consulted to gain a more complete understanding of the development of family practice in the world and its impact in attaining the Health for All. A proposal for such a global family medicine survey is being studied by WHO and WONCA.

Overall, the survey results confirm that the relatively young specialty of family medicine is progressing well.


2 Reference for Table 1, chapter 2 (World Bank calculations for estimated costs and health benefits of the minimum package of public health and essential clinical services in low- and middle-income countries, 1990).


CHAPTER THREE: 
CHALLENGES FOR MEDICAL EDUCATION

The first seven findings identified key challenges facing countries with regards to improving their health systems and physician workforces. The following three findings identify potential areas for improvement in the way countries invest their public funds for medical education and research to improve the population's health status. They also identify the important role medical educators can play to help ensure that countries are producing the type of physicians the public needs.

**Finding Number Eight:** In general, undergraduate medical education can be more responsive to national health goals related to universal coverage and primary, preventive and cost-effective care. Although health systems need physicians trained to meet a broad range of community health needs, medical students typically are trained in narrowly specialized hospital-based settings and to manage patient problems that are increasingly unrepresentative of the community at large.

The WHO has advocated the need for relevance and efficiency in medical education and to education of health professionals in general. This document focused on the barriers to medical education reform and the challenges of implementing the Alma Ata declaration. These concepts were also discussed at a conference held in Tokyo in 1986, which suggested concrete steps that could be taken to create an environment in which the Alma-Ata declaration could be implemented. The Tokyo declaration suggested reforms in the health system, the political system, professional systems, government health ministries, communities, financing institutions, approaches to research, teaching institutions and a host of other sectors of the society.

In 1986, African participants in a regional conference in Abuja, Nigeria and in 1988, European participants in Lisbon, Portugal called for fundamental changes to make both undergraduate and graduate medical education more responsive to health needs, as expressed in the Health for All goals. They called for greater emphasis on training for primary care and in community-based medical practice, as well as more attention to vocational training for general practice. Also in 1988, the World Conference on Medical Education of the World Federation for Medical Education was held in Edinburgh, Scotland. This conference produced the Edinburgh declaration laid out twelve steps necessary to reform medical education; eight dealt with the process of education and four recommended changes in areas outside the medical school.

In June, 1994, the First Global Conference on International Collaboration on Medical Education and Practice was held in Rockford, Illinois, USA (Appendix 2). This conference was organized by the World Health Organization in collaboration with the University of Illinois, College of Medicine, Rockford, Illinois. The conference emphasized the importance of coupling changes in the medical education system and medical practice with the needs of a nation's health care system. The conference recommendations underscored that medical practice patterns in many developing and developed countries needs to be fundamentally changed to emphasize the delivery of essential primary care services to the entire population. Similar changes in the medical education system will be effective so long as medical practice is also reformed to better meet social needs.

It is clear that the call for reform in medical education does not lack declarations or resolutions which have been passed by various, prestigious groups. Furthermore, the emerging societal needs for universal coverage of essential individual and public health services call for medical education reform. However, in general, the medical education system has changed little since Alma-Ata. While occasional innovative approaches to education are found, in the main, medical education throughout the world is conducted very much like it was done two decades ago.

Today, medical education has been widely criticized as not responsive enough to societal needs. Most current curriculum is not organized by what are the common problems in the particular country. A narrow spectrum of health problems are typically covered in teaching. Students are predominantly trained in hospital-based settings, where they see a highly skewed set of complex problems which are increasingly less representative of the health problems seen in community-based primary care practice. In fact, changes that have occurred in the last two decades are far more likely to be away from the Alma-Ata recommendations than toward them.

Finding Number Nine: Many medical schools lack the appropriate undergraduate curriculum and training sites to adequately prepare medical students to practice as family doctors and do not have specialized postgraduate (i.e., residency) training programs to produce family practitioners, educators and researchers. As a result, the majority of family doctors in most countries are defined by their absence of specific training, rather than formal preparation in a comprehensive set of primary care skills.

Medical education in most countries has followed a similar model. First, medical students are taught for a number of years in medical school. Following completion of their undergraduate education, some medical school graduates go into practice. Others continue in postgraduate training where they focus on a particular specialty.

In some countries’ medical schools, a quiet revolution is taking place. In response to health care system needs for universal access and expanded primary health care, medical schools are rewriting their missions and curricula, and organizing sites of training to teach medical students the requisite community-oriented, primary and preventive skills. In response to public need for broadly trained generalist physicians, countries throughout the world are establishing the specialty of family medicine and expanded training programs to produce more and better trained family doctors.

The majority of new family practice specialty organizations which have joined WONCA have established postgraduate residency training programs of two to three years to train medical school graduates to be competent family doctors. However, in the majority of countries, family doctors have been defined by the absence of specialized residency training rather than by the acquisition of a specific set of generalist skills. This requisite comprehensive set of skills and the necessary training components for a family doctor are described in the WONCA published report on The Role of the General Practitioner/Family Physician in Health Care Systems and in many other family medicine textbooks and relevant journal articles.

For many developing countries it may not be feasible or financially possible to develop postgraduate training programs for family doctors. However, the WONCA report cites that, "the new graduate with a traditional [undergraduate] medical education is poorly fitted for the tasks of general/family medicine." In such instances, incremental program development may be the most pragmatic approach. For instance, some countries have initiated professional training programs which provide part time educational activities for the practicing family doctor who did not have the opportunity to receive full time postgraduate training.
The majority of new family practice specialty organizations which have joined WONCA have established postgraduate residency training programs of two to three years to train medical school graduates to be competent family doctors. Nonetheless, the long range goals for all countries should be to provide specific postgraduate training programs which educate doctors in the specific competencies in family practice to enable them to provide quality care to the people.

**Finding Number Ten:** In most countries, a majority of public funding supports biomedical research and the development and evaluation of expensive technologies with limited local applications. Relatively few public dollars are allocated to health services, primary care and population-based research to prevent and cost-effectively treat, the major causes of premature disease and death.

Good health information derived from relevant research is fundamental for the development of good health policy and ultimately improved health. The thrust of medical research in the world has, at its core, the development of more knowledge about how the individual human system functions. By concentrating on biomedical research, there have been enormous advances in our understanding of how disease develops. Furthermore, this research has contributed to the development of new technology to aid in the diagnosis, prevention and treatment of disease.

However, research in health services and primary care has been poorly funded and insufficiently developed. In the WONCA document, *The Role of the General Practitioner/Family Physician in Health Care Systems*, the challenges for primary care research are defined:

**Education** — There is a need for basic knowledge in primary care to be included in the education of medical students, physicians and other health care personnel, such as the health and health problems of the population, the natural history of diseases, the effects of risk factors, the clinical process, the doctor-patient relationship, and the effectiveness of medical care intervention.

**Planning** — There is a need for knowledge about health problems, sociomedical problems and patterns of health care in the population to enable those planning health and sociomedical services to make the maximum use of available resources in the prevention of accidents and disease, and the promotion of health.

**Quality Assurance** — There is a need to incorporate methods of self-assessment and quality assurance in clinical practice. A useful model is that of industrial quality assurance programs, which are only now beginning to be adapted to health care services. The skill of critical appraisal of medical information is essential in the contemporary graduate who faces an ever increasing tide of medical literature.

**Research Methods** — Research methods form other disciplines such as the biological and social sciences and the humanities may need to be adapted and integrated within primary care research. Statistical methods will play an increasing role in such research.”

Governments play an important role in setting research priorities, in part because of public funding of medical research. However, it is not clear that the allocation of research funding is driven by a full analysis of what the priorities should be. In most countries, for example, relatively few dollars are allocated to: 1) understanding the impact of environmental, educational, and socioeconomic factors on a population’s health; 2) evaluating the cost-effectiveness of various health services; and 3) studying the efficacy of specific interventions in the primary care setting.
The World Bank report recommends that priorities for research include the prevention, detection and management of six conditions which together cause 40% of the disease burden in developing countries and 25% in developed countries. These include perinatal and maternal causes of death; childhood vaccine-preventable illnesses; respiratory infections; diarrheal diseases; cardiovascular and cerebrovascular disease; and tuberculosis.

Primary care research needs much development. For example, better understanding is needed regarding the risks for, and natural history of, common community health problems; patterns of health care utilization; self-assessment and quality improvement in family practice; the doctor-patient relationship; and the education and continued professional development of physicians, nurses and other professionals who work in primary care settings.

Through the work of WONCA Classification Committee, with cooperation from WHO, a standardized, international database for research in primary care has been created. These important WONCA publications include classifications of health problems in primary care,\(^1\) criteria for diagnosis and processes in primary care,\(^1\) and functional status measurement in primary care.\(^1\)


CHAPTER FOUR: 
TOWARDS OPTIMAL HEALTH CARE 
SYSTEMS, MEDICAL PRACTICE AND 
MEDICAL EDUCATION: A VISION

Introduction

Throughout the world, governments recognize that they have an interest in the health of their people, not least because this affects their productivity and economic performance. At the same time, whatever their level of resources and development, all governments recognize that health care costs must be constrained and they have to seek ways of ensuring the best possible health gain for each unit of health expenditure. They also have an interest in the equitable provision of health care: unless it is available to all of their people, the potential economic gain will not be realized and there will be political costs if their people’s rising expectations of care are frustrated. The extent to which governments can control or influence health care and the education and training needed to provide it vary widely. There is no doubt that they should be concerned about the cost-effectiveness and equity of health care. This chapter sets out a vision of health care systems which is responsive to people’s needs. It also provides the pattern of medical practice, and the nature of the education and training by those who deliver it.

The Optimal Health Care System

The Health Care System is defined, for the purposes of this chapter, as the investment, organization, and infrastructure for the deployment of health care providers who work to improve the quality and quantity of life of the individuals who make up the population for whom that system is responsible.

Types of Need

Throughout the world people’s health care needs vary widely. These range from measures such as adequate nutrition, clean water, safe disposal of sewage, immunization against communicable diseases, health education and promotion, personal disease avoidance, reassurance based on the reliable exclusion of serious illness, help in coping with minor illnesses, early diagnosis and management of serious illness, and ongoing care of chronic disease and disability.

Types of Services

These different sorts of need are met by different sorts of services the objectives of which include, amongst others, both the reduction of premature death and the improvement of the quality of life. The delivery of such services requires a wide range of providers with appropriate skills. The mandate for health care delivery comes from the people generally as represented by the political authority which deploys them, and from the individuals who choose to enter and remain in their care. The effectiveness of these services may be measured by the analysis of hard data such as birth and death rates, but it is often difficult to interpret since the relationship between intervention and outcome is complex. When the objective of the care is well-being it is particularly difficult to quantify.

When resources are scarce service priorities must be narrowly focused. However, given a choice, people express their needs for a broader range of services including personal care. In such circumstances primary care providers particularly

Countries can obtain the greatest value for their health expenditure by having a delivery system which provides all citizens with a set of essential and proven cost-effective public and individual health services.

can integrate and coordinate individual and community health services so that there is no wasteful duplication nor significant needs unmet.

However, if a government or other provider institution wants to attract good quality workers into public health and primary care, it will have to make sure that their pay and conditions approximate to those carrying comparable responsibility in
the specialist sectors. Remuneration affects performance: people tend to concentrate their efforts on activities which will be professionally and financially rewarding. Those who provide personal health care services carry out a complex mixture of tasks ranging from patient reassurance to the care of the terminally ill. The three main payment mechanisms for health professionals are salary, capitation, and fees for items of service, and each of these has well recognized advantages and disadvantages. Rather than relying on just one of them, a mixture can be used to encourage the best distribution of effort between the different tasks, especially where payment can be related to performance indicators. Such indicators could include accessibility, cost effective prescribing, population coverage in preventive medicine, and maintenance of function or freedom from complications in chronic disease care.

Optimal systems should give priority to public health and individual services. These services are all amenable to provision by primary care providers and are characterized by high volume and low cost per case.

Primary care services may be delivered by providers with different levels of training: from health assistants to nurses and nurse practitioners, to fully trained family doctors. The better the training, the more likely the care is to be competent and comprehensive. In addition, if training is minimal and not specific to the community served, then patients will self refer more often, overloading secondary and tertiary care facilities and teaching institutions with problems that could be handled by other providers. Therefore health systems are more likely to benefit from investing in a maximally trained core of primary care providers.

To deliver cost-effective care, primary care professionals need an adequate infrastructure. This includes the buildings in which they see the people who come to them for care, the equipment available for diagnosis and treatment, the record system (which not only provides a management tool for the care of the individual concerned, but also the basis for performance indicators and quality assurance), and support staff. Lack of infrastructure results in poor recruitment, high staff turnover and inefficiency. Conversely, modest investment in infrastructure pays off in terms of cost-effective care.

Specialist services, both diagnostic and therapeutic are, by comparison with primary care, more expensive. They are effective only when the specialists expertise is appropriate to the patient’s needs and when the patient presents at the right point in the natural history of his or her disease. An important role for the primary care worker is to decide, with the patient, whether a referral is necessary, to whom, and when. Access to specialists should in general be through referral by primary care providers. Self-referral by patients, unaided by a primary care provider is often ineffective. It may occur too early in the course of the illness or the initial choice of specialist may be inappropriate requiring further referral. This style of practice can be fragmentary and inefficient. Since the referral decision is fairly technical, the better trained primary care provider is more likely to refer cost effectively.

In an optimal health care system there is considerable overlap in the delivery of individual and population care. Ideally the primary care provider delivers all the clinical and personal preventive care to individual patients. Similar overlaps occur between primary care and secondary/tertiary care. For a system to be cost effective, each sector should have the right number of workers who have been trained with an appropriate skills mix for their tasks in that sector. To achieve equity, essential services should be accessible to all and fairly distributed geographically. This may necessitate extra investment where services have to be deployed in unsafe or unpopular areas.

Data acquisition and analysis should be designed to inform workforce planning with regard to the numbers of workers with the necessary skills and their appropriate geographical location. This, in turn, determines the dimensions and characteristics of the education and training systems within or in relation to, the health care system. This is dynamic. For example, since age structure influences illness in a population, the needs will change as its demography changes. Some societal changes are rapid, such as changes created due to industrialization. Therefore information and planning systems need to be sensitive and capable of responding quickly.

Optimal Medical Practice

Primary care practice which combines personal preventive care and illness care is a personal transaction between the provider and the person who has given the provider a mandate to intervene. Such a mandate requires trust, and the trust given will be proportional to how well the patient knows the provider. But the provider’s response to the person seeking care or advice will only be relevant, acceptable and therefore effective, if it is based on his or her knowledge of the culture and socioeconomic features of the community from which the patient comes.

WHO IS GOING TO MILK MY BUFFALO?

A very sick child was brought to the local community hospital. The young student doctor discussed the situation with the consulting physician. They agreed that the child should be referred to a tertiary care hospital in the city.

The student doctor was good, highly motivated and caring. He spent much time explaining to the parents why the child should be taken to the city and its tertiary care hospital where he may receive the latest treatment and the best medications.

The parents discussed the matter and asked two questions. “Would the child definitely recover if taken to the city?” The student doctor had to admit that the child was very sick and there could be no guarantees. “Would the child definitely die if admitted and treated in the local community hospital?” After some thought, the intern acknowledged that it was possible that the child could recover.

The parents talked together briefly and then responded that they would take a chance and have their child treated in their local hospital. They explained that they know the hospital and they were sure the hospital staff would care well for their child.

The student doctor could not accept this. The parents must, he believed, offer the best possible chance for the child to recover. Why, he asked, would they not let their child be taken to the city?

“Who would milk the buffalo?”, they answered.

The student doctor was devastated and almost in tears. How could he devote his life to become a physician and provide the best medicine and advice, he told them, when patients are more worried about their buffalo than their own children?

The parents patiently explained that they had three other young children in the family. The family subsisted by selling the milk of their buffalo. If not cared for and regularly milked, the buffalo might go dry ---- putting in danger the lives of all their children. The student doctor suddenly realized that medical practice was more than just prescribing medication.

(A story from India)
The need to take account of individual patient's social, cultural and economic circumstances is validated by the rapidly expanding understanding of the extent and the way in which these factors affect people's vulnerability to disease. Evidence that mental states are intimately involved with physical parameters has been gathering for years. Examples include morbidity in a community when its main factory closed, the effect of marital status on survival after myocardial infarction, the effects of social and psychological factors on the effectiveness of hospital treatment, and the vulnerability of stressed children to infection. Optimal medical practice should thus integrate the overall knowledge of the person through a continuity relationship such as by a family doctor, with the biotechnical expertise of a specialist physician to produce a new theoretical framework for care.

Health beliefs have been shown to affect not only the decision to seek professional help, but also the way in which problems are presented and the extent to which expectations are accepted. While most of these beliefs and patterns of behaviors are common to all members of a given community, others will have been formed by specific experiences of health and illness within the individual's network of relatives and associates. In any individual the strongest influence on beliefs and behavior comes from the family, however culturally defined, of which he or she is a member. But not only is the "family" a powerful influence on health behavior, it is, because of its inherent obligation structure, an important resource for health care. Much chronic illness care is heavily dependent on family members as "lay care givers."

Given a mandate to advise or intervene, and being familiar with the patient's life circumstances, the primary care provider can respond effectively. To do so, he or she must exercise competent clinical skills particularly in history taking and physical examination in order to sort out undifferentiated illness, exclude serious illness, and make a plan for initial management. The reason for excluding serious illness, the nature of any illness diagnosed, and the management plan must be clearly and carefully explained to the patient, and fear and distress relieved as far as possible. With regard to the patient with chronic disease or handicap, the primary care provider must be able to monitor and control the pathophysiology (possibly with advice from a specialist). He/she must also set objectives for care which seek to restore or maintain physical and social function, such objectives being agreed with the patient. The achievement of such objectives will often require teamwork with other professionals.

The well-trained primary care provider can offer services to patients that not only meet individual needs such as acute and chronic care, but other needs applicable to the entire community; e.g., immunizations, health promotion and disease prevention. The relationship that the physician has with his/her patient can enhance the acceptability and compliance with preventive health care measures. It is within this context of the family doctor's practice, that individual care and many aspects of public health can be successfully integrated. It requires not only a certain set of skills and commitment, but a health care system that encourages and rewards this type of integrated practice.

The skills described above are of a high level. Those attempting to provide these types of care in the community with inadequate training will be less cost-effective, since patients may well be less ready to accept their advice or cooperate with their care. Less well-trained providers may make premature or unnecessary referrals to specialists. In resource-poor countries, it may not be possible to deploy trained family doctors in the front line of primary care. Under those circumstances, less expensive workers such as health assistants, nurses or nurse
Table 8. The Five Star Doctor

CARE PROVIDER, who considers the patient as an integral part of a family and the community and provides high standard clinical care (excluding or diagnosing serious illness and injury, manages chronic disease and disability) and personalizes preventive care within a long-term trusting relationship.

DECISION MAKER, who chooses which technologies to apply ethically and cost-effectively while enhancing the care that he or she provides.

COMMUNICATOR, who is able to promote healthy life styles by empathic explanation, thereby empowering individuals and groups to enhance and protect their health.

COMMUNITY LEADER, who having won the trust of the people among whom he or she works can reconcile individual and community health requirements and initiate action on behalf of the community.

TEAM MEMBER, who can work harmoniously with individuals and organizations, within and without the health care system to meet his or her patients' and communities needs.


Optimal medical practice is responsive to individuals and communities, being person-centered, health orientated, and community based. The systems of medical practice and public health should be closely linked.

The pattern of primary care that deals with the majority of illness in the community, e.g. providing personal preventive care and health promotion, and participating in public health activities will require a provider (preferably a family doctor) with a new role and a new skills-mix to fulfill them. The physician has been described as “The Five Star Doctor” in Table 8.

The recognition that cultural, social and psychological factors are as important as the physical parameters of health and illness is the basis for the emergence of Family Medicine as a clinical discipline. With its particular knowledge and skills, health care systems are better able to deliver accessible, equitable, quality and cost-effective care. Proper education and training will allow its exponents to respond effectively to “most of the problems most of the people have most of the time”, provided that in these countries new working patterns can be developed and new relationships and responsibility sharing emerge between providers, managers and the people.

Optimal Medical Education

The aim of undergraduate medical education should be to equip the new graduate with a knowl-
discipline chosen reflects the role models to which the student was exposed; secondly that the training for that discipline must concentrate on the problems with which the trainee will be confronted in medical practice; and thirdly that the undergraduate education should provide a relevant knowledge and skills base. In seeking to provide more relevant learning experiences, medical schools should teach not only the main causes of morbidity in the population in which they serve, but the cultural context in which illness and health is defined and the expectations of the people in the population. In order to achieve such cultural and clinical relevance, medical schools will have to seek the advice of, and be accountable to, members of their communities and those who care for them. Such inputs should not be confined to curricular design, but also inform the admissions policy and strategic planning of the institution.

Representatives of the communities concerned should ensure that students go out to them and have an active, if limited role, in elucidating problems and providing some of the care to meet them. This will provide powerful motivation towards learning what they can see is relevant, and expose them to role models on which they can base their subsequent career choice. These learning experiences will be useful to all students, those who will ultimately practice as generalists and those who will go into secondary and tertiary care specialties, because it will give them an opportunity to see the early and late stages of illnesses. Indeed, hospital

It is important to recognize that, even with such exposure to medicine in the community, the undergraduate course does not in itself equip a graduate to enter any form of practice (including family practice) without further training. The growing burden of detailed factual knowledge and the rapid changes in communities and their needs will require medical schools to concentrate on providing students with a broad foundation in medicine and the skills of self-directed learning. The specific training which follows will focus on the particular skills required for a chosen discipline. The medical education system must be responsive to people’s needs in the communities which its graduates will serve both in terms of who is selected and taught, and where and what they are taught.

Postgraduate training in family medicine must develop the basic skills learned in the undergraduate course, until serious illness can be safely excluded or diagnosed early, and common health problems treated without over-reliance on expensive, sometimes invasive investigations and therapies; and until chronic illness can be well-managed. On top of these however, such training should inculcate curiosity about the community, respect for its individuals, recognition of the importance of cultural and psycho-social factors in diagnosis and management, and communication skills. This should occur whether explaining a patient’s illness or negotiating a health promoting change in life style. Since the completion of training is often followed by immediate entry into practice and often in the same community, its relevance to the community is assured.

In universities, teaching should always be accompanied by research and in most medical schools, this is so, but the main thrust of the

While medical education must lay the foundations on which relevant post graduate training for family practice can be built, it must never be seen as sufficient of itself to equip doctors to enter family practice.
 Universities and medical schools, health authorities, professional associations and individual family doctors should engage in teaching and research to improve the health care system and the care they deliver.

Research is biomedical. In order for that research to benefit people in the community, there should be an equivalent program of "health service research" which asks four questions:

1. What is the need for care of a given group of people? (Whether deprived in geographical, cultural, age or morbidity terms).

2. To what extent are those needs met?

3. Why are some unmet?

4. How could they be better met?

The first two questions can be answered by descriptive epidemiology, the third by hypothesis testing, and the last by experiment. But these questions and the application of these methodologies are just as important in post graduate training, and indeed should be carried out into practice by family doctors, because they can and should be applied within individual practices.

The practice of medicine is not static, but constantly changing. In some areas of medicine, especially treatment, new knowledge supplants old modalities very frequently. In addition, the natural history of some diseases change. There are recrudescence of diseases that were thought to have disappeared, and new diseases emerge. However good the undergraduate education and the postgraduate training, the family doctor will need lifelong continuing education. In specialty practice in hospitals, there is a strong traditions of continuing education and an organization and culture which facilitates it; particularly by interaction between specialties at such occasions as "grand rounds." In family medicine, doctors work in relative isolation and usually in circumstances where meetings such as grand rounds cannot be organized. Continuing Medical Education (CME) cannot therefore be expected to be self-generating, and provisions must be made for it. The educational objectives, course content, and learning materials of CME must be relevant, and therefore specific not only to family medicine in general, but to the particular needs of the communities served by each individual family doctor. Successful CME for family doctors should:

- follow a curriculum designed by family doctors themselves;
- address the medical care needs of the doctor's community by reflecting on actual practice. The latter is best achieved by linking CME to agreed performance indicators checked by simple clinical audit.

References

INTRODUCTION:

To meet people's needs, fundamental changes must occur in the health care system, in the medical profession, and in medical schools and other educational institutions. The family doctor should have a central role in the achievement of quality, cost effectiveness, and equity in health care systems. To fulfill this responsibility the family doctor must be highly competent in patient care and must integrate individual and community health care. The cooperation between the World Health Organization and the World Organization of Family Doctors towards this vision is historic.

At the WHO/WONCA Conference in Making Medical Practice and Education More Relevant to People's Needs: The Contribution of Family Doctors, November 6-8, 1994, participants recommended methods by which the vision and goals outlined in Chapter 4 may be implemented. Given the great diversity of the organizations and countries represented, the action plan reflects not only a set of general recommendations, but allows for flexibility within individual organizations and countries. The participants encouraged WHO and WONCA to widely distribute this document to governments, the medical profession, medical schools and other educational institutions and other relevant bodies. This is intended to stimulate discussion and implement action plans to make medical practice and education more relevant to people’s needs. The recommendations for action from the conference are directed to three areas for reform: health care systems, medical practice and medical education.

A. HEALTH CARE SYSTEM:

Recommendation One:  

ACCEPT THAT HEALTH CARE MUST CHANGE

- Fundamental changes must occur in health care systems to make them more equitable, cost effective, and relevant to people's needs. All people and communities should receive essential cost-effective public health and personal services known to improve health status. The family doctor should have a central role in the achievement of these goals by being highly competent in providing quality essential personal care and by integrating individual and community health care. There should be a formal regular dialogue between government, health care policy makers and planners, the medical profession (generalists, specialists and public health doctors) and medical schools and other educational institutions to devise a national response to people's health care needs.

Action by

- Member states of WHO
- Professional Associations
- Family Medicine Training Programs
- Medical Schools
- Universities
Recommendation Two: LINK FUNDING POLICIES TO DEFINED NEEDS

- Tools should be developed and used to define people's needs both as individuals and members of communities. Health care funding should be linked to needs and priority health problems. In particular, defined needs should influence the proportion of available resources spent on primary, secondary and tertiary care, and public health services.

Action by
- Government Health Care Planners

Recommendation Three: REWARD EFFECTIVE PUBLIC HEALTH AND PRIMARY CARE

- Quality public health services and primary care should be available to all as a matter of national policy. Financial incentives should be available to those systems and providers delivering cost-effective public health services and individual care where health is shown to be improved. Primary care should be rewarded where it includes acute and chronic clinical services, longitudinal and coordinated care, preventive care and health education which achieves optimal functional status while enhancing independence. Appropriate levels of investment should ensure that standards of infrastructure in primary care (numbers of support staff, buildings, records, communications and basic diagnostic and therapeutic equipment) are equivalent to those prevailing in hospital settings.

Action by
- Governments
- Public & Private Funding Agencies for Primary Medical Care
- WHO
- WONCA

Recommendation Four: IMPLEMENT WORKFORCE REFORM

- Normally, a majority of doctors should be family doctors. Where necessary national policies should be adopted to achieve this goal as quickly as possible. Countries should perform thorough and objective assessments of the physician workforce composition and distribution, especially regarding the proportion of resources spent in primary care versus secondary and tertiary care. Health policy should be directed by the findings. Systems of medical remuneration should encourage primary care recruitment and retention by establishing reimbursement incentives for family doctors (and other primary health care providers) - especially those working in underserved areas. Specific postgraduate training programs should be provided in sufficient numbers to meet national requirements.

Action by
- Governments
- Educational Institutions for Health Personnel
Recommendation Five:  

DEFINE THE STATUS & ROLE OF FAMILY DOCTORS

- The status of primary care should be enhanced and the role of the specifically trained family doctor within it defined. There should be balanced medical representation of generalists and specialists throughout the health care management system. This balance should become the norm for all policy making, resource allocation, regulatory, educational, and research authorities, boards and committees at national and regional levels.

Action by
- Governments
- Medical Professional Bodies
- Medical Schools
- Funding Agencies

Recommendation Six:

USE SPECIALIST SERVICES MORE APPROPRIATELY

- Appropriate use of specialist services should follow an initial contact with a primary care provider who should be able to provide independent, well informed advice on both the need to refer and the choice of options available, having regard to likely outcomes, quality and cost. Such referral systems should be introduced and sustained by interprofessional consensus, contractual agreements and financial incentives.

Action by
- Governments
- Health Service Purchasers
- Medical Professional Bodies

B. MEDICAL PRACTICE:

Recommendation Seven:

TEST NEW MODELS OF INTEGRATED CARE DELIVERY

- Field test projects should be conducted that experiment with different models of health care delivery that integrate the functions of individual care and public health. Models tested should support practice patterns which emphasize quality, which provide care which is personal, comprehensive, coordinated, and longitudinal, which take account of the health needs of individuals and communities and which integrate care with that provided by other professionals. Medical practice should be modeled on the results after a careful analysis of the essential components of the successful projects.

Action by
- Governments
- WHO/WONCA
- Medical Schools
- Schools of Public Health
- Health Research Agencies
Recommendation Eight:

USE BOTH COMMUNITY AND PRACTICE BASED ANALYSIS OF
PEOPLE'S NEEDS TO PROVIDE RELEVANT STANDARDS OF PRACTICE

- Medical practice should be targeted to people’s needs. National and community data should be balanced by the practice based needs analysis of individuals and families to provide relevant standards of practice. A monograph should be prepared and disseminated widely on the appropriate methodologies for assessing health care needs and outcomes of care. People’s needs should influence and direct practice standards, physician role definition, quality assurance, and national health policies. Individual doctors should be encouraged to establish and maintain practice profiles and to use QA (Quality Assurance) to match practice to needs. This should form the basis of recertification and should be included in professional contracts.

Action by

- WONCA
- Educational Institutions
- Programs for Health Personnel
- Providers of CM and A Programs
- Certifying Authorities

Recommendation Nine:

USE WELL-TRAINED FAMILY DOCTORS TO PROVIDE BETTER QUALITY CARE MORE COST EFFECTIVELY

- Everyone should have a primary care provider thereby making essential individual clinical services available to the entire population. A specifically trained family doctor can respond appropriately to most of the problems that most people have most of the time. Whenever possible, family doctors should be used exclusively as doctors of first contact. Not only are they uniquely qualified for the task but represent the most effective means to control the unnecessary and untimely use of specialist services. Studies should be conducted to define the changing role of the family doctor and their optimal integration into a reformed health care system.

Action by

- Governments
- Health Planners
- Medical Professional Bodies
- WHO/WONCA
Recommendation Ten:

ENJOY THE ALL PATIENTS TO IDENTIFY WITH AN INDIVIDUAL FAMILY DOCTOR

- Every person should know the name of their primary care provider; every person should be known by name by a primary care provider.

Individual patients should be actively encouraged to nominate one doctor as their principal primary medical care provider. Individual family doctors should be actively encouraged to maintain a register of all the individuals and families for whom they take responsibility as principal primary care providers. Identifying with an individual family doctor should be promoted as a matter of personal and professional responsibility but reinforced by financial incentives and contractual requirements.

Action by:
- Governments
- Health Care Providers
- WONCA
- Member organizations
- Professional Associations
- Consumer and Patient Groups
- The general public

Recommendation Eleven:

ESTABLISH COLLEGES/ACADEMIES OF FAMILY DOCTORS IN ALL COUNTRIES

- Colleges, academies, or other independent self-regulating professional associations of family doctors should be established in all countries. Membership should aim to include all physicians working at the primary care level.

These colleges/academies should assure the public that family doctors are responsive to the needs of their communities and seek to maintain high standards of care for their members.

Whether established or newly created, their function should be to advise and participate in decision making with governments and health care planners. In particular, they should help to define the contribution of family doctors.

Their other activities should include:
- developing practice standards and locally relevant role definitions.
- providing the public with reliable health information.
- assuring the relevance of medical education.
- ensuring adequate provision of specific training programs in family medicine.
- developing strategies for equitable geographic distribution of doctors.
- promoting programs of appropriate CME and performance-based quality assurance (QA).
- encouraging relevant family medicine research.
- defining their relationship with other bodies.

Action by:
- WONCA
- Member organizations
- WHO
- contact persons at national level
Recommendation Twelve:  

**FAMILY DOCTORS SHOULD DEMONSTRATE THEIR CONTINUING COMPETENCE USING VALID AND RELIABLE METHODS OF SELF ASSESSMENT**

- Family doctors should devise standards for all aspects of family practice based where possible on published research evidence including both quantitative and qualitative aspects. Doctors should apply these standards to their own performance provided the methods of evaluation employed are valid and reliable. Such systems should enable doctors to demonstrate their continuing competence - for example for the purposes of recertification.

Action by

- WHO/WONCA
- Professional Associations

Recommendation Thirteen:  

**ENSURE THAT REMUNERATION SYSTEMS OF PHYSICIANS DO NOT DISTORT HEALTH CARE PRIORITIES BASED ON NEED**

- Systems of funding and physician payment should support optimal medical practice as envisaged in this report. A thorough analysis of existing systems and possible alternatives should be undertaken.

In particular the perverse incentives, financially driven distortions of clinical decision making and opportunity costs inherent in some systems should be identified. A global debate should establish guidelines for systems which respond to people’s needs by favoring optimal medical practice and good professional relationships.

Action by

- WONCA/WHO
- Professional Associations
- Health Insurance
- Health Authorities
C. MEDICAL EDUCATION:

Recommendation Fourteen:  

JUDGE MEDICAL EDUCATION BY ITS RELEVANCE TO PEOPLE'S NEEDS AND ITS APPLICABILITY TO MEDICAL PRACTICE

• The medical education system should be able to demonstrate explicitly the manner in which it responds to the needs of people - at the level of the individual, the community and the nation. Medical education should respond to those needs by training doctors who in sufficient numbers are capable of providing equitable, relevant, quality, and cost effective medical care. The medical school should contribute in shaping a socially responsible health care system. National quality standards for medical education should be developed and valid and reliable methods of applying them should be devised. The social accountability of the medical school as an institution is of particular importance. An international assessment of a variety of educational systems should be undertaken to establish objective evaluation criteria for identifying institutions that are responsive to the health care needs of society.

Action by

• Medical Schools
• Other medical educational institutions
• WHO/WONCA

Recommendation Fifteen:  

RECOGNIZE FAMILY MEDICINE AS A SPECIAL DISCIPLINE

• Formal recognition of Family Medicine as a special discipline in medicine - already accepted in many countries - should now become universal.

National Colleges/Academies of Family Medicine should initiate the discussions with government, university medical schools, and registration bodies using supporting documentation provided by WONCA. WHO should have a key role by functioning as an advocate.

Action by

• Governments
• Certifying Authorities
• Medical Schools
• Medical Professional Bodies
• WHO/WONCA
Recommendation Sixteen:

**BASIC MEDICAL EDUCATION (UNDERGRADUATE) SHOULD PROVIDE A RELEVANT FOUNDATION FOR SUBSEQUENT SPECIFIC TRAINING**

- Medical schools should continuously refine their mission, strategic plan, admissions policy, faculty composition, curriculum, examinations and teaching settings to meet the needs of people and medical practice in communities to be served by their graduates. The aim of basic medical education should be to produce graduates capable of undertaking further specific training in any chosen discipline-including family medicine. Basic medical education alone is insufficient training for family doctors. Competency in family medicine requires postgraduate training.

**Action by**

- Medical Schools
- WONCA/WHO

Recommendation Seventeen:

**THE DISCIPLINE OF FAMILY MEDICINE SHOULD BE TAUGHT IN EVERY MEDICAL SCHOOL AND PROVIDE A GENERALIST/SPECIALIST BALANCE**

- Every medical school should have a department of family medicine. All specialist teaching should include a generalist dimension including referral, shared care, discharge and follow up. In addition, equal emphasis should be placed on primary care teaching in a family practice setting. All students should experience the continuity of individual health and illness within a community context. The involvement of balanced numbers of family doctors as teachers and role models should enable students to make an informed career choice.

**Action by**

- Medical Schools
- WONCA/WHO
Recommendation Eighteen:

EVERY COUNTRY SHOULD PROVIDE SPECIFIC POSTGRADUATE TRAINING IN FAMILY MEDICINE

- Every country should aim to establish programs of specific training in family medicine which should follow basic medical education and which should endeavor to meet the needs of a balanced workforce. All countries should establish standards of training in primary care. Satisfactory completion of training should be certified in all countries following a valid and reliable form of assessment. Established generalists who have not received specific training in family medicine should be offered special performance-based CME programs leading to certification as an interim measure.

Recommendation Nineteen:

CONTINUING MEDICAL EDUCATION SHOULD FOCUS ON PERFORMANCE IMPROVEMENT

- Continuing medical education (CME) should be centered on the performance of doctors in meeting people’s needs. As part of their professional task all doctors should actively participate with their peers in a continuous review of their own performance in the light of published standards, guidelines and research. CME should include where necessary a commitment to change existing practice in response to the needs of individuals and communities. Each discipline including family medicine should accept responsibility for planning and delivering its own CME programs.

They should be voluntary, flexible, and sometimes multidisciplinary. CME should influence the content and inform the development of specific training and basic medical education. Systems of quality assurance should be largely based on CME. Given well developed accessible CME, recertification for qualification should be considered to promote quality in medical practice - provided it is based on valid and reliable methods of assessment.
Recommendation Twenty:

MORE EMPHASIS SHOULD BE PLACED ON HEALTH SERVICES, POPULATION BASED AND PRIMARY CARE RESEARCH

- Publicly funded research should give a higher priority to health services, primary care, prevention and population based research that directly affects health outcomes. Medical schools should initiate such research in partnership with health authorities, professional associations, communities and individual family doctors. Data from research should be rationally applied to health care policy.

International standards and criteria for research in both practice and education should be developed. The recruitment of collaborating centers in family medicine as part of the WHO Network should facilitate this. Current attempts to define the content of family medicine by the creation of a taxonomy of health, illness, and disease which accurately reflects the complexities of family practice should be further supported.

Recommendation Twenty-One:

INFORMATION AND EXAMPLES OF EXCELLENCE SHOULD BE GATHERED AND DISSEMINATED

- Information should be exchanged between governments, medical schools, professional associations and other relevant bodies for sharing creative solutions to problems in health care systems, medical practice and health education.

Institutions that have become particularly successful in meeting the needs of their communities should serve as sites for funded fellowships, curriculum test sites and centers for the distribution of information related to medical education. A global inventory of important primary care research should be compiled, and experiences and examples of relevant family medicine should be gathered. A world survey of family medicine designed to assess practice patterns, education, and remuneration of family doctors should be carried out and repeated at intervals to monitor the progress of these recommendations. The data should also attempt to assess the success of the profession in meeting the people’s health care needs.
STRATEGIES FOR IMPLEMENTING
THE RECOMMENDATIONS OUTLINED IN CHAPTER FIVE

Strategies for changing medical education and practice should be multiple and related to local needs, resources and stage of development. They should be implemented at different levels - global to local and should be both ‘top down’ and ‘bottom up.’

Collaboration
Collaboration should be a key strategy involving local community groups, practitioners, other health professionals, government, and medical schools.

In countries where primary medical care is underdeveloped a modular, incremental, and developmental approach to establishing family medicine education and training should be adopted, starting with CME programs and clinical skills courses and evolving towards full residency training, and eventually departments of family medicine.

Educational Reform
Member countries of WHO and member organizations of WONCA should encourage educational reform and in particular the movement of academic medical centers from hospital to community-based practice and education. Model practices and community-based medical schools should be identified or created.

Consulting Teams
‘Consulting teams’ should be developed consisting of representatives from both organizations and relevant regions, countries, and institutions to assist those attempting to achieve these recommendations. These teams can assist governments, educators, health care planners and family medicine associations in planning, implementing or evaluating health care systems.

Information
Information should be exchanged between colleges of family medicine and other relevant interested bodies - for example by affiliations between countries, and colleges; through twinning arrangements, faculty and student exchange.

WONCA/WHO should promote the development of family medicine as a discipline by acting as a resource center for key documents, information on quality of care, education programs, models of practice, epidemiology, clinical vignettes, and workforce information.

Conferences
They should convene specific issue conferences - for example to analyze existing funding and physician payments systems, to review and research the options thereby stimulating a global debate on which systems of remuneration for family doctors favor appropriate medical practice and good professional relationships.

Specific Outcome Indicators
Success should be indicated by changes in specific outcome indicators of health improvement, better geographic distribution of primary care providers according to need, numbers of students selecting family practice, and the number of medical schools having a department of family medicine.
PROGRAM FOR PREPARATORY ACTION

As a result of this conference and the recommendations in chapter five, further negotiations between WHO and WONCA should take place. Responsibility should be delegated and 'lead assignments' should be given to key individuals and organizations to:

- Convene regional conferences to further these recommendations.
- Convene a consultation conference on systems of funding and physician payment.
- Devise a program to establish in member states:
  - an association for family doctors
  - a department of family medicine in every medical school
  - postgraduate training programs in family medicine
- Develop WHO collaborating centers for family medicine
- Launch a joint WHO/WONCA world survey of family doctors (current status and trends)
- Devise projects on integrated delivery of primary care
- Develop an information center that provides project support, documents, and consultant teams relevant to the reform of medical education and medical practice and the role of the family doctor.
APPENDIX ONE:
1978 DECLARATION OF ALMA-ATA

Health for All

The International Conference on Primary Health Care, meeting in Alma-Ata this twelfth day of September in the year Nineteen hundred and seventy-eight, expressing the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world hereby makes the following Declaration:

I

The Conference strongly reaffirms that health, which is a state of complete physical, mental and social well being, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important worldwide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector.

II

The existing gross inequality in the health status of the people particularly between developed and developing countries as well as within countries is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.

III

Economic and social development, based on a New International Economic Order, is of basic importance to the fullest attainment of health for all and to the reduction of the gap between the health status of the developing and developed countries. The promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace.

IV

The people have the right and duty to participate individually and collectively in the planning and implementation of their health care.

V

Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures. A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. Primary health care is the key to attaining this target as part of development in the spirit of social justice.

VI

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country’s health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

VII

Primary health care:

(1) reflects and evolves from the economic conditions and sociocultural and political characteristics of the country and its communities and is based on the application of the relevant results of social, biomedical and health services research and public health experience;

(2) addresses the main health problems in the community, providing and promoting preventive, curative and rehabilitative services accordingly;

(3) includes at least: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs;

(4) involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food industry, education, housing, public works, communications and other sectors; and demands the coordinated efforts of all those sectors;

(5) requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care, making fullest use of local, national and other available resources; and to end develops through appropriate education the ability of communities to participate;

(6) should be sustained by integrated, functional and mutually-supportive referral systems, leading to the progressive improvement of comprehensive health care for all, and giving priority to those most in need;

(7) relies at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.

VIII

All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources rationally.

IX

All countries should cooperate in a spirit of partnership and service to ensure primary health care for all people since the attainment of health by people in any one country directly concerns and benefits every other country. In this context the joint WHO/UNICEF report on primary health care constitutes a solid basis for the further development and operation of primary health care throughout the world.

X

An acceptable level of health for all the people of the world by the year 2000 can be attained through a fuller and better use of the world's resources, a considerable part of which is now spent on armaments and military conflicts. A genuine policy of independence, peace, detente and disarmament could and should release additional resources that could well be devoted to peaceful aims and in particular to the acceleration of social and economic development of which primary health care, as an essential part, should be allotted its proper share.

* * *

The International Conference on Primary Health Care calls for urgent and effective national and international action to develop and implement primary health care throughout the world and particularly in developing countries in a spirit of technical cooperation and in keeping with a New International Economic Order. It urges governments, WHO and UNICEF, and other international organizations, as well as multilateral and
bilateral agencies, non-governmental organizations, funding agencies, all health workers and the whole world community to support national and international commitment to primary health care and to channel increased technical and financial support to it, particularly in developing countries. The Conference calls on all the aforementioned to collaborate in introducing, developing and maintaining primary health care in accordance with the spirit and content of this Declaration.
APPENDIX TWO:
FIRST GLOBAL CONFERENCE ON INTERNATIONAL COLLABORATION ON MEDICAL EDUCATION AND PRACTICE, 12-15 JUNE 1994, ROCKFORD, ILLINOIS, USA

Reforms in medical education and medical practice are needed, not only to ensure that doctors fit into health systems consonant with the goals of Health for All, but above all so that they proactively contribute to the shaping of such systems. Within the context of achieving the numbers and mix of the health workforce that make optimal health care delivery possible, the medical profession must examine itself in relation to society’s needs. Thus scrutiny must be directed at the role of the physician vis-à-vis that of other health professionals, as well as at the balance between generalists and specialists.

In response to these concerns, the World Health Organization and the University of Illinois College of Medicine at Rockford, Illinois, USA (a WHO Collaborating Centre for Educational Development of Health Professionals and Health Care Systems), co-sponsored a global conference on international collaboration on medical education and practice, 12-15 June 1994 in Rockford. The conference brought together representatives of more than 80 medical schools, nongovernmental organizations and professional associations worldwide, in addition to local medical practitioners and students - some 179 participants from 56 countries in all.

The context of the conference was established by means of presentations on the interface between medical education, medical practice and health care reform; education of practitioners for global health sector reform; future health challenges in affluent countries and developing countries; priority areas in medical education and practice for the next decade; and guidelines for international collaboration. To further encourage reflection on possibilities for international collaboration, representatives of three WHO collaborating centres in medical education and practice described their institutional priorities and activities, and representatives of three medical schools outlined the programmes of international collaboration they would pursue at designated WHO collaborating centres.

Participants identified 18 priority areas at the interface of health care, medical practice and medical education under the categories of mission/policy of the medical school, partnership, health services, education and research. They selected, in order of priority, up to three areas in which their institutions were prepared to engage in international collaboration. These statements of institutional priority formed the basis of a matrix for international collaboration.

Participants stressed the importance of building the capacity of individual institutions through optimal local use - and inter-institutional sharing - of human, material and financial resources. Institutions could, for example, document their experience through publishing case studies, they could pursue joint research projects, programs and personnel could be exchanged.

Information exchange should be maximized through means ranging from face-to-face contact at meetings to the use of electronic mail. There should be very active efforts to raise funds from local, regional and global sources, including appropriate commercial enterprises. It was generally agreed that a consultative body should be set up to provide guidance on a shared strategy, but participants emphasized that any such coordinating mechanisms should be flexible and should facilitate, rather than control, international collaborative efforts.

At all levels, WHO was expected to be very important in mobilizing the various potential partners for collaboration worldwide: medical schools, professional and other associations and nongovernmental organizations. In particular, WHO headquarters could serve as a clearinghouse for information on people, organizations.
and activities by maintaining a database and by continuing to publish its twice-yearly newsletter, *Changing medical education and medical practice*.

It was anticipated that after the conference the matrix would be circulated for further refinement and institutional approval. A WHO brochure then in draft would be completed, for presentation to potential donors and main partners in collaboration. The membership, responsibilities workplan and financing of the proposed consultative body should be determined. Preliminary plans might be made for a second global conference, possibly to be held in 1998.

The conference urges that priority concern be focused on the interface of health care, medical practice and health professional education such that there is a ready and coordinated responsiveness to societal needs. That interface should be the foundation for a partnership between university, government, health care providers and community that serves as the focal point for their interactive strengthening of their respective areas of responsibility and interest. The recommended direction of action is towards community-based, policy-relevant, publicly accountable systems of health care and educational development that result in equitable, effective and compassionate care for patients, families and communities in keeping with the needs and values of each society. A united thrust by all collaborating organizations, institutions and individuals must be established and sustained worldwide for steady progress towards reform of medical education and medical practice to help achieve Health for All.
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1977 - Fellowship of the Royal Society of Medicine (FRSM)
1967 - Member of the Royal College of General Practitioners (MRCGP)
1957 - Kings College London & Westminster Hospital London (MB BS)
1951 - University of Birmingham (Bsc.)
Present Status: President Elect, Royal College of General Practitioners, (to take office 17th Nov. 1994)
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1982, Fellow of the American Academy of Family Physicians (AAFP)
1983 - to Date, AAFP Vice President for Education & Scientific Affairs
Current Activities: AAFP Representative to the Council on Medical Specialty Societies (CMSS)
1989 - to Date, AAFP Representative to AMA Practice Parameters Partnership
1993 - Board of Directors, Ambulatory Sentinel Practice Network
1993 - to Date, Academic Family Medicine Organisations (AFMO) Steering Committee
1993 - to Date, Primary Care Organisations Consortium (PCOC) Convenor
1994 - to Date, Accreditation Council for Continuing Medical Education

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<td>Professor in Department of Family and Community Medicine at the University of Toronto</td>
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<td>Consultant in Family Medicine to the Credit Valley Hospital in Mississauga.</td>
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<td>Certificant and Fellow of the CFPC and Honorary Fellowship in the Royal College of General Practitioners, the Royal College of Physicians and Surgeons of Canada, the Royal Australian College of General Practitioners.</td>
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Medical Organisations: Co-founder (1983) and National Secretary of the Portuguese Association of General Member of the WONCA World Council (1989 - 1992)
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Head of Research Programme Chronic Diseases, Quality of Care, Quality of Life of Department of General Practice/Family Medicine  
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National Chairman of South African Academy of Family Practice/Primary Care  
Chairman of Faculty of General Practice, College of the Medicine of South Africa  
Actively involved in structures addressing undergraduate and postgraduate medical education, curriculum development with particular emphasis on training appropriate primary care practitioners to meet the needs of a developing Southern African region

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         Articles in Social Science and Medicine, Medical Care, Family Practice, Canadian Medical Association Journal, Journal of the Royal College of General Practitioners, and the British Medical Journal
         Active in fostering an international network of teachers and scientists for communication in medicine
         Edited two books: Communicating with medical patients and Tools for Primary Care Research and has recently co-written a book Patient-Centered Medicine; Transforming the Clinical Method Sage, 1995.

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1983 Member of the EURACT

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Year as a Graduate Assistant at Cornell University, USA
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Book: “How to Survive in Hospital”
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Chairman of the Chinese Society of General Practice
Chief Editor of the Chinese Journal of Obs/Gyne
Professor of Obs/Gyne and Tutor for Medical Graduate students at West China University of Medical Sciences
Guest Professor at Beijing Medical University and Sino-Japanese Friendship Hospital

Professional Society Membership:
1988 - 1998, Vice Minister of Public Health of China
1984 - 1988, President of West China University of Medical Sciences
APPENDIX FOUR:

COUNTRY CASE SCENARIOS
A seeding grant in 1973 enabled the establishment of the RACGP Family Medicine Program which began with two hundred and fifty trainees scattered across each state of Australia, and a handful of amateur educators to train them. Since then, the trainee numbers have risen tenfold to two thousand five hundred, one of the largest vocational training programs for family medicine in the world.

The three-year program comprises a further year in hospital training, following an intern year, and two years in general practice training in accredited training practices. Those preparing themselves for rural practice continue training for a fourth year where the emphasis is on the acquisition of procedural skills. The end of training is marked by the completion of training requirements and the successful completion of the RACGP Fellowship Examination which is a comprehensive test of competence in general family practice.

As a result of the success of the Family Medicine Program, over a period of twenty years the Federal Government, which has funded the Program since its beginning, is now strongly supporting general practice by providing funds for research, demonstration grants which enable family doctors to undertake innovative approaches to health care, and funds to establish local divisions of general practice to enable practitioners to organize their own education and research, and become involved in health policy formation in their area.

Since the beginning of 1993, all doctors wishing to be registered as general practitioners need to have their Fellowship of the RACGP and to undertake quality assurance activities throughout their professional life. The latter are becoming increasingly demanding, and failure to comply will result in removal from the register.

Undergraduate education in general practice/family medicine began in 1974 with special seeding grants to university medical schools to establish departments of community practice (or similar name) in Australia's ten medical schools. Some have prospered and have had a major influence on the medical curriculum; whereas, others still struggle for identity, funds, and influence.
There are 24,000 medical graduates in Bangladesh. The number is increased by one thousand every year by newly graduated doctors. The doctor patient ratio is 1:5,000 (1:10,000 in rural areas) which is a frustrating figure by comparison with many other countries.

Amongst the 24,000 doctors, 8,500 are working in Government health services. Many of them are specialist doctors. These doctors are employed in big hospitals, specialized centers, district hospitals, Thana health centers and sub-centers. The other 15,500 doctors are working in the private sector. Excepting a few specialist doctors, the vast majority of this group are practicing family medicine. They are providing health care to eighty percent of the total population.

Unfortunately, there are not training facilities for general practitioners in Bangladesh. The Government has never felt the necessity of vocational training for general practitioners who are providing health services to eighty percent of total population. Despite this disinterest, general practitioners came forward and established the College of General Practitioners of Bangladesh in 1985.

Every year, the FCGP examination takes place. Interested candidates who fulfill the prerequisites can sit for the examination. The examination comprises a written paper, long cases, short cases, a viva and a dissertation. Three FCGP examinations are already completed.

An orientation course precedes the FCGP examination. The course consists of about 200 lectures and 80 hours of hospital training and covers important aspects of the examination. It is mandatory for the examinees to attend at least 80 percent of the total classes before appearing at the FCGP examination.

Every examinee has to prepare a dissertation under the supervision of a guide. Students can get help from the small, but resourceful library of the college.

Despite the difficulties, progress is being made towards the development of the discipline of family medicine in Bangladesh.
Family Medicine in Latin America

Family medicine emerged in Latin America in the 1970s. By 1981 there were 21 three-year residency programs in family medicine and by 1991, there were 200 programs in the region. The first program began in Mexico at the Social Security Institute and in 1974 and 1976, respectively similar programs were started in Bolivia and Panama. Until 1981, only these three countries in Latin America had postgraduate training programs in family medicine; 19 programs in Mexico and one each in Bolivia and Panama.

The International Center for Family Medicine (ICFM) was founded in 1981 as a not-for-profit, nongovernmental, international organization; with the mission to promote family practice as a discipline that is able to provide high quality, primary health care in the countries of Latin America. During the 1980s, under the influence of ICFM, family medicine residency programs were developed in Argentina, Brazil, Columbia, Costa Rica, Cuba, Dominican Republic, Equador, Paraguay and Uruguay. In all of these countries except Uruguay, family physicians are trained in three-year residency programs. In Uruguay training occurs as a short preparatory course followed by on-going CME programs.

ICFM encouraged the development of family medicine training programs using the following strategies:

- Identification of health care system leaders in medical education and private and public institutions representing health care providers.
- National seminars were held to discuss the characteristics and highlight the unique contributions of family medicine in health care systems and medical education. Subsequently, new leaders started the implementation process generally linked to an institution.
- The ICFM hosted exchange programs in other countries where family medicine was more developed, especially the United States and Canada.
- Motivated leaders created new programs in family medicine at the primary health care level, either in a public or private institution.
- The ICFM encouraged the formation of national organizations of family medicine.

Although residency training programs in family medicine continue to grow and graduates meet the needs of the communities they serve, family medicine involvement in undergraduate education is minimal. Less than ten medical schools in Latin America have formal departments of family medicine.
The College of Family Physicians of Canada (CFPC) was founded in 1954. A minimum of 50 hours of approved continuing medical education annually has been a requirement for membership since the beginning. In addition, certificants in family medicine must do a special Maintenance of Certification program. A recent comprehensive revision incorporates all these activities under the acronym MAINPRO (Maintenance of Proficiency/Maintien de la compétence professionnelle). Total CFPC membership is now 12,600, representing 60% of the practicing family physicians in Canada.

Postgraduate residency training programs, accredited by the CFPC, began in 1966. The programs are of two years duration with an optional third year of training, and are offered by the Departments of Family Medicine in all 16 Canadian medical schools. Currently, there are 1600 residents enrolled. The number of full- and part-time family medicine teachers in Canada now numbers 2,800, and this group is supported by a CFPC Section of Teachers.

Following completion of training, residents write the CFPC Certification Examination in Family Medicine. Certification has now become a standard for a license to practise medicine that is portable across Canada. In addition, the CFPC offers a Certificate of Special Competence Examination in Emergency Medicine to family physicians with additional training. Both examinations are also available to practice-eligible candidates who meet stringent prerequisites.

The CFPC is now directing more attention to family medicine research. A Section of Researchers has been formed and a Research and Education Foundation established. Several major projects are underway.

The CFPC has also found that, unless you are prepared to protect the practice environment, your training programs and educational activities are at risk. Therefore, the CFPC is now deeply involved with health care reform in Canada.
After the founding of the People's Republic of China in 1949, the Government has concentrated on prevention and the control of infectious diseases which endangered the people's health, and has strengthened occupational health, food hygiene, maternal and child health, school health, and the building of a health infrastructure. As a result, great changes have taken place in health care in both town and countryside, and the people's health has been improved greatly. The morbidity of acute infectious diseases reduced from 30,000/100,000 in the 1950's to less than 235/100,000 at present. In the rank order of causes for death, infectious disease has dropped from first place to ninth. Life expectancy has increased from 35 years before 1949 to over 69 years in 1990.

There were more than 1.8 million doctors, including physicians and assistant physicians of both western and traditional Chinese medicine in China in 1990, averaging 1.54 per 1,000 population. Among them, more than 1.1 million doctors are working in community hospitals, township health centers and clinics in cities and rural areas all over the country, besides 1.27 million village doctors and health aids (once called barefoot doctors), of which 780,000 have had an equivalent training to that of an intermediate medical school graduate. These doctors practice primary curative and preventive care for both individuals and communities like a general practitioner, though they lack qualified training for the discipline of general practice/family medicine.

According to the above number of doctors working in the community, we can learn that a great number of the medical personnel serve primary health care. However, their quality is unsatisfactory especially for meeting the challenge of the second medical revolution. Inadequate training of those working in primary and secondary services has caused lack of public confidence, and for that matter, lack of confidence in their own ability. Therefore, a training program in general practice/family medicine has been organized and implemented as the most important task for the Beijing Society of General Practice and the Training Centre of General Practice/Family Medicine at the Capital University of Medical Sciences in Beijing (formerly named Capital Institute of Medicine).
In Denmark, approximately 98% of the population is registered on a list which identifies them with a specific GP/FP and without direct or private costs of service. GPs/FPs are paid by contract with the government. As little as 2% are "private", i.e., and paying a part of fee for service; even with these patients, many stay with a specific GP/FP anyway. Registered patients who receive their care through the public system must have a referral to visit a specialist without payment. Patients register with their GP/FP for many years, less than 3% making a change per year; the current system has functioned since 1973.

All medical students have a mandatory training period in general practice. The response of the graduates is generally favorable; most expressing that their experience positively influences their attitudes towards the health care system in general and the relative importance of primary care. All Danish doctors now have a mandatory 1 1/2 years internship; 1/2 year in each of internal medicine, general surgery and general practice. GPs/FPs are trained for 3 1/2 years in a specific program of clinical training (3 years in hospitals, 1/2 year in general practice) combined with a 2 year theoretical course (100 hours per year). Approximately 20% of Danish doctors practice as family doctors (GPs/FPs) as a full time career.

Recent education and other reforms of the health care system have helped to provide for equitable distribution of services and the provision of cost effective care.
ESTONIA
Margus Lember, M.D.

Estonia is a small country in North-East of Europe on the coast of the Baltic Sea. Estonia was an independent republic in 1918-1940 and is again since 1991. We have a tradition of family physicians from the first period of independence. During 50 years of occupation, the health care was organized according to the soviet model. In urban areas, polyclinics with different specialists in primary care were responsible for health care. District doctors provided primary health care only for adults in internal medicine. District pediatricians took care of children, district gynecologists - for women’s diseases and pregnancy, etc. General practice/family medicine did not exist. In rural areas, the district doctors working alone provided much wider care, but they did not have special training to be family doctors.

In 1990, changing of the medical education started in Estonia. It was decided to introduce family doctors into health care system. Early (undergraduate) specialization of medical students was changed. As a major change in post graduate education two-years common internship was introduced in 1991 instead of one-year internship.

In 1991, vocational training (VT) for family medicine started. By 1994, VT has been completed by 67 doctors, 300 are now at training. VT takes two years. The trainees who are mostly district doctors and district pediatricians with practical experience of 5-10 years continue their practice as primary care doctors and once a month for one week they attend different courses at the University of Tartu. The curriculum has been constructed according to the participants’ needs and previous experience. Family medicine is recognized as a specialty since 1993. To reach the specialty of a family doctor, one must pass the exam after VT period.

Practical reorganization of primary health care in cities started in 1994 in Tartu (population of 100,000) where three new group practices of family doctors were opened. Previously all the inhabitants of Tartu had to go to one central polyclinic.

Since 1992 a Department of Polyclinic and Family Medicine is opened at the University of Tartu where the only medical school in Estonia is located. Undergraduate teaching consists of one-week introductory course for the third year students and a four-week period of group work and 1:1 teaching at family doctors’ surgeries for the sixth year students.

In 1991, an Estonian Society of Family Doctors was established. It held the first national conference in 1994.

The whole reorganization of primary health care is estimated to take 5-7 more years.
Malaysia, which is projected to assume developed country status by the year 2020, is in the midst of rapid economic growth. The health services, both in the private sector and in government, are undergoing rapid development to meet the increased expectations for health care of its people.

In 1991, the Director General of the Ministry of Health announced that the Ministry recognized Primary Care as a distinct specialty. This was a historic milestone as for the first time there were careers in government service for family physicians as already existed for other specialties. Departments of Primary Care/Family Practice were established in the University of Malaysia in 1989 and University Kebangsaan in 1993. The third medical school at the University Sains Malaysia has completed plans for a program in family practice. A four-year program leading to the masters degree has been recognized as a specialty qualification by the Government. The University of Malaysia has accepted its fourth enrollment of candidates and the National University its second enrollment. The College of General Practitioners is involved in both programs.

The Ministry of Health has built a chain of rural health centers which will ultimately cover the entire country. The new breed of specialists in family practice will be based in these health centers and be responsible for the health of a specific population.

The College of General Practitioners of Malaysia was founded in 1973. An examination leading to the Membership of the College of General Practitioners was first held in 1979. This examination was recognized by the Royal Australian College of General Practitioners as equivalent to their examination. Since 1982, it has been held jointly with RACGP examiners leading to eligibility for membership of both Colleges. The numbers taking the examination have steadily increased each year.
PHILIPPINES
Zorayda E. Leopando, M.D.

The Philippine Academy of Family Medicine was organized in 1960 to promote the role of the family doctor in the Philippine health care system. In 1974, residency training in family medicine was started. There are now 28 residency training programs and 190 positions for the three year residency programs. The programs are accredited by the Committee on Residency Training Programs and initially require yearly visits for three years followed by full accreditation for a minimum of three years. By the year 2000, only graduates of accredited programs will be eligible for membership in the PAFP. Board certification requires successful completion of a qualifying examination.

Family Medicine was introduced into medical schools in 1976 as a course integrated with community medicine. A core curriculum in family medicine was formulated in 1988 and now serves as the basis for undergraduate education in the 10 out of 30 medical schools with family/community medicine departments.

The Philippine Society of Teachers of Family Medicine was organized in 1982 to look into educational concerns of the discipline. Its activities include curriculum review and development, teacher training, and resource development.

Publications to enhance and maintain the competencies of family medicine in the Philippines are numerous and include the journal: Filipino Family Physician, the newsletter: PAFP Reporter, and the book: Fundamentals in Family Medicine. Educational guidelines have been published such as: Developing Standards in Family Medicine and Competencies of Family Physicians.

Family Practice in the Philippines is well organized, growing and strongly committed to the training of competent physicians to meet the health care needs of its society.
In 1974, Portugal had a marked maldistribution of doctors with the majority practicing as specialists in urban hospitals. Rural and deprived areas were, in general, without doctors. General practitioners were almost nonexistent.

In 1975, in an effort to correct this problem, a national medical service was established with young physicians practicing in rural and deprived areas for one year, following their basic medical education (six years of medical courses and two years of general common internship).

This one-year-long "civic" medical service was one of the precursors of the Portuguese National Health Service (NHS) created in 1979 under the principles of universal coverage and free health and medical care for all the population.

After five years experience of this medical service, although it was well-accepted by patients and doctors, an increasing perceived need for continuity of care and a more personalized doctor-patient relationship was felt. In addition, it became apparent that a well-structured postgraduate training program in general practice was necessary and that the NHS needed to develop long-term career possibilities for physicians in general practice.

In 1982, a general practice medical career was created with the NHS and the "civic" medical service was discontinued. Also in 1982 a three-year postgraduate vocational training program in general/family practice was developed. In 1987, vocational training became obligatory to enter general practice, and specific training programs were developed for general practitioners already in practice. The first Chair of General Practice was created in the Medical School of the University of Lisbon in 1987.

All five Portuguese medical schools expose nowadays their undergraduate students to learning experiences in general practice. The vocational training in general practice/family medicine is under the responsibility of the Ministry of Health with a supervision of the Portuguese Medical Association. Its program is in the process of reform to become more general practice-based and community health-oriented and will increase to four years duration with trainees attached to health centres. Hospital training, although important, will be organized as satellite learning inputs to the general practice program.

Presently, there are 6,000 GP/family doctors spread all over the country covering around 9 million people (90% of total population) with 1,500 patients per GP, on average.
Family medicine (general medical practice) is the mainstay of the health care delivery system of the country. About 85 percent of doctors in the country practice family medicine. Most of them are employed in the public sector and serve in the headquarters (major towns) of districts; even those in private practice stay mostly in the major towns of districts.

Now that there is a medical school in the country, training of general practitioners (family doctors) has changed. Emphasis is now shifted towards community health care. Part of the training takes place in rural settings, where the major part of the country's population lives.

The future is bright for family medicine practitioners because more and more of them are needed to serve in the rural areas of the country, where there are none as of now. Postgraduate training for family medicine (general practitioners) is being contemplated.

Most of the doctors practicing family medicine are in a better financial status than their counterparts in the public service.
Singapore
Goh Lee Gan, M.D.

The College of General Practitioners, Singapore, was formed in 1971. An editorial of its journal stated in 1971, "The long term goal is to institute vocational training for the intending general practitioner and to organize undergraduate teaching in the University. Family practice must become a positive factor in our health care delivery system and our family practitioners must be trained by design if they are to serve cum scientia caritas." Over the years, the College has achieved many of the goals it set for itself.

Undergraduate teaching of general practice was initiated in 1971, by the College, and in 1987 the discipline of family medicine was formally accepted as an academic discipline in the National University of Singapore. The Department of Community, Occupational and Family Medicine was given the responsibility for teaching undergraduate family medicine in February 1987.

Vocational training began as self-directed learning supplemented by continuing medical education courses organized by the College. With the help of the Royal Australian College of General Practitioners, it mounted its first Diplomate examination in 1972. From 1972 to 1992, the College organized 14 Diplomate examinations.

It was in 1987 that the Government took interest in vocational training for the general practitioner. The most important factor in the successful implementation of the vocational program is the tripartite effort of the Ministry of Health, the college of General Practitioners and the National University of Singapore.

From a pilot program of two years of rotating hospital postings and a three-month posting in primary care, in 1991 it developed into a three year vocational program consisting of two years of hospital postings and a year in primary care. This is now the definitive program for trainees in the Government medical service. The first two batches of trainees took the MCGP Diploma offered by the College. The School of Postgraduate Medical Studies accepted the setting up of a program of postgraduate training in family medicine leading to the award of the Master of Medicine (MMed) in Family Medicine in 1991.

There are two future tasks in the development of family medicine in Singapore. These are firstly, developing a training program for existing general practitioners, and secondly, developing a Fellowship by Assessment program for MMed (Family medicine) holders and MCGP holders. This will be directed by the College. Although it has taken almost twenty years to achieve, family medicine is now established in Singapore and carries the same professional status as the other medical disciplines.
SLOVENIA
Dr. Igor Svab

The general practitioners of Slovenia started developing their training of teachers in general practice in 1982. After participating at the WHO course of training of teachers in general practice, a group of general practitioners started to organize workshops for general practitioners in Slovenia on topics specific for general practice.

In 1982, two workshops on the same topic were organized with a participation of 55 GPs. Over the years, the number of participants has been growing resulting in a network of 135 regularly participating general practitioners which is more than 10% of the GP population. This group has become the driving force for the development of general practice in the country and is the basis for the development of practice based teaching in general practice that will be introduced at the undergraduate level. The materials used for the preparation of the workshops is the core for the first textbook on general practice in Slovenian language.

In addition, the workshops have been condensed to an international "summer course on principles of general practice", which is followed by three workshops in Slovenian for about 150 participants every year. The workshops have become the most popular form of CME for the general practitioners of Slovenia.
SRI LANKA
Professor Le la De Alwis Karunaratne

General family practice has been in existence in Sri Lanka (as a private sector service) for well over a hundred years, but postgraduate and undergraduate training in family medicine was not seen as a need until the late 1970s when it was first proposed by the College of General Practitioners of Sri Lanka (founded in 1974).

In 1979, the Postgraduate Institute of Medicine of the University of Colombo established a Board of Study in Family Medicine to conduct a training program leading to a Diploma in Family Medicine.

The DFM course began in 1981 and comprises a modular course at weekends over one year. Module objectives and teaching/learning methods have been documented. Resource persons are drawn from general family physicians and specialists.

The course also contains a clinical element comprising an attachment to general family practitioner tutors working in their own practices and also a few short appointments in specialized government health services clinics relevant to general family practice.

The course is attended by government medical officers and general family practitioners, a steady number participating each year.

In November 1981, a workshop supported by WHO was conducted by an international consultant to develop the framework for the DFM examination which is a comprehensive examination of competence in general family practice and community based primary health care. The Diploma is awarded by the University of Colombo.

As regards undergraduate training for family medicine, although the idea was put forward in the early 1980's, scant attention was paid by the faculties of medicine. Students had only a brief three-day attachment to a general family practitioner. Recently (since 1993) two new faculties of medicine have given due recognition to family medicine in the undergraduate curriculum and there is much hope for the future.