# The family physician in the twenty-first century

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**Family medicine, a discipline which has redefined its epistemology over the past thirty years, approaches the twenty-first century in the knowledge that it is an area of study and practice central to the delivery of medical and health care. The family physician must be able to provide a wide variety of services, and bring a broad canvas of knowledge, a comprehensive repertoire of skills, and a particular set of values and attitudes to the care of people in their community setting. This article describes the role of the family physician as a generalist, personal doctor, family doctor, health promoter and team member, and addresses the issue of medical economics. The training, assessment and continuing medical education requirements are outlined, and the role of the family physician in research accented.**

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## Introduction

The discipline of family medicine has its origins in general practice, one of the oldest forms of medical practice, dating back to the eighteenth century. Since the mid-1960s, a process of redefinition has been occurring which has resulted in clarification and elaboration of the base of knowledge, both conceptual and factual, which supports the discipline; confirmation of its sphere and mode of action; delineation of its clinical method; agreement about its agenda for research; and consensus about the world-view which is shared by its practitioners-family physicians.

It is recognised that at present many practitioners fall short of the ideal portrayed in this paper. However, an ideal is necessary as the discipline trains its practitioners for the twenty-first century.

### *The family physician as a generalist*

The family physician must be a well-informed generalist, able to provide a comprehensive range of health care services, and familiar with such high prevalence illnesses as respiratory infection, allergy, asthma, chronic lung disease, hypertension, diabetes mellitus, musculoskeletal conditions, anxiety and stress-related conditions, depression, insomnia and skin complaints. The practitioner must also be aware of the multiplicity of less prevalent conditions which must be identified when they occur, such as cancer. Some of these are of such low prevalence, so diluted amongst the more prevalent conditions, that they can easily be overlooked. Uncovering them is one of the ongoing challenges of family medicine.

The family physician must also be able to provide care for infants, children, adolescents, pregnant women, adults and the elderly. This physician should be able to manage more than 90% of the problems people present with and be familiar with the community's health care facilities when there is a need to refer patients for investigation, treatment, and support. Following referral, the family physician needs to coordinate their care so that they and their families can find their way through the complexities of the health care system.

Family physicians traditionally provide continuing care, often over long periods, sometimes literally from the cradle to the grave. However, with the increasing mobility of people, the period of care is often shorter; continuity of care is then ensured by way of proper transfer of the patient's medical record, or writing a comprehensive referral letter to the next family physician.

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### *The family physician as a personal doctor*

Since it is usually individuals who present to the doctor, they are the initial object of the family physician's attention. McWhinney emphasises the individual as the focus of care when he speaks of "the primacy of the person" and asserts that "the person should occupy centre stage."[1] All doctors who relate directly to ill people need to be personal physicians in the sense that they make the person the focus of their attention.

Patients expect their doctor to listen to them, understand their problems, and give sound advice. The doctor's ability and willingness to meet those expectations is a function of the relationship of the doctor with the patient.

### *The doctor-patient relationship*

The interaction between the doctor and the individual patient—the doctor–patient relationship—is the centrepiece of family medicine. It was a psychotherapist, Michael Balint, who underscored this connection as crucial for the care of people. With a small group of interested doctors he formed discussion groups, later called Balint groups, which met regularly over extended periods of time to discuss their patients and their interaction with them. They focused particularly on patients who had multiple and difficult problems, and especially those with whom they had difficulty or discomfort in establishing a satisfactory relationship. The participants found solace in relating these situations to their colleagues, and comfort in the support and advice offered by them. They also found their relationships with patients became more productive and satisfying.

Recognising the importance of this, family physician training now focuses attention on the development of skills in empathic listening, communication, and counselling. The family physician needs to accept that he or she is part of the patient's world and an important part of the patient's support system.

### *The family doctor*

However, even with the benefit of a productive relationship with their patients, family physicians cannot comprehensively manage their problems unless the family is also brought into focus. Because the family is so pivotal in determining the health and illness patterns of its members, the term family medicine is used as the name of the discipline, and its practitioners are called family physicians, or family doctors.

Christie-Seely, who has defined the family as "a group of people, often but not necessarily related by blood or marriage, with a commitment to live with and care for one another over time," highlighted that although family physicians consult mostly with individuals rather than families, each person is surrounded by "the invisible family members with whom the patient's history, character, behaviour, and illness are inextricably woven."[2] Even single people living alone are influenced by their family of origin, "the family in the patient," and by the social system of extended family, friends, neighbours, or the welfare and health care system. Christie-Seely has also asserted that: "Whether the clinician likes it or not, what happens in the office with the individual patient will automatically affect the family: an effect on one part of the system necessarily reverberates throughout the whole system. The question, therefore, is not whether the clinician will intervene at a family level but how he or she will intervene. Consequently, it is clearly desirable that the clinician has a sophisticated level of understanding of how families function and know the patient's family well enough to know which interventions will be helpful and which might be damaging."[2]

The concepts of person-centredness, the doctor-patient relationship, and a family orientation need to be integrated. The systems approach is one way of doing this. The individual interacts with family, friends, neighbours, fellow workers and others in the community, and from time to time with the family physician, who thereby becomes part of the patient's system. The traditional approach of dissecting out the causes, with the intent of determining the cure, often does not work in the complex, often-changing dynamics of the family. An effective approach is to use systems theory as the basis for understanding and action. This theory was described by Von Bertalanffy in 1968[3] and Christie-Seely has defined its application to family medicine.[2]

Systems theory is helpful in understanding not only disturbed family dynamics, but also the effect of the wide range of biological dysfunctions encountered every day. Christie-Seely has said: "Diagnoses like hypertension, arthritis, angina, and even gastroenteritis in a child, trigger family overprotectiveness, blaming, labelling, role changes, and suggested treatments. Family relationships or lifestyle may be changed unnecessarily or in a way that is detrimental to the outcome of the disease. If family relationships are understood, the clinician

can work with the family in the management and prevention of illness."[2]

In addition: "Understanding systems theory is basic to both the family-oriented approach and the approach using the family as the unit of care."[2] Others support this view. Williamson and Noel have written: "Systemic family medicine assumes that health patterns maintain a circular and recursive interaction with individual and family emotionality. The clear implication of this is the importance of being able to think systemically, including being able to think in terms of the family. Although the individual is the unit of treatment, the family is the unit of understanding."[4]

Systems-thinking requires the doctor to be able to change perspective from the molecule, gene and cell to the body system, to the person, to the family, and at times, to the wider community. Such a conceptual facility allows the doctor to adopt the right perspective at the right time, taking an ecological viewpoint where appropriate, observing *Homo sapiens* in his natural environment, and taking into account the effects of the complex interactions which take place between individuals and their environment, both physical and social.

## A community orientation

A community orientation is therefore essential since this is where the people live and work. However, the capacity to take the community view requires an understanding of community dynamics, environmental issues, and the health care system. Clinical interest needs to extend beyond the family. Without an understanding of the epidemiology of the community, its age and ethnic mix, cultural beliefs and social patterns, economic status, physical environment, and its health care facilities and resources, vital parts of the picture are missing. So often these contextual factors are crucial in diagnosis and management.

Hence, in order to understand the context of the illness, the family physician must be able to focus not only on the micro aspects at the cellular level, but also on the macro issues at the global level, and on all the points in between.

## Health promotion

Apart from providing curative and rehabilitative care to patients and families, family physicians need to provide preventive care and health promotion. The need to avoid illness derives from the fact that apart from short-lived, self-limiting respiratory and gastrointestinal disorders, much illness today is chronic. Approximately 20% of visits are for hypertension, 8% for diabetes, and 10% for other chronic conditions, including cancer (Chan CS, personal communication). Many illnesses are avoidable. In the United States, half of the two million deaths in 1990 were from avoidable causes.[5] Tobacco (400 000), diet/activity patterns (300 000) and alcohol (100 000) were prominent, but toxic agents, firearms, sexual behaviour, motor vehicles, and illicit drugs also featured strongly.

There is much potential for improving the health of the population through preventive care and health promotion. The very high immunisation rate against hepatitis B in those younger than five years of age in Hong Kong is an example of a well-designed public health campaign to raise awareness and provide the vaccine at convenient locations.

The population approach to preventive care is a powerful one. Public education through the media, health education through health care services, and the provision of vaccines and disease surveillance by health departments, will continue to be necessary components of the community's preventive care programme. Family physicians need to be aware, and strongly supportive of, such public health campaigns.

There is much unrealised potential for individual family physicians in their consulting rooms to screen for diseases or risk factors and to give preventive care and advice about healthy living. To do this, they need to regard the patients who attend their practice as a population at risk. Although those who need health checks most are least likely to seek them, as family doctors see at least 85% of the population during any given year, that opportunity needs to be seized, as people are most receptive to health education when they present to a doctor for advice about a problem they have.

Worldwide, one billion people smoke tobacco, and almost half will die from the effects of their smoking—half of these in middle life.[6] Family physicians have a responsibility to tackle this problem on an individual level, as governments and health departments have on a population level. Much can now be done to help people to stop smoking. Nicotine replacement, hypnotherapy, and acupuncture have been used successfully. Although quit rates are not high, the aggregate effect over time is encouraging, making this

process a worthwhile one for family physicians. Because smoking cessation is so difficult for both patient and doctor, family physicians should take every opportunity to dissuade young people from commencing the habit, through opportunistic counselling in the consulting room.

Inappropriate diet and activity patterns and alcohol abuse also need to be tackled in the consulting room. There are many other useful activities such as periodic blood pressure checks, Pap smears, mammograms for women older than 50, and a number of other proven preventive care measures. The family physician should not waste time on procedures with no proven value in the asymptomatic, such as electrocardiograms, peak expiratory flow measurement, chest X-ray, and batteries of biochemical and haematological tests. Multiphasic screening of the asymptomatic, so popular in the 1970s, is now discredited.

Currently, experienced family physicians probably spend approximately one fifth of their consulting time on preventive care and health promotion. This is likely to increase slowly as the long term benefits of such activities become more apparent. Apart from screening and preventive activities, there is a need for promoting healthy living with good diet, regular exercise and relaxation, good family and work relationships, family life education, the avoidance of drug and alcohol abuse, and the prevention of accidents.

However, in doing so, family doctors need to be mindful of each patient's agenda and their right to take or ignore advice. Doctors need to negotiate management with patients, rather than give them orders. They should avoid creating unnecessary anxiety about health matters through over-zealous intervention. The desire of the doctor to help must be tempered with respect for what the patient wants from life.

Even when disease is established, much can be done to prevent or slow its progress to avoid complications and iatrogenic effects. For example, proper care of those with hypertension and diabetes can significantly extend both the quality and quantity of life. Those with undetected hypertension and diabetes need to be identified through opportunistic screening in the consulting room and adequately controlled. In the same way, screening of the female population for breast and cervical cancer is far from adequate. Family physicians could substantially improve the community's coverage, recall procedures, and the follow-up of abnormal results. Many of the chronic conditions which are now managed in specialist clinics should be managed by family physicians close to where the patient lives or works, thus reducing the load on these clinics. Shared care is becoming an accepted mode of practice; family physicians manage the stable patients, referring them to specialist services when complications require specialist care.

While it is easy to advocate healthy living, helping people to change established behaviour patterns is difficult. The family physician needs training as a change agent, capable of helping people to effect changes of behaviour which move them from an entrenched position to a new way of living.

## Health economics

Attention to preventive care will eventually reduce the burden of illness and the cost of health care, particularly in the long term. The contemporary problems of rapidly rising health care costs concern all health policy makers. The crisis is extreme in the United States where in 1993, US$910 billion was spent on health care, which in terms of per capita spending was twice the average of the 24 developed nations which make up the Organization for Economic Cooperation and Development (OECD).[7] Contributing factors are said to be administration (in 1993 the health bureaucracy consumed 25% of the health care budget), issues of quality, population demographics, the high cost of defensive medicine and litigation, costly regulation, the extreme application of technology in response to public demand and expectations, and waste and abuse in the system.[8] Yet this health expenditure was not reflected in improved health outcomes. The United States is well below many other developed nations in terms of its under-five mortality rate of 10 per 1000 live births, (rank 25); crude death rate of 16 per 1000 (rank 22), and life expectancy at birth of 76 years (rank 14).[9] Although there are many complex reasons for the discrepancy between expenditure and health outcomes, it is not possible to sustain an argument that in these circumstances greater expenditure produces better outcomes.

The dependence of American medicine on specialist care is cited as one of the causes of these high costs, and attempts are now being made to rapidly expand the number of generalists in the belief that a proficient generalist can diagnose and manage most complaints without resorting to high-cost technology. In the United States, there has been a turning towards the generalist and towards health maintenance organisations, which are recruiting family physicians to staff their clinics.

This move is supported by evidence of the effectiveness of primary care physicians. Starfield has

shown that highly developed countries which are strongly oriented towards primary care and have high levels of community satisfaction with the health system, are more likely to have better health outcomes.[10] In a study of 11 Western industrialised countries, she concluded that the primary care orientation of a country's health service system is associated with lower costs of care, higher satisfaction of the population with its health services, better health levels, and lower medication use.[11] Shi found in the United States, that high primary care physician to population ratios were associated with lower infant mortality rates, lower neonatal mortality rates, and a higher life expectancy.[12]

It has been successfully argued in many countries that the most cost-effective form of health care is based on a well-trained and -staffed primary health care sector in which family physicians predominate. Governments, convinced of this argument, have invested heavily in training family physicians and supporting their practice in the community.

It is important that family physicians be equipped with the knowledge and skills needed to manage health care resources prudently. Inevitably, this can place them in a difficult position whenever there is ethical conflict between what is best for the patient and what is best for the community. How to resolve such conflicts needs to be part of contemporary training.

Hence, the family physician needs to understand medical economics, and how to rationally use the expensive sectors of the health care system. In some countries (e.g. the United Kingdom), family physicians are fund holders for the total care of their patients. They have to get the best value for money for the investigations, treatment, and procedures they advise. However, this has its negative side. With the advent of managed care and health maintenance organisations—with their orientation to cost containment—the doctor is now seen as a "case manager" who manages both the patient and the costs. Cost containment does not imply cost-effectiveness; it is sometimes more cost-effective to spend more rather than less.

Edmund Pellegrino in his Nicholas J Pisacano lecture warned about the dangers of using metaphors such as "case managers", "fund holders", "gatekeepers", and "clinical economists" to describe physicians, as these words can damage the image of the profession and distort the patient's perception of the doctor's role. "Words are not simply the names of things. They convey ideas that shape our actions and give them moral content."[13]

## Team care

Medicine today is so complex that a team of people is needed to carry out some of the care people require. Nurses, allied health professionals, and community health workers often join with doctors in primary care teams to provide patient and family care. At times of stress, the patient and the family need someone who can explain the nature of the problem and the available treatment options. The family physician who is providing continuing care is often the most suitable person to perform this role. Contemporary training of family physicians must emphasise this role, enable trainees to work with, and learn about the role of specialists, nurses and others who provide care, and understand how they can integrate their care with that of others, now often on a shared-care basis.

At times, as part of the community network of health and supportive services, he or she will coordinate the care of the patient, and sometimes assume leadership of the team, and at other times will simply be a collaborating member. Whatever the role, the family physician needs to be trained to understand team care and be able to engage in it. The team most frequently encountered in family medicine will be the practice team of receptionist, dispenser, and nurse.

## Educating the family physician for the next century

The family physician described in this paper needs comprehensive education and training, which should start at the undergraduate level where attitudes and values are formed which persist throughout professional life. Through departments of community and family medicine, students can be introduced to community epidemiology and the practice of medicine in the community; to caring for individuals and families in their natural settings; and to providing both curative and preventive care across a wide range of conditions over long periods of time. If students learn to value the role of family medicine in the community and the professional satisfaction which family physicians enjoy, they will be able to make a balanced vocational choice from the many opportunities available in medicine today.

### *The medical curriculum and the community*

The widening gap between medical education and community needs in many countries has become a concern to clinicians and educators. There is now a movement to promote stronger links between medical schools and the communities they serve. This movement recognises that medical education needs had to have a profound influ-

ence on medical practice, and the latter must also influence medical education. Even more importantly, the health care needs of society must exert their influence on the medical curriculum. This triangle of medical education, practice, and society's needs must be dynamically interactive to achieve the best results.

In 1994, the World Organization of Family Doctors (WONCA), in collaboration with the World Health Organization (WHO) conducted a Strategic Action Forum at which 60 invited participants from 35 countries met to discuss the theme "Making medical education and practice more relevant to people's needs: the contribution of the family doctor." The output of this meeting has been disseminated as a joint WONCA/WHO publication.[14] When its recommendations are implemented, far-reaching changes in medical education and practice are predicted. This process has begun. A resolution endorsed by the World Health Assembly has been sent to its 189 member countries and 1500 medical schools, part of which requests the Director General of WHO "to promote coordinated efforts by health authorities, professional associations and medical schools to study and implement new patterns of practice and working conditions that would better enable general practitioners to identify the health needs of the people they serve and respond to these needs to enhance the quality, relevance, cost-effectiveness and equity of health care."

Member countries of WHO are urged "to collaborate with all bodies concerned, including professional associations, in defining the desired profile of the future medical practitioner and, where appropriate, the respective and complimentary roles of generalists and specialists and their relations with other primary health care providers, in order to respond better to people's needs and improve health status," and "to support efforts to improve the relevance of medical educational programmes and the contribution of medical schools to the implementation of changes in health care delivery, and to reform basic education in the spirit and the roles of general practitioners for their contributions towards primary health care–oriented services."[15]

***Postgraduate training in family medicine***

Postgraduate vocational training is now a necessity for family physicians, and in some countries it is a legislative requirement. In most countries, the duration of training is three to four years after the intern year. In Hong Kong, to gain the Fellowship of the Hong Kong Academy of Medicine, six years of training is required. During this period, graduates work for two years in a variety of inpatient and outpatient hospital settings to expand their knowledge and skills, and then spend two years in community-based training practices under close supervision to extend their experience. During the final two years, advanced training in community settings under the guidance of a mentor completes their preparation for unsupervised practice as a family physician.

A comprehensive educational programme parallels the in-service programme. Educational resources are provided to support personal studies. The availability of computer-based learning, instructional videotapes, ready access to the world's databases through computer links, and video cameras for videotaping and replaying consultations, is changing the face of medical education. Trainees need instruction on how to use these multimedia facilities.

In Hong Kong, a programme of education and training is already in place for government outpatient doctors, and a small programme exists for a handful of doctors in private practice.[16-18] A much larger programme is needed to provide sufficient trained family physicians for Hong Kong in the next century. It is unlikely that a programme of sufficient capacity will be possible until there is substantial government backing. The Hong Kong Government and the Department of Health have recognised the need for a comprehensive training programme, but so far funding has been restricted to a limited number of government medical officers. Extension of this programme could be achieved through expansion of the number of posts in hospitals for basic training, and more community-based training positions.

***Formative and summative assessment***

Throughout training, there is formative assessment which monitors progress and gives feedback to trainees on their strengths and weaknesses, and at the end of the fourth year there is a comprehensive examination which tests the knowledge and skills required and the values and attitudes needed for quality practice. Success in this examination results in Fellowship of the Hong Kong College of General Practitioners and Fellowship of the Royal Australian College of General Practitioners.[19]

At the end of the last two years, a final assessment is required, the details of which are now being completed. In principle, this should test the content of higher training and address areas not covered in the conjoint examination. It will probably include an assessment of consulting skills, the doctor's practice—

in which an audit will be undertaken—and skills in critical appraisal.

***Continuing education and quality assurance***

After completing training, participation in continuing medical education and quality assurance exercises will be expected of the graduate to maintain competence, and research will be strongly encouraged. The combination of regular quality assessment of different aspects of practice, accompanied by focused remedial education, will be essential for future family physicians.

There are now a variety clinical protocols against which to measure the performance of individual doctors. These provide guidance based on evidence derived from the literature and need to be developed by family physicians in a way which makes them applicable to the community setting. Visits to the practices of colleagues by experienced practitioners can be helpful in drawing attention to practices which are sub optimal.

## Research

Over the past two decades, family medicine worldwide has been pre-occupied with the establishment of its educational and training programmes and assessment procedures, although the amount of research being carried out has accelerated during this period. This has been the case in Hong Kong, where the academic discipline of family medicine has been established for only 10 years, and recognised as recently as 1993 by the Hong Kong Academy of Medicine.

There is an expanding body of family medicine research in the literature which is giving answers to everyday problems. Some examples include whether and when to use antibiotics in patients with a sore throat; the value of antibiotics in acute otitis media; the use and side effects of oral contraceptives; screening for depression; the diagnostic determinants of peptic ulcers; and the effect of a smoking cessation programme. Research methods include those used in clinical, behavioural, and social research.

It is accepted that no discipline can flourish without research, and that the long term survival of the discipline depends on the commitment of its practitioners to research as part of everyday practice. However, this will not occur unless it is given priority amongst the many competing demands for a doctor's time. There is a need to recognise the cost of research in terms of time and money, but to accept that the benefits to both the researcher and the discipline are substantial.

## The ideal family physician

Being a complete and proficient family physician is one of the most difficult roles in medical practice today. It requires a comprehensive range of knowledge and skills; a value system which has high regard for the person, the doctor-patient relationship, and the family; a positive attitude to preventive care and health promotion as well as curative and rehabilitative care; and an orientation to the community and its health care needs and resources. A superordinate requirement is a commitment to serving people over long periods of time and coordinating their care whenever and wherever it is needed. It has been said: "Patient management is the quintessential skill of clinical practice, and is the area of knowledge unique to family physicians. Family physicians know their patients, know their patients' families, know their practices, and know themselves...the true foundation of family medicine lies in the formalization and transmission of that knowledge."[20] Others have described the personal attributes which characterise the family physician as including compassion, understanding, patience mixed with a high degree of intellectual honesty, thoroughness, a keen sense of humour, and persistent curiosity.[21]

Family medicine is a young but rapidly maturing discipline. It is distinct from the general practice of the past from which it has emerged. Its standards must be consistently high, in contrast to the patchy and indifferent standards of general practice previously.

What is needed is substantial and repeated exposure of undergraduates to family and community medicine, support for its postgraduate programmes of training, and recognition of its higher qualifications. The health care system, its resources, and its method of financing need to be conducive to good family medicine.

In Hong Kong, progress has been made in recent years towards these ideals. Much more needs to be accomplished in the remainder of this century. What is needed is a professional and community milieu which will produce sufficient numbers of proficient family physicians to serve the Hong Kong community in the twenty-first century.

The aim should be: "A trained family physician for all by the year 2010."

## References


1. McWhinney IR. Textbook of family medicine. New York: Oxford University Press, 1989.
2. Christie-Seely J. Working with the family in primary care: a systems approach to health and illness. New York: Praeger Publishers, 1984.
3. Von Bertalanffy L. General systems theory. New York: George Braziller, 1968.
4. Williamson DS, Noel ML. Systemic family medicine: an evolving concept. In: Rakel RE, editor. The textbook of family practice. Philadelphia: WB Saunders Company, 1990:70-9.
5. McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 1993;270:2207-12.
6. Napalkov NP. Editorial. WHO Tobacco Alert July 1994.
7. Vincenzino JV. Developments in health care costs: an update. Stat Bull Metrop Insur Co 1994;75(1):30-5.
8. Palkon DS. Health care reform: identifying some cost culprits. Am J Surg 1994;167:223-6.
9. Grant JP, editor. The state of the world's children: 1995. Oxford: Oxford University Press, 1995.
10. Starfield B. Primary care: concept, evaluation and policy. 1st ed. New York: Oxford University Press, 1992.
11. Starfield B. Is primary care essential? Lancet 1994;344:112933.
12. Shi L. The relationship between primary care and life chances. J Health Care Poor Underserved 1992;3:321-33.
13. Pellegrino ED. Words can hurt you: some reflections on the metaphors of managed care. J Am Board Fam Pract 1994;7:505-10.
14. World Health Organization. Making medical practice and education more relevant to people's needs: the contribution of the family doctor. Geneva: WHO/WONCA, 1995.
15. World Health Organization. Reorienting medical education and medical practice for health for all. Resolution (WHA48.8) of the Forty-Eighth World Health Assembly: Twelfth Plenary Meeting; May 12; Geneva. Geneva: WHO, 1995.
16. *Report of the Working Party on Primary Health Care. Health for All: The Way Ahead.* Hong Kong: Department of Health, Hong Kong Government; 1990:199-210.
17. Fabb WE. *Assignment Report on Training and Educational Programmes in Family Medicine.* Hong Kong: Department of Health, Hong Kong Government; 1990:67-127.
18. Hong Kong College of General Practitioners. Handbook for Vocational Training in General Practice and Family Medicine. Hong Kong: HKCGP, 1995.
19. Hong Kong College of General Practitioners. Examination Handbook. Hong Kong: HKCGP, 1995.
20. Stephens GG. The intellectual basis of family practice. Tuscon, Arizona: Winter Publishing Company Inc., 1982.
21. Rakel RE, Pisacano NJ. The family physician. In: Rakel RE, editor. The textbook of family practice. Philadelphia: WB Saunders Company, 1984:3-11.