

Changes in health needs and health services provision by 2005

A REPORT OF A TRILATERAL SEMINAR HELD 27TH AUGUST - 3RD SEPTEMBER 1994

The role and training of doctors

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Foreword

On behalf of our respective organisations, we were responsible for organising a Trilateral Health Care Meeting in 1990 at Newport Beach, California. This meeting involved some forty delegates invited in a personal capacity from the USA, Canada and the UK. At an individual level the meeting was a considerable success and many lasting relationships and contacts were established. We subsequently reviewed this meeting most carefully. After wide consultation it was decided that it would be valuable to hold a further Trilateral meeting – though this was to be quite distinct from the former in terms of both subject and delegates. The three of us have to admit to our considerable enjoyment in our three planning meetings which resulted in cementing our friendship, and also in a high level of understanding in our respective health care systems; the organisation of medical education; and technological developments. Our detailed discussions led to the eventual agenda – which to a significant degree determined the selection of each delegation – and after a year's planning, the meeting took place in August 1994 at Lincoln College, Oxford, England.

The agenda, list of delegates, summary papers of presentations, and detailed account of the meeting are contained in the Report that follows. However, what these papers cannot do is reflect the liveliness, enthusiasm and enjoyment of the delegates. There is no doubt in our minds that the venue – the special ambience of Lincoln College with its most helpful staff – the involvement of spouses, and the well-timed mixture of working sessions and social events, all contributed to a very strong “feel-good factor” among delegates. Perhaps through good selection, or perhaps just serendipity, right from the outset the delegates produced that magic amalgam of ease, fellowship, courteous, challenging and sparkling discussion. It was especially the latter that made the meeting so successful and of such high calibre.

To the reader, we hope this Report provides an interesting overview of the different perspectives of the three countries; the extraordinary consensus regarding the anticipated health care systems of the future; and the pertinent policy debates for health policy and medical education. To the delegates, we hope it triggers memories of a delightful and fascinating week which we hope will live on through continuing dialogue and exchange amongst the participants.

On behalf of all the delegates, we would especially like to thank Mr. Dan Godfrey – Home Bursar of Lincoln College – and all of his staff for the excellent arrangements made at the College: and Ms. Anne McBride who worked so hard at the meeting, and especially in preparing this Report.

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April 1995

Introduction

The purpose of this Report is to consolidate the discussions of the Seminar; demonstrate the needs that require to be met; inform the reader of some of the initiatives that are already taking place within medical education; generate ideas; and highlight some of the debates which need to take place before real change is achieved.

The Seminar was divided into a number of discrete sessions. Members of each national delegation were asked to present papers on a number of issues:-

the health care system, and the present role of doctors

undergraduate and postgraduate medical education, with specific reference to the future structure and content of the medical curriculum

the extent to which doctors should be taught research awareness and interpretation; community-based practice; care of the chronic sick; and the conduct of medical audit/quality assurance as core topics

the anticipated changes in health needs and the organisation of health care services over the next decade

the present status and likely further development of multi-disciplinary working, with particular reference to: (i) the concept of the health care team and the role of its members in secondary and tertiary care; and (ii) the future role and skills required of specialist doctors

the future role and skills of the primary health care physician (PHCP), with particular reference to: (i) the PHCP's role as part of community care services for the management of long-term illness and chronic disease and the possible need for special training; (ii) the need to define the primary/secondary health care interface in the future; (iii) the importance of ethnicity and gender of PHCPs and related workers in relation to the demography of the population serviced

the management of the gap between perceived medical and social need and available finance, with particular reference to resource issues; rationing; health workforce planning and needs; and the role of health economics in health care planning

the impact of readily available information and its dissemination upon the behaviour of doctors, health care workers and patients

problems, barriers and possible solutions during the next decade

The first chapter outlines a number of generic factors which are likely to shape society's needs of the medical profession in the next decade. Within the context of these societal trends, each delegation described their national health policy, and identified the strengths and weaknesses of their systems of medical education. Chapters 2 and 3 contain the UK debates; Canada is discussed in Chapters 4 and 5; and Chapters 6 and 7 refer to the US. Chapter 8 draws together common educational needs and commences with a profile of the doctor deemed most able to meet societal needs in 2005. The remainder of chapter 8 is devoted to issues which need to be addressed in order to fully prepare doctors for their future role in society. Chapter 9 contains specific action which each delegation believes is essential to achieve beneficial change in their own country.

Chapter I

CHANGES IN HEALTH NEEDS AND HEALTH SERVICES PROVISION BY 2005

1.0 INTRODUCTION

This Chapter outlines those factors which the delegates identified as shaping society's definition of the 21st century doctor. Following a description of population and individual based needs, this chapter identifies developments in medical and information technology which are likely to have implications for the future delivery of care – and thus the training of doctors.

2.0 POPULATION NEEDS

2.1 More than Medicine

A number of diseases emanate from multi-factoral causes, and there are many determinants of health outside medicine. It is necessary to remember that the medical profession are not solely responsible for the health of the population. For example, health is affected by poverty, housing, the nurturing of infants, and nutrition. Thus a wider view of health, which emphasises health rather than illness, and includes health promotion, disease prevention, and patient education, was felt to be a more appropriate starting point for discussions on medical education.

Furthermore, since much ill-health occurs within society for non-biomedical reasons, a wider view of clinical intervention is required which balances contributions from bio-medical science and behavioural science. So, for example, sociology and anthropology could be used to a far greater extent when trying to understand the causes of ill-health within society.

2.2 Societal Needs and Trends

Seminar participants identified a number of demographic and societal trends which will have significant impact on the health of future populations. This is not an exhaustive list but provides illustrations of the continuing growth of chronic, degenerative and man-made diseases in all three countries:-

The elderly have multiple health and illness problems, so it is of significance that the age structure of societies is shifting, to produce aging societies. For example, in Canada the percentage of the population over 65 is 11% and increasing – with the highest increase in the those over the age of 85. Children from single parent families have a different health experience, so it is also important to note changing family structures and the increase in single parent families.

There are acute economic differences between members of society, with significant numbers having relatively less and less purchasing power. The distribution of wealth is disproportionately lower amongst former immigrant communities, and health problems are emerging in marginalised communities which are significantly different to those experienced in the rest of the country – and in fact share more in common with ill-health found in “3rd World” countries. This is compounded when health care coverage does not exist for all citizens. Such relative poverty is likely to increase with long term employment prospects becoming more uncertain. Members of society are becoming more mobile, and there is an increase in numbers of people who are homeless – increasing their need for care and flexibility in the manner that care is provided.

2.3 Equitable Resource Allocation

All countries are facing constraints on public expenditure and increasingly a major

responsibility of the physician is to be parsimonious with scarce resources. Economics is the science of choice between competing ends with limited means and there are strong arguments for the greater understanding and usage of health economics within medicine: if resources are limited, choices about who lives and who dies ought to be informed (not determined) by evidence about the costs and outcomes (effectiveness) of competing interventions – be they diagnostic, therapeutic or preventative. In addition, if it is possible to identify the cost effectiveness of competing options then scarce resources can be directed to those interventions with the greatest impact. If such data is ignored, and scarce resources are used inefficiently, this is potentially unethical since such inefficiency deprives potential patients of care from which they would benefit.

However, it needs to be stated that the practice of resource allocation is very difficult and not wholly determined by the efficacy of health economics. First, insufficient information exists on the effectiveness, let alone the cost effectiveness, of interventions. Secondly, even in the presence of evidence, doctors do not necessarily provide either the most effective or appropriate care. A study by Robert Brooks (1990) illustrates this point. Brooks looked at the effective treatment of elderly people, and noted there was both an underprovision of appropriate services, and an overprovision of inappropriate services. Unfortunately, these phenomena are a feature of every specialty, in every country, and require considerable investment in health services evaluation, and the changing of clinical behaviour, if they are to be adequately addressed in the future. The systematic study of health outcomes is now on political and managerial agenda, and the doctor of the future will need to understand the implications of such studies and incorporate such findings into their current practice.

Thirdly, since such allocation has political consequences, politicians find it difficult to withstand pressure from patient's advocacy. This is compounded by "provider capture", where certain specialisms, for example paediatric intensive care, arguably advocate a number of interventions which are not based on good scientific research – but which capture the emotions of the public and politicians. Fourthly, the denial of care to a patient, however "ethical" in the context of the population, may be in direct conflict with needs as they are perceived by the individual. The first two issues require better education, training and research. The latter two issues require a deeper and more consistent dialogue between society and the medical profession than hitherto experienced.

3.0 PERSONAL NEEDS

3.1 Continuity of Care

Since diagnosis is not mechanistic – often involving a degree of negotiation between the patient and doctor – and many individuals need time to discuss their anxieties and confide in their doctor, an on-going patient-doctor relationship was identified as an important element in future care. More patient-doctor contact time was another important feature of future care. This is a need frequently identified by patients, and arguably demonstrated in the rapid growth of alternative medicine (which does provide more time for individuals to talk than the average doctor can spare). The coherent organisation of complicated services around people's needs was identified as a current weakness and proposed as a necessary element of future care. Finally, it was argued that providing care to an individual in their own community setting was likely to be the most desirable way of meeting their personal needs.

However, as noted above, the needs of the individual may conflict with the needs of the population, and vice versa. Developing on-going patient-doctor relationships, providing more patient-doctor contact time, establishing "seamless" care packages and providing effective care in primary care settings, all carry costs which a nation's population and its

Government has to be willing to underwrite in full. The importance of these elements is also relative to meeting the basic needs of those individuals whose access to health care may be currently restricted on account of their social class, ethnic group, geographical location, and/or age.

3.2 Increased Choice

A growing culture of egalitarianism and participation at all levels, including between women and men, in both individual and group, private and professional relationships requires a different patient-doctor relationship. Moreover, people who have chronic disease desire to have more control in dealing with their lives. Giving individuals choice is one aspect of this different relationship; listening is another – a skill which members of the medical profession need to develop more fully in the future.

Doctors will be developing these skills in the context of an increasingly heterogeneous society which is becoming dramatically more aware of medical innovation and practice. As such, supporting increased choice may require a number of different actions: it will always require clear expositions of the relative benefits to be gained from different interventions; it may also require the correction of misinformation gained about medical practice; and may also require making information accessible to those individuals who are illiterate (for example, Canada anticipates an illiteracy level of 20%), or to those individuals who do not communicate in the dominant language of the country (for example, there are over 80 different linguistic groups in Canada).

4.0 DEVELOPMENTS IN THE DELIVERY OF CARE

4.1 Surgical and Diagnostic Interventions

The development of minimal access surgery and miniaturised diagnostic techniques have contradictory implications for the relationship between the generalist and specialist (in the context of this argument, the terms “generalist” and “specialist” are taken at face value. However, the reader will note that each term is open to different national interpretations, and subsequent chapters contain more detailed discussion of these differences).

It is estimated that approximately 80% of operations will involve minimal access surgery – which could promote an increase in daycase surgery, lead to progressively shorter hospital stays, and shift the location of such surgery into the primary care setting. For example, already 25% of “cold” surgery in the US is performed outside of hospital settings (although caution must be exercised in the transferability of such a statistic since the resources available to primary care differs between the UK, Canada and the US). On the one hand, these innovations are likely to increase the opportunity for generalists to play a major role in minor surgery, and palliative and rehabilitative care of the patient in the community. On the other hand, the increased ability of surgeons to perform more intricate surgery (for example, heart, lung, and liver transplants) – which are not conducive to daycase or primary care settings – will increase their respective level of specialisation.

Likewise, the development of miniaturised diagnostic techniques and the extension of diagnostic expertise, brings both increases and decreases in the role of the specialist vis-à-vis the generalist. As the power of diagnostic techniques increases, specialists gain acute awareness of highly individualised phenomena and become highly specialised in their eradication. On the other hand, the power of diagnostic techniques increases the ability of the generalist to diagnose and treat patients without referral to the specialist. Thus, it is likely that boundaries between care provided by generalists and specialists will continue to move, with generalists increasingly performing what are now deemed as specialist tasks, and specialists becoming increasingly identified as “super-specialists”. Since generalists and

specialists – at least in some countries – are located in different settings (namely, the primary and secondary care settings), the location of the bulk of medical care has important implications for the most relevant setting in which medical training and education should take place in the future.

4.2 Multi-disciplinary Teamwork

Care is increasingly delivered through multi-disciplinary teams (for example, liver transplantation may involve a team of physicians, surgeons, anaesthetists, radiologists, microbiologists, pathologists, specialist nurses, psychiatrists, dietitians and a transplant coordinator). Although the term “nurse specialist” has different meanings in the UK, Canada and US, an increasing number of nurse specialists are being involved in the direct management of patients. Both of these trends have implications for the future education of doctors.

5.0 DEVELOPMENTS IN INFORMATION TECHNOLOGY (IT)

5.1 The Search for Information

Reference was made in 2.3 above to two phenomena: the inadequacy of clinical information, and the inadequate use of information which does exist. A number of studies have looked at the dissemination of medical literature and indicate low levels of information seeking by practising health professionals. However, when answers are sought, medical literature can be useful in providing answers and prompting a change in clinical practice. Disincentives arise from relevant data taking time to get into textbooks, and medical literature being viewed as a dialogue between researchers, rather than a guide to action. It appears that physician behaviour is more likely to change if data is prompt, relevant, valid, reliable and not costly in terms of time or money. Key motivators for most physicians searching for data are the availability of information, clinical applicability, and human sources for advice. It is argued that IT has the potential to provide these elements in the physician’s day-to-day working environment.

5.2 Supportive IT Systems

Patient records are seen as the essential building block in improving the management of information in health care, and all countries are investigating ways in which patient records can meet the current and future information needs of health care professionals. For example, the Computer-Based Patient Record Institute has been established in the US, and aims to develop Computer-Based Patient Records (CPRs) which:-

Support the creation of a longitudinal view of a patient’s health history.

Offer greater flexibility in the retrieval and display of patient data.

Capture data elements essential to understanding the clinical thought process behind patient care decisions and to assessing the effectiveness of treatments” (Detmer, 1994).

To this end, a Committee established by the Institute of Medicine identified 12 basic requirements for future patient records – for example, the CPR must “link to local and remote knowledge, literature, databases, and systems to aid decision making” and “assist and guide clinical problem solving” (Detmer, 1994).

It is envisaged that future patient records will support the information needs of the full range of legitimate users, and as such will need to take account of the different approaches to patient care. For example, physicians tend to spend their time asking very directed questions, and spend a lot less time listening to patients. Conversely, it is argued that nurses spend more time listening to patients’ deliberations, and use open ended comments to a far

greater extent. Since it would appear that nursing assessments are particularly dynamic, there needs to be some way of being able to record pictures and patterns as well as words on the single patient record.

Systems of quality assurance can also benefit from developments in IT: for example, clinical care protocols – developed through peer review criteria statements – can be transferred onto software programmes which trained assessors can use to review clinical records. This form of performance review is currently being used for Family Physicians in Canada and is likely to become the basis for recertification. Another example, in the US, is the incorporation of routine diagnosis sets into computerised clinical support systems, so that any usage outside the guidelines is automatically highlighted, and the medical resident is required to defend its usage from the literature. A beneficial spin-off from this exercise is that it encourages greater knowledge of the literature, and prompts research into the gaps which exist in the literature.

IT can also be used to provide practical assistance and patient education to those living in remote areas. For example, “telemedicine” has been successfully used in Canada to address dermatological disorders of people living 150 miles away from the nearest doctor. At its most futuristic, it is possible to imagine a scenario in which computer-literate patients are “de-medicalised” and able to design their own therapies via the use of extensive medical databases.

5.3 Technology Based Medical Education

The medical student of the future will need to be familiar with computers in order to take full advantage of developments in technology based learning. Regional networks are already developing in Canada for study purposes: by equipping doctors with portable computers and modems, it is possible to educate doctors in the community whilst keeping track of their progress. Along a different dimension, virtual reality could be significantly exploited by medical educationalists. For example, students in Nottingham, UK can gain a greater awareness of the stomach through real-time imaging of the body.

5.4 Implications for Doctors, Patients and Societies

Developments in IT have a number of implications for the management of health and illness: opportunities exist for patient administration to be revolutionised by single clinical records, and the linkage of computers in different care settings; and research databases could be enlarged through the systematic use of data from clinical records. In this manner, choices could become better informed through the wider distribution of outcome information and survival rates.

In tandem with these exciting new opportunities, however, is another set of dynamics, upon which delegates felt the medical profession should reflect. Although computers may be efficient in getting answers to directed questions, delegates noted that they do not replace the need to think about the original question. In addition, although computers can be used to obtain economies of scale, it will be necessary for someone to input the original data. If this is the physician, this is likely to be time-taking, as opposed to time-saving. Notwithstanding, irrespective of who records the data, the effective use of information relies heavily on its quality, and it was noted that those who collect and record information will need to be far more involved in the decisions about the information that is required than is currently the case.

There are also add-on costs to increasing the circulation of information: concerns about confidentiality (for example, Canada is experiencing legislative opposition in its bid to develop accessible and portable medical cards), and concerns about the implications of

increased patient information. Too often the assumption is made that information is emotionally neutral and the anxiety which surrounds the imparting of information is forgotten. For example, delegates noted that increasing one's knowledge about susceptibility to particular disease(s), may in some circumstances significantly decrease the quality of life for that individual – irrespective of the outcome of the original diagnosis.

6.0 SUMMARY

Ideally, the education and training needs of doctors should be linked to the needs of society – and the needs of society are perceived to be relatively consistent across all three countries. However, these needs can be based on population or individual needs which, as discussed above, may lead to conflicts of interest when set in the context of scarce resources. The identity, responsibility, and accountability of those negotiating these conflicts of interest will differ across countries, as will the chosen priorities. Thus, although there are a number of similar factors which may mediate upon the role of the doctor of the 21st century – such as continuing developments in the delivery of care, and supportive usage of information technology – a major determinant will emerge from the health policy of current governments and existing health care systems.

The following Chapters highlight the health system operating within each country, and the manner in which each medical education structure attempts to provide a service to meet the potentially diverse needs of the population, policymakers, and the medical profession.

Chapter 2

UK HEALTH CARE

1.0 INTRODUCTION

This Chapter contains a brief overview of the National Health Service (NHS) in the UK. Following a description of the core features of the NHS, this Chapter outlines the recent health care “reforms”, and the implications these have for the structure of the service and the future role of doctors.

2.0 CORE FEATURES

2.1 Founding Principles

The NHS was introduced in 1948 to provide a comprehensive system of health care for every citizen in the UK which should be equitable, offering equal services for equal needs, should afford equality of access to health care when needed and should be free at the time of use, with access not being dependent on a patient’s ability to pay.

The NHS is publicly funded and publicly managed. Overall policy is determined by a Policy Board at the Department of Health, chaired by the Secretary of State, and policy is implemented by the NHS Executive under the direction of a Chief Executive Officer. The proportion of GDP spent on health is relatively stable at little more than 6% – which equated to £35bn in 1993. Of this amount, £1.5bn was spent on private practice, and it may be of interest to note that the majority of private insurance schemes only cover minor surgery.

2.2 Primary-Secondary Care Interface

One of the long-standing characteristics of British medicine has been the role of the general practitioner (or family physician) and the referral system between general practitioners (GPs) and specialists. All citizens have direct access to a GP (based in the community or primary care sector), who will be able to diagnose and treat approximately 95% of consulting patients. Patients requiring more specialist knowledge and treatment will be referred by their GP to a hospital specialist (based in the secondary care sector). Few GPs have hospital bed responsibilities (other than in community hospitals). This system is felt to serve patients and doctors well, and by providing health care through a primary “gatekeeper” to expensive secondary and tertiary care, the population arguably benefits from a more efficient use of resources.

A more recent development at the primary-secondary care interface is the practice of shared care or integrated care which involves both GPs and hospital specialists. The development of this form of medical practice has been encouraged by the use of computers in medicine which enable the specialist to communicate readily with GPs and monitor the care of large cohorts of patients in general practice – without becoming regularly involved in direct patient care. Integrated care of this kind is used in the management of diabetes mellitus, hypertension, rheumatological diseases, dermatological diagnosis and ante natal care.

2.3 The Evolving Role of the General Practitioner

One consequence of the primary-secondary care interface is that there are large numbers of GPs and much smaller numbers of hospital-based specialists. The demarcation between the “generalist” and the “specialist” has its origins in the 19th century and, particularly since the inception of the NHS, there has been a gradual increase in the services provided within the primary care sector. Initially primary care was mainly provided by GPs working in single-handed practices. However, the formation of the College of General Practitioners in the 1950s and the Family Doctors’ Charter of 1966, stimulated the growth of larger

practices and led to the evolution of the Primary Health Care Team which now includes GPs, practice nurses and other health care professionals. More recently, the introduction of a new GP contract has seen the remuneration of GPs for minor surgical work and the obligatory health screening of patients over the age of 75.

It is important to note that GPs are independent contractors. The vast majority of GPs work from purpose built practices, with the average practice consisting of 4 GP partners (a practice of more than 8 GP partners is unusual). GPs receive a basic practice allowance but derive most of their income from capitation fees for registered patients and from additional payments for specific services (for example, immunisation and cervical smear programmes). Notwithstanding this independent status, new lines of managerial accountability are evolving between the GP and the Family Health Services Authority (FHSA). Following the recent health care changes, GPs now have to submit detailed information to the FHSA about their prescribing and referral practice, and be prepared to discuss both rates with the FHSA's medical advisors.

The importance of community based practice is that it provides a high degree of clinical care where people live. Unfortunately, this is not the case in all locations. Although there are no inherent problems with the GP practice model, two factors appear to restrict its comprehensive effectiveness. First, the conditions and the resources with which doctors work: a Department of Health Report (Acheson, 1981) noted that the lack of resources generally, and lack of investment in practice premises in particular, correlated with weaknesses in staff and unfavourable conditions for patients. In these circumstances, it is often the case that the partnership between nurses and doctors breaks down and teambuilding amongst the staff is very difficult. Secondly, since GPs are independent contractors, there are few mechanisms to effectively address standards of practice. GPs are not subject to competency tests – although the Royal College of General Practitioners are currently developing new mechanisms in this respect. (see Chapter 3 for further detail).

2.4 Hospital-based Specialists

Doctors in the secondary care sector are primarily employees and all such doctors are considered trainees until they are appointed to the position of consultant. Consultants hold either whole-time or part-time contracts. Those with whole-time contracts may engage in limited private practice earning up to a maximum of 10% above their salary – but those with part-time contracts may engage in unlimited private practice.

Doctors in the secondary care sector work in specialist “firms”, attending to both inpatients and outpatients. These firms of doctors (consisting of Consultants and trainees) are grouped together within particular specialties (of which there are approximately 11), and sub-specialties (of which there are approximately 50). The skill-mix of clinical firms determines that a considerable number of all patients will be seen by a doctor who is not a Consultant.

2.5 The Role of Nurses

Nurses undertake a number of roles in primary care: District Nurses; Practice Nurses; Health Visitors; and Community Psychiatric Nurses – where they are giving independent advice and are not medically controlled.

Within the setting of secondary or tertiary care, there is increased use of nurse specialists working to circumscribed programmes. For example, they are used in the management of patients with diabetes mellitus and in gastroenterology and hepatology. The nurse specialist works to a well defined protocol and their role is clearly identified in patient management or diagnosis. They work in close association with the medical specialist but the nurse can and does examine the patient, order investigations and prescribe therapy.

2.6 Long Term – Chronic Care, and Care of the Elderly

NHS provision for care of the long term, chronic ill, and elderly is shrinking (for example, the wholesale closure of long-stay institutions for psychiatric patients). Following implementation of many of the principles in the White Paper Caring for People (1989), Local Authorities have been given the responsibility for purchasing continuing care for citizens in their community, but this care is now more likely to be provided by private nursing homes, relatives, or, in some cases, nobody. Ideally, the concept of caring for people in their communities rather than in remote, long-stay institutions, is a humane one. Unfortunately, it appears that community care is proving too expensive for Local Authorities to adequately resource, and is poorly managed.

3.0 HEALTH SERVICE REFORMS

3.1 The Introduction of Market Forces

Prior to the NHS reforms, hospitals were funded and managed by the same body – the District Health Authority (DHA). The purpose of the NHS reforms was to separate these functions and introduce market forces into the NHS. Following the implementation of the NHS and Community Care Act, 1990, care provided to patients referred to the secondary sector is the subject of contracts negotiated between DHAs (known as purchasers) and hospitals (known as provider units). In addition, DHAs are allowed to purchase services from any provider unit, which in turn is intended to encourage competition between provider units, whose income is no longer guaranteed by their local DHAs.

3.2 GP Fundholders

GPs have also been given the opportunity to become purchasers so that they can arrange contracts directly with hospitals (public or private) for the specific categories of care for their patients. GPs were granted the ability to manage their own budget and take on the status of “fundholders” or “budgetholders”. Initially, to become a fundholder, a group of GPs had to have 9,000 registered patients. Now this number has been reduced to 7,000. In England about 30% of GPs are now in fundholding practices. In Scotland the figure is 5%.

GP budgets exclude emergency and maternity care, but include elective surgery and community services. The average fundholding practice has a list size of 8-10,000 patients, and a budget of £1m – £1.5m. The budget is broken down into 3 categories: (i) drugs; (ii) hospital services; and (iii) staff in the practice. If monies within any of these categories are not expended within the year, they may be transferred to another category. The general trend is that savings are being made in drugs and transferred into the staff budget. Although these savings are not transferred directly to GPs, if they are expended in terms of upgrading capital and practice, GPs may be indirectly increasing their investment in the practice – which becomes realisable on their retirement.

3.2 Towards a Needs-based Service?

The separation of the funding and provision functions is intended to encourage NHS provision to be driven by the needs of the community as opposed to the desires and prejudices of those providing the services. It is argued that the introduction of a competitive element in the NHS ensures that purchasers will be establishing progressively more advanced quality standards and outcome measures in the health care contracts they agree between themselves and the service providers – forcing providers to demonstrate the existence of formalised quality assurance programmes and meet jointly agreed standards.

In particular, it is argued that GPs have become “energised” by fundholding and are providing sufficient incentive within the system to significantly raise the responsiveness and accountability of secondary care providers to community needs. Specialists for example are now holding outpatient clinics in GP fundholder surgeries. In addition, it is also permissible for GP fundholders to undertake certain categories of work which traditionally have been

the province of the secondary sector. Indeed, the responsibility for managing a fundholding budget was always intended to encourage GPs to do more work in their practices, which some would argue represents better care for patients since it cuts out potentially long waits for outpatient appointments and costly and time-consuming hospital attendances.

However, the reforms – which have not been fully evaluated – have produced a number of effects which are contradictory to providing genuine needs-based care. Although hospitals are now competing with each other for contracts, purchasers are tending to opt for the cheapest contracts since the quality of the service may be difficult to compare, and a number of services have to be purchased from limited budgets. Some hospitals, particularly London teaching hospitals, have been disadvantaged, partly because of demographic change and shrinking inner-city populations, and partly because of their high staffing levels and the capital charges now levied on all hospitals by government, and their contracts are subsequently non-competitive if judged on cost alone. Loss of contracts – and therefore monies – has led to the merger and closure of hospitals being put firmly on the agenda. In order to service contracts, hospitals are responding to specific needs of GP fundholders which has led to the “fast-tracking” of fundholder patients. Since only 30% of GPs are fundholders this has led to a 2-tiered system of treatment – although it is often argued that both tiers are of a higher quality than before. As a result of such pressures, hospital staff complain that business needs have replaced medical needs as the criteria on which admission decisions are made. Although some hospitals have exploited their independence from direct management of DHAs, they have arguably done so at the cost of staff demoralisation and frustration.

4.0 SUMMARY

The health care system in the UK is publicly funded and managed, so the government of the day exercises considerable control over its structure and form. Notwithstanding, a key feature of the system is the division of medical manpower between the GP in the community setting and the specialist in the hospital – which has its origins in the 19th century and its determination firmly in the domain of the medical profession. Hitherto, the boundaries between the primary and secondary care sectors have moved as medical technology has evolved and professional responsibilities have been re-negotiated and re-aligned.

It can be argued that the introduction of health care contracts and GP fundholders into the UK health system is forcing a sharper, more immediate, focus on the roles and responsibilities of the GP and the specialist than the previous gradual blurring of boundaries. It is now in the immediate interests of the GP fundholder to utilise a wider set of clinical skills within the community setting and obtain skills in contract negotiation, needs assessment and financial management. It is also in the immediate interests of the specialist provider to engage with outcome measurement and quality assurance and determine the most appropriate settings in which specific care is delivered. The system of medical education in the UK is described in Chapter 3 below, together with an overview of the extent to which it addresses the current and future needs of UK citizens.

Chapter 3

UK MEDICAL EDUCATION

1.0 INTRODUCTION

Following a discussion of the mechanisms for medical manpower in the UK, this Chapter reviews current practice and future aspirations for undergraduate, postgraduate and continuing medical education and highlights the need for more systematic training in medical research.

2.0 MEDICAL MANPOWER PLANNING

2.1 The Medical Career Path

Undergraduate medical education is the responsibility of University Medical Schools, the duration of training being 4-5 years, followed by one year's mandatory internship as a house officer – six months in medical specialties and six months in surgical specialties. On satisfactory completion of this year graduates are eligible for full registration with the General Medical Council (GMC). (The GMC is the regulatory body for the medical profession and the body responsible for approving medical schools and qualifying examinations.)

After full registration most trainees will decide upon a career – either in general practice or in a hospital specialty. Those opting for general practice must undertake a three year period of vocational training, with two years in rotating hospital posts and one year in an approved training practice. They then become eligible to be a principal in an NHS general practice. Those seeking a career in a hospital specialty must embark on a period of postgraduate training in senior house officer, registrar and senior registrar posts, taking specialist examinations and competing for promotion through each grade – the final post being that of a consultant.

2.2 Mechanisms for Manpower Planning

Manpower planning is discussed every 5-10 years by a government appointed committee consisting of medical representatives from many of the specialty groups. The Committee (currently Campbell's Committee) has recently recommended that the number of students admitted to medical school be increased to 4,200 per year. About half of these medical students will chose a career in General Practice.

The controls on medical student admissions work in tandem with strict controls on the number of consultant posts – which in turn regulates the number of training slots available in specialty medicine. However, since specialists cannot work autonomously until they are appointed to the post of consultant, and many individuals are unable to obtain career posts, in extreme cases this can mean that a doctor is a trainee for up to 10 years (although it is more generally 4-6 years). There have been a number of recommendations for the number of training years to be reduced, but career prospects for hospital specialists can only improve if the number of consultants is enlarged.

It should also be noted that any national of the EC with a medical degree has the right of free movement within the community. Directives of the EC specify a minimum number of hours of postgraduate training. Since the UK required one more year than the rest of the community this was adjudged to be against the free movement of EC members and the UK had to change its stipulations regarding specialist training.

3.0 UNDERGRADUATE TRAINING

3.1 The Learning Experience of the Medical Degree

It is 50 years since the Goodenough Report (1944) stated that a certain amount of the undergraduate curriculum was unnecessary and yet it is argued that there are still too many facts and not enough challenges in the training. There has been, however, some innovation: it is now recognised that the objective of undergraduate medical training is not to produce a safe general practitioner capable of taking full clinical responsibility for all types of cases, as it once was, but to produce doctors with an attitude to medicine and learning that will fit them for their professional calling and connect them to a life of self-education. The pressures to liberate the curriculum from factual overload are balanced by pressures to incorporate new material – although many feel that a number of subjects could be transferred to the post-graduate period of training.

The Education Committee of the GMC recently published new recommendations for the undergraduate curriculum suggesting that much didactic teaching should be replaced by the provision of learning opportunities and the stimulus to acquire knowledge through problem solving. It was suggested that the undergraduate curriculum should consist of (i) core subjects: clinical method; practical skills; patient care; art of communication; understanding of human body, and (ii) 3 to 6 selected modules which would provide a wide range of learning opportunities. It is anticipated that undergraduate students should acquire a proper attitude to learning and be fully equipped to study on their pre-registration year – which forms the bridge between medical education and post-graduate medical training.

3.2 Quality Control

The GMC is responsible for approving undergraduate curricula and medical schools and has the power to visit and look at examinations, and other procedures, every 5 years. It has been argued that although the GMC has the power to regulate undergraduate (and postgraduate) education, the extent to which it uses this power is limited, since it does not evaluate or monitor carefully what happens – and find out who and what is useful in terms of training and trainers. Universities are also subject to non-medically orientated quality assessments. Funding for Universities is provided through Higher Education Funding Councils (HEFCs) who are now organising systematic inspection of University teaching facilities.

3.3 Pre-registration Year

The pre-registration year (as a house officer) is intended to be a stimulating experience, but unfortunately many factors conspire against achieving successful education during this period. Many young doctors are given responsibilities which they are not ready to assume and which are not supported with adequate supervision. Others are given irrelevant tasks. In many cases it is clear that the educational function of the pre-registration year has not been adequately considered – hitherto this year has certainly contained no structured training – still being based on the traditional apprenticeship mode of British medicine

4.0 POST-GRADUATE TRAINING

4.1 Responsibility and Funding Mechanism

Funds are allocated to teaching hospitals based on their employment of full-time post-graduate medical students (the SIFT formula). However, since the time of qualified medical staff is not covered by these funds – their salary being paid by their employer (the NHS) – the cost of providing this education is arguably not fully covered. These funds are distributed by the Postgraduate Dean on behalf of the Regional Health Authority (RHA).

The Postgraduate Dean and the RHA each hold 50% of the budget. Although the distribution of these funds does not alter the service responsibilities of medical students, the Postgraduate Dean does have the power to withdraw this money. At a local level, Districts have a Clinical Tutor who has responsibility for local educational activities.

Previously a University appointee, with advisory responsibility to the RHA, the Postgraduate Dean is now an RHA appointee directly accountable to the RHA Chief Executive (although it could be a joint appointment if the Postgraduate Dean were also taking up a Professorship). Medical students are the responsibility of the medical school until full GMC registration. After that time, responsibility for training transfers to the NHS, and is organised by Royal Colleges.

4.2 Specialist Training

Postgraduate medical education begins on completion of the pre-registration year and must carry the approval of Royal Colleges. Once GMC registered, trainees rotate through Senior House Officer (SHO) posts of 6 months duration, during which time they will identify a specialty in which they wish to practise, then take examination to enter specialty. Such training has been arguably inadequate. The core problem has been the need to reconcile service needs and educational requirements which becomes unstructured because of the dominance of service needs. There is no dedicated teaching time for trainers – although each trainee has a nominated supervisor. Concerns have been expressed about long hours; inadequate supervision; and unstructured training programmes. To address these concerns junior doctor hours are being cut to 56 by 1996 and shorter training programmes are being planned. A curriculum is being developed for SHO stages. Specialists are accredited to Colleges and have certificates of specialist training – although this is not mandatory.

4.3 General Practitioner Training

In contrast to specialist education, GP trainers do have dedicated training time. In addition, the Royal College of General Practitioners recognised that not all GPs are teachers and has developed a programme for “training the trainers”. GP vocational training is compulsory for certification as a GP.

4.4 Quality Control

It is to be noted that postgraduate education is not the responsibility of Universities. It is the GMC who oversee responsibility – through their Education Committee. All junior doctor posts require approval from the relevant medical College – who conduct inspections at 5 yearly intervals. Since the Postgraduate Dean holds 50% of the budget for postgraduate education, this can be used to bring pressure to bear on unsatisfactory posts.

5.0 CONTINUING MEDICAL EDUCATION

5.1 General Practitioners

Traditionally, continuing education for GPs was provided by hospital based consultants. However, this did not provide what the GPs wanted, and so they have taken on responsibility for their own continuing education. Continuing medical education is now becoming a significant activity. GPs are required to attend 8 sessions a year in order to retain part of their income, in addition to receiving a postgraduate training allowance. 98% of GPs attend educational courses. However, the Royal College of General Practitioners is increasingly suspicious that the content of education is very small and unimportant and is moving towards performance based assessment. This is a different approach from that of the specialist Colleges which are all going down the competency route (ie points and accreditation for attending educational sessions).

5.2 Hospital Consultants

Hospital Consultants have traditionally been left to their own devices with regard to continuing medical education – with many using Journals Clubs and case conferences to educate themselves. They are now under external pressures from those who question the quality of continuing care provided to the patient to adopt a more systematic approach. This has led to plans for mandatory continuing education, with consultants being expected to undertake a specified number of educational sessions each year. Each Royal College is establishing an Office of Continuing Medical Education in order to put these plans into action very shortly. It is being left to each Office to decide whether these sessions will be accredited.

5.3 Quality Control

All doctors – including GPs – are required to undertake medical audit. In addition, there is a mechanism by which individual doctors with problems which affect their practice should be notified to the GMC. Although the GMC will provide a counsellor to these individuals, quite often these doctors are not brought to the attention of the GMC. There is a tendency towards sheltering such individuals from GMC attention, and the provision of medical services to such doctors is not properly used (Silvester, 1994).

6.0 RESEARCH TRAINING

6.1 Undergraduate Opportunities

Every medical school offers students an intercalated year between pre-clinical and clinical training. When originally introduced 30-40 years ago, it was intended to introduce students to research, but only 50% of students take this option. The majority of those in the past who did an intercalated year became scientists, but it is now becoming relatively rare for students to do research and publish papers at this stage in their career – although it does give them advantage when applying for internship.

6.2 Postgraduate Opportunities

Some specialisms (for example, medicine and surgery) expect students to undertake a year of research and this is taken into consideration when applying for a consultant post. This is rare, however, in other specialisms such as general practice and public health medicine. The attitudes of many of the senior doctors is somewhat dismissive of research because of their own unsatisfactory experiences and students often do rather trivial experimental work, which is rarely well supervised. Consequently, trainees do not value this research very highly, and the majority do not enjoy the year.

A joint MDPHD programme (similar to the Harvard PhdMD) is still rare. Opportunities have always existed for students to take time out of practice to do a PhD, but this is also extremely rare. Almost all PhDs are in basic molecular sciences – which are highly valued – but ironically students who excel at such research sometimes fail their final examinations in clinical matters.

6.3 Implications for Knowledge Base and Clinical Practice

There is a deficiency of medical researchers in the UK. The current structure for research training is not producing the requisite skills, ie: the capacity to interrogate databases, synthesise material and dismiss poor quality research. Research studies are highly incomplete and very often allow little adjustment for confounding factors – for example, case severity. Studies which do exist use intermediate outcome measures and ignore costs.

The poor quality of research permeates the way doctors are trained and the conduct of

clinical trials. As noted in Chapter 1 above, there is a lack of knowledge about the effectiveness of many treatment regimes, and thus when health economists come to the scene, they are therefore attempting to “build castles on sand”. Significantly more information is required about the relationship between the use of certain products and their success in trials. The deficiency has been well documented but nothing has been done. A House of Lords Select Committee noted in 1988 the inadequacy of facilities; training facilities; and career structures to continue to support clinical science research – in particular for those conducting research in public health medicine, behavioural sciences, general practice, and nursing. The committee (which included industrialists) were quite outraged that the NHS spent so little on its research structure. Even with the changes and the re-organisation of Research and Development in the NHS, the difficulties that were identified 6 years ago have not been rectified.

6.4 Obstacles to Overcome

In many specialisms (for example, public health) there is insufficient emphasis on the need to have research based knowledge available before the introduction of public health measures. In many specialisms there is no real philosophy or commitment to undertaking research or accepting research findings and implementing them. This is partly because many get “turned off” by an insistence that they do research which is then seen as a mechanical procedure with little control over what can be done. It will be necessary to completely change the atmosphere towards research so that although relatively few may do it, all doctors will be able to assess the value of particular findings. The challenge for medical education is : (i) selecting students for research careers; and (ii) introducing more research assessment into the training period

Only a minute proportion of GPs do research, which is largely a structural deficiency, not one of motivation. Because of the way GPs are employed and paid, research in primary care settings is generally conducted at the expense of an individual’s own earnings, or outside of practice hours. There is consequently little convention for doing research in general practice. Thus, if a greater role is desired for GP research, something needs to be changed in the structure and content of research training.

Finally, the majority of research is conducted in teams but there has been a lack of research into how the different disciplines work together.

6.5 Research Funding

Medical Research Council (MRC) funding for clinical research is decreasing, and there is a concern in the manner in which these diminishing funds are being prioritised. It was noted that the charitable foundations in the UK have more money for research than the total of government and MRC funding.

7.0 EDUCATION OF OTHER HEALTH CARE PROFESSIONALS

- 7.1 Nurse education, which used to be hospital based, has now been transferred to higher education.
- 7.2 There is no system of management training or structured career development for managers in the UK, which is believed to be a major deficiency.

8.0 SUMMARY

All medical students undertake undergraduate and pre-registration study before choosing whether to pursue a career as a hospital based specialist or community based generalist (GP). Once registered, those doctors opting for a specialist career will train under the

guidance of a consultant, who will be endeavouring to reconcile educational and service needs. The GP will learn with a trained GP “trainer”, who will have dedicated training time to give to the student. Once appointed to the post of consultant, or GP, both doctors will be required to participate in continuing medical education: in the future it is likely that the consultant will attend educational sessions and the GP will be subject to performance based assessment. The latter route is particularly pertinent in view of the autonomous role of the GP in the health care system and their increasing role in providing more specialised care.

It is the role of the various Education Committees of the GMC and Royal Colleges to ensure that curricula are relevant to meet the needs of society, the current health care system and the profession. However, one fundamental gap which requires to be addressed is the means by which medical students train for, and understand, medical research. The NHS reforms make major assumptions about the availability of sound, scientific evidence upon which the purchasers of health care are making purchasing decisions. Until the structure and environment for medical research is improved, it would appear that neither purchasers, nor providers, can be explicit about the effectiveness – or cost-effectiveness – of what they are purchasing or providing. Thus, decisions about which treatments should be delivered, and in which setting, will continue to be guided by pragmatism, financial considerations and political agendas.

Chapter 4

CANADIAN HEALTH CARE

1.0 INTRODUCTION

Fundamental changes are occurring in the Canadian health care system reflecting a desire to shift its focus from health care to health. This Chapter outlines the core features of the system and concludes with a description of the recent health care reforms.

2.0 CORE FEATURES

2.1 Founding Principles

Established in 1959, the Canadian health care system provides free medical and hospital care to all permanent residents of the country. The provincial and territorial governments (12) are constitutionally responsible for the delivery of this health care. The Federal Government transfers funds to Provinces and Territories, only holding direct responsibility for the health care of certain groups. The Federal Government originally planned to provide 50% of costs incurred, but this changed in early 1970s with the establishment of programme funding. The Federal Government now re-distributes 33% of central funding to the Provinces for health care. The proportion of GDP spent on health in 1993 was 10.1%.

The Canada Health Act, 1984, (CHA) established national criteria for the provision of health care and ensures that all 12 Provinces and Territories provide a minimum standard of delivery:-

- (i) Public administration: the system is publicly administered on a non-profit basis. However, there are opportunities for private sector involvement and contracts can be made with private providers for administrative and support functions. The service is administered through a single payer system – the paying agency paying the provider within 2-3 weeks of treatment being given. The system has low administration costs, being approximately 3% of the health care budget.
- (ii) Comprehensive: all medically necessary hospital and medical services must be covered, although Provinces and Territories may provide additional services (for example, physiotherapists, nursing home care).
- (iii) Universal: coverage extends to all permanent residents. An inability to pay therefore cannot be used to deny medically necessary care.
- (iv) Portable: reciprocal billing exists between Provinces and residents living temporarily in another Province are provided with three months' coverage. Residents outside Canada are covered up to the amount paid in the home Province.
- (v) Accessible: access cannot be precluded by financial or other barriers. Provinces must provide reasonable accessibility of services.

2.2 Fee for Service System

Most doctors practise a fee-for-service system whereby the fees are set between the Provincial Minister of Health and the Medical Association. However, there has been pressure to switch to a salaried system which has opened the debate regarding alternatives to fee-for-service payments. It is often argued that a fee-for-service system leads to excessive work and operating a salaried system would produce lower intervention rates. When the system first started it was completely fee-for-service but some physicians started to negotiate salaries as they were not being fully recompensed for the work they delivered. For example, a physician delivering a series of sessions such as genetic counselling, or palliative care,

would be severely disadvantaged under a fee-for-service system. The future will probably see trends for more stable forms of funding which are not medically or procedurally driven. These are likely to start in teaching hospitals and filter out into other hospitals over time.

The importance of noting that Canada currently operates a fee-for-service system is the implication it has for co-operation between health care professionals and the use of lay workers in, say, health promotion.

2.3 Improving the Family Physician – Specialist/Consultant Relationship

In Canada the physician based in the primary care sector is called a Family Physician and secondary and tertiary care are provided by the specialist/consultant and sub-specialist. (For logistical reasons virtually all tertiary care is performed in teaching hospitals.)

In 1991 a task force of The College of Family Physicians of Canada (CFPC) and The Royal College of Physicians and Surgeons of Canada (RCPSC) was established to advise on the relationship between family physicians and specialist/consultants – extracts of which are quoted below (The College of Family Physicians of Canada and The Royal College of Physicians and Surgeons of Canada, 1993):-

The family physician's role is to "provide primary contact and continuing, comprehensive care to patients of all ages and both sexes in the context of their families and social environment regardless of the presenting clinical problem" (p7). The specialist/consultant provides secondary and tertiary care, addresses the medical problems which generated the referral and provides concurrent on-going care.

The task force "identified problems in communication, controversies and misunderstandings about the respective roles of family physicians and specialist/consultants and a lack of adequate undergraduate and postgraduate teaching about consultation and referral" (p1). To overcome these deficiencies, the task force proposes guidelines for the consultation and referral process, and a set of specific recommendations in two categories: patient-centred and profession-centred.

2.4 Family Medicine

Family physicians work in group practices and are not likely to have access to hospitals – although some community hospitals will provide access for obstetrics. Canada does not operate a registration system for physicians, thus every citizen is free to go to any physician. There is increasing interest in patients registering with family physicians – to improve the continuity of care and control demand for services – but citizens want to keep the flexibility of the current system. Notwithstanding, 97% of people in Canada have a family physician, although 35% of people use the emergency services.

2.5 The Role of Nurses

Canada is interested in developing the role of nurse practitioners. Although nurse practitioners are competent to function both in teams and independently, family physicians do not accept independent practice from nurses. Ontario is currently trying to legalise the role of nurse practitioners. The first generation of certified nurses started in last year to work with physicians – again with great difficulty in knitting a good will relationship. One reason for this difficulty is the fee-for-service system, which determines that if nurses practise autonomously, they are deemed to be in competition with physicians.

3.0 HEALTH REFORMS

3.1 Universal Reforms

Medical education and hospital services have been subject to restructuring due to the recession and the consequent decline in government revenues. There are 5 dimensions to the reforms which are being implemented across all Provinces but in different degrees:-

(i) Health Goals: Provinces need to look at what determines health and assess the health value of other public policies. For example, Alberta has established nine health goals it wishes to realise:

increase the number of years of good health

make decisions based on good information and research

healthy public policies

appropriate, accessible and affordable health services

healthy families and communities

healthy physician environment

maximise individual potential despite heredity

increase healthy behaviours

maximise coping skills

(ii) Regionalisation: in an attempt to increase structural efficiency, management flexibility, continuity of care and provide more local needs assessment there has been a devolvement of spending power from Provincial governments to regions. Regional bodies are intended to rationalise and merge previously disparate programmes of care with the involvement of local councils. However, concern has been expressed that regionalisation will lead to mini-bureaucracies within each region. A second, and even bigger challenge, is how to actively involve physicians in changing process. Physicians still want to deal with Provincial governments whilst policy is now being developed in the regions.

(iii) Downsizing inpatient care: medicine and hospitals have been the dominant factor in the provision of health care in Canada leading to an over-reliance on hospital admission and very high hospital bed rates. Although the population generally wants hospital-based health care, Canada is seeing some shift in opinion. There has been significant hospital restructuring: the numbers of hospital beds are being drastically cut, although there has been monitoring of the outcomes of these reductions. Programmes have been rationalised: for example, not every hospital will have high technological equipment. There has been a 10% decrease in the number of medical students being admitted to medical school.

Although it is argued that it is inappropriate bed usage that has been targeted for closure, family physicians complain that hospital beds are being closed without first providing the substitute community resources. They wish to see medical assessment and therapeutic, rehabilitative and restorative services in the community being planned for and supported.

In addition, clinical practice guidelines; utilisation review; and a change in funding methods (for example, using DRGs) have been used to rationalise inpatient care. Drug protocols are becoming the rule rather than the exception.

(iv) Increased community based care: this is an aim which is difficult to realise due to difficulties in identifying modes of delivery and a lack of defined targets. A fairly recent objective is the management of care in the home (for example, care for non-seniors, palliative care and higher level acute care) but there is a real danger that the rhetoric is not

becoming reality. With the exception of Quebec, it is argued that there is no institutional base for the establishment of systematic models of community health in Canada.

(v) Moves towards outcomes: pressure to use outcomes as the basis for funding and managing derives from a number of sources: fiscal pressures; moves towards a more holistic model of health and a focus on population health; pressures for international comparisons; longer range perspectives; and advances in technology. Outcome measurement requires the development of efficient information systems. Ironically, some very good databases exist within Canada because of the payment system but it is difficult to link these databases and legislative protection makes it impossible to use the information for any other purpose than billing. There are suspicions too that the dissemination of current information is not changing the behaviour of clinicians.

4.0 SUMMARY

Each provincial and territorial government within Canada is constitutionally responsible for delivering health care in accordance with the Canada Health Act 1984. More recently, as a consequence of the recession, a number of reforms have been implemented across Canada which seek to downsize inpatient care, increase community based care and provide a system based on health goals and health outcomes. Chapter 5 below describes medical education in Canada and outlines the framework in which doctors will be educated in the future.

Chapter 5

CANADIAN MEDICAL EDUCATION

1.0 INTRODUCTION

This Chapter outlines the structure of Canadian medical education. It describes recent developments in curricula; in-training evaluation and continuing education and highlights the principles which underpin the role and education of the physician of the future.

2.0 MEDICAL MANPOWER PLANNING

2.1 The Medical Career Path

The student decides at the beginning of their final year whether to go into family or specialty medicine. The postgraduate residency training for family physicians is 2 years. The need for additional postgraduate training is well recognised and efforts are being made to acquire sufficient third year residency positions to provide additional training for at least 40% of trainees coming through the system. Postgraduate training for specialists varies from 4 to 6 years. Sabbaticals during one's medical career are particularly difficult to arrange because the fee-for-service system of remuneration.

2.2 Mechanisms for Manpower Planning

In Canada, postgraduate medical students have a position to go to and workforce controls are experienced at the entrance to postgraduate training rather than at the exit. Medical schools are responsible for the selection, training and evaluation of students and currently there are approximately 5 applications for each place. In North America, it has been found that postgraduate training is a better influence in people going to under-served areas. There are many disincentives to working in rural areas: there are far fewer resources and too many small hospitals supporting one doctor, which leads to an undesirable workload and life style. Although there has been an effort to provide more opportunities for Aboriginal students to study medicine, there has been no attempt made to match the ethnic origin of future physicians to percentages in the population.

Approximately 50% of medical students opt for family physician training. Although the family physician is not paid as much as specialist, the historical denigration of family physicians has disappeared. The dramatic increase in numbers of students choosing to be family physicians over the last 25 years is attributed to:-

- (i) the willingness of the medical profession to support the development of family medicine;
- (ii) the opportunity that family medicine provided for the 60s' and 70s' students who were interested in social and community issues; and
- (iii) hard work by a number of people in identifying procedures which had not been used before and subsequently proved useful to other branches of the medical profession – for example, the establishment of educational objectives; evaluation procedures; and simulated office orals by The College of Family Physicians of Canada.

Manpower planning by Provincial government as in Quebec may be the way forward. This utilises councils; government; schools; resident associations; and hospital associations. Regional planning tries to match community needs and students – although this is not easy. Every year the Quebec Certification and License Board issues a training card to medical graduates which gives the right to a graduate of a position; to be paid; and to continue as long as the graduate holds a training card. This system has worked well. The numbers of training cards to be distributed are agreed by the Provincial Ministry of Health in

collaboration with the Ministry of Education and the Deans of the medical schools.

3.0 UNDERGRADUATE AND POSTGRADUATE TRAINING

3.1 Responsibility

Postgraduate, as well as undergraduate, education is conducted on a university institution basis – compared to hospital-based postgraduate programmes in the UK and US. This has produced some interesting consequences – one of which has been the complete reversal of the service direction to education. The postgraduate period is considered an educational experience. There has been a rationalisation of medical education – for example, although there are 53 postgraduate programmes only 2 schools offer all programmes.

3.2 The Learning Experience

Medical curricula have changed drastically. Students now study critical assessment; ethics; communication as a science; economics. Schools have also attempted to de-emphasise sciences, and emphasise humanities, but this has not been completely successful, since students continue to believe that sciences should be emphasised. All medical schools now include family medicine in the undergraduate curriculum.

A patient centred clinical method is used to educate in Canada. 43% of Canada's medical schools now use full-blown problem based learning and the remainder utilise it to some extent.

A project in Ontario (Educating Future Physicians for Ontario) defines what people of Ontario need and expect from physicians. The project defines how undergraduate medical education must be modified to define the future role of physicians as a medical expert/clinical decision maker; communicator/educator/humanist/healer; collaborator; gatekeeper/resource manager; health advocate; learner; scientist/scholar and a person.

Women now represent 47% of the medical student population in Canada. Queen's University runs a programme in women's health. This is an additional year of education and is attracting interest.

3.3 Specialist Post-graduate Training

The Royal College of Physicians and Surgeons of Canada is responsible for the setting of training requirements of specialists in Canada, the accreditation of specialty programmes, the evaluation and certification of specialists and subspecialists and the maintenance of competence of certified specialists. The Royal College is currently involved in two major projects to better define the future roles and skills required of specialist physicians.

The first initiative deals with the framework for the definition of the length of training in the specialties and subspecialties, based on clearly defined educational objectives. It is an attempt to define the training requirements in terms of needs. This has led to the development of an in-training evaluation instrument. This instrument defines in specialty-specific terms the knowledge, skill and professional attitudes of the future specialist – an example of which is given below:-

Future Role and Skills Required of Specialists: Consultation Skills

Communication skills: techniques for overcoming barriers, facilitation, use of silence, confrontation and summarising

Clinical skills: history taking and physical examination

Diagnostic skills: the making of a hypothesis and pursuing this efficiently in consultation

Management skills

Patient education: preventative medicine skills

Therapeutic skills: prescribing, procedural skills

Counselling skills: imply a two-way interaction with the patient

Attitude perception: includes respect, empathy, concern, sensitivity, responsibility, perceptiveness and competence

Collaborator / learner

The second initiative is to expand on the preliminary work in Ontario (noted in 3.2 above) and identify remedies which may be required in certain areas of specialty medical education to ensure its responsiveness to Canadian societal needs. To do this, the Royal College will focus on two streams – the societal needs stream and the medical resources stream. It is hoped that this exercise will lead to an informed statement on the rationalisation of post-graduate medical education, which is sensitive to the essential function of the specialist as a treating physician.

3.3 Family Physician Post-graduate Training

2 years postgraduate training is not enough time for those working in rural areas. The student needs specialty substitution skills for emergency care; surgery; anaesthetics; obstetrics; and psychiatry. Originally this prompted great resistance from The Royal College but it is necessary for remote areas where no other specialist services are available.

Family medicine in Canada is based on 4 principles which govern the CFPC-accredited residency training programmes leading to certification in family medicine:-

- (i) the doctor-patient relationship is central to the role of the family physician;
- (ii) the family physician is an effective clinician;
- (iii) family medicine is community based; and
- (iv) the family physician is a resource to a defined practice population

6 concepts have been highlighted as being important in the education of the family physician for the future:-

being a team player: working in closer collaboration with other health care professions, which requires good communications skills and a better understanding of group dynamics

being better managers: more management skills are needed to support the effective functioning of the health care team and more expertise in managing information

being a patient educator: more effective patient education is required for the shift from illness to wellness. There is a need to study the long term relationship between family physician and patient so that individuals can be more effective as patient educators

being a patient advocate: a better understanding of medical ethics is needed and how to apply when a patient advocate.

to practice continuous quality improvement – being more accountable for professional activities is one way of maintaining position as autonomous profession. This involves incorporating quality assurance standards into the daily routine in a visible way

being a teacher and researcher: the family physician needs other interests which could be provided by teaching and research

3.4 Quality Control

The accreditation function has been transferred from the service to education. Colleges are inspected every 6 years. All professionals have residency unions which negotiate terms (for example, not more than 1 night to be worked in 4).

4.0 CONTINUING EDUCATION

4.1 Specialist/Consultants

The Royal College of Physicians and Surgeons of Canada has established a Maintenance of Competence Programme for its members. This programme is designed to encourage self-directed learning and achieve two goals: first, to assist the specialist to use effective methods of continuing education to keep abreast of advances in their specialty; and secondly, to provide specialists with documentation of their continuing education activities.

4.2 Family Medicine

Since its inception in 1954, the College of Family Physicians of Canada (CFPC) has required its members to do a minimum of 50 hours of approved continuing medical education (CME) annually. Certificants in family medicine, now 75% of the 12,500 CFPC members, are required to do, in addition, a Maintenance of Certification program every 5 years. The CFPC has recently completely revised both of these programs under the umbrella of MAINPRO (Maintenance of Proficiency/Mantien de la compétence professionnelle), incorporating the principles of adult education and lifelong learning, and adding new CME instruments such as small group learning, a monitored self-evaluation program and an electronic journal club.

5.0 ACCREDITATION

New licensing rules in Canada may transform medicine and substantially improve its quality. The new procedure, begun in Quebec and now being expanded to Ontario and Alberta, links certification by one of the two Colleges to licensure. In order to be licensed an individual must be certified in either family medicine or in one of the specialties. The accreditation council includes the certification and licensing authority.

6.0 SUMMARY

As noted in Chapter 4 above, health care reforms in Canada have attempted to re-orientate the system from a focus on health care to one of health and from a usage of inpatient care to community care. A number of initiatives taking place in Canada could provide considerable support for this re-orientation: the Ontario project which is studying what people of Ontario need and expect from physicians; the definition of the future roles and skills required of specialist physicians by The Royal College of Physicians and Surgeons of Canada; and the collaboration (noted in Chapter 4 above) between The College of Family Physicians of Canada and The Royal College of Physicians and Surgeons.

Chapter 6

US HEALTH CARE

1.0 INTRODUCTION

This Chapter outlines the core features of US health care, highlights the impact of the health care reform movement and describes the differentiations and tensions between generalists and specialists.

2.0 CORE FEATURES

2.1 Private Finance

US health care has been described as being a “non-system” and yet the proportion of GDP which was spent on health care in 1993 was 14.4%. There has been an unsustainable increase in health care expenditure – rising twice as much as inflation – which has become the overriding consideration of the public and politicians and prompted the “Clinton Reforms” (discussed in 2.3 below).

The majority of health care in the US is privately funded through private health insurance schemes (60%), although two publicly funded schemes exist: Medicaid, a means tested programme for certain categories of the poor, and Medicare, for elderly citizens. A third publicly-funded system exists to provide health care for those who served in the US military. The Veterans’ Administration Health System manages acute and chronic care hospitals and serves people. Approximately 15% of the population do not have insurance to cover the cost of any health care treatment. Of course those who do not have insurance cover may still be able to obtain access to hospitals of a charitable nature (ie, the so-called not-for-profit hospitals), or to the diminishing number of public hospitals. The proportion of the population not covered by insurance is not a constant group of the same people: employers provide the bulk of health care insurance and therefore coverage for the vast majority of Americans is linked to employment status.

2.2 Private Provision

The majority of health care in the US is provided through private, rather than public, institutions. Approximately 70% of these private institutions are managed on a non-profit making basis, the remainder are profit-making organisations. The traditional payment system used in US is that of the “3rd party payer” – the institution providing medical care seeks reimbursement from the insurance company on a fee-for-service basis. It is argued that this system is open to abuse in that since neither the patient nor the institution are liable for the cost of the care, excessive charges are made and unnecessary care is requested which the 3rd party payer is obliged to reimburse.

As health care costs rise insurance premiums rise and employers put pressure on the insurance companies to control costs. In turn insurance companies put pressure on hospitals to cut costs. At the same time, the governmental universal programme for the elderly (Medicare) faces the same escalating cost pressure. As a consequence of these pressures, a number of cost containment measures have developed within the health system:-

(i) To refine the billing and reimbursement process health care is categorised by Diagnostic Related Groups (DRGs). Payments for care are pre-determined through DRGs and hospitals have an incentive to provide care for less than the DRG and keep the balance. This has led to immediate reductions in the length of stay – although the savings from this measure have now levelled off. This DRG programme is strictly a federal initiative which

requires compliance only for those patients whose health care was financed by Medicare and its success led to cost savings for the government, but encouraged hospitals to make up their losses by increasing charges to private insurers.

(ii) In an attempt to control costs, organisations known as Health Maintenance Organisations (HMO) began to proliferate, having been an accepted mode of practice for well over twenty-five years. These organisations provide both health coverage and health care – thus there is a closing of a purchaser – provider split. Approximately 20% of the insured population are covered by such systems, but that percentage appears now to be rapidly rising.

(iii) Managed care has been introduced. This is an all inclusive term referring to the fact that in some way the care of the patient is rationalised within a cost structure and this has tended to replace the fee-for-service system of payment. Managed care facilitates the production of profit if the health care provider is a profit-making organisation. The most extreme form of “managed care” may be the HMO, wherein the organisation undertakes to provide all the health care services required by its enrollees for a flat annual fee. This capitated method provides maximal incentives for providers to minimise costly interventions since cost over-runs come out of their own pockets.

(iv) Large employers have started their own in-house insurance companies to directly purchase health care for their employees – using Preferred Provider Organisations (PPOs). This provides something less in terms of managed care than an HMO, but tends towards negotiated contracts for the most expensive modes of care.

The mid-1970s saw the development of HMOs, which although not necessarily run for profit, did start to use “managed care” as a means of balancing the books. The 1980s saw the expansion of HMOs, as business corporations saw potential to make money through “managed care”, and quite rapidly the purchase and provision of health care became a competitive market.

Managed care and HMOs are not necessarily bad news for the patient. If managed care were regulated it could lead to more community-based work than the traditional fee-for-service system. Likewise, HMOs have found that community clinics are cheaper and have developed Primary Physician Gatekeepers. It is competition amongst purchasers, and thus providers, which provides the conflict with patient-centred care.

Competition between the providers (ie hospitals, PPOs and HMOs) has led to delivery of “managed care” by everyone – ie the HMOs started setting the rules by which everyone now plays. If HMOs operate on a “loss-leader” basis until they have gained a foothold in specific geographical markets, such competition could lead to fewer insurers (oligopoly), and fewer providers (monopoly). The danger of insurance oligopoly is that insurance companies will skim populations for healthy insurees – either refusing insurance to the rest, or charging them extortionate premiums. One danger of provider monopoly is that teaching hospitals may be put out of business. Perhaps the most sinister outcome is the possibility that the for-profit organisation might sack physicians who order too many services for patients – irrespective of legitimate patient needs. Subsequently, the fired physicians may be replaced from the growing surplus of doctors – who might be more compliant in behaviour – and thus more likely to advance the organisation’s commercial goals.

Managed care poses a particular threat to teaching institutions because its presence in the market makes health care an extremely price sensitive commodity. Service provision becomes the most important function of the hospital and previous cross-subsidisation to provide infrastructures for education and research and time for training doctors becomes

unaffordable. Put simply, the education of medical students is in danger of being equated solely with accounting costs to the organisation, as opposed to investments in its future excellence.

2.3 The Clinton Reform Movement

It is to be noted that managed care, as a basis for health care competition, happens in the absence of equity (purchasing is not on behalf of everyone – at least 15% are not insured at all). The Clinton Reforms were an attempt to bring some stability to the health care market by balancing issues of equity with the management of competition between the purchasers of healthplans (ie the insurance companies). The fundamental assumption of the Clinton proposal was that true cost control could never be achieved until and unless all citizens were covered by insurance. The reforms proposed that within geographical locations people could chose their own healthplan. There were to be 3 categories:- cheap (used by Medicare; Medicaid; and employees/employers on a 20/80 split), middle range and expensive. If an individual wanted middle range or expensive cover, they paid the extra premium themselves. These directed funds would then go to a central pool which an organisation called a Health Alliance would use as a central purchaser. Health Alliances would top-slice to protect training costs and use risk-adjusted plans to take into account those healthplan providers who were taking on high risk patients, or the poor, ie the formula would give healthplan providers an incentive to be attractive to everyone; and the competition would ensure that no one health care provider would obtain an oligopolistic position.

For a number of reasons the reforms are not likely to see fruition and unfortunately efforts by insurance companies to gain advantage over the reform movement appear to have exacerbated and exaggerated the competitive elements which were already prevalent within the system. Universal coverage for all Americans will not occur in the near future; but the shift from fee-for-service towards capitated care provided by large organisations is going forward with great speed.

2.4 Unregulated Medical Graduate Levels

There are no mechanisms for medical manpower planning in the US and it is anticipated that by the end of the decade there will be 165,000 excess physicians – most of whom will be specialists. There is a significant undersupply of generalist physicians and major problems for increasing the numbers.

2.5 Differentiations and Tensions between Generalists and Specialists

The generalist better defines the role of the physician who provides continuity of care to a population of patients along the entire spectrum of health promotion, disease prevention and management of the majority of illnesses that occur over the lifetime of the patients. The specialist defines the role of the consultant physician who provides the medical care that falls beyond the broad expertise of the generalist in the management of very serious, complex or rare illnesses.

Tensions arise because the current medical education system has created specialists who have had exposure to broad or general aspects of their specialty at the outset of their specialty education and it is common that many physicians, regardless of specialty qualifications, consider themselves as the primary contact physician. This has contributed to a fragmented health care delivery system. Recently, some surgical specialties, including orthopaedics, considered making a case for being listed as “primary care orthopaedists”. Certain definitions of generalist physicians include not only the specialties of family and community medicine, primary internal medicine, primary paediatrics, but also obstetrics

and gynaecology. The higher fee schedules and reimbursement for specialists compared to primary care physicians has contributed to the continued growth of the numbers of specialists – so too, debt load at the end of medical training; the creation of many specialty groups; the emphasis on “results”; and the demand by some patients who feel that a specialist will, indeed, deliver better care than the generalist.

In addition, there is still a major perceptual problem amongst specialists concerning the nature, competencies and importance of the generalist physician. Using their rarefied – and untypical – specialty world of tertiary and quaternary care in large medical centers as a reference point, many specialist physicians think that most primary care physicians lack the requisite knowledge and skills to manage more than the routine and non-threatening health care problems. These perceptions are deeply imbedded, sometimes reinforced by experience, and therefore conveyed by attitude to the many better educated patients who in turn seek specialty care.

2.6 Long Term – Chronic Care, and Care of the Elderly

Though financed partially by the government’s Medicare programme, nursing home care of the elderly is the domain of the private sector – although there are a number of public institutions which do provide for the poor. Traditionally, nursing homes were run by single families, so-called “Mom and Pop” enterprises, but they are increasingly managed by larger companies. This has raised the level of care and reduced unnecessary care. The provision of care differs between States. Medicare and Medicaid will pay for some care, but not for unlimited stay.

3.0 SUMMARY

The majority of health care in the US is privately funded and provided. Three key issues have been highlighted as having serious implications for the future role of the American doctor – and each is underpinned by the desire for a “free” market in health care. First, competition between providers (and HMOs) has led to “managed care” being delivered by all health care providers. As noted above, the combination of managed care, competition and for-profit health care organisations has led to serious concerns about purchasing equity for the patient; medical education of the student; and clinical autonomy of doctors. Unfortunately the Clinton Reforms which sought to mitigate these effects have not been enacted and in some cases may have exacerbated the situation. Secondly, there is a lack of definition between the generalist and specialist roles of physicians, since many specialty physicians consider themselves as the primary contact physician. Thirdly, a lack of manpower planning has led to an excess of specialist physicians and undersupply of generalist physicians.

Chapter 7

US MEDICAL EDUCATION

1.0 INTRODUCTION

This Chapter outlines the future roles and skills of specialist and generalist physicians and concludes with an agenda which would arguably bring about real change.

2.0 MEDICAL MANPOWER PLANNING

2.1 The Medical Career Path

Medical students attend college for 4 years. On completion of this period, generalists have a further 7 years of professional education and training. Specialties within internal medicine, surgery and paediatrics have 10 years of professional education/ training, with the last 3 years concentrating on the specialty area.

2.2 Mechanisms for Manpower Planning

Reference has already been made to the lack of medical manpower planning in the US and the consequent oversupply of physicians. It is fair to say that the USA has been able to respond to the perceived need to expand the medical workforce over the past 40 years and medical schools and teaching hospitals have eagerly responded to financial incentives to do so, but the USA has not found an adequate device to reduce production. There are currently 650,000 physicians in the US and each year another 24,000 physicians are trained. Any accredited programme can admit students, so there is no pre-entry mechanism to stop this number continuing to increase very rapidly. There are 1000 teaching hospitals and 7000 specific residency training programmes in the US, so accreditation of teaching programmes could be used to regulate manpower. However, if there is even a hint of controlling the number of physicians, this elicits accusations of anti-competitiveness as regulation is seen to go against deep cultural beliefs in capitalism, competition, and sovereignty of free markets. Restrictions on residency positions were in the original US reforms package but the demise of the reforms has made the future of this policy uncertain.

The lack of manpower planning appears to be leading to a skewed specialty mix, although it is difficult to find the evidence, since the American Medical Association master file of physicians⁸ relies on self-designation. Generalists account for approximately one third of physicians with specialists/sub-specialists accounting for the remainder. This split is likely to worsen in the future because opportunities in generalist careers were declining up until 1992. In 1992 interest in generalist careers was less than 15% and in the last 2 years it has increased to 23%, but it will take a long time for the workforce to reflect this better balance.

There is also an uneven geographic distribution of physicians within the US. Remote areas with sparse populations find it very difficult to attract physicians – a situation which is becoming more difficult with changing lifestyle needs and the advent of 2-career families. Too often the assumption is made that increasing the number of generalists will increase the number of physicians willing to practise in rural areas. It is argued that this is a flaw in the public policy debate and the distribution of physicians needs better targeting. Again, however, anyone attempting to control the geographical or specialty distribution of physicians risks being accused of being “un-American”. It may be of interest to note that nurse practitioners are asserting their desire to fill these gaps in generalist positions and in rural areas.

3.0 PREPARING SPECIALISTS AND GENERALISTS FOR THE FUTURE

3.1 Common Grounding

There is an appreciation of the need to provide students with a greater grounding in a number of subjects – witness an AAMC survey, in which 1993 medical school graduates reported insufficient exposure to:-

practice management	76%
cost effective medical practice	68%
medical care cost control	68%
nutrition	63%
literature analysis skills	54%
public and community health	46%
health promotion/disease prevention	44%
patient follow up	43%
role of the physician in the community	42%

Reference was made in Chapter 6 above to the tensions which exist between the specialist and the generalist. It is envisaged that physicians of the future will adhere to caring for problems in their own specialty. Thus, specialists will practice specialty care and primary care providers will practice primary care and the era in which physicians do both will draw to a close.

To support this change, the curriculum for medical students will need to reflect a generalist approach to care; thereby providing a broad base of common knowledge to the graduating medical student. This will need to be coupled with excellent role models and mentors in the field of primary care – often missing in current academic health centers. Students should be allowed to experience continuity care and the health care needs of the community per se. It would be helpful if they dealt with medicine in its broadest from birth to death and were exposed to the health care team concept, with consideration of the role of non-medical primary care givers. In addition, schools need to introduce more humanism into medicine, including the development of appropriate behavioural skills. Students will need to deal with ambiguity, and uncertainty, whilst at the same time respecting the prerogatives of the patient. Essentially, it is argued that an educational system needs to be developed which openly values the role of the generalist.

3.2 Specialist Training in the Future

It is envisaged that the future will hold a continuing market for specialists, but fewer of them will be needed. Educational opportunities will be much fewer and perhaps limited to certain medical centers.

It is suggested that a number of changes will be required in the role and education of specialists:-

- (i) The profession can no longer afford the luxury of training fully accomplished specialists who spend only part of their professional time engaged in these highly specialised activities. Thus, there will be less emphasis upon the primary contact role of the specialist and more emphasis upon the exclusive practice of the specialty. This will represent a major change for many specialists, particularly the non-procedural ones, who now devote a significant percentage of their practice to primary care medicine.

(ii) The specialist is likely to require additional years of clinical training beyond the primary certification and perhaps one or two additional years for added competence – for example, electrophysiology and basic cardiology; gastroenterology; sleep disorders; thoracic surgery. Moreover, as the knowledge base increases, further specialties will continue to emerge – for example, gender specific illnesses; transfusion medicine; gene therapy; adolescent health.

3.2 Generalist Training for the Future

Preparing the generalist for broad based practice will involve significant alterations in the current education process. Most faculty members are specialists who arguably encourage unnecessary referrals and residents are required to spend prolonged lengths of time in specialty areas because of service needs rather than sound education objectives. The generalist in training often obtains a skewed impression of medicine, as home based care and long term care are seldom included in the service delivery, with faculty members resisting the transfer of in-service students to external community care. In addition, the service training provides a skewed view of population and patient needs – since the patient population in medical school affiliated hospitals, and clinics, are often poorly educated, from lower socio-economic groups, with multiple social problems.

Notwithstanding the above, the generalist does need to be educated in part by specialists in order to know how to treat, how to diagnose and manage the common problems, when to refer and how to manage the complex problems upon return of the patient from the specialist. For this reason, the primary care educational tracks must include more education by specialists, but the specialists in turn must reorientate their teaching to the needs of primary care. The primary care physician must indeed become an “expert” in the management of 85% of patient problems which they encounter – which will in turn induce respect from specialists and create a constructive and mutually respectful relationship between members of the two specialisms.

As noted above, service needs are currently a politically charged issue – services are currently provided using relatively inexpensive residents and if these students were diverted to community settings to any great extent, hospitals could suffer financially.

3.3 Management Education

Physician managers have an important role to play in the future but the education system is not systematically providing them with the requisite managerial skills – although there were a number of examples of postgraduate management courses for physicians:-

One such example is the Wisconsin/Madison Masters management programme for the physician with 6-7 years of experience: This programme is not aimed at the person planning to become a manager, but rather the boundary role which exists between clinical and manager – for example, it could be attractive to future Deans. The curriculum contains health economics; health services research; quality assurance; audit; informatics, clinical experience; health politics; values/ethics; business; organisational behaviour; management accounting and medical-media skills. It is a model which other medical schools are taking up. Although some past graduates have left practice and have become Chief Executive Officers of HMOs, many have returned to their original settings and continue to do what they did before – but in a more effective manner. The extraordinary increase in demand for physicians able to work effectively within managed care organisations is dramatically increasing the pressure on educational programmes to develop the requisite skills in their students.

4.0 EDUCATION OF OTHER HEALTH CARE PROFESSIONALS

4.1 Nursing Profession

Nurse practitioners at most have 4 years of college education, plus 2 years of practitioner training at the Masters level – although many have only one year at the certificate level. About one quarter of nurse practitioners have a Masters degree.

4.2 Physician Assistants

Physician assistants have 4 years of college education, with a few having 2 extra years at the Masters level – less than 10% are trained to Masters level.

5.0 TRANSFORMING THE EDUCATIONAL EXPERIENCE

5.1 The Need for Radical Change

There have been continued calls for change in US medical education – 14 reports since 1966. All reports emanate from within the medical profession and all affirm that medical schools are to serve society. All call for changes to better serve the needs of the public and address workforce needs; to cope with increasing knowledge base and increasing emphasis on generalist. These calls still exist, but what is different now is that they come from a different source. The call for change is coming from outside the profession: federal and state governments want more generalists and the public are dissatisfied with their relationship with the medical profession, certain aspects of care and its cost. The US public is demanding customised service, value and accountability.

In the last 25 years, many Schools have tinkered with the structure of the curriculum, some also with the content, but it is argued that the process of medical education has remained one in which the “expert” decides which should be learned and designs experiences for learning, without assessing customer needs, satisfaction or process outcomes. What is arguably needed is a transformation of the educational process to focus on the needs of students, of their future patients and employers – all three groups being the “customers” of the education process.

5.2 Taking Action

Outlined below are ten actions which it is argued would transform the education process:-

1. Developing a customer focus. The current system tends to be organised for the convenience of the Faculty and does not put the needs of the student, patients or future employers at its centre.
2. Developing learning covenants between teachers and learners which outline material responsibility and accountability for the learning process and discuss what is expected from all parties to the process.
3. Explicit identification of at least the core values of health care institutions and health profession and a demand that students and teachers live to these values.
4. A change in the reward system to stop rewarding that which is not desirable.
5. Providing a spectrum of experiential learning using a variety of different mentors and learning sites
6. Incorporating the principle of continuous improvement into the learning experience to stimulate students and faculty
7. Thinking about the relationship skills which the management of particular cohorts of

patients will require – for example; those with chronic illness; those who require specialist genetic advice. Both groups may require patient education; and advice on behaviour modification.

8. Preparing people to work in teams. This requires an awareness of the skills that different people can bring; shared experiences with health care staff – not just professionals (service and support staff). The skills of a competent team member can be taught, but schools do not teach them:- listening; conflict management; negotiation; group dynamics; personal reflection.

9. Preparing physicians to be critical consumers and assessors of research. They need to know the difference between good and bad research and need to participate in clinical trials.

10. Facilitating the development of students as people. This requires activities which encourage reflection – for example, appraisal of the literature in Journal groups; one-on-one discussions; the exploration of the meaning of illness and health. Students need to be exposed to diversity and other world views related to different social classes; ethnic groups; gender; and sexuality. It is necessary to remember that the majority of students are from very different backgrounds to patients. Students need to remember that many citizens will not have the same level of literacy skills and will use a number of different languages.

5.3 Barriers to Change

Members of Faculty often do not have the skills required to transform the educational process, so it will be necessary to help the Faculty develop the requisite skills and reward them for so doing. The current medical school hierarchy does not provide sufficient flexibility to support real change – it needs to be more community oriented and interconnected with the work group. The function of education should be the driving force behind medical school structures in the future, rather than the development of discipline-based power bases, status and hierarchical control. It is argued that too often appointments are made for political reasons rather than good thinking and courage. Balanced against the need for increased flexibility, is an appreciation that stability and consolidation have their place too – for example, some Medical School Deans have a very short tenure (the average being 3.5 years) which can create unstable relationships and have a dysfunctional impact on strategy.

On a positive note, it is possible to change – for example, The Johns Hopkins School of Medicine has changed its curriculum and its policy for promotion. Students have no more than 2 hours of lectures per day; basic sciences are not departmentally based; students work in small groups; they spend 4 hours a week with a community based physician; and open-book tests have been introduced which allow students to get used to using reference books as a matter of routine.

As care is becoming more patient centred there is growing interest in academic centres in the role of the patient. Health policy and health economics are small and new additions to curricula – although still arguably insufficient – but at least all medical schools include them in some form. An innovative way of teaching health policy and health economics – and cited as the most effective way of teaching – is to address the subjects on the ward rounds. Using an expert in health economics to discuss pertinent topics when physicians are making their weekly ward round raises awareness of the economics of the cases they are discussing – and reiterates the relevance of the subject to medicine. This approach has also proven to be highly effective in the teaching of bioethics.

6.0 SUMMARY

One of the major tasks of US medical education is to support a re-orientation in the division of labour between generalist and specialist physicians. It is envisaged that providing more focused education for each group of doctors will encourage a situation wherein the specialist only provides the medical care that falls beyond the broad expertise of the generalist in the management of very serious, complex or rare illnesses. Calls for change are now coming from outside the profession and it is possible that public opinion will provide a timely springboard for action. Although individual institutions are changing, it is argued that radical transformation of the current system would require all institutions to develop – amongst other things – a customer focus; a different reward system; an emphasis on teamworking; and a structure which prepares physicians to be critical consumers and assessors of research.

Chapter 8

THE ROLE AND TRAINING OF DOCTORS IN 2005

1.0 INTRODUCTION

It will have become apparent from reading the above text that there are a number of common needs which are shared across the three nations. In some ways this is not surprising given the common focus, ie the health of the citizen. Indeed, there is sufficient commonality across all three nations to outline a generic role of the doctor required for 2005. Highlighting this model enables its underlying assumptions to be made explicit and tested in discussion and pinpoints those issues which will need to be debated in wider circles if real change is to take place. This Chapter commences with the generic role of the doctor in 2005 and discusses some of the issues it raises for policymakers and medical educators.

2.0 THE ROLE OF THE DOCTOR IN 2005

2.1 The Generic Role of the Doctor in 2005

To be in the best position to fulfill societal needs in 2005, it is argued that doctors need to reflect the gender, class and ethnic mix within society and will have the following attributes:-

they are more likely to be a generalist utilising a wider range of present day “specialist” skills, they are more likely to be based in a primary care (community) setting than a secondary care (institutional) setting

they will work effectively within multi-disciplinary teams

their medical science knowledge base will be increasingly complemented with a deeper understanding of behavioural sciences

they will employ principles of health economics and health service evaluation as a matter of routine

they will be tested on their ability to talk, listen and effectively communicate with patients

they will be able to understand and fully utilise new developments in information technology

they will accept peer review and continuing education as routine

they will have a higher management orientation

2.2 Clarifying the Role of the Medical Profession

Participants felt that the art of medicine was becoming better defined and delineated over time and in turn was prompting clearer teaching practice. However, in an environment in which politics and business interests are playing an ever increasing part, the role of the medical profession needs further definition and clarification. For example, in the context of managed care it is necessary to re-visit the debate of whether medicine is a profession or a trade and the duties and penalties of either definition. In the context of constrained resources it is necessary to question whether students should be trained to choose and treat – or trained to treat everyone. Participants felt that physicians were not reflecting on these issues collectively and were in danger of fragmentation and weakness.

2.3 Professional Standards

Important questions need to be addressed concerning the maintenance of professional standards and accountability. An increased reliance on generalists based in community settings demands increased self-awareness of individual limitations and systematic forms of

quality assessment. Participants wished to preserve clinical freedom but appreciated the need to meet public expectations and anticipate societal needs in this respect. Papers in the Seminar indicated that there were at least two different trends in the maintenance of current standards: one involved systematic performance review by peers and mandatory continuing education; the other involved a move away from methods of self-regulation to regulation by a managing bureaucracy. The implication in the latter change is that regulation by the profession has failed and that other institutions (for example, HMOs) might provide better outcomes by regulating the medical profession. However, it seems logical to suppose that if the profession could help regulate and improve its regulatory activity, the profession would be a more cost effective regulator than a bureaucracy.

What is the best way of regulating professional standards? It can be argued that if one only looks at the science based knowledge of an individual, too many unsubstantiated assumptions are made about expertise. In contrast, the audit of performance in “real time” is arguably less disputable – but this is not an opinion shared by all. It is to be noted that only some elements of the medical profession are recommending pre and post-testing of the continuing medical education programme, with follow up performance review. Perhaps determining the most effective means of maintaining standards would be a good issue on which to begin collective reflection amongst the medical profession!

3.0 SKILL MIX ISSUES

3.1 Generalists and Specialists

Seminar participants anticipated that the doctor of the future was more likely to be a “generalist”. It is necessary to be careful about using the terms “generalist” and “specialist” in a comparative context because, as noted in Chapters 2 – 7 above, these have different meanings in different countries.

So what is meant by “generalist”? The Seminar felt that there was an increasing role in all three countries for the doctor who is competent at dealing with the undifferentiated patient and provides a high level of long term, continuous, appropriate care to the patient without referral to the specialist. Implicit in this assertion is that such individuals will utilise a wider range of skills; some of which are currently assumed to be “specialist” skills. It will be imperative to identify these requisite medical skills in a clear manner, and train doctors accordingly, since also implicit within this model is decreased patient access to the specialist – ie the health of the patient will become more dependent on the competence of the generalist. Also implicit within this model is a redistribution of financial and physical resources to the generalist physicians to enable them to fulfill their enlarged role and a re-scheduling of patient workload to allow for increased patient consultation time where necessary. (For example, the average patient consultation time with generalists in the UK is 9 minutes – would this be sufficient for those patients requiring more specialist care and treatment?)

And what of the specialist? In the future, participants envisaged that specialists will become fewer in number; and will be “super-specialists” dealing with a smaller volume of patients, with more uncommon needs.

Within each country it will be extremely useful for the relevant bodies, to define the relationship between the generalist and the specialist. As noted in Chapter 4 above, The College of Family Physicians of Canada and The Royal College of Physicians and Surgeons of Canada established a Task Force and are addressing this issue. Education of both types of physicians in concert would also ensure that each understands and respects the role of the other.

Increasing the number of “generalists” within the UK and Canada will not require radical changes to the structure of the health care system – although paying generalists and specialists in a comparative manner would not go amiss! However, considerable effort will need to be made in the US if the volume and status of generalists is to increase.

3.2 Contribution of the Nursing Profession

The terms used for members of the nursing profession differ across the three countries and what requires further clarification are the differences which exist, for example, between the nurse practitioner in the US and Canada and the practice nurse, or clinical nurse, in the UK. Within the context of each country, however, are two common issues:-

- (i) what is the desired relationship between doctors and nurses and what are the relevant skills each should perform;
- (ii) how independent can nurses (and physician assistants) be in providing primary care?

The latter question is particularly pertinent given the expanding concept of the generalist role in treating an increasing proportion of the population. Unfortunately, there are virtually no randomised controlled studies which look at the cost effectiveness of nurse practitioners (or physician assistants) compared with generalist physicians, so reference tends to be made to the Burlington study in Canada (Spitzer, Sackett, Sibley et al, 1974). This study illustrated that in a practice with 3 family nurse practitioners and 3 family physicians, the nurses managed 2/3rds of the patients, but its age bears testament to the need for timely research in this area.

On the other hand, there are innumerable studies which purport to show that nurse practitioners and physician assistants can in fact carry on a large proportion of the normal duties of a generalist physician with no loss in discernible quality and, in some instances, an increase in patient satisfaction due to better communication.

In Canada and the US, debates concerning the responsibilities of nurse practitioners have tended to be corrupted by the fee-for-service system – why work with others who may take away your money? In the UK the debate has a different focus – since the biggest growth in personnel within primary care is amongst nurses, what needs to be established is the most effective and appropriate skill-mix between the nurses.

3.3 Multi-disciplinary Teamwork

It is envisaged that the doctor of the future “will work effectively in multi-disciplinary teams”, but considerable work needs to be undertaken within the education process for this to be achieved. For a number of historical reasons it is very difficult to achieve equality amongst professions. Doctors are highlighted as presenting a particular challenge to multi-disciplinary teamworking – they are trained in an isolated environment and since they have the deepest knowledge of medicine amongst the team, they frequently assume leadership roles. It is argued that sensitivity has not informed the establishment of medicine and that a power structure analysis of doctors’ views of other disciplines would be a useful tool in achieving more effective teamworking. Another suggestion is that if you train different disciplines together, they will be able to practise together – whilst others would argue that this is an example of wishful thinking, rather than a demonstrated fact. Multi-disciplinary education and training is being developed within a number of schools and the methods and results of such training need to be disseminated to a wider audience.

4.0 LOCATION OF HEALTH CARE DELIVERY

4.1 Primary Care or Secondary Care Setting?

It is anticipated that future generations will desire, and benefit from, doctors being based in a primary care (community) setting. However, this model needs testing:-

(i) what element of hospital care is being transferred into the community – is it the same care; different care; or no care? Hospital stays are already getting much shorter, but no-one is providing any answers to these questions.

(ii) what are the most effective models for delivering primary care? For example, multi-disciplinary care provides a number of challenges in terms of defining the relative responsibilities of each team member and ensuring that there are no gaps between different responsibilities.

Obviously the answers to these questions have important implications for skill-mix within the primary care sector and the training of all primary health care workers. In addition, since the bulk of medical education is currently performed in teaching hospitals, if there is to be a significant shift of resources – and work – into the primary care sector, this has considerable implications for the most appropriate location of medical training in the future.

4.2 Political Will

To date, there is insufficient information on which to base accurate answers to the above questions but there is considerable political will – at least in Canada and the UK – to see a decrease in the levels of care taking place in the secondary care sector. The danger is that this work is being transferred to the primary care setting as a way of devolving responsibility for the majority of health care to a very local level; or in the mistaken belief that community based care is cost-effective.

With regard to the latter point, the only Randomised Controlled Trial to look at the cost-effectiveness of community based care was conducted 25 years ago. This showed that the social costs in each sector were exactly the same, and indeed the UK experience of Community Care (see Chapter 2 above), has shown that assuming that care in the community uses relatively fewer resources, leads to an underfunded and inadequate service.

4.3 Long-term Responsibility for Training

As noted above the training of doctors currently takes place in teaching hospitals – at the cost of the employer – and it is worth considering the long-term responsibility for medical education:-

(i) whilst training remains in the teaching hospitals, what mechanisms are required to protect it from competitive elements in the secondary care sector?

(ii) in the UK, since GPs are currently autonomous contractors, if the bulk of training is transferred into the primary care sector, who will be responsible for funding the training of doctors?

5.0 SOUND KNOWLEDGE BASE

5.1 Dissemination and Integration of Research Findings

All delegations referred to the need for more research into the effectiveness – and cost-effectiveness – of clinical interventions and all agreed that careful consideration had to be given to the dissemination of this research and integration into routine practice. Questions

need to be addressed as to the most appropriate medium for this dissemination and the need for any intermediary interpretation of the research findings. Personnel will require different levels of interpretation, depending on what level of service they are providing, but all practitioners need to cultivate critical evaluation skills, need inherent scepticism, and need to make their own judgements – this responsibility should not be assigned to anyone else.

5.2 New Research Methodologie

Participants felt there needed to be new ways of piloting and trialling clinical interventions. They did not accept that clinical research had to be conducted in Randomised Controlled Trials (RCTs). RCTs were charged with having a limited use and relating to specific limited information. It was argued that such evaluation could not give one single answer to questions which involved recording large numbers of outcome measures – for example, biological; family; client satisfaction. If the answers do not converge and a mixed result is obtained, it is difficult to say which is best way forward. In contrast, it was argued that non-RCTs find out how things are working – for example, what is being addressed by which component; which unit is working better than the other; which drugs produce which outcome.

6.0 THE PACE OF CHANGE

6.1 Evolution or Revolution?

The Seminar questioned whether the envisaged changes would be part of an evolutionary process or would require a revolution. A number of participants felt that medical schools were already looking at the future and preparing for it – so it was more likely to be a multi-staged evolutionary process. Others felt that nothing was likely to change until reward systems significantly altered – for example, the fee-for-service system; and the wide differentials of income between different medical specialties. Others noted, however, that commercial interests waited for no-one and had the potential to dramatically change the delivery of education and training in a relatively short time span.

6.2 Impact of Feminisation?

In all three countries, women are fast moving towards 50% of the medical student intake and this trend is likely to continue. In contrast to the dominance of the medical profession by men in the past, the “feminisation” of the medical intake raises a number of interesting questions for the future – for example, will women change the relationship of physicians to patients; other health professions; and society; will they copy the dominant (male) culture or develop their own ways of working?

7.0 SUMMARY

Although it may be possible to outline the role of the doctor for 2005, achieving this in reality requires considerable debate and, potentially, radical change within each country. Each country has different barriers to change, and will doubtless pursue different priorities on the way. This chapter has sought to highlight the issues which each country will need to address in preparing and supporting the doctor of the future.

Chapter 9

WAYS FORWARD

1.0 INTRODUCTION

After considering all the debates during the Seminar, each delegation outlined specific actions which they deemed essential to providing an appropriate and effective doctor for the future. These outlines are presented below:-

2.0 UK MEDICAL EDUCATION

2.1 Further Development of Primary Care Team

The bulk of illness is dealt with in primary care and the desired health care system of 2005 will develop from the existing system without radical changes of substance.

The primary care team will be caring for quite large populations in urban areas (for more remote areas there will be pragmatic adjustment).

The primary care team will consist of all disciplines concerned with primary care: doctors, nurses, occupational therapists, counsellors, public health physicians, social services, physiotherapists etc.

As far as possible the team will provide comprehensive health care, although there would be an issue as how to involve social services.

Outreach specialists will come from secondary and tertiary care to provide care within the primary care team setting.

This model will diminish the role of gatekeeper. The primary health care team will manage acute or new illness coming through the door, diagnose, treat and refer when necessary.

The primary health care team will be responsible for the management of long term illness, and assuring quality of life for the elderly, mentally ill, and physically disabled (services currently underprovided).

Health promotion, disease prevention, patient education and public health will be aided by the health care team being based on defined populations – possibly combining 2/3 practices. Practices will be based on the needs and wants of the population being serviced.

Training and research will be provided within the primary care setting where the volume of work is sufficient.

Hospital services will be considered as ultra-specialist – narrow disciplines. A few general physicians will exist – whose key function will be the acceptance of referrals from the primary health care team for referral to the ultra-specialists (ie a second sifter).

2.2 Changes and Threats

The identity of the leader of the team will need to be resolved – it will not necessarily be the doctor. All workers within that team will need to accept the management of that team to ensure that they are delivering the service for which they are designed.

The payment of members of the team may have to be worked out on an individual basis and be related to individual responsibilities.

Continued justification for securing adequate resources for health services will require continuous evaluation of what is provided.

The traditional home of medical teaching (the District General Hospital) will not be the

place where the bulk of teaching will be done – being super-specialist it will be inappropriate for generalist training. Funding will need to be focused at training teachers/trainers in primary care settings.

There is a real threat to the funding of research – both in the allocation of research monies within the NHS and the present status of universities – which threatens the development of good researchers. Continued funding will need to be justified and defended.

There is a need to evaluate training.

The medical profession will need to recognise the increased potential for re-training and redundancy in the future health care system.

The presence of greater numbers of better trained, more responsible, more independent nurses may be perceived, by a large number of doctors, as a threat.

Although there will be a decrease in the numbers of managers required to work within a primary care based service, it will be imperative to provide them with a higher standard of training and continuing education.

3.0 CANADA MEDICAL EDUCATION

3.1 The health care system envisaged in 2005 has 4 elements:-

broader view of health:

not just medical or health care- one that recognises broader determinants of health: eg social and economic – and one that has population health focus. recognising that population health is different from patient focus. The system would focus on keeping people well, and therefore include health promotion.

different perspective of the patient:

the patient will not be a passive recipient but an active partner in care. The system will seek to maximise the independence of the individual and recognise that quality of life issues are as important as quality of care.

evidenced based resource allocation:

the system must systematically gather and use evidence which is significant for decision makers at all levels including clinicians. Some changes will need to be made in a number of areas to ensure that the information is used.

priorities set on regional and local basis:

in recognition that different populations have different needs and different expectations.

3.2 The structure of the health care system in 2005 will have 4 elements:-

more community based care (shift determined by improved quality of life for patient – eg more independence – not cost).

emphasis on teamworking and collaboration among disciplines.

more emphasis on chronic care.

different methods for payment and reward of professionals.

3.3 The move towards the above will require at least 7 changes:-

changes in communication at 4 levels:-

(i) at the highest policy level – to make sure academic medicine and regulatory bodies have

greater impact on policy decisions and that there is greater continuity of approach between these organisations. At the moment there is no system or designated system level at which to hear from Deans, academic medicine, regulatory bodies. This is a major deficiency and needs to build into the system.

(ii) among disciplines – communication among the different disciplines must start in training and continue from there into practice.

(iii) among different components of medical profession itself – there is a need for better communication channels – among medical organisations, medical schools, and regulatory bodies. At the moment there is fragmentation among disciplines – and within the medical profession – as to which points are to be addressed.

(iv) with medical students – we need continuing dialogue with medical students to make them more aware of health system of future. This is most important because they face an uncertain future.

changes in the role of medicine – within the desired broad health determinants approach to health – physicians must be part of the population health perspective. They will need to collaborate more with other disciplines and health professionals. This might require a change in the payment system.

increased patient education – although possessing no absolute answer as to whom should deliver patient education – there is an appreciation that patients are not being adequately educated at present.

more comprehensive approach to shifting care into community – the shift to community care has been very sporadic manner to date. Need to shift money into the community so that training can be held in community settings. Need better re-alignment of resources to match new provision of services.

new models to co-ordinate health and social services – we must recognise that when we talk about family structures they are more fragmented than they were in the past. Providing a holistic approach to medicine is thus a challenge in an increasing fragmentation of societal structures.

training of doctors to practise evidence based approach to resource allocation – and temper rush to new technology until evidence available

more health services research – in addition to biomedical research. Need to develop new health services research models.

3.4 The implications for medical education and the training of future physicians

learning effective interaction between professions in a service setting

learning how to discharge individual responsibilities within a team setting

training for life long learning in medicine

continuous assessment of roles and competencies of physicians

inclusion of non-health disciplines in medical education (eg management, sociology)

4.0 US MEDICAL EDUCATION

4.1 It is important to note the context of the US health system/medical education:

freedom of the individual; suspicion of government intervention; devotion to capitalism; politics of ad-hocism; ability to pick physicians; love of technology; and multi-cultural environment

4.2 Expectations of health care system/ education in 2005 fall into 4 broad categories:

increased resource constraints and rationing; increased reference to cost of resourcing patient expectation

dominance of managed care; more profit making enterprises in medicine; uncertainties in funding of research and education; loss of cross-subsidies; lower salaries for doctors; larger roles for non-professional staffs; more use of media/computers – with risk of loss of certain degree of privacy; increasing use of technology in medicine

more regulation – accreditation issues to be resolved; more accountability of profession; greater public empowerment in decision making

more medical care in the community

4.3 The health care system envisaged in 2005 will have 8 core requirements:

primary care as centre of medicine

student-centred learning

dialogue with public regarding: (i) accountability/distrust, and (ii) patient perceptions and demands

training of physicians for management, succession and diversity

collaboration and integration between inter-disciplinary teams: in education/ research/ and patient care

greater investment in health services research – in teaching of students, evaluation of education, and incorporation of research into service

improved quality control over professional and medical research publications

societal control of numbers entering postgraduate education

4.4 Key Needs in Undergraduate Medical Education

A better use of undergraduate years (possibly requiring a change in pre-admission requirements) would determine that all curricula include the population perspective; health promotion; disease prevention; nutrition; health economics, administration and management studies; information technology; and focus on knowledge for the generalist. Curricula should also facilitate an increase in social and ethical considerations being made in practice; an increase in the role of the patient in medical education; and the development of patient education skills for patient self-improvement.

Educators need to make greater use of student and patient-centred learning processes and experiential learning. The preparation, recruitment and reward of faculty as scholars in teaching is also of importance.

Medical education needs to encourage the development of key skills in the student: critical thinking; problem solving; decision analysis; scientific medical research; communication and interpersonal skills – such as active listening. The student should be supported in developing their sensitivity to cultural, gender and ageism issues, and prepared for working in teams and appreciating roles and skills of others. In essence, the student needs to be encouraged to be a “life-long learner” and develop an understanding of themselves as whole person.

4.5 Key Issues in Generalist Postgraduate Education:

The largest challenge is training the generalist. The generalist provides continuous,

comprehensive primary and secondary care for a population of patients. Since there is a need for increased generalist capacity in the US, it will be necessary to train more generalist physicians (new, and retraining of specialists). There is also utility in enhancing the numbers of nurse practitioners, physicians' assistants and other relevant health professionals.

It will be necessary for diverse personnel to learn to work together. The generalist, as a member of the team, should maintain their role as patient advocate and principal guide through the diagnostic and therapeutic maze. The generalist team should be able to dispense effective care, efficiently offering both curative and preventative interventions at the lowest prudent cost. The team will need to be able to provide enough professional time to each patient at all critical or appropriate moments so that the caring function can be adequately carried out.

It will be necessary for the border between generalist and specialty care to be constantly under revision. This will require consistent attention to the professional ethics of referral and professional interaction and the rules guiding the health professional's behaviour and loyalties when working within and/or for an organised delivery system

4.6 Key Issues in Specialist Postgraduate Education:

Faculty will be training fewer specialists and these specialists will be doing less general care. Thus specialists will need to expand their teaching role with the generalist, so that fewer routine conditions are referred to the specialist

Trans-professional educational consortia should be formed regionally to rationalise workforce development plans in order to meet anticipated needs.

4.7 Barriers to Change:

The role of primary care is very new in the US, and few academics exist in this field – added to which there is a lack of knowledge by specialists of the educational needs of generalists.

The current academic status of primary care will need to be improved, which will require payments for trainees and trainers (revenue and costs of training). The lack of research in primary care will also need to be addressed and will require more resources, more people, and more funding for research and salaries.

The current system whereby students have free choice of specialist training will be a major barrier to change, as will the current use of low cost specialty residents in teaching and care in hospital settings.

Appendix I

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UNITED KINGDOM

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The Nuffield Provincial Hospitals Trust

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Dr Richard Cruess

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Former Assistant Deputy Minister of Health currently President and CEO – Kingston General Hospital, Queen's University

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Former Dean of Medicine – University of Ottawa currently Executive Director – Royal College of Physicians and Surgeons of Canada

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President – Association of Academic Health Centres

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President – Association of American Medical Colleges, Former Dean of Medicine – State University of New York at Stony Brook

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President Emeritus – Association of American Medical Colleges, Former Vice Chancellor for Health Sciences and Dean – University of California, San Diego School of Medicine

Dr C McCollister Everts

Senior Vice President for Health Affairs and Dean – College of Medicine, The Milton S Hershey Medical Center, The Pennsylvania State University

Dr Catherine De Angelis

Associate Dean for Academic Affairs – The Johns Hopkins School of Medicine

Dr Carol A Aschenbrener

Chancellor – University of Nebraska Medical Center

Dr William G Anyan

Chancellor Emeritus – Duke University

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Dr Ruth Ellen Bulger

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Appendix 2

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THE BRITISH HEALTH CARE SYSTEM

DR JOHN LISTER

The National Health Service (NHS) was introduced in 1948 in order to provide a comprehensive system of health care for every citizen in the UK entitling every man, woman and child to be registered with a general practitioner for primary care and to receive specialist care without charge at the time of need.

General practitioners have always been independent contractors. They are in contract with Family Health Service Authorities and receive a basic practice allowance, but derive most of their income from capitation fees for registered patients and from payments for certain specific services.

Since the inception of the NHS the hospital service has been organised in regions and districts and each year central government allocates a global sum for the service which is distributed to regions, which in turn make allocations to districts.

Structural reorganisation of the NHS took place in 1974 and 1982, and in 1985 managers with greatly increased executive authority were introduced at all levels.

Almost since its inception, there have been complaints that the service is underfunded. Governments have pointed to the real annual increase in the budget (though the percentage of GDP spent on health has remained obstinately at about 6%) and have called for increased efficiency, but proposals for radical reforms were published in 1989 in a government paper entitled *Working for Patients*.

The essential features were that an internal market should be developed with the separation of purchasers and providers of health care facilities, and instead of making block allocations of funds to hospitals, districts would enter into contracts with them for the provision of services.

Hospitals would be encouraged to apply for self-governing status with freedom to determine their own staffing levels and to appoint all grades of medical staff including consultants, most of whom had previously held contracts with regions.

General practitioners would be given the opportunity of becoming budget holders so that they could arrange contracts directly with hospitals for the care of their patients rather than depend on Family Health Service Authorities to do so.

Since the reforms were introduced in 1991 hospitals have been competing with each other for contracts and purchasers tend to opt for the cheaper contract. Some hospitals, particularly London teaching hospitals, have been disadvantaged, partly because of shrinking inner city populations and partly because high staffing levels and capital charges now levied on all hospitals by government, have made their contracts non-competitive.

There have been conflicting views about these reforms.

Although initially the British Medical Association was opposed to the concept of budget holding, many budget holding practitioners are now enthusiastic, but there are complaints that their patients receive priority both for out-patient treatment and routine hospital admission ("fast-tracking").

Many hospital consultants have become frustrated by the commercial considerations of the internal market which they believe have disadvantaged patients, created an expensive bureaucracy and billing system, destroyed morale and fragmented the service.

On the credit side there seems to be agreement that the separation of purchasers and

providers of health care has been beneficial and that there are benefits from doctors becoming more accountable for their actions and for their clinical performance to be subject to peer audit.

Medical education must take place within the structure of the health care system of the country concerned. In Britain the NHS is the monopoly employer of medical manpower, and it has evolved from a system in which primary care is provided by a large number of general practitioners and secondary care is provided by a much smaller number of consultants. All junior hospital posts from pre-registration house officer through senior house officer, registrar and senior registrar are designated training posts, but there is concern about the training at all levels. The core problem is the difficulty of reconciling educational requirements with service needs but many trainees have also been frustrated by the rigidity of the career structure and uncertainties about future manpower planning.

HEALTH CARE, UNDERGRADUATE AND POSTGRADUATE MEDICAL EDUCATION IN CANADA: HARVEY BARKUN MD

Had this talk been given as recently as 3 years ago, it would have been very different from what we shall be discussing this week.

The health care system in Canada, although still by far the most popular social program in Canada, is under great financial pressure, and the result has been:

- restructuring of medical education and of hospitals;
- downsizing in terms of numbers in hospitals, numbers of beds, numbers of medical students, and numbers of postgraduate training positions;
- rationalization of programs, be they in the area of patient care or in medical education.

Concomitant with these measures, there has been a surge in the awareness of population health and community health needs. Health care professionals are undergoing training outside the traditional training sites of tertiary care teaching hospitals; new methodologies are being introduced into undergraduate curricula (43% of Canada's medical schools now use full blown problem based learning, and the other 57% utilize it to some degree); curriculum content devotes major blocks to ethics, to outcome analysis, to quality assurance, to critical assessment. Medical practice in rural communities, a problem which is particularly Canadian, is getting much more exposure both at the undergraduate and postgraduate levels.

Under the Canadian constitution, health and education are provincial jurisdictions. The financial incentives which the federal government held out to the provinces to implement universal, comprehensive hospital and medical care are drying up. Established program funding which provides major federal financing to the provinces for both health and education is diminishing to the point that many predict it will disappear completely within 5 years.

The provinces are therefore confronted with radically constrained budgets, and the political necessity of maintaining the most popular and the most expensive programs under their jurisdiction – health and education. And since every provincial health minister is thoroughly convinced that the cost of the health care system is directly proportional to the number of doctors and to their remuneration, a number of measures have been put in place. Caps on doctors' incomes, reduced remuneration for new medical graduates, reduced doctor mobility are just some of these measures. The involvement of other health professionals in traditional doctor functions is yet another move to attempt to rationalize the system.

Medical education remains under university aegis. Medical students move through the undergraduate program directly into postgraduate training as residents in either a program of family medicine or a speciality. The latter programs remain in the university faculties of medicine. The levers to adjust these programs lie with the medical school, but change is difficult given the service interests, academic pursuits, and prestige vested within each program.

An interesting phenomenon begun by the province of Quebec (4 medical schools) is to link certification by one of our two colleagues to licensure. This has now expanded to Ontario (5 schools) and Alberta (2 schools). It is expected that the provinces housing the remaining 5 schools will follow suit.

The ramifications of the preceding summary are many. Discussion should be most interesting.

ABSTRACT OF COMMENTS BY R J BULGER AT THE FIRST INTRODUCTORY AND OVERVIEW SESSION

1. A background discussion of some of the underlying American values which have conditioned our policies toward the organization and delivery of health care: the rights of the individual vs. the obligations to the group; the love affair with technology; and death as an optional affair! Criticisms notwithstanding, Americans have had exactly what they wanted with regard to health care, but suddenly all that is changing.
2. A snapshot of the organization and financing of undergraduate and postgraduate medical education over the past several decades, including a description of two dramatic changes that appear to be changing the traditional environment permanently. These two changes will be discussed and are the advent of the DRG (diagnosis-related group) concept and the conquest of the "market" by "managed care".
3. A more detailed exposition of the financial implications for the educational environment of our academic health centers will reveal the expected dimensions of the changes that are now underway, especially when one adds the gaining popularity of the thrust to out-of-hospital clinical education, returning the student to the ambulatory setting where comprehensive primary care can be experienced and learned.
4. A discussion will be presented concerning the continuing plight of the chronically underserved rural and inner city populations and the implications of health care reform legislation on their health care and health status.
5. Finally, as appropriate, a brief analysis will be presented of the viable options still under active consideration by the political process for congressional action before the October recess.

SESSIONS 2 AND 3 – BACKGROUND NOTES

Overtly for a good ten years now¹, and based on advances in knowledge and in technology, leading medical educators within their own faculty/school of medicine, and other health professionals, especially nurses; ministers of health and their officials in several Western World countries, national and international health organizations, are calling for:

- a) a medical education more responsive to patients' needs and views;
- b) integration or linkages between bio-medicine and health promotion/disease prevention;
- c) a team's approach between physicians and other health care professionals, including redefined roles for nurses.

Local initiatives of different kinds have tried, or are trying, to answer these demands. Joint Strategic Planning exercises involving different health partners (Faculties of Medicine and of Health Sciences, District Health Councils, local University hospitals, and, rarely, community health agencies) are such an example. Leadership seminars for physicians-in-the-making or for senior medical educators are another example. So is the Canadian initiative of EFPO (Educating Future Physicians for Ontario)² – a consortium of the provincial government, a private foundation, and the five faculties/schools of medicine trying, over a period of five years and with a relatively broad-based participation, to bring about the desired changes mentioned above.

Positive results are not yet obvious nor visible, despite the above-mentioned efforts, and despite the “feminization”³ of medicine – the single major socio-demographic change in faculties/schools of medicine in the last twenty years. Resistance to change is normal both in individuals and even more so within organizations. Sustained resistance to change can however easily become dysfunctional.

Changes affecting more or less directly health care needs for both specialists and general practitioners are rooted in demographic and societal trends. These include:

- a much more multiethnic, pluralistic and heterogeneous, possibly fragmented, society, with some groups witnessing a remarkable birth rate (eg. the aboriginals in Canada);
- an ageing society-at-large, with the old-old showing the fastest growth;
- a culture of egalitarianism and participation at all levels, including between women and men, in both individual and group, private and professional relationships;
- the continuing growth of chronic, degenerative and man-made diseases;
- a greater awareness by the public of epidemiological research output;
- the women's health movement and consumerism in general;
- the need for lifelong learning skills for all;
- poverty, and poverty of children in particular;
- unemployment, under-employment and the new uncertainties of work;
- increased pressures on mental health due to increased violence of all kinds;
- decreased public funds and increased accountability demands.

The only formal development of multi-disciplinary work in health matters in Canada is that of the establishment of health and social services community clinics, an affirmative public policy in Québec with the CLSC's, a haphazard development elsewhere in the country. Community clinics, and CLSC's in Québec, may however reproduce the traditional medical

power structure depending on the local leadership; the structure in itself is no panacea. Recently, some provinces seem to be actively encouraging the academic training and new role descriptions for nurses practitioners and nurse specialists, as well as for midwives. Much remains to be done in practice in implementing these new roles and their linkages to physicians. In hospital settings, some medical/nursing teams, in some places, do work cooperatively with social workers, psychologists, occupational therapists and others. Having basic courses taught to students of all health care disciplines together is being discussed as a way of ensuring future cooperation by better knowing one another. In itself, and given the existing power structure in health care, this measure may actually contribute to the opposite result. The internal logic of each health discipline and their respective main paradigms are what should be familiar to each health care professional.

Nurses repeatedly confirm that true teamwork in medicine exists only (a) in hospital settings, and (b) in tertiary, high tech, specialized medical practice. Necessity seems to have forced in such an environment a collaborative effort valued by all members of the team. How can we create that “necessity” for primary health care? It does exist with great success in the Northern parts of Canada for example; again, necessity leads to a re-division of labour between the health/medical care players.

Specialists, before performing in the operating room, and after surgery, deal directly with patients, as do general practitioners. This link defines the need for the same set of skills for both groups. Above all comes good communication with the patient, with the aim of establishing good human relations. It is a crucial set of skills since highly specialized roles make for a fragmented, alienating experience for the patient. Further to the AMA study of 1985-1988, EFPO work has identified the usual list of skills:

- anticipation of and sensitivity to patient needs;
- good and truly egalitarian attitudes with other health care professionals;
- negotiating skills;
- learning to listen;
- spending more time listening and responding to patients;
- avoidance of medical terminology and use of plain language;
- effective use of appropriate interpreters.

Putting these communication skills to use pre-supposes not so much knowledge of the society around, as a sensitivity to:

- variety of views related to care and management of one's body and health;
- gender issues;
- racial and ethno-cultural issues;
- needs of persons with disabilities;
- issues of sexual orientation;
- major public policy issues in health matters and in general.

In other words, specialists and GPs are not expected to master the knowledge of the above subject matters. That is not what they are trained for. What is requested from them is to have the basic, elementary knowledge needed to inform their sensitivity about these issues; to know the importance of such issues; to know their own knowledge limitations; and to know who the “experts” are – other professionals, other members of society who are better equipped than them to deal with them.

Another criticism in many quarters is that of the general practitioner (PHCP) (or all physicians for that matter) as being “the gatekeeper” to the system. This concept, of undisputed importance to physicians, is the major irritant in redefining efficient and more appropriate primary health care roles. Nurses, with the appropriate education and clinical training, can and should be given added responsibilities. Nurse practitioners can and should share with PHCP in the tasks and procedures relating to giving good primary health care, in hospitals and in community settings.

Finally, and although the concept is foreign to the medical profession, it is impossible for anyone to seriously discuss teamwork and true cooperation with other health professionals without the benefits of a double political analysis: that of the power structure and relationships in the medical/health care system, and that of the power structure of knowledge within experts’ disciplines, and with the non-expert patient.

The Hon. Monique Bégin, P.C.

Dean, Faculty of Health Sciences,
University of Ottawa
Ottawa, July 14, 1994

REFERENCES

1. At least on this side of the Atlantic, a most conservative official date being that of the GPEP Report, Physicians for the Twenty-First Century, of the Association of American Medical Colleges of September 1984. Much had to be said in years prior to 1984, by medical and other academic leaders, for such a panel to be created and such recommendations to be made.
2. Co-ordinated by Victor R. Neufeld, M.D., Associate Dean (Education), McMaster University, Hamilton (ON).
3. Based on 1988-89 statistics, women now form 44.4% of the medical student population in Canada. This however is far from being reflected in the profession, where they are only 17.5% (1990) of MDs, and even less in faculty, with around 13% of faculty. (To be updated.)

THE PRESENT STATUS AND LIKELY FURTHER DEVELOPMENT OF MULTIDISCIPLINARY WORKING: REG L. PERKIN MD:- PART I

I. PRESENT STATUS

I.1 Relationship between family physicians and specialist/consultants

The Royal College of Physicians and Surgeons of Canada (RCPSC) and The College of Family Physicians of Canada (CFPC) published a document in 1993 "The Relationship Between Family Physicians and Specialist/Consultants in the Provision of Patient Care". This document was produced by a joint task force of the RCPSC and the CFPC. The document contains 19 recommendations – three are patient centred and 16 are profession centred. It also outlines the guidelines for consultation referral. A copy of this document will be provided for conference participants.

I.2 Relationship with non-physician health care workers

Canadian University Departments of Family Medicine were involved in training nurse practitioners, primarily for the north, in the early 1970's. Nurse practitioners continue to work in the north, with physician support through communication links and periodic visits. Many Departments of Family Medicine in the 16 Canadian medical schools also employ nurse practitioners in the family practice teaching units.

In the past year, there has been a strong move from a small group of nurse practitioners to achieve independent practice status in Canada. Family physicians favour the team approach to health care, but are opposing independent nurse practitioners.

A similar situation exists with respect to midwives. Family physicians, particularly those in university teaching positions, have achieved good working relationships with midwives in the care of low-risk obstetrical patients. Delivery in hospital is still preferred over home births. The independent practice of midwifery has been achieved in some Canadian provinces in the past year and is causing problems with respect to integration with existing physician services.

In family practice teaching units, health care professionals such as social workers, psychologists, dieticians, pharmacists, and physiotherapists are frequently involved in the teaching of family practice residents and undergraduate medical students. Similar arrangements exist in some group practice situations, but these are less common. Relationships with optometrists and chiropractors tend to be more at arm's length.

I.3 Payment mechanisms

The fee for service payment mechanism, applicable to the majority of family physicians in Canada at the present time, is an impediment to closer working relationships with other health care professionals. In addition, in most communities, there is geographic separation of family physicians from other health care professionals serving the same patient population, and this is not conducive to collaborative working arrangements.

2. FURTHER DEVELOPMENT

2.1 Medical profession implementation of the recommendations in the RCPSC/CFPC 1993 document

Implementation, particularly in undergraduate and postgraduate teaching, should result in continuing improvement in the relationship between family physicians and specialist/consultants in Canada.

2.2 Group practice

Solo family practice will not likely survive in Canada. Increasingly, family physicians will work in groups and in closer collaboration with other health care professionals. The current competitive, and at times antagonistic, relationship between physicians and other groups will give way to a more collegial and co-operative framework, which will ultimately be professionally more satisfying for all concerned and will lead to improved patient care.

2.3 Payment mechanisms (copies of the document will be provided to delegates)

The CFPC has developed a blended funding mechanism which it has been promoting for the past two years as an alternative to fee for service. It includes a base salary, overhead costs, non-volume modifiers and volume modifiers. It is designed to provide family physicians with a suitable income for providing the services most appropriate to the needs of their patients, while preserving motivation to provide quality care and reducing the pressure to provide an excessive volume of care.

There is also interest in Canada in having all patients register with a family physician. This would tend to counteract the negative effects of walk-in clinics and inappropriate use of hospital emergency departments.

The CFPC is attempting to set up some demonstration projects in different parts of the country to explore the team approach to the delivery of primary health care, using the alternate payment mechanism in place of the current fee for service system.

2.4 Rural practice

Canada has a distribution problem. There are too few family physicians in the rural and remote areas of the country, and the problem is more acute with respect to specialist/consultants. More attention is being paid to innovative communication strategies. There is a need to provide more resources for appropriate postgraduate training for physicians planning to practise in rural areas where they need specialty substitution skills. A more difficult political problem is the need to close small hospitals capable of supporting only a solo physician in favour of regional hospitals capable of supporting a minimum of four or five physicians. A team approach involving physicians and other health care professionals in such a regional setting would be an ideal way to deliver health care to people living in rural Canada.

**THE PRESENT STATUS AND LIKELY FURTHER DEVELOPMENT OF
MULTIDISCIPLINARY WORKING: REG L. PERKIN MD:- PART 2**

SESSION 2 – MONDAY AUGUST 29TH, 1994

The cost containment imposed on health care in Canada in the 1990s offers challenges for health care providers. Significant cost reductions must be realized through initiatives such as physician resource management and changes in health care delivery.

To that effect, the profession is in the process of determining the role of its members in secondary and tertiary care. There is general consensus in Canada by the profession that family physicians should provide primary medical care. In remote or under-served areas, family physicians with added skills may be required to provide secondary care. As a general rule, however, secondary and tertiary medical care is provided by the specialist and subspecialist. Nevertheless, in the context of many geographic and local conditions, discipline-specific primary care (obstetric, pediatric, generalist internist) could be given by specialist-consultants. The complementarity of the relationship between family physicians and specialist-consultants has been well defined and guidelines for consultations and referrals have been developed.

Changing health needs and redefined health services to meet societal needs requires modifications to the concept of health care teams; the anticipated changes are likely to have more impact on primary health care than on secondary and tertiary care. In terms of secondary and tertiary care, the family physician's role is to provide comprehensive, continuing care while the specialist-consultant will address the problem that led to the referral and sometimes provide concurrent, ongoing care for specific problems. The profession recognizes the important roles and contributions of the other members of the health care team and guidelines for interpersonal relationships should apply to all members of the health care team.

While the profession espouses the concept of multi-disciplinary care, the concept of a health care team for the future is not easy to deliver. The idea of non-hierarchical teamwork (teams made up of equal members) has not been part of the education of most professionals, especially physicians, and role models are scarce. The opportunities for the further development of a health care team concept have been compromised by interprofessional rivalry and negative perceptions. Recent studies in Ontario suggest that some of the gatekeeping responsibilities traditionally placed on physicians are inappropriate. The concept of gatekeeper needs to be clarified and the appropriate role of physicians needs to be identified. The prerequisites for the multidisciplinary team will be reviewed and the evolving partnership between health professionals in providing efficient health care to a shared client base, especially in primary health care, will be explored.

Physicians and most other health professionals generally agree that the primary role of physicians should be one-on-one care of people with illness(es). Most health professionals (except physicians) consider the current hierarchical structure, with the physician as the "leader", to be a barrier to collaboration and optimum patient care. New generations of physicians will have to be educated differently to meet the changing expectations of society. The physician as a collaborator, emphasizing competence in working effectively with other health professionals, has become an essential characteristic.

Educating Future Physicians for Ontario (EFPO) is a major undertaking which defines what the people of Ontario need and expect from physicians. The project defines how undergraduate medical education must be modified to define the future role of the physicians as a medical expert/clinical decision maker; communicator/educator/humanist/healer; collaborator; gatekeeper/resource manager; health advocate; learner; scientist/scholar and a person.

These concepts which apply to the education of the undifferentiated physician are now being extended to postgraduate medical education. The Royal College of Physicians and Surgeons of Canada is responsible for the setting of training requirements of specialists in Canada, the accreditation of specialty training programs, the evaluation and certification of specialists and subspecialists, and the maintenance of competence of certified specialists. The Royal College is currently involved in two major projects to better define the future roles and skills required of specialist-physicians. The first initiative deals with the framework for the definition of the length of training in the specialties and subspecialties, based on clearly defined educational objectives. It is an attempt to define the training requirements in terms of needs. A typical in-training evaluation (ITER), defining in specialty-specific terms, the knowledge, skills and professional attitudes of the future specialist will be reviewed. The ITER is one of the instruments to determine whether the resident has demonstrated the attainment of the objectives measured by the evaluation system of the specialty training program, as prescribed by the accreditation standards.

The second initiative of the Royal College in defining the future role and skills of specialists will expand upon the framework of the work done by EFPO to identify, ultimately, remedies that may be required in certain areas of specialty medical education to ensure its responsiveness to Canadian societal needs. To do this, the Royal College will focus on two streams – the societal needs stream and the medical resources stream – the outcome of this, it is hoped will lead to an informed statement on the rationalization of postgraduate medical education, sensitive to the essential function of the physician-specialist as a treating physician. The role of the physician-specialist as a scholar, educator and scientist is also to be considered.

The future role of specialists would be incomplete without developing their skills as life-long learners. The Royal College has established a Maintenance of Competence Programme (MOCOMP)¹ for its members. MOCOMP is designed to encourage self-directed learning and to achieve two goals; first, to assist the specialist to use effective methods of continuing education to keep abreast of advances in their specialty; and, second, to provide specialists with documentation of their continuing education activities.

The essential elements leading to this broad conceptual framework will be reviewed.

¹ MOCOMP is an official mark and a trademark of the Royal College of Physicians and Surgeons of Canada.

THE PRESENT STATUS AND LIKELY FURTHER DEVELOPMENT OF MULTIDISCIPLINARY WORKING

Multidisciplinary working within the health care system has become an accepted practice although it has yet to make a major impact on all of the specialist doctors working within a hospital setting.

Multidisciplinary practice can be undertaken in a number of settings: between the "generalist" and the "specialist" in hospital practice; between health care workers within a hospital setting; and between hospital specialist doctors and primary care doctors. In most United Kingdom hospitals outpatient and inpatient care is split between the generalist and the organ-based specialist. The system works well but difficulties can arise in the management of acute admissions and the manning of "general" outpatient clinics.

The development of the multidisciplinary team is seen best in organ-based units providing secondary or tertiary care, for example cardiology and gastroenterology where physicians, surgeons, radiologists, anaesthetists, specialist nurses and pathologists provide an interactive diagnostic and therapeutic service. In a more circumscribed manner there is a growing development of the use of specially trained nurses who complement or even substitute for specialist doctors in the management of patients. The system of the nurse-specialist works effectively in the care of diabetics and the specialty of hepato-gastroenterology.

A growing development is the sharing of care between specialist doctors in hospitals and primary care doctors (general practitioners). The system has many advantages for care and cost-containment and is used to best effect in the management of patients with diabetes mellitus, hypertension and asthma.

Despite the current difficulties in the United States it is likely that specialist doctors will continue to underpin the provision of secondary and tertiary care, but the precise pattern will be determined by changing medical technologies, being able to guess numbers accurately, economics and politics.

It is probable that new specialties will emerge with training requirements. The introduction of new technologies will be reflected in new training requirements for specialists. Complex drug therapies for example in oncology will also lead to specialty development. This trend with its obvious implication for training and practice must be balanced against the need for all specialists to have a knowledge of and training in a broad base of medicine (so-called general, internal medicine). This is necessary firstly so that they can practice their specialty more efficiently and secondly because in the foreseeable future hospital medical practice will still require the services of doctors able to deal with a variety of medical (or surgical) problems and such doctors are all likely to come from the ranks of those who have a primary specialty-oriented practice. Notwithstanding it is probable that there will be continued pressures for secondary and tertiary medicine to be practised within the setting of a multidisciplinary team.

Ian A D Bouchier
26.6.94

FUTURE ROLE AND SKILLS REQUIRED OF SPECIALISTS

C McCOLLISTER EVARTS MD

THE SPECIALIST TODAY

The Specialist

- Character/culture
- Knowledge base
- Practice patterns
- Relationships with generalists

Educational System

- Training
- Numbers
- Distribution

Delivery System

- Fragmented care
- Reimbursement patterns
- Cost
- Access

FUTURE ROLES AND SKILLS

The Specialist

- Education/training of specialist
- Knowledge base
- Practice patterns
- Communication/collaboration with generalists
- The subspecialist
- The clinician/scientist

The Patient's Perceptions

- The generalist
- The specialist

The Delivery System

- Integration of care
- Patient centered
- Seamless

THE CONCEPT OF THE HEALTH CARE TEAM AND THE ROLE OF ITS MEMBERS IN SECONDARY AND TERTIARY CARE

The concept of a health care team is not new; yet, in the United States, the delivery of health care has more often than not occurred in the sporadic manner, without equal accessibility, dominated by specialists with little interdisciplinary coordination, not to mention high costs and uneven quality. It has not been truly patient centred and seamless with few exceptions. Individual physicians have produced good care but the health team concept has been lacking.

It is essential that the health care team include not only generalist physicians but nurse practitioners, nurses and allied health personnel including dentists, pharmacists, and others. The size of the team will vary from location to location but must develop to adequately serve the health care needs of the region. The health care team's relationship to secondary, tertiary and quaternary care remains a function of the collective ability and skills of the team. Certainly, the well educated generalists of the future will possess the skills to diagnose and treat acute and chronic diseases. Their education, conducted in part by specialists, will allow the development of a competency as to when to consult and refer to the specialist, thereby avoiding criticism by the specialists in regards inappropriate or late referrals.

The ultimate goal is a seamless web of health care, cost effective, of the highest quality and accessible to all.

THE FUTURE ROLES AND SKILLS OF GENERALIST¹ PHYSICIANS: CATHERINE D DEANGELIS MD

The basic role of the generalist physician is to provide continuity of care to a population of patients along the entire spectrum of health promotion, disease prevention and management of the majority of illnesses. Ideally, this care is provided in partnership with nurse practitioners, physicians' assistants, others such as nutritionists, social workers and with sub-specialist physicians. The former groups manage or assist in the management of health maintenance, illness prevention and care of minor illnesses; the latter group should provide sub-specialty care only for those patients with very serious, complex or unusual illnesses. The scope of practice for the generalist must be broadly defined in order to use his or her expertise to the fullest; this leads to a more fulfilling professional life and eliminates unnecessary referrals. The key component is that, except in rare instances, the generalist physician provides the long-term continuity of care for each patient. The sub-specialist serves as a consultant and only provides the care that falls beyond the broad expertise of the generalist.

Preparing generalist physicians for broad-based practices will involve significant alterations in the process by which physicians are currently educated and trained. Most of the faculty in medical colleges are sub-specialists who encourage the referral of patients, who could be managed by generalists, to sub-specialists. Further, because generalists are relatively few in number in medical colleges and because their roles are not conducive to promotion, they have a weak power base from which to influence the curriculum. The current financial reimbursement scheme rewards the sub-specialist much more than the generalist, thereby augmenting the importance of sub-specialists in medical colleges, which depend heavily on clinical reimbursement for financial security. The current reward system of caring for intellectually stimulating patients, financial remuneration and promotion provides medical students with young physicians-in-training with a strong message to seek sub-specialty careers.

Other important issues must also be considered in the education of physicians. Health and illness are significantly affected by ethnic, cultural, religion, gender and age issues. Therefore physicians should mirror the society they serve, at least to the degree necessary to influence a multi-cultural practice of medicine. This includes types of faculty and of students. Also the generalist physician must be prepared to practice primarily in ambulatory settings including community-based offices/clinics, long term care facilities, schools and homes of patients. This requires a dramatic shift from the current hospital based emphasis.

All of the issues mentioned above must be addressed to assure adequate quality and quantity of generalist physicians to meet the needs of patients. The onus for change lies primarily on the medical education process, which ultimately influences how medicine is practised.

¹ The terms primary, secondary and tertiary care are confusing at best. The terms generalist and sub specialist are better suited for this discussion.

PRIMARY HEALTH CARE: REG L PERKIN MD

I THE FUTURE ROLE AND SKILLS OF THE PRIMARY HEALTH CARE PHYSICIAN (PHCP)

In the Canadian context, the PHCP is the family physician. The only other physicians that do any significant amount of primary care are the paediatricians. The following 6 concepts will be important in the education of family physicians for the future.

TEAM PLAYER: Family physicians will work in groups in closer collaboration with other health care professionals. They will need good communications skills and better understanding of group dynamics.

MANAGER: Family physicians will need more management skills with respect to the functioning of health care teams. They will also need more expertise in managing information, particularly computer skills with respect to patient record keeping, drug interaction protocols, collaborative research, implementation of clinical practice guidelines and home based continuing medical education.

PATIENT EDUCATOR: The shifting emphasis from illness to wellness will bring with it the need for much more effective patient education. The long term relationship between a family physician and her/his patients potentially gives the physician an opportunity to achieve higher compliance with patient education initiatives directed towards healthier lifestyles and disease prevention.

PATIENT ADVOCATE: Medical technology is outstripping our human ability to know how to deal with it. The family physician will need a better understanding of medical ethics and know how to apply this knowledge in acting as an advocate for patients.

CONTINUOUS QUALITY IMPROVEMENT: The key to maintaining our position in society as an autonomous profession rests with how successful we are in being accountable for our professional activities. This involves incorporating quality assurance standards into our daily routine. The public perception that this activity is occurring is as important as the activity itself.

TEACHER AND RESEARCHER: To maintain the interest and challenge of the job over an entire career requires that family physicians do something professionally over and above looking after patients. Increasingly in Canada, family physicians are turning to teaching and/or research to fulfil this need. The expansion of family practice residency training programs has involved more community based teachers. Computer technology makes research networks more feasible, and the CFPC along with its provincial chapters and university departments of family medicine has plans to greatly expand primary care research.

2 PHCP'S PARTICULAR ROLE AS PART OF COMMUNITY CARE SERVICES FOR THE MANAGEMENT OF LONG-TERM AND CHRONIC DISEASE

There are a number of principles that should govern the role of the family physician.

- Governments in Canada are closing hospital beds without first providing the substitute community resources. Medical assessment and therapeutic, rehabilitative and restorative services in the community must be planned for and supported.
- Patients must have the ability to move easily from home and ambulatory care settings to facility based care without encountering unnecessary obstacles.
- Where patients are being cared for in the home, the needs of the family members and other caregivers must be respected and supported.

- Some long term care facilities should become academic centres that promote research and education.

3 THE POSSIBLE NEED FOR SPECIAL TRAINING

All medical schools in Canada now include family medicine in the undergraduate curriculum. The postgraduate residency training programs are only of two years' duration. The need for additional postgraduate training is well recognized, and efforts are being made to acquire sufficient third year residency positions to provide additional training for at least 40% of the trainees coming through the system.

RURAL PRACTICE: Family physicians being trained for practice in rural Canada need to acquire, in addition to the core curriculum, specialty substitution skills in emergency care, surgery, anaesthesia, obstetrics and psychiatry.

ACADEMIC STREAM: The discipline of family medicine will require young men and women with extra skills in education and research, to prepare them for academic careers.

LEADERSHIP AND MANAGEMENT: Faculties of medicine need to look to other departments in the university to provide education in community-related disciplines to equip physicians to deal not only with individual patient problems but also with decision-making in the health care system. If family physicians are to become a more effective resource to the community, they need to understand better the problems of special groups such as minorities, the disabled, victims of abuse, etc.

4 NEED TO DEFINE PRIMARY/SECONDARY HEALTH CARE INTERFACE IN THE FUTURE

The document of the RCPSC/CFPC: The Relationship Between Family Physicians and Specialist/Consultants in the Provision of Patient Care, deals with this subject in detail. (Copies will be provided to the delegates to the conference.)

5 THE IMPORTANCE OF ETHNICITY AND GENDER OF PHCP'S AND WORKERS IN RELATION TO THE DEMOGRAPHY OF THE POPULATION SERVED

ETHNICITY: Cultural factors are very important. Some physicians and health care institutions have blind spots for the needs of minority groups. Cultural awareness needs to be a part of everyone's medical practice because it leads to improved doctor patient relationships. Sensitivity to ethnic differences makes the physician's intervention more appropriate, more acceptable and more effective. There is a determined effort in Canada to provide more opportunities for aboriginal students to study medicine, but there has been no attempt made to match the ethnic origin of future physicians to percentages in the population.

GENDER: Women now represent 44% of the medical student population in Canada. A number of female/male differences have already been documented. Women are more interested in family practice, pediatrics and psychiatry, and less interested in surgery. They prefer group practice in larger centres and are less involved outside of the office. There is a stronger preference for alternate payment mechanisms among women physicians, and their incomes are lower. Female physicians work fewer hours than their male counterparts and see fewer patients, but spend more time (average 6 minutes) with each patient.

**SEMINAR AT LINCOLN COLLEGE, OXFORD, 30 AUGUST 1994
PRIMARY HEALTH CARE: PROFESSOR DENIS PEREIRA GRAY**

HISTORICAL BACKGROUND

Nineteenth century specialisation (Rosemary Stevens, 1966)

1892 Osler predicted extinction of the generalist

Role of the generalist 1911 Lloyd George Act; 1946 NHS Act; 1977 NHS Act.

Professional development of the medical generalist

1947 USA first ever college of General Practitioners

1952 UK College of General Practitioners (Fry et al., 1983)

1954 Canada College of General Practice (later Family Physicians) of Canada (Woods, 1979)

1961 Journal of the Royal College of General Practitioners (JRCGP) first generalist journal of record recognised by Index Medicus

1965 MRCGP examination

1982 NHS compulsory vocational training

Alma Ata Declaration (WHO & Unicef, 1978)

Turning point in strategy

International (WHO), but problems in definition and reconciliation with western health service organisation. A & E departments and GUM clinics are primary care but not general practice.

The nature of the discipline. Health services versus social services; pharmacists, education service, whole society.

Where to start?

Primary health care team, core team based in building and outer team.

Discipline

Six features: Primary care; family care; domiciliary care; continuity of care; personal preventive care; whole person care (Pereira Gray, 1978). 1990s addition: cost-effective care.

Facts and figures of primary medical care in the UK

see enclosure from *The Health Summary*

PRIMARY HEALTH CARE TEAM (PHCT)

Multi-disciplinary

Membership, core team in building, outer team visiting. UK pattern differing from Ireland and continent. More group practice (50% principals in South and West in groups of 5 or more doctors, fewer single handed). No fee for the doctor integrates.

Patient satisfaction

Jowell et al (1990) *British Social Attitudes*.

COST EFFECTIVENESS

Of 23 OECD nations UK spends in total less on health than all but Greece and Spain ie ranks 21st, but achieves comparable health statistics with say USA.

Population (98% cover) Cf 37 million Americans uninsured.

Approximate costs about £100 per head p.a. including drugs for 3.25 doctor plus 1.0 nurse consultations p.a.

Cost per medical consultation = £10.87 for 1991/2 including nurses, managers and secretaries, premises, transport, 24 hour open access and >90% of all medical care for asthma, hypertension, depression, and 93% care of elderly.

70% of contraception and immunisation rates at >90%, cervical smears at >80% eligible women.

INTERNATIONAL TRENDS

1. Progressively shorter stay in hospitals
2. More day care surgery
3. Miniaturised diagnostic techniques
4. Closed mental hospitals (2 in Exeter!)
5. Rising patient/consumer expectation and complaints
6. Rationing of public health services.

All six are progressive and international.

All six increase the responsibility of the GP and primary health care team.

SPECIAL ISSUES

Science of primary diagnosis

The environment (home and family) as cause of disease and as a factor in management.

Human values in medicine, confiding, trust, persuading change (Ettlinger and Freeman, 1981).

Relationship between physical and psychological factors, psychosomatic disease and somatisation.

PRINCIPLES FOR FUTURE DEVELOPMENT

1. Formal training programmes (NAHAT, 1994). MRCCGP for principals.
 - Competency assessment, and reassessment (recertification)
 - Quality assurance programme (Fellowship by Assessment; RCGP, 1990).
2. Purpose planned premises.
3. Multi-disciplinary team trained for purpose.
4. Desk top networked computers.
5. Research based policies; university departments of general practice and the RCGP.
6. Equal status with secondary care, recruitment, recognition, pay.

THE BASICS OF PRIMARY CARE

General practice in the United Kingdom is a fascinating phenomenon; a rich source of study and a dynamic experiment in Health Service planning.

Starting from modern theories about organisation and management of the arrangements of health services as advocated by the World Health Organization (WHO & UNICEF, 1978; Horder, 1983), it is possible to derive a series of principles which ought to be met in an ideal system of primary care.

IDEAL SPECIFICATION FOR MODERN PRIMARY CARE

Access to health care ought to be a right and not be restricted to those in the higher income groups. The primary health service ought to be used by virtually all the population. The service should be of high quality, be provided day and night by those trained for the purpose, and be able to handle the great majority of the health needs of the population without referral to specialists. It should be organised so that the high frequency of contact between patients and their doctors and nurses are used therapeutically to foster treatment. Health should be improved routinely through large amounts of scientifically validated personal preventative care for patients of all ages.

Health services all over the world are directing their policies to community (i.e. non-institutional) care, which usually means the home and family. So this care should be organised by doctors and nurses on family doctor lines, and should be provided in both medical centres and homes (Huygen, 1978). The costs must be reasonable as judged by the society served and be such that the country can afford.

The primary medical service ought to be comprehensive and manage all (or at least 80% of) the common physical and mental illnesses. It should be supported by a second tier of specialist services available only on referral and it ought to be provided to the general satisfaction of the population. Finally, the primary medical service should be multi-disciplinary with strong nursing involvement, including other health professionals like physiotherapists (Walker, 1990). It should be able to select and train its own recruits and be empowered to undertake a substantial research and development role to ensure standards are provided and that advances are made in the future.

EVOLUTION OF BRITISH GENERAL PRACTICE

General practice in the British NHS has evolved continuously since the 1911 Lloyd George Act. Fortunately, analysis according to WHO theory suggests it is much closer to the ideal than in most countries in the world, and that it anticipated many of what are regarded internationally as desirable features. This must be a tribute both to successive British governments, and to the Royal College of General Practitioners, and to the General Medical Services Committee of the BMA.

FACTS

Access to general practice in the UK is a right for all citizens regardless of age, sex, class, colour, or creed. It is probably the most widely used public service, as 98% of the population is registered through it. The RCGP, OPCS & DH (1990) found that it provides at least 3.25 face-to-face consultations per patient per year. General practice is focused on medical, psychological, and social needs, as the under-5s and the over-75s receive as many as seven consultations each per year (OPCS, 1991), with half of the later being provided in the home (OHE, 1992). Of adult women 72% see a GP every year and 15% of the whole population see a GP every two weeks (OPCS, 1991).

The emotionally frail get more time (Westcott, 1977) and those most socially deprived receive far more of the doctor's and nurses' time (Crombie, 1984). The service operates 24 hours-a-day with the vast majority of out-of-hours care being provided by fully trained general practitioner principals. Four years' training after qualification is legally required for all general practitioner principals.

General practice has modernised itself in information technology ahead of general practice in the rest of Europe and ahead of all other branches of British medicine: over 70% of general practices have some computerisation with half of all British GPs with a computer on their desk. The Read codes, now adopted for the whole NHS, were devised by a British GP (Read, 1986), and smart card technology giving patients their own medical record has been developed in a British university department of general practice (Hopkins, 1990; NHS Management Executive, 1990).

General practice is provided at a fixed predetermined cost to the government, which can budget accurately for it, and the costs of all professionals; premises, staff, equipment and expenses take 8% of the NHS budget for 90% of the contacts in the NHS (Secretaries of State, 1986). The drugs prescribed cost a further 10.3% in 1991 (OHE, 1992).

There is a large and growing amount of health promotion so that 90% of all British babies are immunised against five different diseases, two-thirds of all GPs provide cervical cytology to 80% or more of the women at risk, and most practices now know most of the blood pressures of their adult patients. Both child surveillance and geriatric surveillance are now part of the NHS contract for general practice.

The average duration of a general practice consultation is now just under nine minutes (DH, 1991). Even at only eight minutes, given an average 3.25 consultations per patient per annum, this equals 26 minutes a year, so for a family of four this is 104 minutes. Given an average 12-year registration with general practitioner by NHS patients, it follows that the average patient comes to see an average GP with a background of over 20 hours between that patient or a member of the family and the practice.

Over 90% of all infections in most parts of the body, and over 90% of all patients with all the most common diseases of our time are diagnosed and treated in general practice without referral to the hospital service eg asthma, depression, hyperlipaemia and hypertension. Most children never see a paediatrician after they are born and most of the elderly never see a geriatrician. On any day 93% of the over-75s in Britain are in the care of a GP.

Satisfaction levels as measured by objective external researchers (Jowell et al, 1990) are 12% dissatisfied with general practice, 15% dissatisfied with hospital admissions, and 30% dissatisfied with hospital outpatients.

CONCLUSION

Two recent publications from the Royal College of General Practitioners trace first the evolution of British general practice (Pereira Gray, 1992a), and secondly consider its future (Pereira Gray, 1992b). A few conclusions stand out. Most of the progressive trends have been led by the academic wing of general practice – either the Royal College of General Practitioners or the university departments of general practice, or both – so it is important to study what they are now saying.

Immediate priorities are funds for better buildings and supporting staff, with computer support. Secondly, research and development is now urgent if the ever-increasing responsibilities arriving in general practice can be efficiently and sensitively handled in ways that are fair to both patients and the doctors and nurses who work in primary care.

General practitioners learn best by seeing colleagues in general practice demonstrating working examples of good practice (Tudor Hart, 1975; RCGP, 1982). It follows that research training opportunities with paid time and the development of approved research general practices are two urgent priorities. So much is now being asked of general practice that more resources are required and money must follow the patient. Research can identify many of the origins of diseases, especially in the behavioural fields and it is also needed in the health services to find the most efficient methods of working.

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RATIONING, RESOURCES AND THE ROLE OF HEALTH ECONOMICS: ALAN MAYNARD

Introduction

Scarcity is ubiquitous but in the health care sector the issue of making choices about how to allocate resources is dealt with by a reluctance to be explicit about the criteria which should determine access to care and by the use of emotive language (eg rationing). At the level of popular public debate it is argued that demand (due to the expansion of expensive and usually unevaluated technologies, and the “greying” of the population) is rising faster than provision. These forces make ‘rationing’ inevitable. With the bulk of medical interventions of unknown cost effectiveness, the “rationing problem” could be mitigated by enhancing the knowledge base to ensure that inappropriate interventions are eradicated and effective treatments used¹.

The Doctor’s Role

Doctors in the UK-NHS have, because of legislation and delegation to their colleges and their trade union (the BMA), considerable professional power. They have not used this efficiently. Education processes reward those who can regurgitate accepted practices rather than those who analyse evidence and refer to the knowledge base. Training is poor: a recent survey showed that SHOs (the initial training grade) spent only 2% of their time on training and the scope for improving Continuous Medical Education for consultants is considerable.

A fundamental problem is the absence of training throughout the career to equip practitioners with both the skills to identify good practice in clinical research and the ability to synthesise critically evidence from the knowledge base. Altman² has argued that the primary purpose of clinical research is not to enhance knowledge but to develop curriculum vitae to facilitate career promotion! Poor research gets published because of poor peer review³. This defective material corrupts economic evaluation⁴ and clinical practice. It is remarkable that the problems have been well identified for decades but are yet to be mitigated effectively by professional regulation.

Prioritising Care

The objective of the NHS is to allocate resources on the basis of need, interpreted as being the ability of patients to benefit from care per unit of expenditure. To achieve this objective, physicians need to base practice on knowledge about the cost effectiveness of alternative interventions.

This principle is difficult to implement. Most interventions are unproven and there are great variations in practice within districts and regions and between countries. QALY league tables, Oregon prioritisation procedures and Dutch priority setting frameworks (Dunning Committee) are tentative and crude approaches to prioritisation⁵. Their great virtue is that they are explicit and they concentrate minds on the need to improve the knowledge base, the deficiencies of expert judgements⁶ and the defects in consensus conferences⁷.

It is necessary to research more to identify what works, and this is best done with spending on RCTs rather than the use of observational data⁸. It is also necessary to research into cost effective dissemination techniques⁹ and perhaps learn about how to change clinical practice from the drug industry.

Conclusions

The principle which should determine access to NHS care is the ability to benefit from it per unit of expenditure. Some who could benefit little at high cost will be deprived of care in

principle but in practice cost effectiveness data will inform but not determine resource allocation¹⁰.

Bradford-Hill advocated RCTs many decades ago. Cochrane anticipated the creation of knowledge based medicine in his 1972 book. Over 20 years later resource allocation is determined by “guess and by God” and scarce R+D resources are wasted on poorly designed trials. These practices perpetuate inefficiency in the use of society’s scarce resources and are unethical¹¹. It is hardly surprising that politicians’ reaction to these practices is to “reorganise” health care structures and create regulatory bureaucracies where professional control has failed. Such bureaucracies are of unproven efficiency as both politicians and clinicians do not like to be “confused” by facts!

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NOTES

1. There are many such interventions, eg in screening (L. Russell (1994), *Educated Guesses*, University of California Press); in the use of drugs for instance, to control cholesterol and treat depression (Freemantle N., Long A., Mason J., Sheldon T., Song F., Wilson C., (1993) Cholesterol: screening and treatment. *Effective Health Care* 6, School of Public Health, Leeds University), (Freemantle N., Long A., Mason J., Sheldon T., Song F., Watson P and Wilson C (1993) The treatment of depression in primary care. *Effective Health Care* 5, School of Public Health, Leeds University); in surgery (eg the treatment of “glue ears” Freemantle N., Long A., Mason J., Sheldon T., Song F., Watson P., and Wilson C., (1992). The treatment of persistent glue ear. *Effective Health Care* 4, School of Public Health, Leeds University) and obstetrics (Chalmers I., Enkin M., Keirse M.J.N.C.(eds), (1989). *Effective Care in Pregnancy and Child Birth*, Oxford University Press).
2. Altman DG., (1994), The scandal for poor medical research. *British Medical Journal*; 308: 293-4.
3. Smith R. (1994), Promoting research into peer review, *British Medical Journal*, 309, 143-44 and the special edition of the *Journal of the American Medical Association* on this topic (1994, July 12th).
4. Freemantle N, and Maynard A. Something rotten in the state of clinical and economic evaluations? *Health Economics* 1994; 3:2.
5. QALY league tables (Maynard A., (1991), *Developing the Health Care Market*, *Economic Journal*, 101, 1277-1286), (Drummond MF, Torrance G, Mason J. Cost effectiveness league tables: more harm than good? *Social Science and Medicine* 1993; 37: 1: 33-40), Oregon (Strosberg MA, Wiener JM, Baker R, Fein IA (editors). *Rationing America’s health care: the Oregon plan and beyond*, Brookings Institute, Washington D.C.), Government Committee on Choice in Health Care. *Choices in health care. Dunning Report*, Ministry of Welfare, Health and Cultural Affairs, Rijswijk, Netherlands, 1992.
6. Alvin Feinstein (1988) argued that “The agreement of experts has been the traditional source of all the errors through medical history”.
7. Abba Eban argued that “Consensus means that lots of people say collectively what nobody believes individually”.
8. Sheldon T., (1994), *Please bypass the PORT*, *British Medical Journal*, 309, 142-43.

9. Lomas J., (1993), *Teaching Old (And Not So Old) Docs New Tricks: Effective Ways to Implement Research Findings*, CHEPA Working Paper Series No. 93-4, McMaster University, Hamilton, Ontario.

10. As Victor Fuchs argued *Who Shall Live?* (1974) “At the root of most of our major health problems are value choices. What kind of people are we? What kind of life do we want to lead? What kind of society do we want to build for our children and grandchildren? How much weight do we want to put on individual freedom? How much to equality? How much to material progress? How much to the realm of the spirit? How important is our own health to us? How important is our neighbour’s health to us? The answers we give to these questions, as well as the guidance we get from economics, will and should shape health care policy”.

11. Inefficient practice deprives potential patients of care from which they could benefit!

RESOURCES; RATIONING; HEALTH WORKFORCE PLANNING; THE ROLE OF HEALTH ECONOMICS IN HEALTH CARE PLANNING: JORDAN J COHEN MD

RESOURCES

Workforce

- Oversupply
- Skewed specialty mix
- Inappropriate geographic distribution
- Nonphysician health care professionals

- Implications for medical education
 - Restrictions on residency positions
 - Disproportionate impact of foreign medical graduates
 - Service (patient care, education, research) needs must be addressed
 - Major restructuring of undergraduate education to foster generalist disciplines

- New linkages between financing of medical education and public policy goals
 - National physician workforce commission
 - All-payer funding

Financial

- Unsustainable increases in health care expenditures
- Lack of universal coverage
- Cultural resistance to limiting access to desired care
- Rationing inevitable

- Implications for medical education
 - New or heightened emphasis on:
 - Clinical resource management
 - Decision analysis
 - Team care
 - Clinical epidemiology
 - Population-based science
 - Information science
 - Group dynamics
 - Organizational behaviour

RATIONING

- Current rationing by social class, access to insurance
- Oregon experience
- Massive public education required to counter cultural myths
- New paradigm needed

HEALTH REFORM IN CANADA: MATCHING RESOURCES TO NEEDS

PRESENTATION BY DONALD J PHILIPPON PHD DEPUTY MINISTER OF HEALTH, PROVINCE OF ALBERTA

Dr Philippon will make a few comments on the structure of the Canadian health system, focusing on the incremental development of single-payer coverage for medical services, hospitalization and public health programs. He will outline how the historical development of the system has led to a high degree of public satisfaction with the quality of services but has also resulted in some limitations. A lack of effective management of resources from a system perspective has led to imbalance in resource allocations. Emerging health needs and cost pressures are accelerating reform efforts in all provinces.

There has been increasing recognition of the need for systems change in Canada during the past two decades, but change has been slow. There has recently been an acceleration of reform efforts. Though there is some variation in approaches among provinces, essentially all are proceeding within much the same conceptual framework.

Dr. Philippon will outline the key paradigm shifts which are emerging as the conceptual framework for Canadian reform efforts. These shifts include such things as:

- the increasing focus on population health rather than individual treatments;
- increasing independence and choice of consumers as partners in care decisions;
- increasing focus on effectiveness and outcome measures rather than compliance with minimum input standards;
- increased focus on health promotion and disease prevention;
- shift from independent sectors of health delivery to interdependent programs covering a broad range of services.

The presentation will then highlight recent reform efforts in Canada with a particular focus on reform efforts in the province of Alberta. Alberta has embarked on an aggressive reform strategy across all government programs. Changes are taking place more rapidly there than other parts of the country.

Dr Philippon will outline five similar reform initiatives which are central to the increased focus on matching resources to identified health need. These are:

- Health Goals
- Regionalization
- Downsizing inpatient care
- Increased community-based care
- Outcomes as the basis for funding and managing

A key feature of reform efforts is regionalization of governance structures for health delivery. This is occurring across all provinces in Canada. Multi-sector governance structures, responsible for a wide range of health services, are seen as a way to reduce unnecessary duplication, and allow flexibility in reallocation of resources to areas of highest need. They are also seen as a way to allow community-based priority setting in regard to resource allocation.

Another major system reform is the shift from institutional to community-based care. Canada has traditionally relied greatly on inpatient care as the mode for delivery of services.

This is changing greatly and there is a rapid and sizeable downsizing of inpatient beds along with an increase in community-based care.

Care decisions in the past have been made primarily based on tradition rather than on outcome assessment. There is a lack of consistent practice patterns. There is little cost-benefit analysis which recognizes the impact of individual decisions on overall resource consumption. Dr Philippon will outline the human resource implications of the reform efforts underway with particular emphasis on the implications of physicians. He will examine:

- new primary care models
- workforce adjustment strategies
- expanding concept of “gatekeeper”
- provider role in resource allocation
- new training requirements

Government has acted as the funder of services with the physician as the main gatekeeper and decision maker in regard to care delivery and allocation of resources at the micro-level. New models are being looked at for the delivery of primary care and for the delivery of specialized care in institutions. These new models require different skills and different organizational relationships between providers.

A transition from an institutional focus to a community focus creates many challenges for workforce adjustment. There are many strategies required to retrain and assist displaced workers.

The role of the physician as primary gatekeeper is undergoing change in Canada. There is movement to “teams” of health providers serving multiple entry points to the system. This requires legislative and regulatory change to allow for less restrictions in regard to scope of practice. Funding systems are also adjusting to allow for linkages to outcomes and population health status rather than being simply driven by activity. It is important that training of all health professionals changes to match future needs. All health professionals are having to adjust to a system under tremendous change.

**DIRECTIONS IN THE REFORM OF THE HEALTH CARE SYSTEM:
EDUCATION AND ROLES OF PHYSICIANS: ANDRÉ-PIERRE
CONTANDRIOPOULOS**

INTRODUCTION

Health care systems almost everywhere in the world are undergoing a crisis. This crisis which appears, at first sight, to be essentially one of funding is in fact more serious (Lazar, 1990). It is at once a funding crisis, a regulatory crisis, a knowledge crisis and an ethical crisis.

The nature of the crisis is such that the paradigm of intervention on which current public systems of health insurance are based has been the focus of a growing controversy. A new paradigm is emerging which calls for the renewal of the roles, functions and responsibilities of physicians (Contandriopoulos, 1994).

Medical schools are faced with the challenge of rapidly adapting the education and training of physicians so that they may continue to treat the diseases of their individual patients efficiently but also participate in the promotion of population health and well being, and actively contribute to the re-organization of the health system based on the new emerging paradigm of population health.

I The Health Care Crisis

All aspects of the health care system are being affected by the health care crisis (figure 1).

Funding crisis: there is a strong tendency, in all developed countries and independently of health care expenditure levels, to control health expenditure (both private and public). Two arguments are used, the first being the poor shape of public finance (public debt, economic recession, strong movement in favour of tax reduction . . .). The second argument is the increasing opportunity cost of health care expenditure.

Regulatory crisis: the strategies and mechanisms used over the past twenty years to control health care expenditures while maintaining equal access to health care services appear less and less efficient. Market mechanisms and greater technocratic control over the decisions of all parties involved (managed care) have both proven ineffective in modifying the tendency towards an increase in health expenditures and their decreasing impact on the health status of the population.

Knowledge crisis: the tremendous progress in our understanding of biological mechanisms and in the development of means of intervention (drugs, micro-surgery, transplants, genetic engineering, diagnostical methods) co-exists with the awareness that there is a limit to the ability of medical science to improve the health of populations. Questions are being raised about the scientific basis of medical science and about the efficiency of the technological apparatus currently used. (Evans et al., 1994).

Ethical crisis: Confronted with the growth of knowledge and the development of new means of intervention (genetic engineering, in-vitro fertilization, organ transplants, etc.) on the one hand, and with the choices imposed by the funding crisis, on the other, health care professionals, policy makers, and the population at large are searching for guidelines which law, ethical rules and codes of ethics can no longer provide.

A fundamental transformation is needed to solve these crises. It constitutes a profound rupture from the existing order. Physicians' roles, responsibilities and functions will be massively affected (National Conference, 1993). But while there is a general consensus concerning the need for a reform, there is no consensus as to its form and nature. The crisis

demonstrates that there cannot be a simple solution. One must realize that the health system, like all social systems, is both complex and paradoxical.

II The Paradoxical Nature of the Health Care System

The health care system can be seen as a sub-system of the health system (figure 1). At the core of the health care system is the utilization process which can be described as the encounter between the ill person's trust and the physician's competence and conscience. Without a true understanding of this process and of its relationships with other components of the health system, it is difficult to decide how and where the reform should begin.

The efficiency of the health care system is largely dependent upon what occurs between patients and health professionals and thus, upon the behaviours of individuals acting in a given society, at a given time and within a specific technological, economic, political and social environment.

Individuals behave according to their belief systems which derive from their interests, goals, and outlooks on life, death and pain. Inevitably, these belief systems constitute a very complex set of perspectives that are based, although not explicitly, on different outcome criteria aiming at different units of analysis (treatment of individual illness, improvement of population health, personal growth, etc.), within different timeframes, and often largely influenced by available information (life expectancy, mortality rate, utilization rate) that barely reflect the various goals of the individuals involved.

Under these circumstances, measuring the efficiency of the health care system and determining its underlying factors is pointless unless one recognizes, as Cameron (1986) proposes, that the concept of organizational efficiency, and all the more that of interorganizational system efficiency, is in essence paradoxical: "Organisational effectiveness is inherently paradoxical. To be effective, an organisation must possess attributes that are simultaneously contradictory even mutually exclusive" (p. 545). Cameron uses Slaatte's definition to develop his thought further:

"A paradox is an idea involving two opposing thoughts or propositions which, however contradictory, are equally necessary to convey a more imposing, illuminating, life-related or provocative insight into truth than either factor can muster in its own right. What the mind seemingly cannot think it must think; what reason is reluctant to express it must express" (Slaatte 1968, p. 4).

"Paradox, then, involves contradictory, mutually exclusive elements that are present and operate equally at the same time...no choice need be made between two or more contradictions. Both contradictions in a paradox are accepted and present. Both operate simultaneously." Cameron, (1986, p. 545). When one of the poles of a paradox prevails at the expense of the other, a dysfunctional situation occurs (Miller, 1993).

Once the "inherently paradoxical" nature of the health care system has been recognized, it is easy to understand why there is no consensus as to its reform. The very nature and complexity of these problems prevent them from ever being settled definitely through accepted scientific approach and research. They belong to what Schumacher (1977) calls divergent problems as opposed to convergent problems which "deal with distinct, precise, quantifiable, logical ideas that are amenable to empirical investigation. Convergent problems are *solvable* problems, and as they are studied more rigorously and more precisely, answers tend to converge into a single accepted solution. Divergent problems, on the other hand, are problems that are not easily quantifiable or verifiable and that seem not to have a single solution. The more rigorously and precisely they are studied, the more the solutions tend to diverge, or to become contradictory and opposite." (Cameron, 1986, p. 548).

It is not surprising that most of the resources devoted to research bears on this type of question but the remaining questions, those that could enlighten the choices facing society are divergent problems. "The moment we deal with problems involving the higher levels of Being (life, consciousness and self awareness) we must expect divergence, for there enters, to however modest a degree, the element of freedom and inner experience. In them we can see the most universal pair of opposites, the very hallmark of life: growth and decay. Growth thrives on freedom . . . while the forces of decay and dissolution can be contained only through some kind of order. These basic pairs of opposites Growth Versus Decay and Freedom Versus Order are encountered wherever there is life, consciousness, self awareness." (Schumacher, 1977, p. 125).

In the field of health, the complexity at play between the various players and factors affecting individual and population health can be illustrated by a set of paradoxes that characterize the environment in which physicians practice.

III The Paradoxical Environment of Medical Practice

The health system is a complex environment involving a number of paradoxes. Physicians need to be aware of these and know how to use them in the permanent trade-offs and negotiation with other physicians, as well as with their patients and other parties involved in the system. There is no definite answer to any of the contradictions contained within each paradox. For physicians to participate actively in the permanent negotiation process that structures the health care system, they must be given access through education and training to the knowledge, concepts and abilities that will help them appeal to higher values (compassion, justice, equity) to "transcend" contradictions, and play a central part in the health care system of the future.

Figure 3 shows the main paradoxes of medical practice in relationship to the four great poles that define the health care system.

THE KNOWLEDGE POLE

1. Specialization of Knowledge — The Person as a Whole

The exponential growth of biomedical knowledge leads to increased specialization on the part of physicians. On the other hand, it is a widely accepted fact that illness affects the whole individual (physical, mental and social) and thus that one's life and well-being is not simply the sum of the good working condition of each of one's organs.

2. Mind — Body

There is a complex set of relationships at play between the body and the mind. Neuro-psycho-immunology studies the mechanisms through which the immune system and the central nervous system communicate. The various cultural representations of illness, cure and health affect the way in which illness manifests itself and evolves. Within this perspective, the opposition between the object and the subject disappears.

3. Illness — Health

An improvement in the indicators of the health status of a population is not necessarily related to a proportional decrease in the health problems for which members of a population seek help from the health care system. This is so not only because improved health cannot immediately justify a decrease in the provision of care, but also, more fundamentally, because health is not simply the opposite of illness (De Vries, 1981; Canguilhem, 1966).

There is no symmetry in the relationship between health and illness. While it is true that an

untreated disease can affect one's health, a global improvement in the indicators of a population's health does not necessarily mean that there is less illness or a lesser demand for health care. Although they are more healthy, the Japanese are not less ill than Canadians, and women no less than men.

The concept of health encompasses several realities that intersect only in part. Thus, describing the health of a population using indicators based on the concept of mortality (life expectancy, standardized mortality rates, etc.) leaves one with a perception of health that is different from that of an individual who is experiencing pain or anxiety over feelings of sickness. By choosing the latter's perspective as a basis for discussing health issues, however, one leaves out a number of biological functions (in terms of organs, tissues, cells, and molecules) that can be identified through modern diagnostic methods, and rectified using biological technology.

Yet, in themselves, these biological dysfunctions are not necessarily meaningful. "In choosing any frame of reference, there is always the danger of excluding relevant phenomena that do not fit within the frame. In the psychochemical frame of reference, phenomena like 'will power' or 'to give meaning', which our own understanding of health leads us to consider relevant, are not even seen" (Lafaille R. and Leber J., 1991, p. 19).

All this raises many questions: what is normal and what is pathological (Canguilhem, 1966; De Vries, 1981)? What is health and what is disease according to individuals, professionals, and society? It also touches on the relationships between the two sets of concepts, which leads us back to our basic conceptions about the world and knowledge. "It is difficult to define the paradigm, or worldview, of modern medicine without an understanding of the premises of 'pathology' (De Vries, 1981, p. 16)".

4. Scientific Biomedical Research Approach — Complexity of Life, Health, Illness

The dominant model in biomedical sciences is the positivistic model which postulates simple causal relationships between cause and effect and which is well adapted to convergent problems but cannot solve complex problems that are in essence divergent.

THE RESOURCES, ORGANIZATIONS, AND SERVICES POLE

5. Health Care — Determinants of Health

The health care system is one of many determinants of health. In difficult economic times its development may prevent society from investing into social programmes, and, even more so, into wealth-producing activities which in time have a greater impact on health and welfare in general than the health care system.

6. Stability — Innovation

Stability reduces the stress of uncertainty and is therefore a sought after feature of the health system and its constituent organizations. At the same time, however, innovation which bears progress can only be born from change.

7. Power of Intervention — Uncertainty of Result

Progress in intervention capabilities associated with technological development generates substantial and ethical uncertainties.

Evaluating and controlling technology will not in themselves reduce these uncertainties. The information gathered through evaluation must be part of a new and generalized argumentative process in which physician will be accountable for the use of resources and its outcoming result.

THE REGULATION AND METHODS OF INTERVENTION POLE

8. Control — Autonomy

The public funding of health services, the responsibility of the State with respect to the health of the population, the rising cost of the health care system, and economic constraints have given rise to a current of technocratic control in the management of the health care system and to standardized professional practice (budget freeze, managed care, guidelines, evaluation councils, etc.). The inherent uncertainty of clinical activity, however, implies that professionals must have as much autonomy and independence as possible in making clinical decisions and yet remain accountable.

To allow physicians' clinical judgement to be as independent as possible from external influence, interference from economic concerns and organizational constraints must be kept to a minimum. This entails, among other things, that:

- physicians' payment should not depend, as they do now, on the number of services provided, but more widely, on the professional competence demonstrated throughout the caring process (COREPS, 1980);
- physicians' remuneration for their professional activity should be dissociated from the operating costs of their practice or clinic, as well as from the financing and depreciation of equipment;
- physicians should participate in the decision-making process about the organization and funding of their local health care system and be accountable for the health outcome of their services.

9. Scientific Knowledge — Clinical Decisions

Traditionally, medical science is based on the idea that disease is the result of a quantitative disruption in one of the functions of a living organism. Through the use of scientific methods, it is possible to analyze and discover the cause of this disruption, and to act upon these so as to restore normal functioning.

In this positivistic view of the world, progress lies in the constant refining of technologies that allows us to observe biological phenomena and act upon them. This notion has been the source of major developments in biomedical science. On it rests the legitimacy of current health care systems.

But clinical expertise involves more than the mechanical application of available scientific knowledge. The context of uncertainty in which clinical decisions are made due to the inherent complexity of life, illness, and health will never be eliminated by biomedical science.

Given the fact that the knowledge on which clinical decisions are based is relative and often uncertain, it is essential for physicians to maintain a critical attitude towards their own judgements and those of others. The idea is not to establish means of control to ensure that the rules of good practice are being respected, but rather to create a context that strongly encourages constructive criticism (McIntyre and Popper, 1983) and the systematic integration of scientific research results along with individual experience. The right to practice should be conditional to participating in this permanent critical process. This is the price that the medical profession and all other professions must pay in order to maintain their prestige, credibility, and autonomy.

This implies that professionals be allowed to work in an environment that fosters critical *a posteriori* discussion of clinical decisions. Clinical competence must take into account the relationship between physician and patient (compassion, empathy), the meaning of an

illness in the eyes of the patient (psychosomatic illness) and the various cultural representations of an illness and of its various forms.

10. Clinical Time Frame — Environmental Factors Time Frame

Environmental factors are slow to act on the health of a population and on the occurrence of individual illness. Their effect on health may take several years whereas the impact of medical science on illness is rapid. In the former case, the potential outcome will be felt by the population in the long run. In the latter case, the results are concrete and must reduce the illness-related pain and anxiety experienced by an actual person here and now.

THE ETHICS AND VALUES POLE

11. Bio-Ethics — Macro Ethics

On the one hand, the physician is responsible for doing everything that is possible given his knowledge, his abilities, available technology, and cultural environment, to solve his patient's health problems. The patient's needs and the capacity to intervene are the only limits to his decisions. The ethical questions facing him have to do with the uncertainty of diagnosis, and with treatment choice, effectiveness and side effects: Should one try and keep a 600 gram embryo alive? Should the vital functions of someone who is in a deep coma be maintained? Should one attempt a transplant on a diabetic elderly patient suffering from a heart condition? How long should cancer treatment be pursued? On the other hand, given the resources which society allocates to the health care system, physicians are expected to keep in mind that the resources mobilized in caring for their patients may not be used otherwise to care for other patients at other times. This social responsibility implies that physicians be aware of the economic constraints and of the consequences of their clinical decisions on the allocative equity between different social groups and age groups.

12. Equity — Freedom — Efficiency

Decisions concerning the funding and organization of the health system cannot be based on efficiency alone. The social value of a decision also depends on its consequences with respect to equity and freedom.

IV - Medical Education and Professional Organization

For physicians to fulfil their role in the health care system of the future - that is for society to be convinced that they are treating their patients in the best possible way given the resources allocated to the health care system, the collective wealth, and the relative value of each medical service in relationship to other determinants of population health - calls for a review of physicians' training and education and for the reorganizing of public and self-regulation of medicine (Lomas and Contandriopoulos, 1994).

Acknowledging the complex and paradoxical nature of the health care system means that society will expect and demand more from medical science in the 21st century than ever before.

Table 1 is an attempt to show the fields of knowledge that physicians will need to master as well as the abilities that they will need to have in order to respond to the expectations of society. It also indicates some of the features to be integrated in the structure and regulation of the health care system as well as in the public and self-regulation of medicine in order to create an organizational infrastructure in which physicians will be encouraged to play their role according to social expectations and to the various representations of health, illness and their determinants.

TABLE 1: MEDICAL EDUCATION AND REGULATION

PARADOXES	EDUCATIONAL CONTENT	SKILLS	PUBLIC AND SELF-REGULATION OF MEDICINE
Complexity of the health system	<ul style="list-style-type: none"> - System thinking - Broad scientific, humanistic and historical culture 	<ul style="list-style-type: none"> - Negotiating skills - Self learning - Team work 	
KNOWLEDGE POLE 1. Specialization of Knowledge/The Person as a Whole	<ul style="list-style-type: none"> - Bio-medical disciplines and a good education in social and psychological disciplines 	<ul style="list-style-type: none"> - Communication - Leadership 	Interdisciplinary team work
2. Mind/Body	<ul style="list-style-type: none"> - Holistic view of the relationship between physiological and psychic functions - Neuro-psycho-immunology 	<ul style="list-style-type: none"> - Active listening - Cultural awareness - Attention to phenomena such as pain and the recovery process 	Criteria of selection for admission in medical school should be changed
3. Illness/Health	<ul style="list-style-type: none"> - Limits of medicine - Determinants of health - Social sciences - Health promotion 	<ul style="list-style-type: none"> - The patient seen as a partner 	Replace specialization and hospital based training with primary care physician and community based training
4. Scientific Biomedical Research Approach/ Complexity of Life, Health, Illness	Epistemology of science	Qualitative and quantitative research skills	<ul style="list-style-type: none"> - Use of problem based learning in medical schools
5. Clinical Decisions/Scientific Knowledge	Scientific method (power and limits)	Critical thinking Patient's advocate	<ul style="list-style-type: none"> - Replacement of fee for services with payment based on time spent in professional activities and responsibilities and adjusted according to experience, speciality, etc.
RESOURCES, ORGANIZATIONS, SERVICES POLE 6. Health Care/Determinants of Health	Management Health economics		<ul style="list-style-type: none"> - Global cap on health expenditure - Decentralization - Downsizing in terms of numbers of hospital and beds - Physician manpower planning and reduced number of physicians
7. Stability/Innovation	Organizational theories	Managerial skills	<ul style="list-style-type: none"> - Annual resource allocation revised according to results - Continuing experimentation and public disclosure of trials and errors
REGULATION POLE 8. Power of Intervention/ Uncertainty of Result	Competence in information search and retrieval	Quality improvement	<ul style="list-style-type: none"> - System of periodic re-certification of physicians - Strong technocratic control at macro-level: Global cap on health expenditure
9. Control/Autonomy	Evaluation methods		<ul style="list-style-type: none"> - Public funding - Global budgeting per region - Autonomy in clinical decision making and accountability for results - Physician as gatekeeper
10. Clinical Time Frame/ Environmental Factors Time Frame	Management of the consequences of chronic illness		<ul style="list-style-type: none"> - Systematic and continuous evaluation of long term effects of intervention - Long term cohort studies
11. Bioethics/Macro-Ethics	Moral and philosophical foundations of ethics		Public discussion and explicit statement of general principles (universality, accessibility, comprehensiveness, etc.) of the health care system
12. Equity/Freedom/Efficiency	Political science and public choices		Democratic decision-making on intersectorial allocation of resources

The table conveys the extent of the changes called for in medical training and in the reorganizing of the health care system and makes one realize how different the new physician will be from today's physician.

The following is a series of guiding principles for the needed transformations:

1. Public funding of the health care system;
2. Universal coverage;
3. Free access to health care services;
4. Professional freedom;
5. A large degree of freedom of choice for the population;
6. Decentralized decision-making with respect to the organization of the health care system and the provision of services;
7. Allocation of resources based on outcome (emphasis on continuous experimentation and public disclosure of successes and errors in a public argumentative process);
8. Changes in medical education (criteria of admission, humanistic culture, team work, etc.);
9. Less physicians and greater use of highly specialized technicians within an interdisciplinary teamwork approach;
10. Physician (and professional) payment based as much as possible on outcomes (no more fee for service);
11. Regular public discussions of the impact on health of all policy options presented by the government.

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Figure 1: THE CRISIS OF THE HEALTH CARE SYSTEM

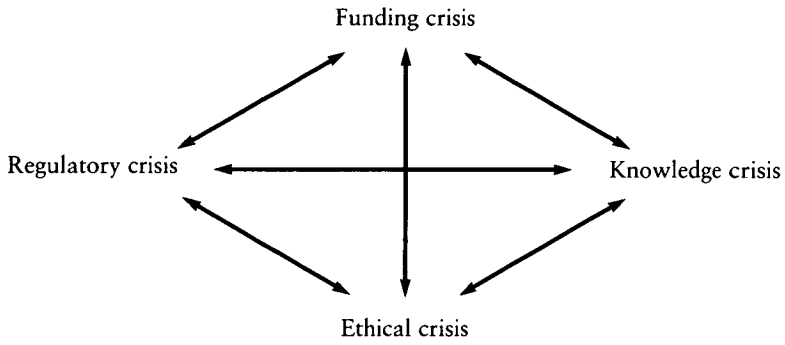
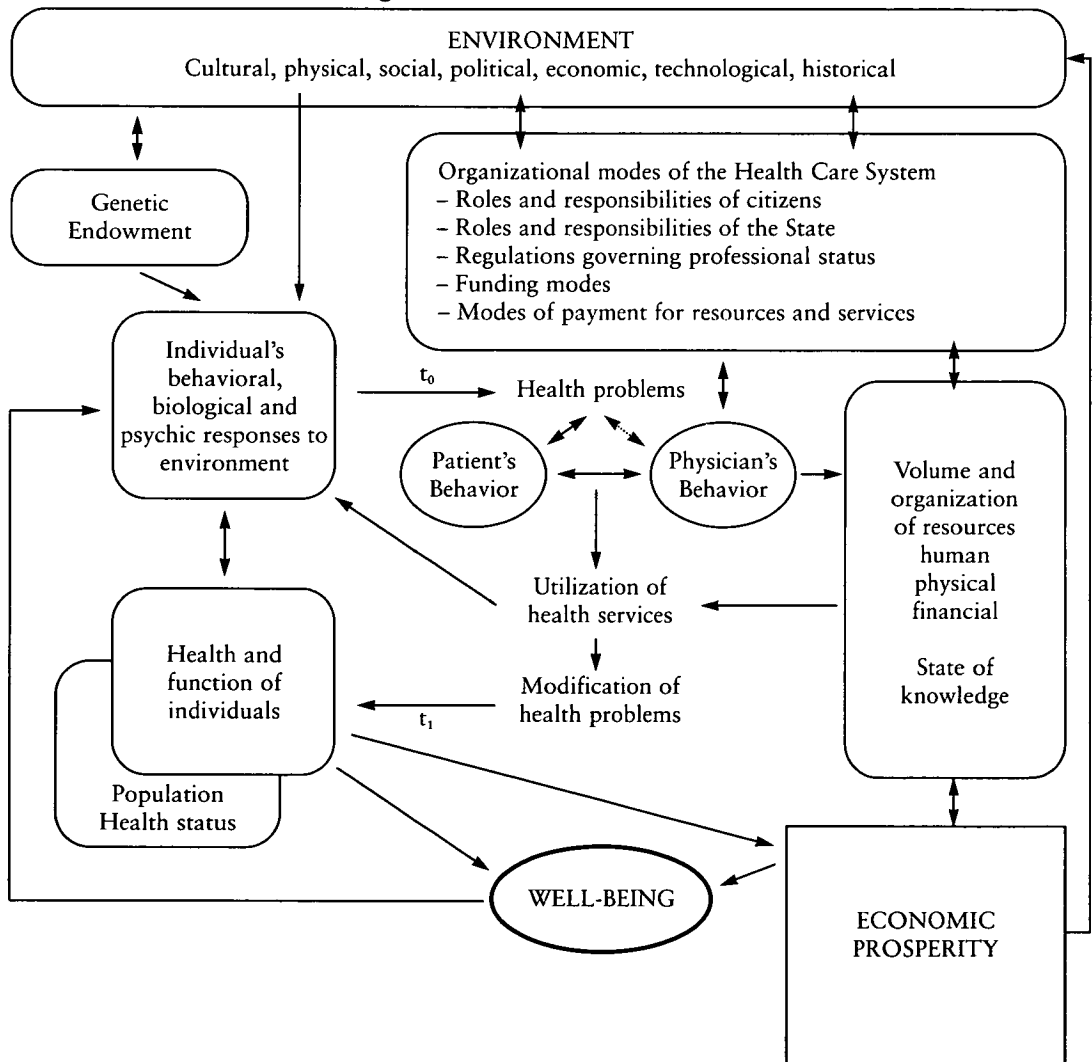


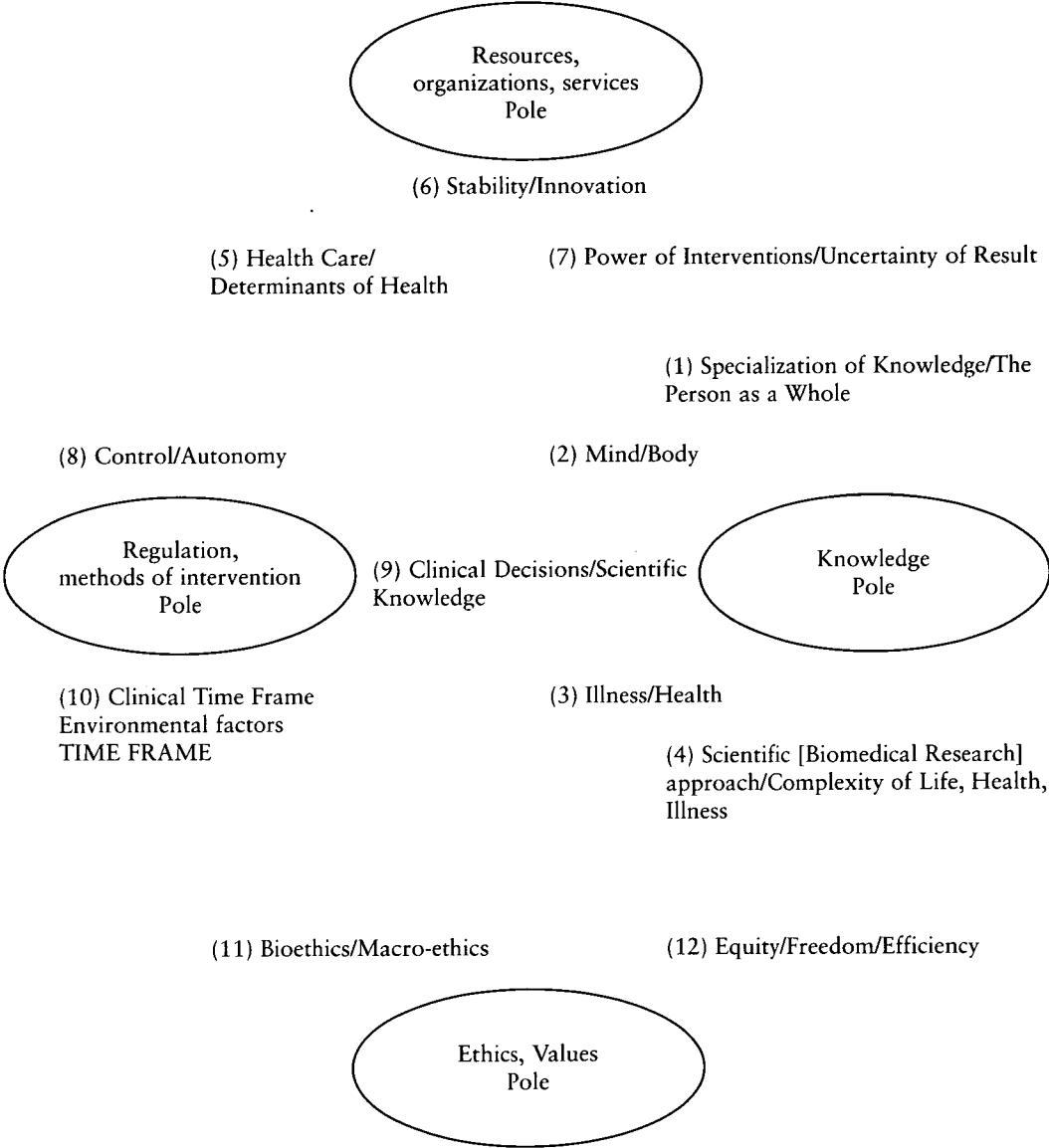
Figure 2: THE HEALTH SYSTEM



Source: Adapted from Evans et al. (1994)

© A P Contandriopoulos, GRIS, 1990

Figure 3: THE PARADOXICAL ENVIRONMENT OF MEDICAL PRACTICE



**THE COMPUTER REVOLUTION, HEALTH CARE REFORM AND ITS
MANAGEMENT: DON E DETMER MD**

TOP 4 High Performance Computing Challenges in Medicine's Information Superhighway

I. Computer-based Patient Record - the cars; trucks

- a) software
- b) hardware
- c) standards and classifications for (a) and (b)
- d) estimated date for success 2000

II Telemedicine and Networks - Infrastructure - the roads; bridges;

III Decision-support systems - the engineering intelligence

- a) medical knowledge bases - Medlars; human genome
- b) expert systems
- c) regional data bases
- d) health services research/outcomes

IV Financing - the gas/petrol

TOP 4 Leadership/management challenges for health care system to benefit from the revolutions of managed care and information technology - balancing the best of the old with the best of the new

I New organisational structures to achieve transformation gains rather than typical incremental benefits

II Preserving the core value of service to the suffering, preserving health, and giving compassionate care

III Developing systems to define value of health care services - how much improvement in quality and quantity of life as a function of investment

IV Leadership capable of managing to new behaviours required for success in next iterations

THE IMPACT OF READILY AVAILABLE INFORMATION AND ITS DISSEMINATION UPON THE BEHAVIOUR OF DOCTORS, HEALTH CARE WORKERS AND PATIENTS

THE EXPERIENCE OF A CANADIAN TEACHING HOSPITAL

At Kingston General Hospital we believe that “facts” (information) provided to everyone will lead us to provide quality care to our patients within the resources available. We try to make information the cornerstone of the decision making process for physicians, other health care workers, patients and their families. In my presentation, I will present four examples: joint practice committees, collaborative care planning, utilization management, and patient education examples.

Joint Practice Committees

In 1992, Kingston General Hospital established its first formalized joint practice committees to bring together, predominately, medicine and nursing to manage certain selected budgets (pacemakers, operating room suite, end-stage renal...) and enhance multi-disciplinary functioning (Intensive Care Unit) through the sharing of common information. There are now twenty-three in various stages of development. The impact to date has been:

- increased understanding and support of different professional roles as they try to provide quality patient care;
- emphasis on “who can best do this” rather than “X should do this”;
- resource management is now a team effort and resources have not been exceeded;
- diagnostic tests have been reduced;
- patient education has been enhanced;
- transfer of function between professions.

Collaborative Care Planning

Collaborative Care Planning (CCP) is a patient-centred process that focuses on the achievement of patient outcomes within effective and appropriate time frames and resources. It addresses the entire episode of care (pre-admission to return to clinic visit), bridging all clinical settings in which the patient receives care. Through a multi-disciplinary, cross-functional, collaborative approach practice guidelines are developed which make explicit the usual events, activities and outcomes that a specific patient case type should experience during their hospital experience.

Three project goals have been established: the achievement of expected patient outcomes; the promotion of interdisciplinary collaborative practice; and the promotion of patient satisfaction. Practice guidelines for four patient case types are being developed: uncomplicated elective caesarean section (ECS) and infant; uncomplicated transurethral resection of the prostate (TURP); uncomplicated acute myocardial infarction (AMI); and end stage renal disease (ESRD) (pre-dialysis to six weeks post-establishment on a treatment modality).

The outcome of making available and disseminating CCP information, resulted in a high level of support and involvement of physician at CCP Team meetings. Team meetings were consistently attended and physicians played an active and critical role in the development of the plans of care. Physician members of the CCP Teams also developed a profound appreciation of the effort spent by other health care team members in actualizing a physician’s order; such a statement as “I never knew all this actually happened!” was heard.

During the development of the plan of care, information on the systems and process supporting care across the continuum of care was discussed and shared. As a result of this dissemination of information, team members developed an acute appreciation of the issues encountered by their peers, their practices became more relevant, and the barriers between departments began to dissolve.

Patients have also participated in the pre-testing of a patient education booklet that is being developed from the multi-disciplinary plan of care. All patients indicated that the booklet contained relevant information that helped them to understand the events of their hospital experience, plan for their care upon discharge, and to become partners with the team in working towards the achievement of their treatment goals.

Based upon our experience, the sharing of information with physicians, health care workers and patients in this project has and will continue to impact positively upon the organization and the care provided.

Utilization Management

In the fall of 1989, the Kingston General Hospital made a formal commitment to establishing a comprehensive utilization review process. Given the importance of data as a building block for establishing effective utilization review activities, priority was given to addressing issues associated with data timeliness, quality, access and education.

The issue of data quality was addressed through the establishment of an education process that brought physicians (by service) to the Patient Records Department for a presentation that focused on defining such things as case mix (CMG) assignment and the importance of information recorded on the front sheet. These education sessions also became part of the orientation process for newly arriving physicians in addition to residents and house staff.

A uniquely developed peer hospital database supports the development, identification and implementation of proactive educational models that assist clinicians in understanding what specific procedural and diagnostic average length of stay (ALOS) data is averaged to form overall CMG ALOS and how to apply this knowledge in the development of case mix based resource management.

With the exception of some minor adjustments to accommodate local realities, this real utilization data formed the basis for deriving an acceptable bed reduction/reallocation plan for the Kingston General Hospital and Hotel Dieu Hospital combined that was necessitated by substantial budget driven bed closures. Not surprisingly, what became immediately apparent was that this bed reduction/reallocation plan, produced through a process governed by sound principles and based on fact not perception, was far more palatable to the medical staff in spite of the fact that the brunt of the bed closures fell on one department.

Patient Education – Diabetes and Dialysis

Over the past few years, highly developed patient education programs for diabetic and dialysis patients have been developed. Both these programs, through the presentation of information using adult education techniques, have resulted in increased quality of life, improved health status and increased independence for our patient.

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Kingston General Hospital

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Canada

**MEDICAL EDUCATION FOR A NEW MILLENNIUM:
DR CAROL A ASCHENBRENER**

The role of medical education is to prepare physicians to meet the needs of the people they serve – the individual needs of patients and the collective health care needs of society. As the needs have changed, there have been many calls for dramatic change in medical education, most unheeded. A new health care system is emerging in the United States, driven by public demand for customized service, value and accountability. This new health care system will be customer focused and will emphasize epidemiology, wellness and prevention, measurement of outcomes, and integration of services. It will be information intensive, bringing better decision support tools and unparalleled challenges to confidentiality.

Assumptions about the context of US health care and medical education in the 1990s:

- slow growth of the economy, resources tightly controlled
- dominance of large, integrated health care systems
- majority of population enrolled in managed care plans
- increased competition for public funds
- most physicians employed
- weakened role for accreditation
- unceasing, unpredictable change

The traditional mode of curriculum planning has been for faculty to decide – individually or collectively – what discipline-based content students should know, then demand more time in the curriculum for didactic sessions. In the last 25 years, many schools have tinkered with the structure of the curriculum, some also with the content. The process of medical education, however, has remained one in which the “expert” decides what should be learned and designs experiences for learning, never assessing customer needs and satisfaction or process outcomes.

What is needed now is transformation of the educational process to focus on the needs of students and of their future patients and employers; all three groups are the “customers” of the educational process. The first step is to identify, through systematic input from patients and physician employers, the knowledge, skills, behaviours and attitudes that physicians will need for the future. For example, to provide high quality, cost effective service in a managed care environment, physicians must be able to educate people about wellness and prevention, design interventions that will prevent health problems, gather information systematically, analyze and synthesize information, choose best practices, enlist the patient’s participation in the prevention and treatment interventions, monitor critical outcomes, use resources wisely, and contribute to the common good.

After identifying critical needs, medical educators must next design a student-focused, resource sensitive educational process to meet those needs. Skills needed for the future that are not currently emphasized in the medical curriculum include systems thinking, an understanding of people, cultural awareness, teamwork, comparison of best practices, behaviour modification, and practice management. Educators must also create a learning environment that stimulates curiosity, self-directed learning, continuous improvement, use of information technology, and shared accountability between teacher and learner for educational outcomes.

It is not enough to design and implement a needs-based educational process. Educators must

also incorporate ongoing, systematic measurement of outcomes, including customer satisfaction, by seeking input from at least students and employers. They must regularly assess changing needs. And most importantly, educators must continuously improve the educational process based on the information gathered about outcomes, satisfaction and changing needs.

Radical transformation, not tinkering, is needed in medical education. Forces pushing for change in the educational system include: public demand for value and accountability, increasing role of government, changing population demographics, explosion of information technology, changing demographics and needs of students, emerging ability to identify genetic predisposition to disease, and constrained resources. Barriers to change include tradition, resistance to change, fear of losing status or resources, lack of faculty preparation for different roles, and hierarchical, discipline-based structure of most medical schools.

Function must drive structure in health professions' education for the future. It is increasingly clear that the old structure will not serve us well. Options for a new structure will be explored.

**THE FUTURE STRUCTURE AND CONTENT OF THE MEDICAL CURRICULUM:
BARRIERS TO CHANGE: RICHARD L CRUESS**

“Academic life is a world in motion. Some changes revolutionize fields of study; occasionally new subjects are born; some innovations are ephemeral and quickly forgotten. New ideas can make life miserable for the many who have a stake in the old ways, generating conflict between the adherence of the old and the new. Every scholar has to face these fundamental challenges during his or her lifetime. It is at once a burden, a challenge and one of the attractions of academic life.”

Rosovsky, Henry; *The University – An Owner’s Manual*.
W W Norton & Company, New York, 1990, Page 163

The medical curriculum in most of the world is elaborated by the academic community with varying degrees of evangelic fervour. The freedom to set the curriculum is seen as basic to university independence but, as is particularly true at the present time, societal pressures and needs influence both its form and its content. In addition, the barriers to change arise within the medical professional and in particular its academic members.

The following propositions are put forth for discussion.

- 1) The right to set the curriculum is a fundamental academic freedom and must be maintained by the universities.
- 2) Universities must, as they always have, respond to external forces including new opportunities and societal needs.
- 3) The barriers to change within universities (and to some degree the medical profession at large) are inevitable and must be understood in order to be overcome. Some degree of conservatism is probably worthwhile if one takes the long view of the evolution of the practice of medicine.
- 4) The place of research in the medical curriculum is complex. The following proposals are made:
 - a. Universities are responsible for producing the next generation of investigators in all recognized disciplines (classic biomedical research, psychosocial research, health services research, etc.)
 - b. At the present time, some faculties of medicine have sufficient strength in research to be classified as “research intensive”. In many other faculties, the quantity and quality of research is much less. There has been a gradual concentration of more and more resources into the research intensive universities and a relative diminution in the remainder.
 - c. Research intensive universities have a dual obligation. They must both ensure the future of biomedical research and make certain that all graduates are equipped to incorporate future research into their everyday practice. They thus will design their curriculum with this in mind and must have extensive exposure to research at all levels.
 - d. Non-research intensive universities must provide sufficient exposure to their students so that they may arouse interest in students who may wish to pursue a research career. However, their major role is to ensure that all graduates can evaluate the broad range of research applicable to the practice of medicine so that they may change their practice as new knowledge becomes available.
- 5) Community based practice including the care of the chronic sick represents a major societal need which will actually increase in the future. All faculties have an obligation to

provide first hand experience to students of all levels in order to meet this obligation.

6) The same is true of medical audit/quality assurance. All faculties have an obligation to provide their graduates with contemporary skills in outcome measurement and with the ability to acquire new skills as they are developed. At the present time, contemporary skills go under the heading of "Medical Audit/Quality Assurance". There will undoubtedly be new terms and new techniques in the future, and as these become accepted, they must be included in the curriculum.

**U.S., CANADA, U.K. SEMINAR: 27TH AUGUST - 3RD SEPTEMBER 1994.
LINCOLN COLLEGE, OXFORD**

Session: "The training of doctors in research, community-based practice and continuing education, U.K."

Crucial to any health system are the individuals responsible for the delivery of health care particularly those with a medical qualification. In the UK, since the middle of the 19th century the content and standards of medical education have been under the control of the General Medical Council. This ensures that the training of doctors satisfies certain minimum requirements through inspection and monitoring of examinations, monitoring of syllabuses, and the inspection of medical schools and universities. Undergraduate medical examinations are under the control of the universities and medical schools. Uniform standards are ensured by exchange of external examiners. Postgraduate and continuing medical education is also influenced by the GMC, by the Postgraduate Medical Council and most importantly by the Royal Colleges and their faculties. These are responsible for ensuring that individuals wishing to specialise have appropriate standards.

The GMC has usually been forward-looking in the development of undergraduate education and over the past twenty years has been in the forefront of emphasising the need for change from classical medical education to one concerned more with the community aspects of medicine including public health, the social and psychological aspects of medicine, and the skills required for communication with patients. Most recently, the Department of Health has encouraged the development of the medical curriculum, and of medical education in general, through funding the post of an educational advisor in each of the medical schools.

Although all medical schools now have an option for students to have a research year, this in many schools is only taken up by about 50% of students. The year often only consists of in-depth learning, in one or two subjects. In some universities the intercalated year is supposed to teach research methods.

The postgraduate period of specialization following a compulsory pre-registration year usually entails training in a subject, including a two stage examination, the first stage factual, the second stage practice based. Although the majority of junior doctors and trainees are expected to spend up to one year in research this is often of a mechanical nature and rare in some specialties e.g. general practice, public health medicine. The attitudes of many of the senior doctors is somewhat dismissive of research because of their own unsatisfactory experiences.

General practice has been most concerned in the developing of appropriate methods of training to help the graduates in their ability to communicate with patients and to be capable of caring for families and individuals over a long period of time – providing continuing care, e.g. for the disabled and chronically sick. Other specialties, such as psychiatry, have been successful in the educational, postgraduate programme in satisfying the needs of their junior trainees. In some, such as radiology, anaesthetics, ophthalmology, the technical content of training has improved immeasurably.

The real question, however, that needs to be faced is that of research-based practice. Although both the undergraduate medical schools and the postgraduate educational facilities maintain the importance of research-based practice, the acceptance of the importance of this is still limited. The difficulty is that although research is suitable and of interest to a number of medical practitioners, in some cases it is expected to be undertaken by all and thus individuals are "turned off".

In the undergraduate period there are a few universities, e.g. Cambridge, that are fostering a combined MB-PhD programme which attempts to really produce research based

practitioners. The standing of medical research in medical faculties is still, however, not as high as it is in the United States.

Major changes in the education of medical practitioners are going to be required in the United Kingdom in the near future. Because of the changing nature of the common diseases, with the increasing ageing of the population, the increasing numbers of the disabled, and increasing possibilities for undertaking curative procedures, doctors are going to be required to have new skills as well as to develop those that were common in the past. They must become far better at communicating with their patients, they must be capable of assessing the effectiveness of a variety of proposed interventions which will be propagated through the industrial complex to medicine, now and in the future. It will be essential for medicine to be based far more on evidence rather than purely on impression. For this to come about medical practitioners will not necessarily need to undertake research, but they will need to be able to critically assess evidence presented to them as well as the basis of procedures which they are being asked to use. At the same time they will need to have far better knowledge than at present of long term care for individual patients. All of this, however, will need medical practitioners to become aware of the conflict existing between the demands and expectations of individual patients, and between new technology and the need to provide services at least cost.

There will need to be a far better structure for our medical education. This education will not need to produce practitioners capable of coping with all situations as they have had to do in the past. There will need to be a far greater appreciation that the educational process continues throughout the professional career, thus the speciality training for all parts of medical practice, general practice, cardiology, radiology, public health etc., will be required to teach individuals in the specific methods and knowledge of that subject. That will need to be a continuing structured educational process even at the end of this period to which all practitioners will need to contribute. This is gradually being accepted by most medical specialties at this time. The implications of this on the whole medical profession are profound in terms of the resource implications both for individuals as well as for the system.

A final problem which has not yet been adequately tackled at all is the concept of team working. Changes in medical practice, such as long term care and increasing technical demand, will lead to the delegation of work now done by individual practitioners to those with different training, e.g. nurses and technicians. More and more of medical practice will involve work in teams which will pose additional strains on the education and behavioural process of our future doctors.

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