

THE ROLE OF THE MARKETPLACE IN THE CLINICAL WORKFORCE - CANADA

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STATEMENT OF OBJECTIVES

All countries share similar goals for their health care system, and yet differ significantly in their reliance upon market forces to plan, organize, and finance their clinical workforce. The differences in the respective roles of the marketplace and the public sector reflect countries' political and economic environments as well as their traditions of social welfare. The number of physicians, income, professional standing, and clinical care are influenced by the extent and type of competitive markets.

In this session, papers will discuss the role of health care markets in the clinical workforce through examining for each country the underlying economic assumptions and political environments. The performance of the differing approaches will be evaluated to understand what works and fails. The papers will consider the impact of these approaches on the major stakeholders of the health care system - patients, payers, and providers.

In considering the above, authors will address four questions for their country:

1. What are the nature of the country's health care markets?
2. How has the different mix of public/private planning, regulation, and financing affected:
 - the availability of clinicians to patients;
 - the cost of care to the public sector, private payers, and patients;
 - the professional opportunities of providers;
 - training positions;
 - the specialty mixture; and
 - the geographic distribution of clinicians, particularly physicians.
3. In what areas of the health care system have the market and/or public planning fallen short in achieving a desirable clinical workforce?
4. How is the country altering its approach as they assess the successes and failures of past policies?

1. WHAT ARE THE NATURE OF THE COUNTRY'S HEALTH CARE MARKETS?

Planning, organizing, and financing a clinical workforce can be viewed as a series of interlocked resource allocation decisions. In this paper, we will consider the following six categories of decisions, and apply them to physicians and to nurses (with some comments en passant about other health professions). The first three affect the supply of a clinical workforce, whereas the last three affect their financial and service consequences for providers, patients, and payers:

Supply issues

<i>Training</i>	Decisions to allow individuals to receive the educational preparation required for the particular health profession.
<i>Licensure</i>	Decisions to certify individuals as able to practice that profession in a particular jurisdiction.
<i>Employment</i>	Decisions to allow individuals to work and be reimbursed for practicing that profession.

Financial and service issues

<i>Costs</i>	Decisions about the total resources which will be allocated to pay for the services of those individuals practicing the profession.
<i>Incomes</i>	Decisions about the earnings of individual providers.
<i>Service mix</i>	Decisions about what services will be purchased for those resources (by service recipients, geographical area, and type of services).

In terms of decisions about costs, incomes, and service mix, we have found it helpful to focus upon three dimensions: *financing* health systems, *delivery* of health services, and *allocation* of resources to providers.¹ We have used the term *financing* to refer to the methods by which money is collected from those who use (or might use) health care. We have used the term *delivery* to refer to the ways in which those health care services are actually organized and delivered. Finally, we have used the term *allocation* to refer to the variety of ways in which financing is linked to delivery. In other words, allocation refers to the ways in which resources flow from those paying for care to those providing it, and includes the ways by which we chose to pay providers, and the incentives inherent in these approaches.

Within this framework, markets can play a role within both the financing and allocation dimensions. In contrast, issues relating to the mix between public and private responsibilities (including competition among them) arise within the financing and delivery dimensions. For the purposes of this paper, the role of the market in the financing dimension would accordingly look at who bears which costs and how this is distributed. In contrast, allocation focuses on control and on the sorts of incentives built into reimbursement policies. In these terms, markets do not arise within the delivery dimension, although they can arise in considering how various delivery models would be financed and their providers reimbursed.

For each of these decisions, we will consider, at least briefly, four questions.

The first two involve process:

1. Who decides?
2. What policy instruments do they employ?

The final two involve policy content, and will be considered when the six issues are discussed:

3. On what basis do they decide? What are their policy goals?
4. What are the consequences of these decisions for patients, payers, and providers?

Who decides? - public and private actors

For the purposes of this paper, we will concentrate upon whether the decision maker is 'public' or 'private', further sub-divided into the following levels¹:

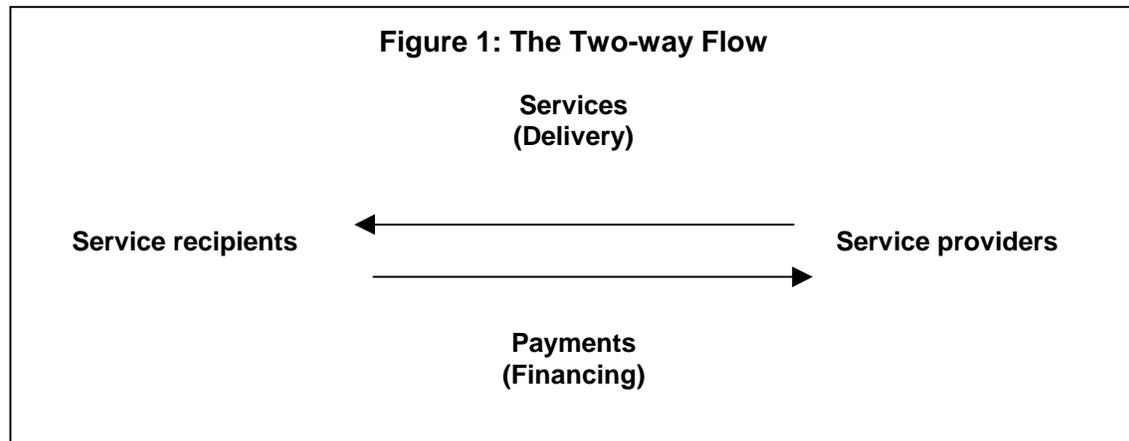
- by 'public', we can be speaking of:
 - a national (federal) government;
 - sub-national (provincial/territorial/state) governments;
 - regional governments within states/provinces; or
 - local governments.

- by 'private', we can mean:
 - for-profit corporations, responsible for providing a good return on investment to their shareholders;
 - small businessmen/entrepreneurs, often self-employed, who do not issue stock;
 - not-for-profit/charitable organizations, (which in turn may rely upon various combinations of volunteers and paid labour); or
 - individuals and their families.

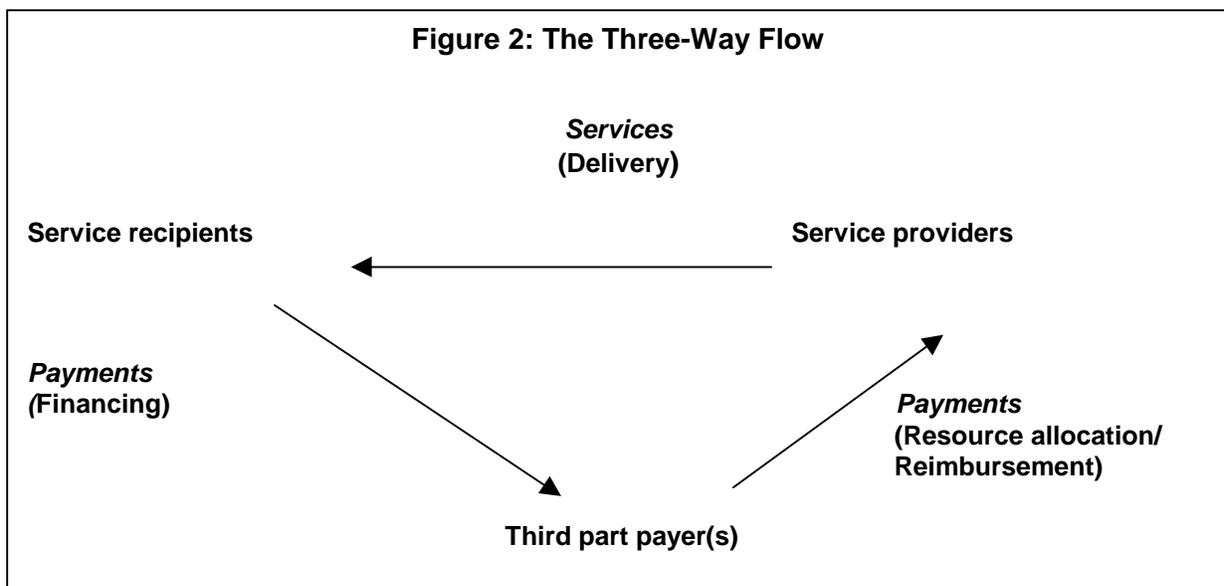
An important bridging category are private charitable organizations which nonetheless work on behalf of the public interest; indeed, they are often regulated and/or funded by government, but are not part of government. Some refer to them as 'mediating structures'; others refer to them as the 'third sector'.² As we will see, many key decisions about the clinical workforce reside with mediating structures and as such are less easy for government to control; these bodies include colleges and universities, hospitals, and even the regional authorities in some Canadian provinces.

An additional complexity in determining who makes decisions, particularly about the financial issues, arises because of the array of ways by which one can 'flow' funds from consumers to providers³. The factor we will consider here is how many parties are involved in the transactions.

The simplest approach can be termed a 'two way flow'. The two way flow avoids middlemen; consumers pay providers directly for the services they receive. For example, an individual purchasing an over-the-counter drug pays the drug store and receives the product. As with any other retail transaction, there is a direct link between using services and paying for them.



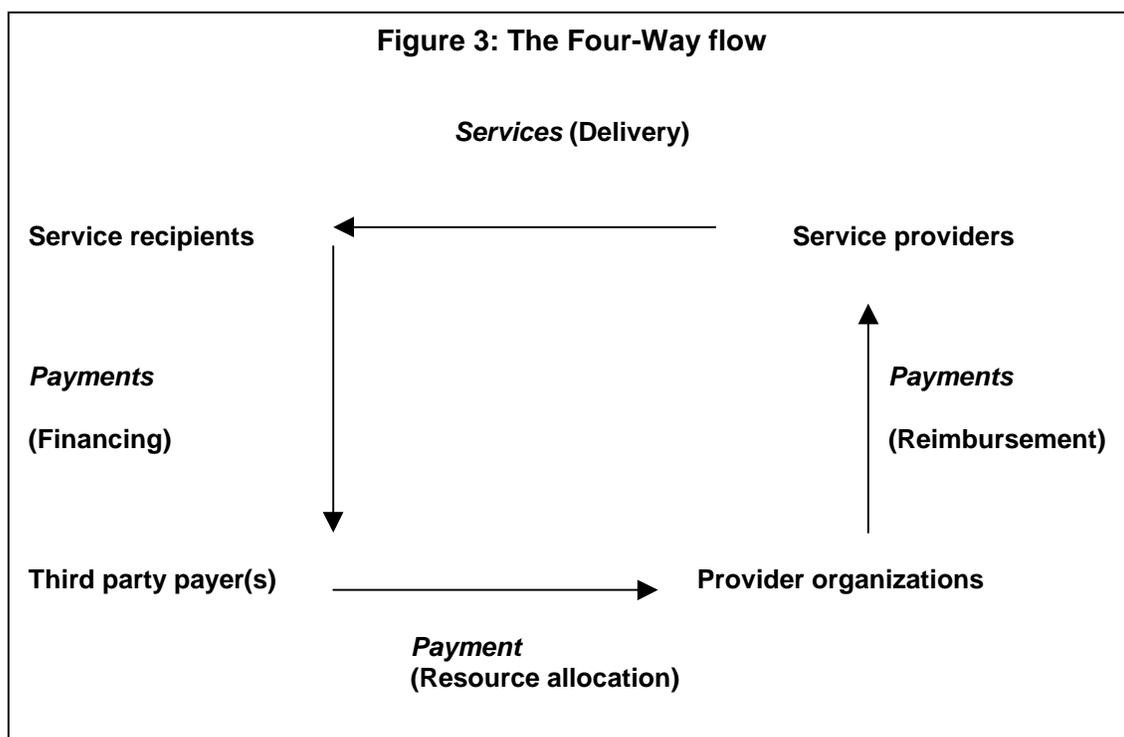
In almost every country, however, the logic of insurance often drives people to pool their risks by introducing third-party payers. In these ‘three way flow’ models, potential consumers pool their resources and pay taxes or premiums to third-party payers, which in turn agree to reimburse providers should services be required. These third party payers can be public (government) or private (eg., employers, private insurers), and the payments can be established in a number of ways. The common element is that three way flows are intended to break the direct link between using services and paying for them. If there is only one such third-party payer, it can enjoy what economists call monopsony power. This term is analogous to a monopoly, except it refers to the situation when there is only one buyer of services, rather than being only one seller. Monopsony power means that this buyer can drive tougher deals with providers, reducing the price of their services. (This, of course, is likely to be unpopular with providers and popular with those who must pay for their services.)



Four-way flow models add a series of provider organizations (ranging from hospitals through to US-style managed care organization or Canadian or British regional authorities) which in turn employ and pay health providers. To clarify these ‘flows’, consider the example of a hospitalized patient who needs nursing services. In a two-way flow, the patient would directly hire and pay the nurse (as is currently the situation for private duty nurses). In a three-way flow, the patient would have paid for insurance (from either a government-run or private plan) and that insurer would now directly pay the nurse (much as they would currently pay the physician). In a four-way flow, the insurer would instead pay the hospital or other provider organization, and that provider organization would take responsibility for hiring and paying nurses.

Clearly, health care services are a complex mix of these types of funding flows. Identifying the precise nature of these arrangements is critical in determining who makes which decisions. For example, government may decide upon the size of the global budget which they will provide to a hospital, wage rates for nurses may be determined by negotiations between individual hospitals or hospital associations and nursing unions, and the hospital itself may decide how much of its budget will be used to employ nurses. Although markets may play almost no role in some of these decisions, they clearly will have a major impact upon the ability of a particular nurse to find employment. Indeed, where nurses are in short supply, hospitals may find themselves forced to offer bonuses or other concessions to attract a workforce. In contrast, where there is a labour surplus, hospitals may be able to casualize their work force and hire staff only for the shifts for which they are needed. Similarly, a number of reforms being proposed under such rubrics as primary care reform, managed care, or integrated systems aim to establish provider organizations which would then take responsibility for ensuring the delivery of a pre-set basket of services to a pre-defined roster of patients³. These models vary in the scope of services to be included and the way in which the patients become associated with the organizations, but have little scope for individual physicians running solo practices. Instead, decision making would be shifted away from individual clinicians and patients towards these provider organizations, with the role of third party payers moving away from direct attempts to control the volume and mix of services towards responsibility for predictable capitation-based funding.

Physicians are unusual within the Canadian clinical workforce in the degree of autonomy they have enjoyed with respect to where they will work, and the volume and mix of services they choose to deliver.^{4,5} Most other clinicians must instead be ‘hired’ by a provider organization, and are accordingly subject to labour market forces in determining whether (and where) employment is available.



What policy instruments do they employ?

A substantial literature has noted that governments have an array of policy levers from which to select when they wish to affect policy. These "policy instruments" vary considerably in their degree of coercion⁶ or intrusiveness⁷. At the extreme non-intrusive end of the scale, government can choose not to act at all, and leave decisions to other actors. It may also choose symbolic responses - what Doern and Phidd term "exhortation". More intrusively, it may choose to intervene indirectly, by using incentives for action. These can range from attempts to secure voluntary compliance with government objectives without accompanying threats or inducements, through tax incentives (also termed tax expenditures) or direct public spending (expenditure).

A still more intrusive set of instruments may be termed directives (what Doern and Phidd call "regulation"); such direct public interventions, via regulation or public ownership, shift compliance costs from government to other bodies (including to other levels of government).

Within this scheme, markets can be seen as one set of policy levers which falls on the less intrusive end of the scale (ie., where government does not choose to regulate more directly).

This schema clarifies that markets are only one way of allocating resources. Indeed, policy makers can choose to allocate resources in many ways that do not rely upon markets, including 'first come, first served', 'merit', 'need', 'equity', and so on. Indeed, even if one relies upon the expenditure category of policy instruments, one can classify mechanisms for allocating services along the following continuum, which ranges from planned models to markets⁸:

Table 1: Allocation models for services

<i>Clients follow money</i>			<i>Money follows clients</i>	
Centrally planned models	Regionally planned models	Managed competition	Public competition	Market

The two most traditional means of allocating finances within health care systems are located at the extremes of the allocation continuum. Centrally planned allocation is associated with a command-and-control model in which the patient follows the money, i.e., planners decide where particular services will be provided, and provide a global budget; patients must go wherever the services happen to be. These models explicitly reject market forces in allocating resources to the service providers. An example is radiation therapy services in Ontario, whereby the provincial government determines the number of centres and the budget for each. Market allocation, not to be confused with market-based financing, is a mechanism for allocating available resources (which may well be from public sources) to providers based upon the ability of providers to attract clients/patients, i.e., the money follows the patients. Examples include physician services in Canada, as well as in the non-managed care portions of the US system, i.e., where physician income depends upon how many patients can be attracted.

The clear advantage of the planned allocation models is cost control. The clear advantage of the market allocation mechanisms is increased sensitivity to patient choice, and therefore presumably to client needs and wishes. The models found in the middle of the continuum represent various attempts to create a compromise between planning and markets which would ideally obtain the benefits of each without the corresponding flaws. It should be noted that most of these models are relatively new and untested. Some of the most active debate currently underway over allocation concerns these "middle-ground" models within publicly financed systems^{8,9}.

As Saltman and von Otter have noted, there are a variety of ways to structure a planned market for health services^{10,11}. For example, providers may compete on the basis of price or quality. On the basis of the (largely) European models they review, they conclude that price competition has the advantage of encouraging innovations and efficiencies which would presumably lower prices; preferred by economists, it is usually based on negotiated contracts between purchasers and providers. This type of market, however, can lead to risk selection of patients, has higher administrative and transaction costs, and reduces patient choice of provider in that the patient must follow prior allocations of money. With planned markets based on quality, fees tend to be negotiated and approximate real costs; there may be few incentives to achieve economic efficiency, but also fewer problems in ensuring universality of access, and lower administrative and transaction costs.

The two basic types of planned markets fall on either side of the public-private divide¹². In public competition models, all providers are publicly funded and politically accountable. Providers have an incentive to attract and satisfy patients, because their budgets are determined on the basis

of the number of patients and through bonuses based on increased productivity and efficiency. The central agents of change in this model are patients, whose choices of physician and treatment site have budgetary consequences for providers. Through modifying incentives, the specifics of this public market can be consciously configured by elected officials to ensure that allocation of health care resources reinforces rather than undermines broader social objectives. In Canada, physician services approximate a public competition model.

In contrast, managed competition models (which Saltman also refers to as mixed market models) create a mixed public/private market in which existing and new privately capitalized providers can bid for contracts against present publicly capitalized facilities. The central agent for change in this model is the administrative agent managing the health plan, who is responsible for overseeing service contracts to providers. Managers are expected to balance questions of quality and cost in the search for less expensive forms of care. The extent of patient choice is reduced to the selection of an administrative agent, who then makes choices on their behalf. If dissatisfied, their main option is to switch to another plan. At least in theory, general practitioner fundholding was a United Kingdom example of a managed competition model. In Ontario, budgets for home-based long term care services have been given to Community Care Access Centres (CCACs), which then let contracts using a managed competition approach^{13,14}.

Health care markets in Canada

Medicare is an uneasy compromise between the public desire for uniform coverage for all Canadians, and constitutional realities. Section 92 of the *Constitution Act, 1867*, which enumerates responsibilities of the provincial level of government, included section 92 (7) “The Establishment, Maintenance, and Management of Hospitals, Asylums, Charities, and Eleemosynary Institutions in and for the Province, other than Marine Hospitals”¹⁵. Subsequently, court decisions have interpreted this clause as assigning jurisdiction to provincial governments for almost all of the health care system; other powers assigned to the provincial level (eg., education) also leaves them in control over such matters as professional licensure, although in practice this has been delegated to professional colleges. More recently, similar powers have been given to Canada’s three sparsely-populated northern territories. The Canadian health care system is accordingly a series of provincially-run insurance plans which reimburse private (albeit usually not-for-profit) provision of what was seen to be a comprehensive array of services, but leave considerable flexibility to provincial governments in how these services will be planned, organized, and delivered. The remarks in this paper must accordingly be accompanied by the caution that one size does not fit all, and that there are considerable variations within Canada.

In practice, this means that the federal (national) level of government in Ottawa does not act as the decision maker for any of the six policy issues affecting Canada’s clinical workforce we identified, although the federal government may occasionally attempt to influence policy directions through providing money or attempting to suggest guidelines. However, Ottawa has had a major influence on what services are insured by provincial governments. Under the terms of the 1984 *Canada Health Act*, which builds upon earlier legislation, provincial health insurance plans will receive full federal funding only if they comply with the five national standards:

- universality - all those eligible for coverage must be insured;
- accessibility – ‘reasonable’ access without co-payments or deductibles for insured services;
- comprehensiveness - coverage must include “all insured health services provided by

hospitals, medical practitioners or dentists, and where the law of the province so permits, similar or additional services rendered by other health care practitioners”;

- portability - to ensure insured people are still covered when they move from province to province; and
- public administration.

As noted above, "mediating structures" are key decision makers for most clinical workforce issues in Canada. As noted, the federal government has almost no constitutional power over any of these issues, and the provincial governments have delegated much of their decision making authority to a variety of independent (or quasi-independent) bodies.

For example, within the delivery dimension, many nurses are employed by 'public hospitals', which are in fact not-for-profit private hospitals. Since the inception of government-financed hospital insurance, these organizations have received considerable public funds, but they were managed by independent boards and retained considerable flexibility in setting their own priorities. More recently, most provinces outside the province of Ontario have replaced independent hospital boards by regional health authorities, which are also nominally independent of their provincial governments. However, financing of these bodies remains clearly within the scope of provincial governments; no province has given independent taxing or money-raising authority to their regional authorities. In addition, none of these authorities includes physician services, which remain largely funded through fee-for-service.

Similarly, issues around entry to practice have been delegated by the provinces to a series of professional 'colleges', financed by their own membership, which determine who can practice that profession and enforce professional standards. This reliance upon such mediating structures in turn can become an important barrier when government seeks to implement policy reforms, often forcing it to rely upon either fiscal or rather coercive regulatory approaches.

Within the allocation dimension, two opposing trends have been evident. In some provinces, for some sectors, there has been considerable effort to move towards the 'planned' end of the allocation continuum, usually accompanied by rhetoric about the need for integrated services, better planning, and more efficiency¹⁶. For other sectors, there has been a movement towards more market-oriented approaches to allocation, usually linked to attempts to encourage competition. For example, Ontario has assigned budgets for home-care services to a series of regionally-based CCACs, which in turn are expected to contract-out services publicly-funded services on the basis of best quality, best price. The competing providers (both for-profit and not-for-profit) respond to each Request For Proposals; the expectation is that competition will lead to efficiencies (which in turn usually translate into a downward pressure upon the wages, skill mix, and working conditions of the nurses, rehabilitation workers, and home makers employed by these agencies). Alberta has spoken about using competition to encourage similar efficiencies in the delivery of clinic services, including recent controversial legislation allowing for-profit clinics to deliver hospital services. Academics have been suggesting setting up competing integrated delivery models¹⁷.

Two consequences of relevance to this paper result. First, there are relatively few variations from province to province with extent to coverage decisions for those services which fall under

the *Canada Health Act*, but considerable variation is arising for those services falling outside the terms of the Act (especially coverage for outpatient pharmaceuticals, home care, and rehabilitation). Second, the extent to which Ottawa can, and should, control provincial priorities is a matter of heated debate, and health policy thus frequently becomes intertwined with federal-provincial politics.

2. HOW HAS THE DIFFERENT MIX OF PUBLIC/PRIVATE PLANNING, REGULATION, AND FINANCING AFFECTED:

- 1) the availability of clinicians to patients;**
- 2) the cost of care to the public sector, private payers, and patients;**
- 3) the professional opportunities of providers;**
- 4) training positions;**
- 5) the specialty mixture; and**
- 6) the geographic distribution of clinicians, particularly physicians.**

We will first discuss items 1, 3, 4 and 5 (the availability of clinicians to patients; the professional opportunities of providers; training positions; and the specialty mixture), in terms of the supply issues of training, licensure, and employment. We will then move on to the financial issues, as they affect cost of care and geographic distribution.

Training decisions relate to how many individuals are allowed to receive the educational preparation required for the particular health profession.

Provincial governments have direct controls over the training of physicians. Each controls the size of the medical school classes, as well as the number and distribution of residency positions. Medical schools decide who to admit, but not how many. In general, most medical schools have about 10 applications for every open place, and can be extremely selective. Even large increases in tuition have evidently not decreased demand for medical school positions, although they may ultimately have an impact upon choice of specialty and practice location after graduation.

Since 1986, data about physician training has been collected by the Canadian Postgraduate Medical Education Registry (CAPER), a co-operative venture by the national medical organizations with an interest in the post-MD clinical education of physicians in Canada. CAPER maintains an individual longitudinal file containing socio-demographic information and details of the current and past training programs of each resident or fellow under the supervision of the 16 Canadian faculties of medicine each year. The most recent data are derived from information submitted for November 1, 1999¹⁸.

CAPER uses two main categories for the source of funding of trainee positions. 'Regular Ministry Funds' refers to funds provided by the appropriate provincial government ministry responsible for the training of residents within that province. All other funding sources are grouped together as 'other funds'. To be certified in family medicine, physicians must receive two years of training for family medicine (the R-1 and R-2 levels), with a third year provided in certain accredited training programs. Specialty training requires a minimum of between 4 and 6 years, depending on the program.

In 1992, there were 1646 trainees who had been awarded the MD degree in Canada; this dropped to 1491 awarded in 1999. Nonetheless, the number of Ministry-funded post-MD trainees has remained relatively stable. This has been explained by an increase in training requirements, comprised by an increasing proportion of residents entering specialty and sub-specialty training programs, and an increasing proportion of family medicine residents choosing to take an extra year of training at the R-3 level. In effect, provincial governments are paying for more years of training for fewer certified physicians. In addition, there has been a dramatic decrease in the availability of training positions for graduates of foreign medical schools and for re-entry trainees. Indeed, re-entry trainees dropped from 663 in 1992-3 to 161 in 1999-2000. The net result was a 1% decrease in the total number of Ministry-funded positions between 1992 and 1999.

This trend was partially compensated for by a steady increase in the number of non-ministry funded trainees, from 1300 in 1992 to 1812 in 2000. Most of this increase has come in the fellow category, and reflects visa trainees. Visa trainees do not have the right to live and work in Canada, although they can be employed in Canada temporarily to the extent required for their educational program, and only while in their training program. Fellows are not seeking Canadian licensure or certification. It is noteworthy that CAPER's designation of 'Estimated Practice Entry Cohort' excludes both re-entry trainees and visa trainees.

Recently, there has been growing pressure to increase enrollment in medical schools, and to increase post-graduate training positions. This has been sparked by the recognition that the physician workforce is aging¹⁹, and a sense that there is insufficient flexibility in the current postgraduate system. Recently, a discussion document spearheaded by the Canadian Medical Association has argued for increasing the number of reentry positions, justifying it both as benefitting smaller communities (by enabling primary care physicians to retrain in such disciplines as obstetrics, anaesthesia, surgery, and psychiatry; and by encouraging new physicians to accept locum tenens positions in underserved communities); and benefitting the profession (by removing limits on physicians' ability to make career changes or to advance their skills and knowledge, and reducing debt load by allowing physicians to become established before completing specialty training)²⁰. The document notes that the proportion of all graduates selecting family medicine as their first choice for postgraduate training had dropped from 44% in 1992 to 31% in 1998, and attributes much of this to a fear that they no longer have the ability to reenter the system later for specialty training. Specifically, they recommended that there be 120 postgraduate training positions for every 100 Canadian medical school graduates.

In contrast, provinces have only indirect controls over the training of nurses and other health professionals. They do control the budgets for colleges and universities, and accordingly may have some indirect influence upon training. (Some provinces are seeking greater control over training within community colleges.) However, programs set their admissions standards and levels based on their ideas about demand for the programs, and for their graduates. These training decisions are accordingly far more susceptible to immediate judgements of market forces, both by the programs offering training, and by the students deciding whether to seek admission.

At present, there are two principal routes to qualification as a Registered Nurse (RN) in Canada. Diploma-qualified nurses take a 3-year program from community colleges (which replaced an older system whereby nurses were trained at hospital-based schools of nursing). Degree-qualified nurses receive a 4-year Baccalaureate of Science in Nursing from a university program. In 1982, the Canadian Nurses' Association adopted a policy that, by the year 2000, all new entrants to practice should receive a university degree. This policy is being widely adopted, and is being implemented by the Ontario government. In turn, this has led to a proliferation of collaborative programs between community colleges and universities. One consequence has been a difficulty in collecting good enrolment statistics²¹. Nonetheless, best estimates suggest a mismatch between the demand for nursing education, and projected demand for nurses. Ryten's data shows a very large drop in the number of graduates. Whereas about 10,000 were graduated in 1971 and 1972 (and remained high between 1971 and 1977), this appears to have dropped to just over 7,000 by 1996 and 1997²¹. This reduced demand translated into a reduced level of admissions into nursing programs, particularly since 1989. Even so, the available places were not all filled, particularly at community colleges. In 1997, over 30% of the small applicant pool to nursing preferred some other field of study. This data suggests that nurses were clearly responding to market forces as they affected nurses; labour market fluctuations have made this profession sufficiently unattractive to prospective students that there are likely to be major nursing shortages for the foreseeable future.

Licensure decisions certify individuals as able to practice that profession in a particular jurisdiction. These decisions about licensure have been delegated to professional colleges within each province, which are given authority by provincial legislation. Although there is some variability across the country, the basic approaches are quite similar.

For example, according to the website of the Ontario Ministry of Health and Long-Term Care, there are 23 self-regulated health professions, each with a governing bodies called a college, which sets the standards for skills, knowledge and behavior for their members. Ontario laws administered by the Ministry of Health and Long-Term Care set the legal framework for regulated health professions, but the colleges are independent of the ministry. All but the naturopaths fall under the Regulated Health Professions Act. This Act regulates by restricting the ability to perform various 'controlled acts' to particular professions, allowing only those with valid registrations to practice. For example, the College of Nurses of Ontario registers individuals who have completed an approved nursing program in Ontario or elsewhere and have passed the registration/licensure examination. To qualify for registration in Ontario, an individual from outside the province must complete a nursing program comparable to one in Ontario; provide evidence of recent practice; achieve a passing score on the examination; demonstrate reasonable fluency in written and spoken English or French; and show proof of Canadian Citizenship, landed immigrant status, or authority under the *Immigration Act (Canada)* to practise nursing. Once registered with the College, members are registered for life as long as they continue to pay their dues²². The professions vary in the extent to which they require Canadian training, with some colleges making it relatively easy to qualify and some putting up considerable barriers.

Among the most difficult is medicine. Similarly, to practise medicine independently in Ontario, graduates of international medical schools must qualify for a certificate of registration for

Independent Practice by completing the following basic requirements:

- Part 1 and Part 2 of the Medical Council of Canada Qualifying Examination;
- certification, by examination, from the Royal College of Physicians and Surgeons of Canada (to practice as a specialist) or the College of Family Physicians of Canada;
- Canadian citizenship or landed immigrant status; and
- completion in Canada of one year of postgraduate training or active medical practice.

In turn, to sit the certification examinations in family medicine, candidates must have either(i) completed, in Canada, a two or three-year integrated program approved by the College of Family Physicians of Canada and administered by the department of family medicine at a Canadian medical school; or (ii) completed, in Canada, a minimum period of two years of active family practice immediately preceding the date at which the candidate sits the examinations.

As is evident by the emphasis on Canadian experience, the question of entry to practice for foreign-trained physicians has been highly contentious. At present, opportunities to enter postgraduate training programs in Canada are extremely limited for foreign-trained graduates of medical schools. A physician must hold a certificate of registration for postgraduate training, issued by a provincial College, to be eligible. One of the basic requirements for a certificate for postgraduate education is successful completion of the Medical Council of Canada Evaluating Examination. The physician must also have an official appointment to a training program at a Canadian medical school within that province. Each year, 36 foreign-trained medical graduates who live in Ontario and who hold Canadian citizenship or landed immigrant are admitted into the Ontario International Medical Graduate Program, successful completion of which enables entry to a family medicine or other residency program in Ontario. In practice, most foreign-trained physicians are unable to become licensed to practice²³.

Employment decisions to allow individuals to work and be reimbursed for practicing that profession largely rest outside of direct government control. Governments have very weak controls over how many physicians can practice, and where; their controls have been exerted through attempts to control fee levels and total reimbursements, as explained below. Efforts to have more direct controls, such as the attempt in British Columbia to restrict billing numbers for physicians by geographic area, were struck down by the courts.

In contrast, those paid by salaries must find an employer with sufficient resources to hire them. Fiscal constraints within the hospital sector have put particular stress on nursing. Hospitals were downsized, new nurses had difficulty in finding employment, and full-time jobs were converted to part-time or on-call jobs. Nurses were said to have increased job stress, and morale appears to have diminished accordingly. These workplace stresses were well-publicized, and the result may have been a reduced demand for nursing education, particularly by students who had alternatives. Ryten's study found a considerable decrease in the admission levels to nursing programs, which will have a flow-through effect for the next 40 years²¹. This suggests a paradox of market forces. In the short term, the labour market for nurses has exhibited upswings and downswings. In the longer term, a rational response to this uncertainty is to seek alternative job opportunities. In consequence, there is considerable worry that the number of nurses available for employment will be inadequate to potential demand. Ryten predicts that by 2011, there will be a shortage of between 59,000 and 113,000 nurses, depending upon the assumptions made.

Even under the most conservative assumption, nursing demand would increase by 23% between 1993 and 2011 to keep pace with population growth. (The higher growth scenarios assume greater demand to deal with an aging population)²¹. There is some scope for better utilization of existing RNs, or for a certain degree of substitution, but the report concludes that it will be essential to educate more nurses, which in turn implies a need to moderate market forces to better ensure long-term stable employment.

The following data comes from a report by the Canadian Institute for Health Information (CIHI), *Health Personnel in Canada, 1988 to 1997*²⁴. Note that there is no direct connection between provincial decisions to classify professions as self-regulating and CIHI's decision to track the workforce in that occupation. As a result of deliberate attempts to control physician numbers, the number of physicians grew relatively slowly, from 49,706 in 1988 to 55,243 in 1997. Because this increase was less than Canada's population growth, there was a 0.3% decline in physicians per 10,000 population. There were more substantial decreases in the health professionals who largely worked on a salaried basis within the institutional sector, with drops in the number of professionals per 10,000 population amounting to 8.2% decline for nursing services, 6.9% for administrative services, and 5.4% for laboratory and therapeutic technological services. In contrast, there was a 52.6% increase in the number of health professionals in the rehabilitation services, 26.1% for dental services, and 22% for psychological and social services. In general, these services are paid for privately.

Table 2: Number of health professionals, rates per 10,000 population and percentage change, by occupational group, Canada, 1988 and 1997

	Counts			Health professionals /10,000 population.		
	1988	1997	% change	1988	1997	% change
Medical and Treatment Services	73094	86068	17.7%	27	28.5	5.6%
Chiropractors	3188	4472	40.3	1.2	1.5	25.8%
Optometrists	2826	3554	25.8	1	1.2	12.8%
Pharmacists	17374	22799	31.2	6.4	7.6	17.7%
Physicians	49706	55243	11.1	18.4	18.3	-0.3%
Dental Services	21003	29524	40.6%	7.8	9.8	26.1%
Dental hygienists	7261	13284	82.9	2.7	4.4	64.1%
Dentists	13742	16240	18.2	5.1	5.4	6.0%
Nutrition and Dietary Services	5548	6524	17.6%	2.1	2.2	5.5%
Dietitians	5548	6524	17.6	2.1	2.2	5.5%
Administrative Services	2857	2965	3.8%	1.1	1	-6.9%
Health record	2857	2965	3.8%	1.1	1	-6.9%
Nursing Services	33280	34074	2.4%	123	113	-8.2%
Licensed practical nurses	83133	76810	-7.6%	30.7	25.5	-17.1%
Registered nurses	24967	26393	5.7%	92.3	87.5	-5.2%
Laboratory and Therapeutic Technological Services	33072	34885	5.5%	12.2	11.6	-5.4%
Medical laboratory technologists	18443	16444	-	6.8	5.5	-20.0%
Medical radiation technologists	11337	12797	12.9	4.2	4.2	1.2%
Respiratory therapists	3292	5644	71.4	1.2	1.9	53.7%
Rehabilitation Services	12875	21914	70.2%	4.8	7.3	52.6%
Occupational therapists	3322	7558	127.5	1.2	2.5	104.0%
Physiotherapists	9553	14356	50.3	3.5	4.8	34.8%
Psychological and Social Services	18348	24958	36.0%	6.8	8.3	22.0%
Psychologists	8346	11328	35.7	3.1	3.8	21.7%
Social workers	10002	13630	36.3	3.7	4.5	22.2%
TOTAL	49960	54758	9.6%	185	182	-1.7%

Table 2²⁴. Data for 17 selected health professions, reflecting either licensed professionals or association memberships depending on profession.

Health Personnel in Canada, Canadian Institute for Health Information/Statistics Canada (Demography Division)

As of 1999, about half of all physicians were in family medicine, and half were specialists. However, the balance is shifting, with a decline in family medicine largely offset by an increase in specialists. As table 3 demonstrates, six provinces/territories experienced a decrease in the number of family physicians per 100,000 population. In contrast, every province except the small Atlantic Canada Prince Edward Island had increases in the number of specialist physicians per 100,000 population.

Table 3: Physicians per 100,000 population, by physician type and province/territory, Canada, 1995 to 1999

Province	Family medicine			Specialists		
	1995	1999	% change	1995	1999	% change
Newfoundland	107	103	-3.7	59	68	15.3
Prince Edward Is.	74	74	0	56	55	-1.8
Nova Scotia	100	101	1	86	97	12.8
New Brunswick	88	91	3.4	60	63	5
Quebec	104	105	1	105	107	1.9
Ontario	93	85	-8.6	93	94	1.1
Manitoba	89	91	2.2	86	88	2.3
Saskatchewan	92	92	0	59	61	3.4
Alberta	89	88	-1.1	74	79	6.8
British Columbia	106	105	-0.9	85	88	3.5
Yukon Territory	124	119	-4	16	20	25
North West Terr.	72	94	-9.7	22	27	22.7
Canada	97	94	-3.1	89	92	3.4

Physicians per 100,000 population figures for 1995 to 1999 are calculated using updated population estimates from Statistics Canada. Physician numbers includes physicians in clinical and/or non-clinical practice; excludes residents. Data as at 31 December of the given year.

Source: Southam Medical Database, Canadian Institute for Health Information. Table adapted from Media Release, 9 August 2000. Table 5, <http://www.cihi.ca/medrls/09augtab/tb5.htm>

It is noteworthy that not all licensed health professionals are employed in their profession. For example, in Table 2, the number of registered nurses in 1997 is given as 263,933, but as shown in Table 4, only 229,813 were indicated as being employed in nursing in that year, of whom only 117,616 were designated as Full-time. Statistics Canada data reveals that the current proportion of RNs who are employed in nursing is actually relatively high as compared with historical data. For example, in 1966, only 73.1% of all RNs were employed in nursing; this figure dropped as low as 70.3% (in 1967) and remained below 80% until 1983. In contrast, in 1996, 86.2% of a record number of RNs (264,305) were employed in nursing²¹. However, the proportion working full time has dropped from 63.7% (in 1985) to 55.6% (in 1996), with a corresponding increase in those working part-time. Put another way, comparing 1996 and 1985, there were about 3,000 more people working full-time as nurses, and over 30,000 more nurses working part-time²¹. Much of this part-time work was not voluntary, but was a consequence of cost-cutting measures by which the provider organizations (usually hospitals) were put under budgetary constraint, and in turn passed these constraints on to their employees.

Table 4: Registered nurses employed in nursing, Canada, 1996 – 1998

Year	1996	1997	1998
Total nurses	227,651	229,813	227,830
Full-time nurses	115,563	117,616	113,692
Part-time nurses	108,512	108,614	90,733
Not stated	3,576	3,583	23,405
Nurses per 100,000 population	748	762	764

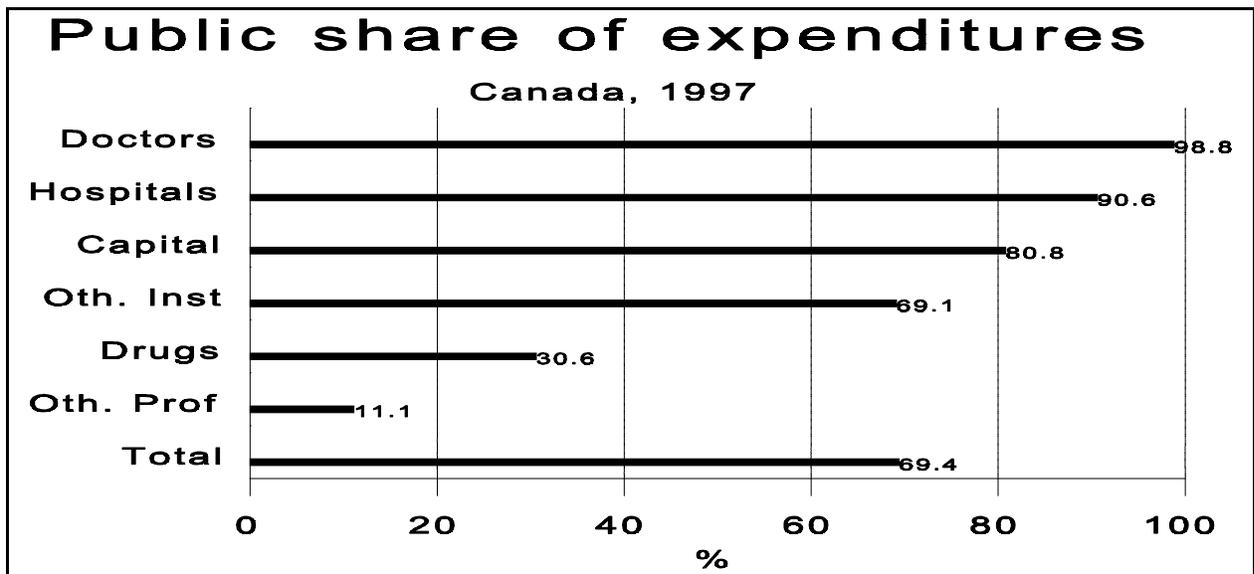
Source: Registered nurses database. Facts and figures. www.cihi.ca/facts/natrndb.html

Whatever forces cause a proportion of registered nurses to not be employed in their profession do not seem to apply to physician services, perhaps because they are rarely employed by provider organizations. At any rate, CIHI's National Information²⁵ lists the same figure for 1997 active civilian physicians - 55,243 - as they give for the data reported in Table 2. The restrictions on physicians instead come through setting levels of remuneration; controls over physicians thus are concentrated under what we have termed *Financial and Service Issues as they relate to Costs, Incomes, and Service Mix*, where *Costs* refers to decisions about the total resources which will be allocated to pay for the services of those individuals practicing the profession, *Incomes* to decisions about the earnings of individual providers, and *Service Mix* to decisions about what services will be purchased for those resources (by service recipients, geographical area, and type of services).

Total patterns of expenditures

The CIHI divides health expenditures in two ways. First, they look at the 'source of funds' and distinguish 'public' from 'private' sector payments. Second, they look at the 'use of funds', which will be discussed later. Under 'source of funds'; public can be further decomposed into the following four categories: payments from the provincial government, direct payments from the federal government, payments from municipal governments, and payments from workers' compensation. The second way in which CIHI divides up spending is by the 'use of funds'. CIHI uses the following categories: hospitals, other institutions (such as nursing homes), physicians, other professionals other than those employed by institutions (in turn broken down to show dentists separately from all other health professionals), capital costs, drugs (in turn broken down to separate prescription drugs from over-the-counter pharmaceuticals), and other health expenditures (including administration, public health, and research).

Figure 4 shows 1997 data for the 'public' share of each CIHI expenditure category. There are still some difficulties in capturing private spending, particularly with reference to outpatient drugs and to other practitioners. (Vernon Hicks has prepared a thorough and first rate analysis of the role and evolution of private sector financing within the Canadian health care sector²⁶.) For example, the 30.6% public share for drugs is composed of 41% of the costs of prescription drugs, and 0% of the cost for over-the-counter remedies. However, clear differences in what the public pays for can be seen. Virtually all spending for physicians comes from public sources, as does about 90% of spending for hospitals. In contrast, much of the spending for drugs and for other practitioners comes from private sources.

Figure 4: Public share of Canadian health expenditure, 1997

The case of physicians

At present, most Canadian physicians are paid fee-for-service, although a declining proportion (currently around 1/3 of Ontario physicians) work in solo practice. In the terms of our framework, the provinces have used a market-based allocation model, in which physician earnings are a function of the volume and mix of services they deliver. In most provinces, the provincial government, in consultation with the medical profession, determines what services are deemed to be medically necessary and prescribes prices for their delivery; the fees payable and conditions and limitations on payments. These are usually set out in a Schedule of Benefits. Physician services are insured regardless of where they are delivered; uninsured services usually fall at the margins, and may include telephone advice, examinations for non-medical purposes (eg., employment physicals, return-to-work certificates, etc.), and services which are not placed on the fee schedule (eg., cosmetic surgery). Physicians may choose to opt out of Ontario Health Insurance Plan (OHIP) and bill patients directly for service provision yet they still remain bound to charge prices not greater than those listed in the Schedule for insured services. Non-participating physicians in Ontario have the option to bill the OHIP directly for certain specified groups of patients and through an associated medical group for services rendered in public hospitals, nursing homes and other institutions. In theory, prices for all uninsured services could be determined by market forces, but physicians tend to follow the guidelines of their provincial medical associations.

In the past decade, provincial governments have tried to move from the previous reliance on market allocation mechanisms. These mechanisms responded to demand (whether patient or supplier-induced), were not necessarily linked to those health problems of highest priority or those services most likely to benefit their recipients, and resulted in open-ended funding. In consequence, most provincial governments also experimented an assortment of blunt controls

over their payments ('caps'), with varying degrees of success. Because fee for service (FFS) is inherently open-ended, enforcement of these caps required the implementation of various reduction mechanisms. For example, Ontario brought in both 'threshold reductions' (individual caps) and 'payment reductions' (global caps).

Threshold Reductions reduced the fees payable to individual physicians as billings exceed agreed threshold levels. Ontario's version, announced in July 1996, affected most physicians with the exception of certain specialists and physicians associated with the Underserved Area Program. Each physician faced three threshold levels, with the levels depending on specialty. Billings in excess of the first threshold amount were discounted by 33.3%, billings beyond the second discounted by 66.7%, and billings beyond the third discounted by 75%. In January 1997, the first thresholds were modified to \$300,000 (for general practitioners) and \$380,000 (for specialists). As Hurley has demonstrated, these individually-based caps are relatively easy to enforce²⁷.

In contrast, Payment Reductions are adjustments made on a uniform percentage basis to all physicians in the case that aggregate billings exceed the target cap. In Ontario, these clawbacks amounted to 2.8% in 1993-94, and 7.5% in 1994-95. In 1995-96, the global cap was exceeded by \$244 million, resulting in a requirement for Payment Reductions calculated to be 2.9% over two years (and originally estimated to require 3.5%). Reductions for 1996-97 were implemented at a rate of 6.5% from May to October of 1996 to prevent similar over-expenditures for the present fiscal year. Subsequently, Ontario agreed to modify these clawbacks.

Although these approaches may have achieved some of their cost control objectives, they have proven to have a number of unfortunate consequences, as the economics literature would have predicted²⁷. For example, shortages of services were accentuated in Quebec when physicians who had billed at the threshold level chose to take leaves of absence rather than receive a level of reimbursement they considered inadequate. The caps also gave incentives for clinicians to encourage de-insurance, which freed services from these cost controls; this tendency has allowed a considerable proportion of physiotherapy services to escape from publicly-financed provision. In a FFS environment, the effect of a downward sloping fee schedule implies that the marginal pecuniary benefit of service provision decreases with volume. However, the impact of measures directed at individuals (eg., the Threshold Reductions) are not the same as those directed against collectives (eg., Payment Reductions). Threshold Reductions indeed make it less profitable for individual physicians to expand their provision of services once they meet their cap, and are relatively easy to enforce. They can also discourage 'revolving door' practices. An additional disadvantage is that this blunt instrument does not distinguish between wanted and unwanted services. Undesirable consequences may include the generation of waiting lists in certain specialties as providers reach their caps, the hampering of the development of effective delivery arrangements by expert clinicians, particularly where quality is related to higher volumes (eg., clinics for cataract surgery), and even the imperiling of service coverage if all providers take vacations after reaching their cap at the end of the fiscal year. In contrast, attempts to reduce aggregate totals directly are known to produce perverse offsetting effects, particularly what some call the Tragedy of the Commons²⁸, and others refer to as issues of 'common-property resources'²⁷. This theory argues that physicians would gain by increasing their billings until they reach their individual caps, even if this increase in service would result in

clawbacks for the pool of all physicians. Taking clawbacks into account, individual physicians would have to over-produce, so that their discounted billings would result in the target revenues. Even more perversely, those who would try to control their utilization would be net losers, because they would be clawed back without the compensating increase.

Barer et al²⁹ presented an excellent typology of approaches to computing and controlling physician expenditures per capita. For example, if provincial governments were simply interested in controlling expenditures per capita on physician services, they could set a global cap on how much they would pay for physician services, and allow market forces to sort out physician income, distribution, supply and service mix. No province has done this; neither have any policy analysts suggest they do so.

As noted above, provincial governments have tried to control physicians per capita by placing restrictions upon the number of medical school places and residency places. However, they do not directly control where these physicians choose to practice. As Barer et al noted, every province in Canada tried to implement physician resource management plans. As a few examples, British Columbia, Saskatchewan, Quebec, and Ontario discounted the billings of new physicians who practiced in what were deemed 'over serviced areas'; Nova Scotia bought back billing numbers from physicians approaching retirement, New Brunswick required that physicians must have hospital privileges to be eligible for a billing number; and Quebec paid 15% bonuses to general practitioners (GPs) and 20% bonuses to specialists who practice in rural areas^{29,30}.

Capping the universal physician budget is recognized as a blunt instrument for achieving expenditure targets, so increasing interest has been expressed in shifting the focus on primary care medical services from FFS to alternate methods of physician compensation. However, this has moved very slowly. For example, in Ontario, in 1994-95, over 95% of OHIP physician expenditures were distributed to physicians operating on a FFS basis. Once the province had implemented a global cap on total physician expenditures, there was a 'zero-sum game'; that is, any increase in funding to non-FFS physician care would mean reduced funding in the FFS pool. The province and the medical association had been unable to agree about the appropriate amount to be transferred, and the 3-year Physician Services Agreement signed in 1997 explicitly prohibited moving dollars from the FFS pool to accompany any physicians who might move to alternative funding arrangements. This concession in turn meant that any new alternate funding arrangements over the next 3 years would require 'new money', while those remaining in the FFS sector would be relatively better off (ie., the same pool would now be divided among fewer physicians). Unsurprisingly, alternative funding models remained a minor element under that agreement, although experiments with primary care reform have since been announced.

Summary of who decides

Tables 5 and 6 summarize who decides for doctors and nurses, with the columns representing the six categories of decisions, and the rows representing the various levels of public and private decision makers. In each case, the cells where market mechanisms might be influential are shaded.

Table 5: Who decides for physicians						
Decision maker	Category of decision					
	Training	Licensure	Employment	Costs	Incomes	Service Mix
PUBLIC						
National	-	-	-		-	-
Provincial	Sets numbers	-	-	May set caps	-	-
Regional	-	-	-	-	-	-
Local	-	-	-	-	-	-
PRIVATE						
Mediating structures	<i>Medical schools admit</i>	<i>Professional Colleges license</i>	<i>Hospitals may employ</i>	<i>Professional Associations set fee schedules</i>	<i>Professional Associations set fee schedules</i>	<i>For hospital-run services only</i>
Corporate	-	-	Group practices may employ	-	-	-
Small business	-	-	Most MDs are self-employed	-	-	MDs determine preferred practice
Individuals	-	-	-	FFS depends on services provided	FFS depends on services provided	Patients demand services

Table 6: Who decides for nurses						
DECISION-MAKER	CATEGORY OF DECISION					
	Training	Licensure	Employment	Costs	Incomes	Service Mix
PUBLIC						
National	-	-	-		-	-
Provincial	Fund colleges /universities	-	-	Give global budgets to employers	-	-
Regional	-	-	-	-	-	-
Local	-	-	-	-	-	-
PRIVATE						
Mediating structures	<i>Nursing schools</i>	<i>Professional Colleges license</i>	<i>Hospitals employ</i>		<i>Hospitals negotiate wage levels</i>	<i>Employers determine practice</i>
Corporate	-	-	Companies may employ		Employers set wage levels	-
Small business	-	-	Physicians may employ		Employers set wage levels	
Individuals	-	-	-	-	-	

3. IN WHAT AREAS OF THE HEALTH CARE SYSTEM HAVE THE MARKET AND/OR PUBLIC PLANNING FALLEN SHORT IN ACHIEVING A DESIRABLE CLINICAL WORKFORCE?

The series of cost control efforts described by Barer et al²⁹ and the more current disputes between provincial governments and health professionals can be seen as representing an uneasy attempt to interfere with market forces to achieve 'more desirable' outcomes. It is the contention of this paper that, paradoxically, it is precisely where market forces operate most efficiently that the greatest perceptions of crisis have arisen. As one example, the working of labour markets appears to be leading to a critical long-run shortage in the number of people willing to train to become nurses. As another, consider this recent news item:

From:: info@healthedition.com

September 22, 2000 Volume 4 Issue 37

******NO SOLUTIONS YET IN DOCTOR DISPUTES ******

As of Wednesday, there were 13 communities in British Columbia (BC) where doctors were providing limited services as a result of a pay dispute with the government. And last Friday, most GPs in New Brunswick closed their offices for a study session as part of their contract dispute. Starting October 2nd, they are refusing to complete special authorization forms that the government requires before it agrees to reimburse patients for certain drugs.

Instead, doctors plan to give patients a piece of paper with any prescription they write saying the drug is the one recommended for the patient. If government officials choose not to accept this note, once it's passed on by the pharmacist, "that is between them and the patient", Dr. Michael Simon of the New Brunswick Medical Society told the Moncton Times-Transcript.

More office closures are also possible in the dispute that has steadily escalated since contract negotiations started in March. Last Thursday, the day before the first office closure, the government was accused of leaking the doctor's pay demands to the media. According to reports, doctors are seeking a 30 per cent wage increase over three years that would bring the average doctor's salary up to \$195,000 a year. Doctors say they are after wage parity with neighbouring provinces and have not disputed the reports of their wage demands. The government is offering 1.5 per cent more a year over three years.

Meanwhile, in BC, the government appears set to pitch its \$40 million wage and benefit offer directly to physicians in rural and remote communities. Talks between doctors and the government, arranged by the BC Medical Association, have failed to break the impasse over on-call premiums and other incentives to recruit and retain physicians in areas outside urban centres.

Now that they have approved funding, the regions will be able to offer contracts to physicians in affected areas that will reportedly increase their salaries by \$40,000 a year. A ministry spokesperson said doctors should be receiving a written offer by the end of this week.

Throughout this lengthy dispute with rural doctors, the government has been frustrated by having to negotiate outside of the existing contract with physicians that doesn't expire until next March. On Friday, Premier Ujjal Dosanjh appointed Judi Korbin to review the negotiating structure between doctors and the Ministry of Health. She has been given until October 31st to submit an interim report on the most effective way to negotiate contracts between the ministry and doctors, and the best way to ensure the resulting contracts are binding on all parties. The government has suspended talks with the BCMA on the new contract until the Korbin report is in.

In effect, one could argue that rural physicians are objecting precisely to the workings of market forces. It is noteworthy that the stories speak of 'salaries' rather than of fee levels, perhaps in recognition that a FFS practice could not yield the income expectations held by these physicians. Markets do not produce parity; they produce winners and losers. In particular, more rural areas do not have enough patients to support enough clinicians to ensure that all have a decent on-call schedule and a comparable income to those working in big cities. By threatening to withdraw their services unless the government provides increased resources to top up their earnings and reduce their clinical on-call time, physicians appear to recognize the unwillingness of all parties to deal with the distributional consequences which would result from a continued reliance on market forces.

Another ongoing issue is the aging of the physician and nursing workforces.^{19,31} CIHI revealed that 22.8% of physicians were between the ages of 60 and 59 in 1999, compared with 19.6% as recently as 1995. In contrast, only 28.1% were under the age of 40 (compared with 33% in 1995). In contrast, despite considerable rhetoric, there does not appear to be a substantial 'brain drain' of physicians out of Canada. The proportion of physicians leaving Canada to the total physician supply has ranged between approximately 1% and 2% since the early 1980s, and was 1% in 1999. In 1999, 182 family physicians moved abroad, while 113 returned from abroad. In terms of specialists, 403 moved abroad, and 230 returned.¹⁹ This number is considerably outweighed by the large number of foreign-trained physicians currently unable to gain entry to practice in Canada (itself a human rights issue). Similarly, the current inflexibility in changing specialities appears to be leading to spot shortages, particularly in those specialties traditionally less likely to attract students right out of medical school.

4. HOW IS THE COUNTRY ALTERING ITS APPROACH AS IT ASSESSES THE SUCCESSES AND FAILURES OF PAST POLICIES?

The most immediate reaction has been to increase medical school enrollment. In 1993 the Ontario provincial government had reduced first-year enrolment at University of Toronto's faculty of medicine by 29% or 74 positions, representing a 12% cut in medical school enrolment provincewide. In July 1999 the health ministry appointed a fact-finding commission, led by Dr. Robert McKendry, to investigate the physician supply and distribution situation in Ontario. The McKendry report came out in December 1999 and recommended, among other things, that the province's undergraduate enrolment in medical schools should increase by 10% or 55 students this fall; Ontario responded by adding 40 places. Dr. Henry Haddad, President-Elect of the Canadian Medical Association, announced that the new positions announced by Alberta, Ontario, Quebec, and New Brunswick amounted to a total of 191 undergraduate, 114 postgraduate and 16 postgraduate re-entry positions, and that he was expecting Manitoba to increase postgraduate enrollment in 2001. In the British Columbia legislature Sunday, the health minister said discussions with University of British Columbia are underway regarding increased enrollment in the 2001-02 school year.

These announcements represented the political failure of the Barer-Stoddart report. A comprehensive examination, it had recommended cuts in physician numbers on the assumption that there would be considerable changes in how physicians practice, and how other professionals (eg., nurse practitioners) were used. However, most of these reforms did not happen. In consequence, the main policy approach being recommended is to increase the

numbers being trained. In the words of the Task Force set up by the CMA:

There are 56,000 physicians licensed in Canada. At a steady state, 3.5% will retire, die, emigrate or leave practice each year (replacement 1960). Population growth will continue between 300,000 to 350,000 per year requiring between 540 to 600 new physicians. To maintain our physician population ratio of 1.8 to 1.9 per 1000, Canada needs a physician supply of approximately 2500 per year. Our current supply is less than 2000. Canada's medical school enrolment of 1570 for a population of 30.5 million (1 per 19,000), is far below the UK at 5600 positions for 61 million (1 per 12,200) and Australia at 1400 positions for 19 million (1 per 13,500).²⁰

They made the following recommendations:

1. Increase medical school enrolment from 1,577 to 2,000 by the year 2000. This increase in medical school enrolment needs to be appropriately funded and free of coercion.
2. Increase efforts to retain and repatriate Canadian physician graduates.
3. Increase government-funded residency positions from 100/100 to 120/100 medical school graduates. This will provide short- and long-term relief and enhance our ability to integrate international medical graduates into the physician supply.
4. Develop a formal and continuing process involving the Canadian Medical Forum, other health care providers, and federal/provincial/territorial governments to monitor and make recommendations on the number of entry positions for Canada's medical schools and postgraduate training programs on a regular (2-3 year) basis.
5. Address the issues of distribution and new models of delivery through co-operation of governments, health authorities, and educators.

Similarly, in August 9, 2000, an open letter was sent to the Chair of the Conference of Premiers from three major Canadian professional organizations - the Canadian Healthcare Organization (representing hospitals, health authorities, and other providers); the Canadian Medical Association, and the Canadian Nurses' Association; among the points it made were that "strategic investments are required to address the training, recruitment, retention and repatriation of health care professionals, including nurses, physicians, radiation technologists, and others."

With respect to other health professionals, the approach is still trying to attain cost control, often by squeezing down wages and working conditions. To a large extent, many of these decisions have been moved to other decision makers, particularly as provincial governments use provider organizations to make difficult resource allocation decisions. This in turn is leading to a strong prospect of shortages, which can be met in the short term by trying to raid the clinical workforces of other countries.

How well do market forces work? As Tuohy has noted³², an ongoing dilemma is the need to balance issues of professional autonomy against issues of 'accountability'. Within the publicly financed sector, non-physicians are heavily regulated; their employers (eg., hospitals) largely

decide upon the service mix they wish to purchase. In contrast, most physicians are what Lipsky has termed 'street level bureaucrats',^{33,34} who retain considerable autonomy in determining what is 'needed'. Within the privately financed sector, in theory, providers are more able to respond to market forces, with the caveat that it is provider organizations, rather than individual providers, who determine who will be hired, and which services will be provided.

The paper concludes that health care markets per se have had relatively little impact on licensure for any category of regulated health profession in Canada. For physicians, markets have also had minimal impact on training, employment, or overall costs, but have influenced incomes and service mix (including geographic distribution of the physician workforce). In contrast, markets have had somewhat greater influence on nurses and other salaried providers, and considerable influence upon those parts of the clinical workforce who work outside of Canada's publicly-funded health care system. It is noteworthy that this disconnect between a market-based allocation system and clinical needs has resulted in periodic crises, particularly with respect to ability to retain physicians in rural areas, the ability to attract students into nursing programs, and the perceived appropriateness of service mix delivered to the population.

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