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Physician Services:

Canada vs. the United States

An Interactive Qualifying Project Report

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Abstract

The Canadian health care system offers universal access to its population, but costs considerably less than the U.S. system. The purpose of this project was to examine these two health care systems, particularly with regard to their physician services sectors, so as to formulate cost-effective recommendations designed to make the technological advances of modern medicine available to larger portion of the American public. Extensive literature research was conducted on both systems, and specific recommendations were made.

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Chapter I: Introduction

The United States health care system is a cost intensive system. It involves many people and resources. Within our country there are some people who have full health care coverage, and some who have no health care coverage at all. The Canadian system, in contrast, is a centralized system in which all of its citizens have government-funded coverage for most of their health care needs.

This project compares the different health care systems of the United States and Canada, particularly in terms of physician quality and cost effectiveness. It investigates how the Canadians can spend about half as much money per household on health care than the United States and still have universal coverage. It suggests changes relative to physician services that can be made in the United States to decrease the costs of health coverage while maintaining a high level of quality of physician services. For example, it discusses factors that explain why physician costs are so much higher in the United States than in Canada.

Every province of Canada has a somewhat different system of health care. For this reason, this project focuses on one particular province, Ontario. Ontario's system for regulating physician quality is very advanced, and the United States can learn from its methods. Its mandatory peer assessment program and other programs attempt to ensure that its citizens have high quality, yet affordable, physician care

This project is important because a nation as advanced as the United States has the ability to provide every one of its citizens with high quality health care, yet it does not. Canadian citizens have the majority of their health care financed for them by their government; this situation does not exist in the U.S. It is also vital to save money on U.S.

health care so that its benefits can be extended to the entire population; it is necessary to make health care more affordable in the United States.

Implicit in the reason that this project is significant is the fact that the overall health and well being of the United States population is of great importance. There are many people in the U.S. who do not have adequate health care coverage. Much can be learned from the Canadian health care system.

This project is suitable for an Interactive Qualifying Project because it addresses a social problem in the United States --relating to technology-- that affects all citizens. In the United States there are a significant number of people who do not have any health care coverage at all. The results of this project can be used to help shape U.S. health care policy in the future. If the full benefits of medical technologies are to be made available to all United States citizens, the American medical care system must change. Changes in the way a medical care delivery system is organized and financed can have a dramatic effect on its availability and effectiveness.

The major goal of this project is to analyze the health care systems of Canada and the United States --particularly the physician services sector-- and to make suggestions for the improvements of the U.S. system, based on the Canadian health care system. A particular focus is to find out if health care quality, particularly relative to physician services, can be improved in the United States. The project examines health care spending in the U.S. and Canada and also discusses quality aspects involved with both systems.

This project will also help its readers to better understand how the Canadian and United States health care systems work. This project presents both the strong and weak

points of both systems. The results of this project provide suggestions for changes that can be made in the United States and Canada to improve the quality and availability of health care, while keeping its costs controllable.

Chapter II, Background, introduces information needed to understand this project. The chapter begins by analyzing economic aspects of the health care systems of the United States and Canada. Then the Canadian health care system is described, starting off with a history of the national system and moving into its present situation. Next the health care system of Ontario is presented, focusing on the physician sector and quality management programs within this province. Finally, this chapter describes comparable aspects of the health care system of the United States.

The Procedure chapter, Chapter III, explains the methods used in researching and writing this project. It describes how and where the research for this project was conducted.

The Results chapter, Chapter IV, presents the findings of this project. This chapter displays the specific information upon which suggestions are later made for the improvement of the health care system of the United States, based on the experience of Canada. These results are analyzed in Chapter V, Analysis of Results. The purpose of this chapter is to evaluate alternative suggestions for the improvement of the health care systems of the United States and Canada and to make recommendations for the improvement of these health care systems. Finally, in Chapter VI, Conclusions, a review of the results is made available. This chapter also includes recommended areas for future research.

Chapter II: Background

This chapter provides information on the United States and Canada in the area of health care. It examines national health care spending, physician service payment mechanisms and household health care costs. The chapter then explains, in some detail, the health care systems of Canada (particularly the province of Ontario) and the United States. Each section gives a brief history of the relevant system and then discusses its current status.

Economics of Health Care: Canada vs. the United States

The following section deals with economic aspects of health care. The first topic is a comparison between Canada and the United States with respect to national spending on health care. This section also addresses ways in which physicians are paid, focusing on the differences in payment systems. The last part of this section deals with household health costs, giving information about how much the average household has to pay for health care.

The United States and Canada National Spending

Canada offers all of its citizens "free" health care services. It has had the world's second most expensive health care system for the past thirty years (Innes, 410). In 1992, the cost reached an all-time high of 10.2 percent of the gross domestic product. These health care costs have become a problem for Canada.

In the 1980's, the Canadian federal government decided to withdraw some of its funding from the provincial health insurance plans. This was done to attempt to curtail

the rising national expenditures on health care. In one year the federal government withdrew nearly 30 billion dollars from the provincial plans in an attempt to "fix" the system (Innes, 410). This forced the Canadian health care system to operate with less capital. Some of the nationwide effects were more outpatient surgery, fewer hospital admissions, and shortened lengths of stay in hospitals (Innes, 410).

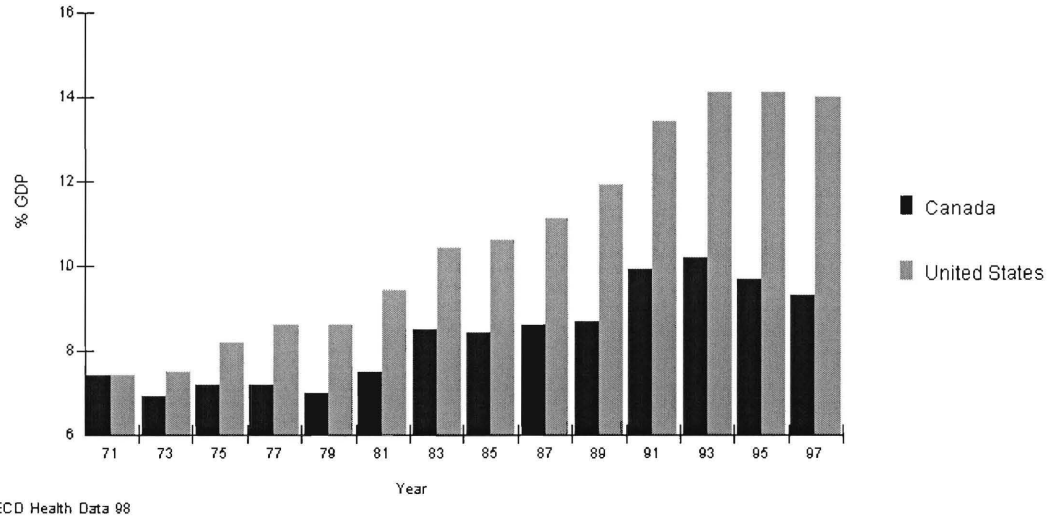
Since the cutbacks of the 1980's, Canada has continued to spend relatively less on its health care system. The federal reduction of provincial aid during the 1980's did assist in slowing the growth of health care spending in Canada. The costs, as a percentage of GDP, reached a peak of 10.2 % in 1992, but by 1995 the percentage of GDP spent on health care had dropped to 9.3 percent (Innes, 410). That is almost a whole percentage point decrease in just three years. (Some of the implications of these cutbacks are discussed in later chapters.)

Canada's close neighbor to the south, the United States, spends much more on health care than Canada does. Although the United States spends a very large amount of money on health care, not all of its people are covered by the many systems and insurance policies of health care (Fuchs, 884). In 1995, 14.2 percent of the United States' GDP was allocated to health care. That ranked the United States as highest in the relative cost of health care among industrialized nations in that year (Innes, 410).

It is a common trend in other countries to have a rapid expansion in health care followed by a period of stabilization, as is the case in the United States, as shown in Figure 1. However, the percentage that the United States has stabilized at is still much higher than that of Canada's. This suggests that health care costs are not only related to how rich a country is but also to public policy on heath care (Evans, 109). This high

percentage of GDP spent on health care is a major problem for the U.S. and an area that needs further analysis.

Figure 1: Total Expenditure on Health
1971-1997



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Physician Service Payment Mechanics

The United States spends almost three times as much as Canada per capita on physician services (Fuchs, 884). Clearly the United States has major problems with its national spending in this area.

In Canada, physician service costs are basically paid by one source: the government of each province. Canada currently has a fee-for-service payment system for its physicians, one in which a physician performs a service and the physician is paid for doing that service (Innes, 411). The provincial government negotiates with the provincial medical association on a sum for physician services. The fee schedule, or list of services

and their costs, is then negotiated by the provincial medical associations with the different specialty physicians and an agreement on the fee for each service is reached (Hsiao, 886). Physicians typically submit one bill per patient visit and payment is usually punctual and complete (Fuchs, 888).

United States physicians have a much different system of payment. The majority of physicians in the United States deal with many third-party payers, such as the government, health insurance companies, and health maintenance organizations. Complications with billings often arise and the patient may get notification of a payment by the insurance company as well as a bill from the physician. There are many complex forms that must be completed; each third-party payer has a unique form that must be completed for the services rendered by the physician. The physician not only has to be a practitioner of medicine, but also proficient at filling out paperwork. There are frequent delays in payments, caused by all of the different forms and work sheets that have to be filled out. Many disagreements concerning the amount of money to be paid by the patient and by the third party payer result from completing the wrong form, sending the wrong copy of the paperwork, or sending the form to the wrong place (Fuchs, 888).

United States' and Canada's Household Health Costs

In Canada, out-of-pocket household health costs come from services not covered by the provincial health systems. Some of these costs include adult dental care, cosmetic surgery, prescriptions, and hospital room amenities (Torrey, 127).

In the United States, many out-of-pocket household health expenditures come from similar self-pay services as in Canada, such as prescriptions and cosmetic surgery;

however, U.S. health insurance plans also typically require co-payments and/or deductibles for many of the services covered in full by the Canadian plans (Torrey, 126-7). In 1986, total out-of-pocket household expenditures on health care in the United States were 1,135 dollars; the percentage of total personal consumption that was directed to out-of-pocket health care expenditures for the United States was 5.6 percent (Torrey, 129).

In a comparative study of how much money citizens of Canada and the United States paid out-of-pocket for health coverage in 1986, it was shown that Canadian households paid about half of what U.S. households paid. The amount of money that an average Canadian household spent on out-of-pocket health expenditures in 1986 was 446 dollars (U.S.); the average out-of-pocket health care expenditures as a percent of total personal consumption was only 2.2 percent (Torrey, 129).

It is clear that Canadians spent considerably less of their total personal consumption expenditures on out-of-pocket health care expenditures than U.S. citizens in 1986. Where Canada compensated was in its taxes; Canadian citizens paid almost twice as much in personal taxes as U.S. citizens. In 1986 the personal taxes per capita in Canada was 6,095 dollars (U.S.), and the amount in the U.S. was 3,612 dollars (U.S.) (Torrey, 129). Canada spent roughly 61 percent less than the United States spent on personal household out-of-pocket health expenditures, 446 dollars (U.S.) to the United States' 1,135 dollars (U.S.), but all of Canada's citizens get health care coverage. In general, Canadians pay less out-of-pocket for their health care services, but this is partially compensated for by the greater role of Canada's public sector in financing health care. While both Canada and the United States spend significant amounts of public

monies on health care, public sector financing is much more significant in Canada than in the United States (Torrey, 130).

The Canadian Health Care System

This section addresses the Canadian health care system. It discusses how the current socialized system was established by reviewing the history of Canadian health care. This section also outlines the current state of the Canadian health care system.

History of the Canadian Health Care System

In discussing the Canadian federal health care system, it is important to look at the experiences of the province of Saskatchewan. Saskatchewan served as a pioneer in the socialization of Canadian health care and led the way in both universal hospital insurance and in universal physician insurance (Roemer, 194).

The concept of a socialized health care system dates back as early as 1916 in Saskatchewan. It originated as tax-supported municipal plans in rural areas, tax money used to finance health insurance for the taxpayer. These plans were used to keep physicians in low-income rural communities. The idea of socialized health care spread throughout Saskatchewan from these rural communities (Roemer, 194).

The Cooperative Commonwealth Federation (CCF) party came into power in Saskatchewan in 1944 as a result of two socially and politically straining events: the depression of the 1930's and a drought in the early 1940's. The CCF party had used the hard economic times to its political advantage and promised "socialized heath care" if it

were elected into office. The party made good on its promises. In 1946, the Saskatchewan Hospital Plan was enacted, to take effect in 1947 (Roemer, 194-95).

The Saskatchewan Hospital Plan provided hospital coverage for virtually all residents of Saskatchewan. Patients with common health problems were treated in local hospital facilities, those with more complex conditions were treated in regional hospitals, and patients with the most complex cases were treated at Saskatchewan's two main hospitals located in its two main cities, Regina and Saskatoon (Roemer, 195 & Andreopoulos, 13).

In the beginning of socializing its health care system, the Saskatchewan government was faced with many dilemmas. In order to accommodate all of its residents, the Saskatchewan government had to develop a system for allocating hospital beds, building more hospitals, and training an adequate amount of physicians and other health care professionals. After two years of refining the system, the government decided that seven and a half hospital beds per one thousand people were adequate to meet the needs of the patients (Roemer, 194-195).

Another major problem the government of Saskatchewan faced was also economic. It needed to develop a system of distributing its hospital budget. This system needed to ensure that the physicians could not take advantage of it by over-crowding hospitals to maximize their income (physicians were paid --in part-- per hospitalized patient). The government developed a fixed annual budget for the hospitals based on an average of ninety-percent hospital occupancy. This budget covered hospital staff services and medical supplies. Each hospital was paid one-twelfth of this budget every month, regardless of the total patients cared for that month. The budget would be adjusted only

if an epidemic or other extraordinary expense arose. Since the terms of the budget stated that the hospital could keep any surplus at the end of the year, the hospital administration prevented the physicians from over-crowding the hospitals (Roemer, 195-96).

After several years of success with socialized hospital care, the province of Saskatchewan began devising a health plan to cover additional health services. Medical professionals, via the Saskatchewan College of Physicians and Surgeons, openly opposed this plan. In 1960, negotiations between the Saskatchewan government and the Saskatchewan College of Physicians and Surgeons resulted in the appointment of the Advisory Planning Committee on Medical Care in Saskatchewan. Before the committee could act, a provincial election had to be held. Physicians campaigned against the incumbent government, but it prevailed. Although the Canadian Medical Association agreed to help develop the best possible medical plan for the province, the Saskatchewan College of Physicians and Surgeons refused (Roemer, 195-96).

The Advisory Planning Committee favored a bill in which the people would only have to pay a tax that would be low enough for any self-supporting person to afford, and the physicians would be paid by the provincial government on a fee-for-service basis. The payment of this tax would insure medical care for the taxpayer. The bill, called the Saskatchewan Medical Care Insurance Act, became a law on November 17, 1961, in spite of continuing opposition from physicians. The Saskatchewan government began appointing people for a provincial committee, the Medical Care Association Committee. The Saskatchewan College of Physicians and Surgeons refused to appoint or consent to any of the members.

On July 1, 1962, the Saskatchewan Medical Care Insurance Act went into effect. At that point there was almost a complete withdrawal of medical services by physicians, except for emergencies. This was the first physicians' "strike" in North America. However, because of unfavorable public opinion about the strike and negotiations with the Saskatchewan government, the strike ended. On July 23, 1962, negotiations were renewed and both parties signed a document called the Saskatoon Agreement (Roemer, 195-96).

Despite the initial problems, the Saskatchewan Medical Care Insurance Act of 1961 was a success. It was popular amongst the people of Saskatchewan because it still allowed for a free choice of physician (Andreopoulos, 17-18).

The foundation for federal socialized hospital care throughout the country dates back to the 1940's. The first movement toward federal socialized hospital care was the National Health Grant Program, established in 1948. These grants were used for hospital construction, research, mental health, health surveys, professional training, crippled children and disease control. These grants were distributed throughout Canada (Andreopoulos, 14).

The interest in national hospital insurance increased during the 1950's. Canadian hospitals were facing stormy financial times. Between the unionization of hospital workers and trying to keep up with the latest technology, hospitals were finding it difficult to maintain the same quality and standards they were used to having.

In April of 1957, the federal Canadian Parliament passed the "Hospital Insurance and Diagnostic Services Act." This Act stated that the federal government would not contribute any funds for hospital care until six provinces, containing at least one half of

the population of Canada, agreed to this Act (Andreopoulos, 14-15). Only five provinces agreed to this Act by 1958. However, there was a change of government in 1958 and an amendment was passed to begin this hospital insurance program before the six provinces agreed to this Act. By January of 1961, all of the provinces had joined the program (Andreopoulos, 15).

Under the Hospital Insurance and Diagnostic Services Act, all residents of Canada were eligible for hospital insurance coverage. It was the provincial governments' responsibility to organize a program, but they had to meet some federal standards. They also had to agree to specify the services to be provided, specify the amount of authorized charges, include a schedule of hospitals in the province, and provide the federal government with their methods for administrating the provincial law (Andreopoulos, 28). Provinces were required to provide comprehensive coverage (inpatient was mandatory, but outpatient was optional), provide universal coverage -- available to no less than ninety-five percent of the population, allow for coverage when a person leaves his/her province or Canada, and provide public administration. Provinces also had to develop a scheme for hospital inspection (because of mandatory inspections, the quality of hospital care greatly improved (Andreopoulos, 28-29)).

The public was very pleased with its national hospital insurance coverage, but many were still struggling with private physician insurance coverage. There were so many insurance companies with different policies that the physicians had to read each one separately to check if a patient was covered for a particular procedure. In the early 1960's, the Canadian government established a Royal Commission on Health Services,

often called the Hall Commission. This commission strongly supported the idea of universal government insurance for physician services (Andreopoulos, 16).

In December of 1966, the Medical Care Act was enacted which gave medical insurance to all Canadian residents. The minimum provincial requirements for this Act are similar to those for the Hospital Insurance and Diagnostic Services Act. The requirements are often referred to as the "Four Points." The requirements are: comprehensive coverage, universal coverage, portability of the policy, and the plan must be operated on a non-profit basis. In Canada, comprehensive coverage refers to all medical services required, as advised by a physician, without any restrictions. Services are provided on the basis of medical need, regardless of financial status. The second point, universal coverage, insures that a proportion close to one hundred percent of the population is provided medical insurance by the government. This allowed for few private medical insurance companies. Portability of the policy allows for coverage during a person's absence from his/her province or the country. The forth point requires the provincial plan to operate without gaining a profit. This point also discouraged private insurance companies. Within these provisions, the provincial governments were allowed to construct their own plan for universal medical insurance. Under the Medical Care Act, all essential services provided by physicians are covered (Andreopoulos, 36-37).

Provisions for socialized health care services were very popular among the people of Canada. Because of the Hospital Insurance and Diagnostic Services Act and the Medical Care Act, hospitals and medical schools were being built, and jobs in the health industry were being created.

Current Canadian Health Care System

Canada currently has a national health insurance plan that offers its citizens virtually free health care. In 1984, the Canadian Parliament passed the Canadian Health Act. It is considered to be the cornerstone of Canada's health care system. Its purpose, in the words of the Act, is to:

> ... establish criteria and conditions in respect of insured health services and extend health care services provided under provincial law that must be met before a full cash contribution may be made.

The purpose of this Act is to ensure that all residents of Canada have access to necessary health care on a pre-paid basis. The Act contains five major criteria that a province or territory of Canada must meet before it is given financial backing by the federal government for its health care. Each territory or province devises its own health care system, but is regulated by this Act. The purpose of the criteria is to ensure fair and equal distribution of federal government funds for Canada's citizens.

Canada's federal government has a set of regulations that each province or territory must fulfill in order to be able to have an acknowledged and federally funded health care program. The first criterion that a province or territory must meet is "universality." This means that all residents in the province or territory must be entitled to equal health insurance coverage. In theory, this idea means that everyone will be treated equally and no preferential treatment will be given to anyone (Rush, 672).

The second criterion is "accessibility." This criterion is designed to make sure that there is reasonable access for all citizens to physicians and hospitals. It also assures reasonable compensation for physicians and hospital employees (Rush, 672).

Another criterion that a province or territory must meet is "comprehensiveness." This means that, within the province or territory, all medically necessary services provided by physicians and hospitals must be covered under that province or territory's health insurance plan (Rush, 672).

The next criterion is "portability." This requires that when a citizen travels or moves out of a province or territory, he or she will still have health insurance. This criterion prevents people from having to pay for their medical expenses when they travel or move out of their province (Rush, 672).

The last criterion that a territory or province has to meet in order to receive federal support is "public administration." This criterion means that the insurance plan of a territory or province will be executed in a non-profit basis by a public authority (Rush, 672).

A province or territory gets its health insurance budget according to the "Federal-Provincial Fiscal Arrangements and Federal Post-Secondary Education and Health Contributions Act." Each province or territory is entitled to equal per-capita health contributions from the federal government. The national contribution has an escalation factor that is applied every year. This factor depends on average gross national product, which takes into account how fast the country is growing. In recent years, the factor has been somewhat modified due to the federal government's health care spending reform.

The Health Care System of Ontario

Health Care Administration and Financing: Provincial vs. Federal

As noted above, the federal government of Canada sets forth the rules by which a province is to create its health care program. Ontario's specific health care plan is called the "Ontario Health Insurance Plan" (OHIP). This plan lays out all of the heath care rules and regulations for Ontario.

Ontario is in charge of setting up rules and regulations for health care service within its borders. Besides financing the program, the federal government's role is merely that of making sure that Ontario is following the rules set forth. The "public administration" aspect of Ontario's health care is in the hands of the College of Physicians and Surgeons of Ontario. Its duties include making sure that Ontario follows the Canadian Health Act, overseeing the education of new physicians, and making and upholding laws and regulations for health care in the province of Ontario (CPSO, 55).

It is the task of the College to oversee and regulate the entire province's health care system. The College has certain task forces, programs, and committees that it uses to address, and then try to solve, problems that arise. Three such programs used to maintain the quality of physician services in Ontario are the Peer Assessment Program, the Quality Assurance Program, and the Clinical Quality Improvement Committee, which are discussed in a later section.

Physician Sector

There are strict rules that govern physicians in the province of Ontario. They must follow the Code of Ethics of the Canadian Medical Association, as well as the College's rules and regulations.

Physician payment

Physician payment methods in Ontario are quite simple. For each service that the physician performs, he or she sends in the appropriate paper work to the provincial government and is paid a fixed amount for each service rendered. Ontario takes the revenue that it gets from the federal government and pays the physician accordingly. Physicians can collect money from the government for any service covered in the Ontario Health Insurance Plan, and they can charge patients for non-OHIP services. Such non-covered services include advice and consultation by telephone, filling out paper work and renewal of prescriptions by telephone.

As with all other items, non-OHIP physician payments are highly regulated. There are two ways that a patient can pay for these services. One way is to pay for each service individually. This approach is usually good for younger people who are less likely to need these services. Another approach for payment is called the block payment method. In this approach, a physician establishes--for a period no shorter than three months--a fixed sum of money that the patient has to pay to receive an unlimited amount of non-OHIP services. There are steps that have to be taken before a patient is allowed to sign up for the block payment approach. The physician has to itemize the costs the different services as if the patient were going to pay for them on an individual basis; then

the patient needs to sign a form saying that he or she agrees with the sum of money charged and the duration of coverage. This block payment approach is often better for older people who frequently need their physician to telephone in prescriptions (CPSO, 1).

Patient Choice of Physician

Ontario's citizens have a wide choice of primary care physicians. In this province, you can change your physician simply by calling a toll-free telephone number or by sending email to the College of Physicians and Surgeons of Ontario (CPSO,1).

Quality Management Programs

The Ontario "Peer Assessment Program" was established in 1981 and is used to help ensure that physicians are up to professional standards in their practice. The program works by randomly selecting about four hundred physicians a year to undergo a review. In addition, when physicians turns seventy they are required to undergo assessment that year.

The review committee consists of a group of the physician's colleagues who observe and review the physician's practice. Specifically, the committee looks at content, structure, and overall quality of the patient records, and conducts an interview with the physician. The committee then issues a report that is given to the College and appropriate actions are taken, if necessary.

Recent changes in Ontario's policy about peer assessment have allowed physicians to request to go under review. This is valuable because it offers group practices and other such organizations of physicians and surgeons a chance to know the

ability and skill level of an incoming physician before they accept that physician into their group.

A second quality control device that Ontario has is the "Quality Assurance Program," which has been in existence since 1995. The goal of this program is to help physicians who have deficiencies in certain areas to solve their problems. This program has the authority to require that a physician go under peer assessment or to require that a physician participate in specific enhancement programs in order to improve his or her deficiencies. The Quality Assurance Program is usually the saving grace for physicians who have deficiencies discovered through peer review. In rare cases, where the physician will not cooperate or go through with the recommended enhancement programs, the Program has the authority to put limitations or conditions on that physician's certificate of registration. This can prevent the physician from properly running his or her practice. It may, in some extreme cases, cause the physician to shut down his or her practice.

A third quality control device that Ontario has is the "Clinical Quality Improvement Committee." The main goal of this Committee is to improve the medical profession as a whole. It implements this goal by facilitating quality improvement and setting priorities for quality issues. One of the program's jobs is to communicate the availability of such quality improvement activities to health professionals and health agencies. The committee also oversees new program development and gives advice and assistance to outside agencies, institutions, and government on matters relating to the quality of clinical care. This Committee's main role is administrative.

The United States Health Care System

History of the U.S. Health Care System

The debate over a nationalized health care system in the United States has been going on since the Social Security Act of 1935. The group that designed this Act, the Committee for Economic Security, believed in national health insurance but did not include it in this Act (Aaron, 2). The American Medical Association (AMA) feared that greater federal involvement in health care would impinge on physician independence and lower the quality of care. For this and other reasons, the AMA insisted that the Committee drop national health care from the Social Security Act.

Another major date in the history of U.S. health care is 1965, when Medicaid and Medicare were established. Many thought that the enactment of these programs was the first step in the journey towards national health insurance. For various reasons, however, no more major changes in the U.S. health care system took place for the next thirty years, notwithstanding expansions of Medicaid coverage and new methods for paying physicians and hospitals under Medicare.

Current U.S. Health Care System

Most U.S. citizens have private health insurance, which comes in two main types: traditional and managed care. Other people receive health care from one of the two major government sponsored health care plans: Medicare and Medicaid. Medicare is a totally federal insurance program, while Medicaid is a group effort of both the federal

and state governments. The remaining uninsured citizens either pay for their own health care, or receive what is called "uncompensated" care. Uncompensated care typically means that the providers of the health care are compensated through "cross subsidies," which result from others paying hospital and physician prices that are higher than the true costs of their care.

Traditional health insurance companies do not limit their subscribers in their choice of physicians and hospitals. However, subscribers usually must pay a charge, either a deductible or coinsurance, for each visit to a physician or hospital.

Many traditional health insurance companies are being driven out of business because of their high premiums. Since these insurance companies do not regulate hospital or physician choice, subscribers can utilize any hospital or physician, including specialists, which can get quite costly for the company. Therefore, traditional health insurance companies have been forced to raise their premiums greatly. These higher premiums have made managed care companies look more attractive to much of the public.

Health Maintenance Organizations (HMOs) are the major example of managed care companies in the United States today. An HMO is usually both a provider of services and an insurance company for its subscribers. Unlike traditional health care insurance companies, HMOs exercise control over their subscribers' health care providers. Enrollees of the HMO plan pay a fixed capitation fee to provide virtually unlimited medical services for a fixed period, regardless of the frequency of use. This is a major advantage of HMOs, since those covered have no deductibles or coinsurance obligations and generally pay only a low co-payment when they see a physician or stay in

a hospital. In some cases, the HMOs do not even charge this co-payment, which is monetarily insignificant relative to the costs of care.

A major aspect of HMOs is that hospital costs are also paid out of the HMO premiums. HMOs often make an agreement with specific hospitals in advance to make beds available to the HMO at a discounted price; in some cases, the HMO may even own the hospital. The patient must, however, chose one of these contracted hospitals. These tactics are used to keep the costs of hospital visits low since in-patient hospitalization is usually very expensive.

HMOs either have contracts with specific health care providers or the providers work directly for the HMO. Clients of the HMO are expected to receive the vast majority of their care from these contacted providers. Unauthorized visits to other providers are usually not covered by HMOs.

Some HMOs offer what is called a "point of service" option. This option allows members of the HMO to receive care from any physician outside the HMO network, but with a significant deductible and/or co-payment. New York State now has a law requiring HMOs to have a point of service option. In addition, under the New York law, HMOs must refer members to nonparticipating physicians at no extra cost if there is no participating physician with appropriate expertise (Birenbaum, 137).

In an HMO, primary care physicians typically have to authorize visits to specialists. This is another way HMOs try to keep costs down since general practitioner visits are usually less expensive than specialist visits. HMOs try to establish a "front line" of primary care providers whose purpose is to perform preventive interventions and

early detection through simple inexpensive tests. This is done in order to avoid more complex interventions and hospital visits later.

Another kind of managed care company is a preferred provider organization (PPO). PPOs use a traditional fee-for-service payment method, but limit clients to contracted providers if the clients wish to receive maximum insurance coverage. In this type of plan, you can see a specialist without approval from a primary care physician. Members of PPOs can also choose to receive care from a physician who does not have a contract with the plan, but the member must pay a higher fee.

Medicare provides health insurance coverage primarily for the elderly and is funded entirely through the federal government. The money for Medicare is collected from taxation of payrolls and premiums charged to beneficiaries. Benefits in Medicare are uniform across all the states so that health care for the elderly is totally portable.

Medicaid is a combined program of both the state and federal governments, with the federal government's share of costs dependent on the state's per capita income (poorer states receive more federal support than richer states). The federal dollars are taken directly out of general taxation revenues. The state governments use federal guidelines to provide medical assistance for people on welfare and, if the state wishes, to those who are "medically indigent."

In 1972, Congress established the Professional Standards Review Organizations (PSROs) to regulate the quality and quantity of services rendered under Medicare and Medicaid (Annis, 205). The federal government financed organizations that ran the PSROs. In 1982 however, Congress disbanded the PSROs because they were too expensive and ineffective. To take the place of the PSROs, Congress founded

Professional Review Organizations (PROs), which are run by privately contracted agents of the government (Birenbaum, 176).

In 1990, a study was performed that concluded that the PROs used ineffective punishments. In 1992, the PROs were reformed into organizations staffed by medical professionals who are trained in quality improvement. These professionals attempt to improve the quality of care for Medicare and Medicaid patients by analyzing patterns of care in the large Medicare database and passing this information along to physicians and hospitals. PROs review individual complaint cases and they have the authority to deny payment for unnecessary services (Bodenheimer, 489).

Physician Sector

Physician Payment

In the United States today, physician payment is very complex. Physicians have a multitude of different kinds of paperwork and forms to fill out. Much of their income comes from third party companies, as discussed previously. There exists a wide variety of payment methods. Because of the confusion arising from all of the different forms and files that each health insurance company or the federal government requires, physicians often have their payments delayed. Many times, there are problems; for example, sometimes patients are billed for services supposedly covered for them by their insurance.

Patient Choice of Physician

The scope of patient choice of physician is diminishing. Under the former traditional health insurance plans, members had free choice of physicians. This choice enabled the members to choose not only their primary care physicians, but also their specialists. But --as noted above-- the current trend in U.S. health care is to move away from traditional health insurance companies because of the greatly increasing costs of fee-for-service policies.

Physician choice is becoming less and less common because of the current movement towards managed care insurance companies. These companies usually have lists of physicians from which their members can choose. To see a specialist usually requires a recommendation from a primary care physician, unlike the system with traditional health care insurance providers.

Quality of Care

Competition between the many health insurance companies has led to many cost-cutting strategies. However, now that most of the easy ways to save on health care expenditures have been fully implemented, HMOs must find new ways to stay ahead of the competition. This is where the quality of the HMO becomes of concern. If two HMOs have about the same cost to subscribers, then the company with the better record of quality would be the logical choice. This has created a dilemma for many HMOs: whether to put more emphasis on cost containment or quality control. In order to make money, an HMO has to be able to attract and hold on to subscribers. The best way to do this is by offering the best quality of care possible, but still at a reasonable price.

The American Association of Health Plans, a managed care trade association, has set up an organization to review and evaluate Managed Care Organizations (MCOs) called the National Committee on Quality Assurance (NCQA). The NCQA is governed by a board of directors that includes employers, consumers and labor representatives, quality experts, policy makers, and representatives from organized medicine. The NCQA has sought to establish valid and reliable indicators of HMO plan performance and health outcomes. The NCQA has two major functions: the accreditation of MCOs and the publication of measures of performance in the Health Plan Employer Data and Information System (HEDIS). The results that the NCQA arrives at are important tools for measuring HMO quality.

There are 50 standards that the NCQA uses to determine the quality of health plans. These standards all fall into one of the following six categories: Quality Improvement, Physician Credentials, Members Rights and Responsibilities, Preventive Health Services, Utilization Management, and Medical Records.

The Quality Improvement category investigates whether the MCO fully examines the quality of care given to its member. It also looks at how well the plan coordinates all parts of its health care delivery system. Under this category, the NCQA checks the steps that the MCO takes to make sure that its members have access to care in a reasonable amount of time. Also, this category includes an inspection of the improvements in care and service that the health care plan can demonstrate.

The Physician Credentials category judges whether the MCO meets specific NCQA requirements for investigating the training and experience of all physicians in its network. This category determines if the MCO looks for any history of malpractice or

fraud related to these physicians. This category also evaluates how well the organization keeps track of all its physicians' performance and how this information is used.

The next standards category, Member's Rights and Responsibilities, determines how clearly the MCO informs its members about how to access health services, how to choose a physician or change physicians, and how to make a complaint. In addition, this category includes a measurement of how responsive the MCO is to its members' satisfaction ratings and complaints.

The Preventive Health Services category checks if the organization encourages its members to have preventive tests and immunizations. It also checks if the MCO makes sure that its physicians are encouraging and delivering preventive services.

The Utilization Management category determines if the MCO uses a reasonable and consistent process when deciding what health services are appropriate for an individual's needs. In addition, it checks if the organization responds to member and physician appeals when the MCO denies payment for services.

The final standards category, Medical Records, looks at how consistently the medical records kept by the MCO's physicians meet the NCQA standards for quality care. For instance, the NCQA checks if the records show that physicians follow-up on patients' abnormal test findings.

Accreditation by the NCQA is a rigorous and comprehensive process. This process is used to assess how well a specific health plan manages all parts of its delivery system in providing, and continually improving, care and services for the plan's subscribers. The NCQA began accrediting MCOs in 1991 in response to the need for

standardized, objective information about the quality of such health insurance organizations.

Chapter III: Procedure

This chapter explains how the research for this project was conducted. It outlines the procedure used in the process of researching and writing this project.

This project required extensive research to fully understand the complexity of both the United States' and Canada's health care systems. For this project, research was performed at Worcester Polytechnic Institute's Gordon Library, the UMass Medical Center Library, and Clark University's Goddard Library. During the preliminary research, it was discovered that the health care system in Canada varied from province to province. For this reason, this project focuses on the health care system of the province of Ontario.

To comprehend both the Canadian and U.S. health care systems, it was necessary to look at the history of both systems. Most of this information was obtained from books at the Gordon Library. From this basis, research proceeded to the modern health care system of Ontario and the United States.

Most of the sources for information on the current health care system of Ontario were found at the UMass Medical Center Library. These sources were found by using the Index Medicus, a publication of the National Library of Medicine, and the Science Citation Index. The Index Medicus is a reference series that organizes articles found in medical journals by subject and author. The Science Citation Index lists other journal articles that cite a specific journal article. This allows a researcher to find other sources based on the topic of the article.

Chapter IV: Results

This chapter presents the basis for this project's recommendations. It is divided into two main areas of discussion: costs of physician services and physician quality. These areas are analyzed from the perspective of both the United States and Ontario.

Physician Services in the United States

This section deals with the many factors that affect physician services and costs in the United States. These factors include physician reimbursement systems, modes of physician practice, Medicare's Resource Based Relative Value Scale (RBRVS) system, and medical malpractice.

Alternative Methods of Physician Reimbursement

There are three basic ways in which physicians in the United States can be reimbursed for their services: salary, capitation, and fee-for-service. These reimbursement systems are introduced in this section, along with the modes of practice that make use of them. The advantages and disadvantages of these systems are discussed in Chapter V.

A salary reimbursement system means that the physician receives a fixed amount of money for a fixed time period. The physician's income does not depend on his or her number of patients or the number of visits by these patients. This reimbursement system is most often associated with "closed panel" HMOs, which are discussed below in the section on modes of physician practice (Eastaugh, 40).

Capitation reimbursement means that the physician is paid a fixed amount for each person joining that physician's panel of patients. This system motivates the physician to keep his or her patients "happy" and "healthy." If patients become unhappy with their treatment, they could disenroll from the health plan, or find a new physician within the same plan. If the patients are kept healthy, then they will not need to utilize expensive treatments. This reimbursement system is common in some managed care organizations (Eastaugh, 40-41).

The third reimbursement system, fee-for-service, means that the physician is paid for each visit by a patient. For this reason, there is the risk of unnecessary physician-initiated visits in order for the physician to make more money (Eastaugh, 41). This is the oldest physician reimbursement system in the U.S., and was the most widely used before managed health care became popular. This system fell out of favor with many insurance companies because of its high costs compared to managed care. However, this system is still common among physicians in solo practice.

Alternative Modes of Physician Practice

The most basic mode of physician practice is the solo practice. This means that the physician works only for himself or herself. The physician in this mode of practice is regulated only by the government, and not by any parent organization. Therefore, the physician sets his or her own rates for services, and handles all administrative tasks and obligations. This mode of practice is becoming less common due to the growth of large managed care companies and physician groups.

In order to avoid losing patients due to competition, many physicians are joining medical groups. Most physician groups are single specialty groups, but multi-specialty groups are also growing quickly (Feldstein 1994, 103). There are many benefits for physicians in groups as opposed to solo practices. For example, medical groups have lower average administrative costs than solo practices. These costs include those involved in making appointments, billing for services rendered, and computerizing patient data. These costs do not increase in proportion to the size of the group (Feldstein 1994, 103).

In addition, large physician groups are able to bid for HMO contracts. The HMO only has to negotiate with one group rather than many individual physicians. This makes such groups more attractive than solo physician practices to non-staff model HMOs (see below). Also, physicians in groups have more negotiating power with HMOs than do solo practitioners.

Many HMOs are called "staff model" HMOs. This means that the HMO provides health services through a group of physicians that is organized and regulated by the HMO itself. This is done in order to provide efficient and cost effective health care. Physicians involved in staff model HMOs are usually on a salary from the HMO; therefore, they are regarded as employees of the organization. The staff model HMO is a centralized health care delivery system, usually contained within several ambulatory facilities (Mackie, 42).

In a "closed-panel" HMO, the admission of new physicians into the HMO's group of physicians is limited by the group. Furthermore, members enrolled in a closed-panel HMO can usually only see the physicians in the group for medical care. Staff model HMOs are an example of a closed-panel HMO (Bloom, 157).

In an "open-panel" HMO, virtually any licensed physician in the area is eligible to contract with the HMO's group of physicians. An example of an open-panel HMO is a preferred provider organization or PPO (Bloom, 161). A PPO is an agreement between health care providers and health care buyers. These two groups of people agree to supply services to a certain group of patients on a discounted fee-for-service basis (Feldstein 1999, 613).

Another type of HMO is the group-model HMO. There are two types of group-model HMOs: dual group and single group. In the dual group model, the physician group makes a contract to perform physician services for an established HMO. In the single group model, the physician groups actually construct their own HMO and health plan. The most common group model is the dual group model (Eastaugh, 144).

Independent Practice Associations (IPAs) are another way for individual physicians to compete in the medical marketplace (Greenberg, 23). An IPA is a different legal entity from an HMO. The IPA contracts with individual physicians involved in a solo practice. The IPA usually handles administrative duties for the physician. However, the physician typically must pay an initial membership fee to the IPA (Eastaugh, 144). There is some utilization review in IPAs, which means that an IPA is also a form of managed care.

In an IPA, physicians provide care to the Association's enrollees on a prepaid basis, and the physicians are also reimbursed in a fee-for-service manner by non-Association patients (Mackie, 43). This means that a solo physician with an established practice does not have to lose his or her current patients when joining an IPA. This makes IPAs very attractive to established physicians (Bloom, 58).

Effects of the Medicare Relative Value Scale on Physician Costs

Medicare Part B, which covers physician and outpatient services, has been using a pricing and expenditure control system called the Resource-Based Relative Value Scale (RBRVS) since 1992. This system was implemented for two reasons. The most important reason for the federal government was the desire to save money and to limit the growth of the federal deficit. The government felt that the old system was being abused by physicians overcharging for their services. The second reason was that the government and many physicians believed that the old Medicare payment system was inequitable. Under the old system, a new physician establishing a fee schedule with Medicare could charge higher fees for the same service than an older physician whose fee increases were limited by the Medicare Economic Index. In addition, it was alleged that the old payment system did not fairly reimburse physicians for the actual amount of work that the physicians performed (Feldstein 1994, 87-88).

The RBRVS fee schedule was developed by Professor William Hsiao of the Harvard School of Public Health. Hsiao defines the RBRVS as "an index of the relative levels of resource input spent when physicians produce services or procedures" (Hsiao, 881).

There were three factors that were used by Professor Hsiao to determine the resource cost of physician services. The first was the work component, which estimated the cost of providing a particular service, including the time, skill, intensity, mental effort and stress associated with the service. The second was the physicians' practice costs, including office overhead and malpractice premiums. The third factor was the

educational costs of the physician. Each physician service was assigned a relative value unit (RVU) number based on these factors (Feldstein 1994, 88).

The actual physician fee for each service is calculated by multiplying the RVUs by a monetary conversion factor. In 1992, this conversion factor was $31 (Feldstein 1994, 88). This fee is then adjusted for the geographic location of the physician. In addition, new physicians receive only 80 percent of this Medicare fee schedule during their first year of practice, with the percentage received rising to 100 percent by the fifth year of practice. This is done so that new physicians are not making more money than their more experienced peers (Feldstein 1994, 88-89).

This new Medicare payment system covers the reimbursement levels for 7,000 different physician services. Under the old system, Hsiao discovered that "cognitive" services, like patient evaluation, counseling, and management of services, were valued much lower than procedural services, such as testing and surgery. Hsiao felt that the cognitive services were undervalued in the old Medicare system, while the procedural services were overvalued. This is because cognitive services typically require more time and effort on the part of the physician than procedural services. The RBRVS lowers the profitability of many procedural services while increasing payments for cognitive services (Feldstein 1994, 88).

Since the RBRV system is still a fee-for-service payment, it does not control the overall volume of physician services and --therefore-- does not control overall physician costs. With the implementation of the RBRV system, the federal government was concerned that physicians would attempt to induce demand for their service to offset their lower Medicare fees. To prevent this, the federal government set a limit on overall

physician Medicare expenditures. This limit is set by relating the annual update on physician fees (the RBRVS monetary conversion factor) to the growth in the volume of physician services. For example, if physician Medicare expenses increase faster than a target rate, then Congress can reduce the monetary conversion factor the following year. This target rate of increase in physician Medicare expenses is based on inflation, number of beneficiaries, newly covered services, and technological advances (Feldstein 1994, 89).

Effects of Malpractice on Physician Costs

The medical malpractice system in the United States is based upon tort law. A tort is a civil wrong that is committed against a person or property. The main purposes of tort law is to find fault for wrongdoings, deter future wrongdoings and to compensate the victim of the tort (Pozgar, 36).

Medical malpractice claims entitle an injured person to compensation for damages that are a result of physician negligence. The damages can be either economic losses, such as lost wages and medical fees, or "pain and suffering." This system gives physicians a financial incentive to provide high quality health care and to perform only procedures for which they are competent (Feldstein 1994, 108).

The cost of medical malpractice insurance is an important concern for the health care industry because of the many malpractice claims and large jury awards. The cost of malpractice premiums for physicians is an important part of total physician expenses, particularly in certain specialties such as anesthesiology, obstetrics, and surgery. In 1991, malpractice premiums constituted an average of 10% of total physician expenditures.

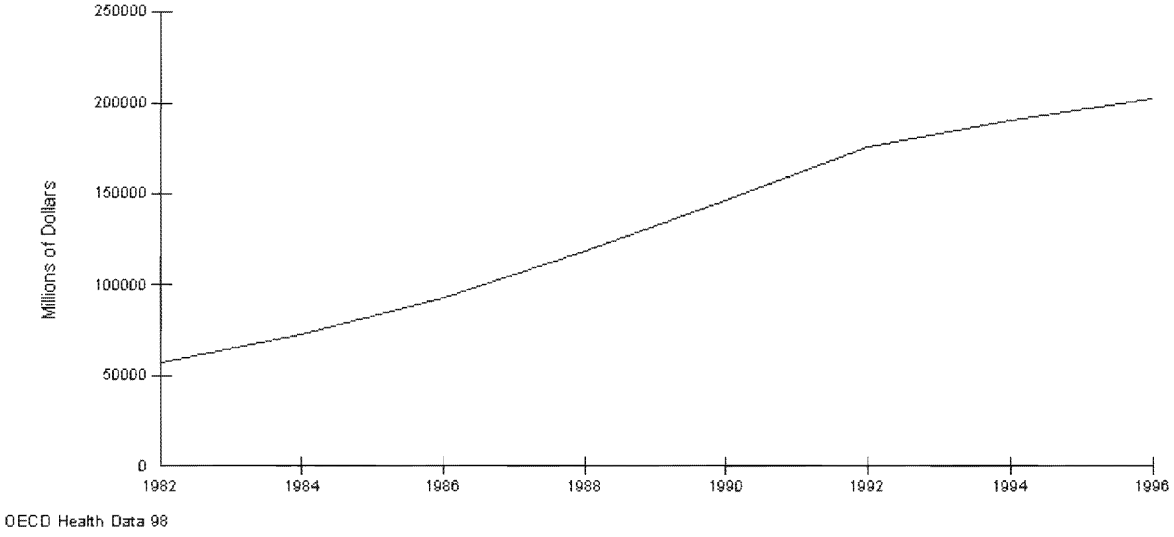
The specialty with the highest malpractice percentage in 1991 was anesthesiology, at 20% of total physician expenditure (Feldstein 1994, 109).

Physicians wishing to avoid malpractice lawsuits have begun practicing "defensive medicine." Defensive medicine is defined as either the undertreatment of patients, by avoiding high-risk tests and services, or overtreatment, such as the excessive use of diagnostic procedures (Pozgar, 656). Defensive medicine is utilized in order to prevent litigation, and to provide an advantageous legal defense should litigation occur. Defensive medicine is considered to be one of the most harmful effects created by the threat of malpractice litigation. It has been estimated that the practice of defensive medicine costs the health care industry $19.3 billion in 1988 (Pozgar, 656-57).

Physician Costs in the United States, 1982 to 1996

This section provides statistics on physician costs in the U.S. in the period from 1982 to 1996. These statistics are presented in the form of graphs.

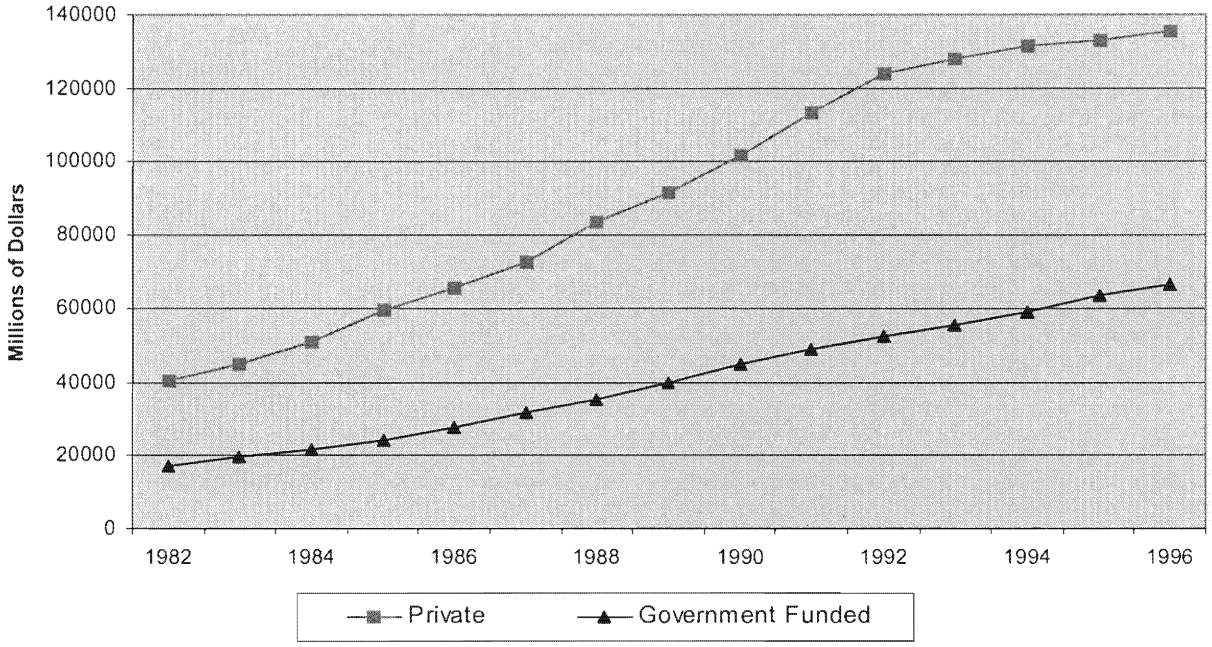
Figure 2: Total U.S. Expenditures on Physician Services 1982-1996



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Figure 2 shows how the total physician costs of the United States have been rising since 1982. As shown in Figure 2, national expenditures on physician services in the United States doubled between 1987 and 1996.

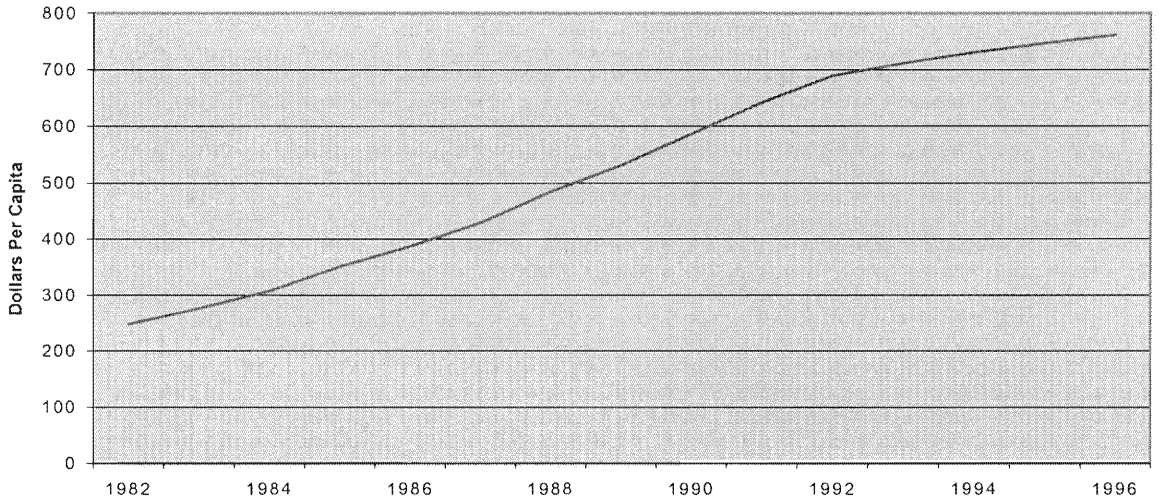
Figure 3: Private and Government Funded Expenditures on Physician Services in the U.S., 1982-1996



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Figure 3 displays the split between government-funded physician expenditures, like Medicare and Medicaid, and private physician expenses. This figure shows that expenditures related to government-sponsored programs have been rising steadily for quite some time. This is largely due to the rise in the average age of the population, since a major portion of government-funded health care is for the elderly (Feldstein 1994, 88). The rise in private sector expenditures on physician services slowed down slightly in 1992, but is still rising.

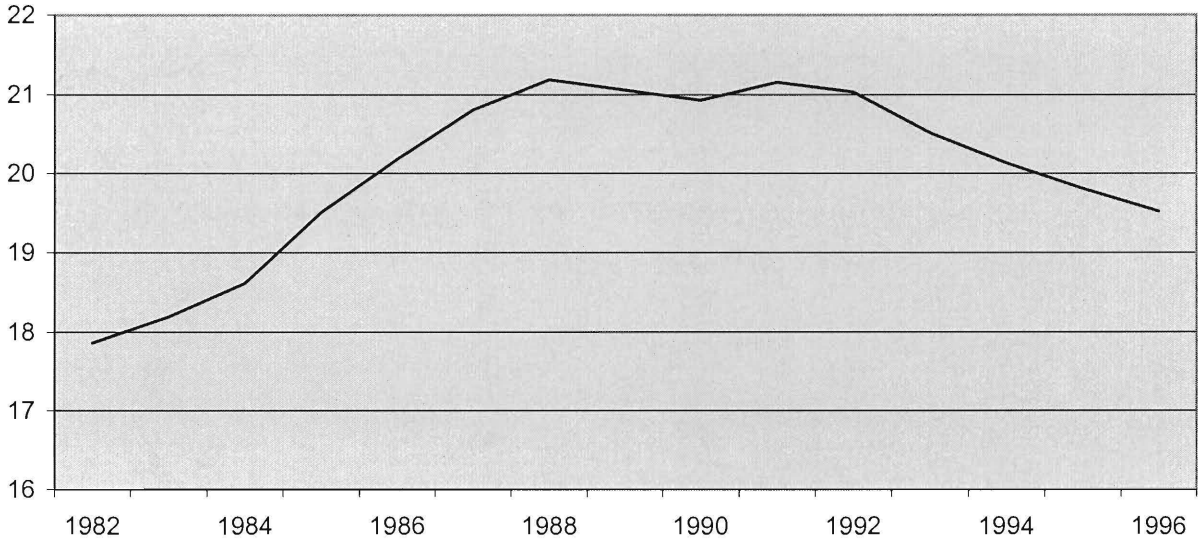
Figure 4: United States Physician Expenditures Per Capita, 1982-1996



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Figure 4 exhibits the total physician costs in the United States per capita. This graph is very similar to Figure 2. Since the total expenditures on physician services are rising much more rapidly than the population, the increase in the physician expenditures per capita is to be expected.

Figure 5: Pecentage of Total U.S. Health Care Expenditures on Physician Services, 1982-1996



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Figure 5 shows total physician costs as a percentage of total medical care costs in the U.S., from 1982 to 1996. This figure shows a rise in the percentage of physician costs between 1982 and 1988, and a drop from 1991 to 1996, with fluctuations between 1988 and 1991. The reason for this drop may be attributed to the switch away from traditional fee-for-service insurance to managed care.

Physician Services in Ontario

Ontario's physician payment system is very similar to the new RBRVS Medicare payment system in the United States. Ontario's system is designed to help ensure equitable physician fees by setting fixed rates for individual physician services. In this type of system, it is relatively easy for the government to control the costs of physician services by adjusting the pricing scale for physician services (Folland, 490).

Ontario also has a physician expenditure limit, much like in the new U.S. Medicare system. The provincial government pays the physicians in a fee-for-service manner, following the Canadian resource-based relative value scale. In Ontario, the physician fee schedule is set by negotiations between physicians' organizations and the provincial government. The two sides work out "fair" amounts for the government to pay the physician for their services rendered (Folland, 490).

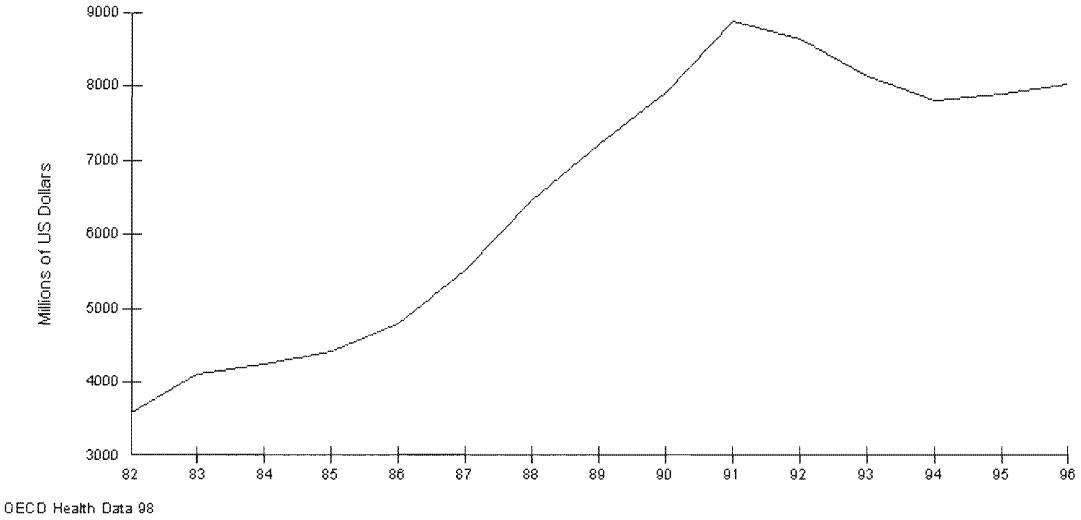
In addition, the government in Ontario may set a total physician expenditure limit. This is done by adjusting the monetary conversion factor to the relative value scale, as is done in the United States for Medicare. This factor is adjusted on an annual basis by the provincial government (Folland, 490).

In a single payer system, less money is spent on unnecessary duplication of facilities. Since the government controls the health care system in Canada, it also regulates the production of new facilities. Furthermore, the provincial governments strive to maintain a good distribution of these facilities throughout their provinces in order to achieve maximum efficiency (Himmelstein, 119).

Physician Costs in Canada from 1982 to 1996

This section provides statistics for physician services in Canada during the period from 1982 to 1996. Data on the province of Ontario was not readily available, so these data are taken from the entire nation of Canada.

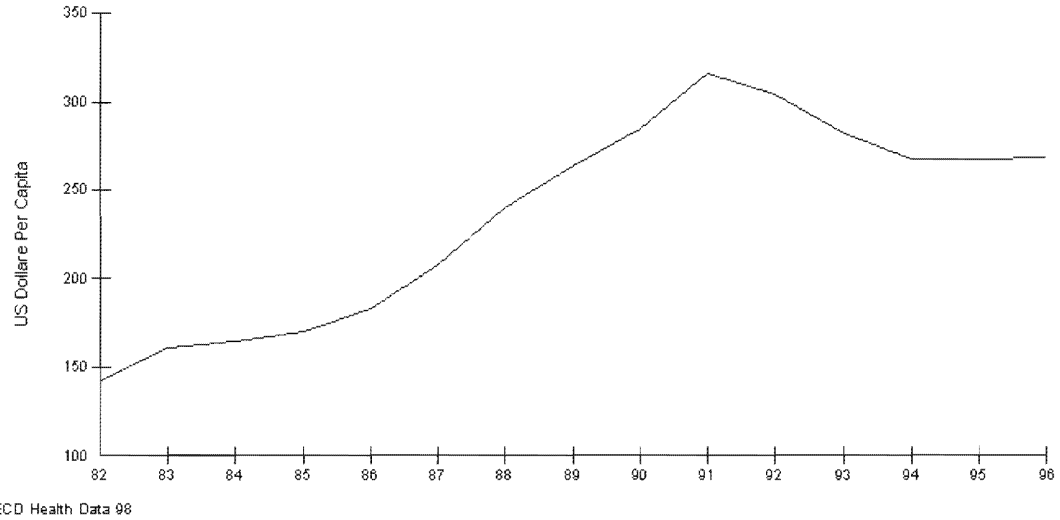
Figure 6: Total Expenditures on Physician Service in Canada, 1982-1996



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Figure 6 shows the total expenditures on physician services in Canada. This figure shows a steady rise in physician expenditures from 1982 to 1991. The Canadian national expenditures on physician services then actually declined between 1991 and 1994, but are now rising slowly.

Figure 7: Total Per Capita Expenditures on Physician Services in Canada, 1982-1996



Source: *Organization for Economic Cooperation and Development, Health Data 98. National Expenditures on Health [CD-ROM]: 1998.*

Figure 7 show the total per capita expeditures on physician services in Canada from 1982 to 1996. This figure is closely related to Figure 6. However, it should be noticed that from 1994 to 1996, the physician expenditures per capita remained fairly even, while the total physician expenditures increased in the same time period, as shown in Figure 6. This trend means that the physician expenditures in Canada tends to increase when the population increases.

Physician Quality in the United States

This section discusses factors that affect the quality of physician services in the United States. These factors include the role of managed care organizations, competition, government regulations, peer review, and physician education.

Effects of Managed Care on Quality

The growth of managed care in the U.S. has had many effects on the quality of its physician services (Iglehart, 995-99). These effects are directly related to capitation reimbursement, managed care institutional accreditation, and the board certification requirements of some managed care companies.

Effects of Capitation and Salary Reimbursement on Physician Quality

Payment by capitation or salary may affect the quality of physician care by both influencing physician decision-making and by encouraging integration and innovation in the design and delivery of services.

Unlike the traditional reimbursement system, fee-for-service, payment by capitation or salary discourages over-use of medical resources. Fee-for-service reimbursement allows physicians to profit from each service they provide; this may result in an over-use of services. Over-use of medical resources has a potentially negative effect on both physician cost and quality.

In the fee-for-service method of reimbursement, physicians earn a higher income the more services they perform. Since capitation and salary involve a predetermined payment amount for physician services, neither the managed care company nor the physician gains from over-use of the medical resources. In fact, HMOs can lose money when additional services are provided because they receive a fixed amount of money per patient. If a physician exceeds this amount by heavy use of medical services, neither the physician nor the HMO will be reimbursed for the extra services. On the other hand, if only a small amount of physician services is required, the physician's and the HMO's

income does not change. The hope is that with continual physician quality assessments, patients will receive quality physician care without the abuse of being deprived of necessary medical resources (Berwick, 1229-1230).

Payment by capitation and salary also motivates integration and innovation in the design and delivery of medical services. Under a fee-for-service reimbursement as in the past, injury or disease prevention might lead to fewer services performed by a particular physician and, consequently, less payment to that physician. Fee-for-service reimbursement is usually found in private solo practices rather than managed care companies which usually have reimbursement by capitation or salary. With capitation or salary reimbursement, prevention programs and at-home treatments are encouraged and often have the potential to provide overall better quality care -- although in some cases it could result in an under-use of services (Berwick, 1230-31).

Effects of Managed Care Institutional Accreditation on Physician Quality

As discussed in Chapter II, the National Committee for Quality Assurance (NCQA) reviews those managed-care companies which voluntarily request accreditation (Iglehart, 995-99). The NCQA undertakes an extensive independent review of those companies making such a request.

NCQA accreditations can have a direct effect on physician quality. The NCQA reviews physician quality in managed care companies based on fifty standards (see discussion in Chapter II). Accreditation by the NCQA is a meticulous and detailed process that can help to ensure physician quality in managed care companies (Iglehart, 995-99).

Managed care companies usually have to compete for clients. For example, private and public employers may require that health plans obtain NCQA accreditation before the health plan may obtain contracts to provide medical services to their employees. For competitive reasons, therefore, these managed care companies often request review in order to compete in the insurance market. HMOs may even advertise in newspapers that they are accredited by the NCQA. This competition among managed care companies encourages accreditation and therefore is likely to result in better physician quality of care (Iglehart, 995-99).

Effects of Board Certification Requirements on Physician Quality

The board certification requirements common to many managed care companies also affect physician quality. When hiring new physicians, many managed care companies not only require graduation from an accredited medical training program and state licensure, but also mandate board certification --or board eligibility-- status from the American Board of Medical Specialties (ABMS). Managed care companies advertise their board-certified/ board-eligible physician requirements in an attempt to gain and retain customers in a competitive market.

The American Board of Medical Specialties consists of many 24-member boards, each focussing on a different medical specialty. To be eligible for board certification a physician must have a degree from an accredited medical school, an active medical license, unrestricted registration with the Drug Enforcement Administration, and an absence of disciplinary action (Kassirer, 43-44). If a physician meets all these criteria, he/she is eligible to take the Board Certification exam. Additional standards, each of which is assigned a set number of points, include the completion of residency training in

an approved program, certification or recertification by an ABMS member board, continuing-medical-education courses, no experience with malpractice legislation, and an office site review (Kassirer, 43-44).

Studies have shown that there is a positive correlation between one's success on the ABMS certification examinations, the National Board of Medical Examiners test, and peers' and program directors' ratings of clinical competence (Kassirer, 43-44). Therefore, it can be argued that managed care companies' encouragement of board certification directly results in an improvement in physician care quality. Oftentimes, physicians become board certified and display their degrees and educational achievements publicly in order to indicate that they are likely to provide high quality care.

Effects of Competition among Physicians on Physician Quality

It can also be argued that competition among physicians affects their quality of care. Many physicians obtain new patients on the basis of their reputation for high quality care. Whether their reimbursement is by capitation, salary, or fee-for-service, it is likely that the physicians who are perceived to be of poor quality will eventually have their incomes affected adversely. Because the supply of physicians in the U.S. has grown much faster than the populations in recent years, competition among physician has increased considerably.

Effects of Government Regulations on Physician Quality

Many government regulations in the U.S. are designed to help improve the quality of physician care. The government created many such regulations in the 1960's with the inception of Medicare and Medicaid (Al-Assaf, 7-8).

One more recent example of a governmental requirement designed to improve physician quality is the National Practitioner Data Bank, developed in 1986. This data bank involves mandatory reporting by state medical licensing boards and insurers of actions taken against physicians and of awards and settlements given to patients. The state medical licensing boards' reports must include information on revocation, suspension, or other licensure restrictions and censures, reprimands, or probations for incompetence or misconduct. The insurers' reports of actions taken against a physician must contain physician identification, amount of payment, hospital affiliations, and a description of the professional negligence involved. Hospitals are required to review the National Practitioner Data Bank every two years to help ensure the quality of their physicians. Managed care companies also have the option of reviewing this data bank, but it is not mandatory (Al-Assaf, 176-77).

Another example of the federal government's attempts at improving the quality of health care was the Health Care Quality Improvement Act of November 14, 1986. This Act was intended, among other things, to restrict the ability of incompetent physicians to move from state to state to avoid licensure difficulties. This Act restricted incompetent physicians by making each state licensing board submit reports to the National Practitioner Data Bank. A physician cannot move from one state to another to avoid licensure difficulties because each state has access to another state's licensing records.

The goals of the Health Care Quality Improvement Act were designed to promote a cohesive quality management system (Al-Assaf, 176).

Effects of Peer Review on Physician Quality

Peer Review Organizations (PROs) are used to monitor the quality of physician care in the Medicare and Medicaid. Before 1992, Congress used Professional Standards Review Organizations (PSROs) to regulate the quality of services under Medicare and Medicaid. However, these organizations proved to be expensive and often ineffective.

In 1992, the Health Care Financing Administration reformed the PSROs into organizations staffed with medical professionals trained in quality improvements, known as PROs. The beneficial effects of these peer review organizations on physician quality have been evident since that time (Bodenheimer, 489-90). These trained medical professionals analyze patterns of physician care through the use of a large Medicare physician database. The results of these analyses of physician care are reported to hospitals and to the physicians so measures can be taken to improve care for the patient. PROs also review individual cases when a complaint is filed from a patient (Bodenheimer, 489-90).

Effects of Physician Education and Experience on Physician Quality

Physician education also helps to ensure quality care in the U.S. In order to become a practicing physician, a man or woman must receive his/her medical degree by graduating from an accredited medical school. Next, a physician must become licensed

to practice medicine by passing a state licensing board examination. Most physicians also continue their studies in order to become certified in one or more specialty areas.

When a physician becomes licensed, he/she is permitted to perform a wide range of tasks in the medical profession. These tasks may include treatments in which the physician is not sufficiently trained. For example, a primary care physician could be legally qualified in some states to provide anesthesia to a patient although he/she is not properly trained.

This flaw in licensure has led to suggestions for further improving the quality of physician care. If physicians were licensed only for tasks for which they are well-trained, health care consumers could be more confident that their physicians are qualified to perform their functions (Feldstein 1999, 395-96).

Although U.S. physicians all graduated from accredited medical schools, there is a wide variation in their treatment patterns. J. Wenneberg addressed this topic in a paper called "Small Area Analysis" (Feldstein 1999, 273-276). His studies showed that even after adjusting for differences in sex, age, health status, etc., variation in procedure rates still persisted. Wenneberg's studies stimulated the medical profession's interest in this topic. The variations that Wenneberg discovered are often a cause for concern in the cost and quality of physician services. Some patients may be receiving too little treatment while others may be receiving too much.

Further studies have shown different use rates for specific surgical procedures, but the same patient outcomes. Such studies show variations in surgical procedural rates that affect the cost of health care substantially, not necessarily the quality (Feldstein 1999, 273-274).

Some hypotheses that have been offered to explain such variation in treatment patterns suggest that it may be a result of the location of a physician's education, his/her experience, length of time in the same community, and community norms. The location of a physician's education may affect his/her treatment patterns because different professors at different schools may have different teaching techniques as well as emphasize different areas of studies. Since medical schools and professors vary, physicians' performances also vary. A physician's experience is also important in explaining different treatment patterns because experience in the medical field is invaluable. For example, a physician with experience may detect symptoms for an illness based on his/her experience without the aid of expensive tests. The length of time a physician spends in the same community and the community's norms also affect treatment patterns because the physician becomes very familiar with his/her patients' expectations. When a physician practices in a community for a length of time he/she learns the most effective way to treat the common illnesses that plague that particular community. A physician is also able to become very familiar with his/her patients when he/she dwells in a community for a considerable length of time. Knowing a patient well is an invaluable factor because the physician is aware of a patient's medical history and knows how to care for him/her (Feldstein 1999, 273-274).

Physician Quality in Canada

This section deals with physician quality in Canada in general, and in Ontario specifically. It explains some of the government regulations, programs, and committees that aid the province in the pursuit of high quality physician care. This section also

addresses some private sector policies for ensuring physician quality. Lastly, it discusses the effects of physician education in Ontario on overall physician quality.

The Federation of Medical Licensing Authorities of Canada, a representative body of all of the provincial Colleges of Physicians and Surgeons, has- - since 1994- - developed a model to help maintain physician performance for the physicians' entire professional career. The Federation developed a three-tiered program that is being implemented in all of the provinces of Canada. It is a national framework for the assurance of physician quality (Norton, 29).

The first step in the Federation's program is a primary screening process for all physicians. Implementation procedures and the frequency of this step differ from province to province; they may consist of re-certification procedures or something as simple as an annual test. The goal of the primary screening process is to identify potential risk indicators in a physician's practice.

The second step is a practice-based assessment of those physicians identified as being in need of attention during the previous step. This step is to start the process of "righting the wrongs" found in step one. What this entails is that the physician's practice is evaluated. Such things as record keeping and professional procedures are evaluated and suggestions are made so that the practice will become one in good standing.

The third step is a comprehensive needs assessment and structured education. If some physicians are still in need of improvement after the first two steps of the program, then they are judged to need further help in getting their practice back in order. The purpose of this third step is to look at every aspect of the physician's practice and address

all possible weaknesses. Such physicians are often required to take courses that help them to improve their overall quality of service.

Each incremental step in the Federation's model involves further physician assessment, with successively higher levels of intervention and costs with each higher step.

Effects of Ontario's Government Regulations on Quality of Physician Services

The main governing body for quality of physician services in Ontario is the College of Physicians and Surgeons of Ontario (CPSO). The CPSO is in charge of both protecting the public and establishing entry level requirements for new physicians. It is in charge of licensing physicians who practice in the province. Part of its task is renewing with the College's many quality committees certificates of registration each year for physicians in good standing. Other quality-related activities that the CPSO is responsible for are: overseeing disciplinary processes, investigating complaints about physician malpractice, and establishing programs to guarantee the quality of practice of the profession.

The next section addresses the peer review system of Ontario as well as its quality assurance program and its clinical quality improvement committees. These are all programs set forth by the government of Ontario to promote quality health care for its citizens.

Peer Assessment Program

Ontario is one of six Canadian provinces with an operational step two of the Federation of Medical Licensing Authorities of Canada's step program (Norton, 28). The College of Physicians and Surgeons of Ontario established its Peer Assessment Program in 1980. Its peer assessment program influenced and helped to develop the national framework of the Federation for monitoring and enhancing physician performance, the step program.

Ontario's Peer Assessment Program operates on a yearly cycle. Every year, when physicians acquire their certificate of practice from the College, a pre-selected number of physicians automatically go up for peer review. This selection process is random. Physicians who are 70 years old when they renew their certificate are automatically selected for peer review. [Note: only physicians who have an independent practice certificate, that is they are given a certificate to work in a solo practice, are selected for peer review. Typically 40-50% of physicians practice in some sort of group practice environment. See section on private sector regulations, below, for a description of quality improvement mechanisms for physicians practicing in some variety of group setting.] (Norton, 30).

One assessor visits the physician in his/her office. Each assessor is a practicing physician in the same area of medicine as the physician who was selected for evaluation. Each assessor also has been previously assessed and found to have an exemplary practice. Assessors must also attend yearly training seminars, as well as listen to audiotapes, watch

videos, and read written material from a bulletin published by the College every six to eight months.

The assessment consists of a tour of the physician's practice and a random evaluation of 20-30 of his/her medical records. The assessors address 44 questions about the physician's practice, 31 of which are related to medical records and 13 of which address the quality of care. In the final part of the evaluation, the assessor discusses his or her findings with the physician and asks clarifying questions (Norton, 29-31).

The determination of the quality of the physician's practice is not the responsibility of the assessor of the physician; rather, it is the duty of the Peer Assessment Committee. This Committee is comprised of six practicing physicians and two public members. The Committee reviews the assessor's report and reads the pre visit questionnaire that the physician had to fill out prior to the assessor's visit (Norton, 32). The Committee then assigns a grade to the physician that is designed to reflect the physician's quality of care and caliber of his/her records. An overview of the grades can be seen in Table 1.

Table 1: The Grading System for the Peer Review Assessment Program

Grade	Definition
B1	The physician's assessment report is essentially perfect and there are no examples given where care is in doubt.
B2	The report reveals minor deficiencies in record keeping or care.
C1	There are more errors in charting but still only minor concerns about care. One or more legal requirements of a medical record may be lacking.
C2	Records are so deficient that judgment about care cannot be made.
D	There is evidence of inappropriate care. This may be a single case or multiple areas of concern.

(Norton, 34)

Physicians who score a C2 or a D are required to have an interview with the members of the Peer Assessment Committee. These physicians are required to bring the records that the assessor looked at and some additional records that they are allowed to choose on their own. The members of the Peer Assessment Committee review the assessment report -- as well as the new files that the physician brings to the meeting. The Committee then gives advice to the physician on areas for improvement (Norton, 32).

The Committee then prepares a report which describes its finding. It gives a copy of the report to the physician along with literature or pamphlets on areas in which the Committee feels the physician was lacking (Norton, 32).

About half of the physicians who had received D or C2 as a grade are later judged by the Committee to have taken steps to address the concerns identified in the peer assessment reports. Many of the physicians who score a D or C2 establish their own educational action plans attempting to address several or all of the concerns identified in their assessment reports. These physicians are congratulated on their achievements and told that their involvement with the Peer Assessment Program is finished, until another assessment is scheduled.

The remaining group of physicians is usually given two options. These physicians can undergo structured, in-depth assessment and intense retraining, or they can be directed to educational opportunities. These physicians are then reassessed nine to twelve months after their intervention and- - typically - - one half of them will be judged to be practicing appropriately at the time of reassessment. The majority of the remaining half will have decided to retire from active medical practice rather than undergo the retraining required to reacquire the standard of practice required for Ontario physicians. The physicians who leave their practice are usually in the age category of 70 and older (Norton, 33).

In the past, physicians who had improved their practice through the peer review system were simply returned to the general pool of candidates to be selected for possible peer review in the next year. However, in 1991 the Peer Assessment Committee began to revisit (within nine to twelve months) all of those physicians who had scored a D or C2 in their original assessment who were still in practice. The revisits are done in a blinded fashion for the assessor; that is, the assessor is not notified that the physician is up for reassessment and only thinks that it is a routine assessment. The Peer Review Committee

is blind to the reassessment as well. Due to the large volume of annual assessments and yearly Committee turnover, it is usually extremely hard for individual members to recall a specific physician. There are some rare cases in which it is brought to the attention of the assessor that he/she is performing a reassessment, but it is usually the physician who brings up the fact that he/she is being reassessed (Norton, 31).

In June, 1998, a study was done to see how well the reassessed physicians compared to those physicians selected for assessment under the normal process. Between 1991 and 1996, 124 physicians were considered eligible for a revisit. Of the revisits, 81 had been completed and 16 were still in progress at the time of the study. The remaining 27 physicians had either died, retired, or left their practice. The study chose comparison physicians who matched certain of the characteristics (e.g., age) of the reassessed physicians so that the study results would have meaning.

The study showed that the revisited group's assessed performance was significantly better than that of the matched physicians who had similar characteristics but who were not up for reevaluation. The conclusion of the study was that physicians who were initially judged to have an unsatisfactory practices and underwent simple interventions were found to be practicing- - within one year - - at least as well as their peers who were selected for assessment under the normal process (Norton, 34-36).

Ontario's Peer Review Program has shown itself to be useful in improving the quality of physician practices. It offers physicians a chance to receive constructive criticism from their peers, as well as to offer solutions to problems in their practice. However the program has constraints due to the provincial budget allotted each year; the Committee can only do so many reviews per year. Since there are so few slots for

review, the selection process is random, and typically only 50 percent of the physician population is even eligible to take part, it lacks widespread positive results. Although the study showed that physicians who have been found to have poor practices tend to improve to the level of their peers, the program as a whole has yet to have a drastic effect on the entire professional population. Evidence of this is the fact that each year the Peer Assessment Committee tends to find relatively the same percentages of physicians who receive a grade of C2 or D (Norton, 35).

Quality Assurance Program

As noted above, Ontario's College of Physician and Surgeon's Quality Assurance Program is the central program dealing with activities relating to improving the quality of the medical profession in Ontario. Its program involves several committees whose job it is to maintain quality of care within the clinical setting. Such committees as the Quality Assurance Committee, The Clinical Quality Improvement Committee, the Peer Assessment Committee --spoken of previously-- the Executive Committee and the Complaints Committee are all part of the Quality Assurance Program.

Committees within the Quality Assurance Program work closely with one another in order to provide the best quality improvement advice and guidelines. The Quality Assurance Committee has physicians referred to it from the Peer Assessment Committee as well as the Executive Committee and the Complaints Committee. These physicians have been identified as in need of help in improving their skills as a physician. The Quality Assurance Committee is a more specifically focused quality assurance device than the Peer Assessment Committee. Physicians who are referred to the Quality

Assurance Committee have clinical deficiencies and usually have already gone through peer review and been found to be lacking certain skills or knowledge (Kofman, 29).

The primary function of the Quality Assurance Committee is to manage individual cases of physicians who have been identified by other College Committees as having clinical deficiencies. This Committee currently has two areas of focus: the major area involves specific medical procedures and services that need to be addressed, and the second area of focus regards opportunities for clinical quality improvement with physicians in the institutional sector, such as hospitals, long-term facilities, and group practices.

The Quality Assurance Committee has five major concerns in 1999 with respect to specific medical procedures. It is focusing on improvement and development of the following procedures and services: electrocephalography (EEG) service, eloctromyography (EMG) services, cosmetic procedures, chronic non-malignant pain management, and physicians providing spirometry and flow volume loop testing (Kofman, 29).

The Clinical Quality Improvement Committee is another important Committee within Ontario's Quality Assurance Program. It is very similar to the Quality Assurance Committee in that the Clinical Quality Improvement Committee also deals with clinical problems that a physician may have. Its role in assuring physician quality though, is more of an administrative one. It sets forth the rules and guidelines for the other committees within the Quality Assurance Program. This Committee also works as a supervisor to the Quality Assurance Committee in its execution of guidelines to specific physician practice areas.

Another part of The Clinical Quality Improvement Committee's job is to be receptive to new ways of quality improvement and share them with the professional community. For instance, in 1998, an August meeting of this Committee included a presentation on quality improvement initiatives undertaken by a community hospital in integrating aspects of managed care into the hospital system of Ontario. The report included problems as well as benefits of the development and implementation of this program. The Committee felt that the program was a good way to improve quality, so it directed its staff to work on ways of sharing the information with CPSO members (Gordon, 17).

Effects of Ontario's Private Sector Regulations on Physician Quality

In the province of Ontario, nearly 50 percent of all physicians practice in some sort of group setting. As noted above, it is the Ontario government's policy not to perform peer review on these physicians. Therefore, it is up to each group to devise its own quality control mechanisms. However, these physicians are still required to register with the CPSO (Norton, 30).

Lately, there has been a new trend with group practices in Ontario. The CPSO is currently allowing physicians to request to undergo peer review with the Peer Assessment Program. Group practices often use the government's quality control device as a pre-hire screening process.

Overall, there are many different types of group practices in Ontario. Data on the characteristics of quality control are not readily available, but they are known to vary so much from group to group (Norton, 30).

Effects of Physician Education on Physician Quality

In Ontario, the Registration Committee of the CPSO is in charge of giving all new physicians --as well as practicing physicians—their annual certificates to practice medicine in Ontario. The Registration Committee decides all of the criteria for receiving and maintaining a medical certificate. This Committee also publishes a pamphlet called *Guiding the Profession* that it distributes to all newly registered physicians (Norton, 33).

This Committee makes decisions that affect the quality of service provided by physicians. For example, in the past new physicians would work as residents and also moonlight in different areas of the hospital. There were many issues that resulted from these practices, but the main one was the quality of care patients were getting from over-worked residents. The Registration Committee felt that moonlighting residents were not good for quality, so it passed legislation that abolished the moonlighting practice.

Medical students also have guidelines set forth by the Registration Committee that they must follow. These guidelines are made with physician quality in mind. There are different procedures for medical students from LCME (Liaison Committee on Medical Education) /ACMS (Association of Canadian Medical Colleges) [all medical schools in Canada and the United States] accredited medical school and from non-LCME/CACMS (medical schools outside of the U.S. and Canada) accredited schools. Guidelines for recommended activities of both types of students are given in the "Guidelines for Supervision of Medical Students," found on page 21 of the January/February 1999 issue of *Members' Dialogue,* a CPSO publication.

Chapter V: Analysis of Results

This chapter discusses several aspects of the health care systems of the United States and Canada. First, the chapter analyzes different modes of physician reimbursement and practice in terms of cost and quality considerations. The next topic is physician quality management. It considers the advantages and disadvantages of the countries' different quality management programs. Within all of these topics, recommendations are made for both the United States and Canada.

Physician Reimbursement

This section discusses the advantages and disadvantages of the physician reimbursement systems in the United States and in Ontario. The advantages and disadvantages are considered from a cost and quality standpoint.

United States

The United States has three major mechanisms in the area of physician reimbursement. These payment methods are salary, capitation, and fee-for-service. Each of these reimbursement systems has advantages and disadvantages associated with them. These advantages and disadvantages are discussed in the following section.

Salary

One major advantage of a salary reimbursement system is physician cost control. Since the physician earns a fixed income per year under this reimbursement system, it is relatively easy to budget and control this salary. Under this alternative, the physician

does not make more money with an increase in patient visits or an increase in the number of the physician's patients. In terms of quality of care, the salaried physician is not rewarded for overuse of services.

However, there are a few potential disadvantages with the salary method of reimbursement. Since the physician has no monetary incentive pertaining to the number of patient visits, underutilization of care can occur. For example, a physician may not perform tests or procedures that could be helpful to the patient. Another problem with this system is the tendency to develop poor physician productivity. Since the physician is paid a fixed amount of money per year, there is no incentive for the physician to seek out new patients. A physician on a salary usually sees less total patients than physicians in other reimbursement systems (Eastaugh, 40).

Capitation

The capitation system of physician reimbursement motivates a physician to provide care to a large number of patients. Since the physician is paid per patient and not per visit, the monetary incentive for the physician in this system is to have a large number of patients, while keeping the number of visits to a minimum. This payment system may encourage preventive care in order to avoid costly and time-consuming procedures.

The major disadvantage with this system is that it too may promote underuse of physician services. Since the physician has no monetary incentive for repeated patient visits, a patient may not receive the highest quality of care possible. In this way, capitation is similar to the salary system. This is a very big problem with the capitation system of reimbursement (Eastaugh, 40-41).

Fee-For-Service

The remaining major reimbursement technique in the United States, fee-for-service, has one primary feature. This system provides a monetary incentive for the physician to schedule as many visits per patient as possible. This can keep both the physician satisfied --financially-- and the patient healthy.

There are, however, ways to abuse this system. Unnecessary physician visits give money to the physician at the expense of the patients and their insurance companies. This raises the total cost of health care. Overutilization of care can also cause quality problems under this system. Additionally, this system tends to have physicians performing services that could easily be performed by people with much less training. Finally, this system does not tend to encourage the same preventive health measures seen in the other two major reimbursement systems (Eastaugh, 41).

Ontario

In Canada's province of Ontario there is one main form of physician reimbursement: fee-for-service. This is how the physicians are reimbursed for all insurance-covered health services. Citizens in Ontario have two choices for payment of services not covered by insurance. They can either charge their patients a fee-for-service or they can use a block fee plan (See Chapter II).

The fee-for-service plan that the Ontario government uses for reimbursement has many advantages. First, it gives physicians a monetary incentive to perform procedures. They are paid for each service that they perform, in the form of a set amount of money as established by the government. This tends to be beneficial to both the physicians and

patients. The former can schedule the appropriate number of visits and procedures and be reimbursed for their efforts. The latter get more attention from their physicians due to the fact that the physicians usually schedules more visits than under the other two reimbursement systems.

Another advantage of Ontario's fee-for-service program is that patients know exactly what services they are getting and what the charges are. There are no hidden fees and the physicians are not paid when the patients are healthy. The physicians are paid only when they provide services to their patients.

There is also one major disadvantage to this type of system. The more services provided by the physician, the more money the physician receives. This can lead to an overuse of services. Some physicians may perform unnecessary or extra services in the interest of receiving more money. These extra procedures can also have a detrimental effect on the patients' health. The fact that physicians are paid for each individual service can play a large role in the physicians' practice decisions. They may perform tests and/or procedures even though it may not be necessary, simply because they are paid for each service. This is the main area where the fee-for-service reimbursement system has negative results.

Recommendations

It is recommended that both countries use a fee-for-service based reimbursement system. This system would have a physician payment fee schedule to control the costs of physician services, similar to the one used for Medicare. This fee schedule would be enforced in order to control abuse of the reimbursement system by physicians charging

differently for the same procedures. Also, a physician spending cap should be in place to control the overall expenditures on physician services. This system would theoretically maintain the potential for a high level of health care quality while keeping national physician expenditures under control.

Modes of Physician Practice

The next section addresses the respective physician practice systems in both the United States and Ontario. This section deals with the advantages and disadvantages of the modes of physician practice in both health care systems.

United States

In the United States there exist many different modes of physician practice. These include solo and group practices, and managed care organizations. Each of these systems has advantages and disadvantages that are discussed in this section.

Solo Practice

The most basic mode of physician practice in the United States is the solo practice. In this type of practice, physicians can be paid on a fee-for-service basis -- or by capitation, if the physician is part of an HMO. Therefore, both the advantages and disadvantages of these payment systems are inherent in the solo practice. Furthermore, the administrative costs per physician are usually higher in solo practices than in group practices (Eastaugh, 144).

Group Practice

Group practices are the next least complicated mode of physician practice. As mentioned above, the administrative costs per physician are lower in this system than in solo practices. Since group practices can either be reimbursed by fee-for-service or capitation -- if part of an HMO-- the advantages and disadvantages of these respective reimbursement systems also apply (Feldstein 1994, 103).

Managed Care

Managed care is arguably the most cost efficient of the modes of physician practice. This is because it is the aim of the administrative organization to keep costs as low as possible. However, the major disadvantage of this system is that it places the monetary incentive on having as few patient services as possible, as mentioned above in the discussion on the capitation payment system, and this may affect the quality of patient care.

Canada

In Canada there are many solo practice physicians. One of the major advantages to the solo practice is freedom of practice. However, solo practitioners have added financial strain because they have to pay for all of their secretaries and other overhead costs. They are reimbursed for services by the government on a fee-for-service basis, which means that they must often work long and hard in order to pay for all of the costs involved. Also, overuse of the fee-for-service program is said to be common in Canada among solo practitioners because physicians tend to take on more patient visits in order to

make more money, thereby sacrificing economic efficiency and --sometimes-- the quality of patient care (Norton, 30).

Group practice in Canada is becoming increasingly popular. Almost fifty percent of all physicians in Ontario practice in some sort of group environment (Norton, 30). The major advantage of this type of practice is the idea of shared costs. Physicians who practice with a group can cut down significantly their per capita administrative costs of operation. It costs them less per physician when the group shares secretaries and other overhead costs. They can divide the cost among all of the members of the group, where before they would have to pay the costs all themselves.

Physicians in groups also have the advantage of sharing patients. This is beneficial for several reasons. It allows multiple physicians a steady stream of work. If the one physician within the group has a very busy schedule, another physician can take his/her place. Also, in multi-specialty groups, physicians can refer patients to other members of the group. Patient coverage is also made easier.

Group practices also have some disadvantages. For instance, if one member of the group performs poor work, then it reflects on the entire group. This is bad because it could mean fewer patients for the other physicians and a bad reputation for the group. That is why it is important for group practices to have some sort of quality review system in place so that physicians who have problems can be helped.

Recommendations

It is recommended that physicians work in group practices as much as possible, in the United States as well as in Canada. Group practices allow the physicians to have

close contact with their peers. The physicians can share new medical technologies and procedures with each other very easily in this mode of practice. Also, the physicians can review each other's performance to ensure high quality health care.

Physician Quality

United States

The physician quality assessment programs in the United States have many positive effects on physician quality, but they are not one hundred percent effective on insuring quality physician care. Peer review organizations and the National Committee of Quality Assurance are two examples that exhibit both strong and weak points to insuring physician quality.

Physician Peer Review

Peer review has had a positive effect on physician quality. The reviewing of physicians by other physicians, previously mentioned in Chapter IV, has proven more accurate for judging quality than written tests or surveys (Al-Assaf, 176-77). Peer review has established itself as a good measure for improving physician quality in recent years due to the development of improved databases. These databases are capable of storing profiles of all physicians who have been reviewed. The information in these databases is often used in hiring physicians and is sometimes used by patients in choosing a physician (Al-Assaf, 176-77).

One problem with these databases is that they do not display the patients' conditions at the time of treatment (Al-Assaf, 176). A physician maybe criticized

because of the way he/she cares for a patient with a chronic condition, but that patient may not have visited the physician in time for any treatment to be effective. For example, a patient may have cancer; if he/she does not consult a physician early in the illness, chemotherapy may be less effective. These databases cannot currently detect this problem because they provide no information of the patients' conditions at the time of the treatment. Another problem with the databases is that they take a significant number of patients with the same condition and the same mistreatment for the database to detect a crucial problem with a particular physician. The databases do not easily detect mistreatment on an individual patient basis; they group the results of the same treatments together, so one mistake in a major treatment category may not be detected.

The National Committee of Quality Assurance

The National Committee of Quality Assurance (NCQA) accredits HMOs that voluntarily request reviews. During these reviews the quality of HMO physicians is studied extensively (the standards of these reviews are discussed in detail in Chapter II). These reviews may lead to accreditation by the NCQA. The NCQA accreditations are used by HMOs to attract potential health care purchasers to their particular HMO. The advantage of having a NCQA accreditation encourages HMOs to be reviewed annually (Iglehart, 995-96).

One problem with the NCQA as a physician quality control mechanism is that the accreditations and reviews are not mandatory. An HMO must request and pay for these reviews. Also, HMOs are not required to publish the results of their reviews in the NCQA's Health Plan Employer Data and Information System (HEDIS). (The HEDIS is

an NCQA publication of performance measures.) Most of the time only HMOs with positive reviews will choose to have them published in the HEDIS.

Another problem of the NCQA as a physician quality control mechanism is that it is an "external" review organization. This means that physicians are not reviewed during working hours. Many physicians have expressed difficulties with scheduling interviews with reviewers and filling out surveys. Because of these inconveniences and other reasons, many HMOs do not request NCQA accreditation. In major cities, there are many managed care companies, so an accreditation by the NCQA is often necessary to compete in such a market. However, in small rural towns, accreditations are often not as necessary, so they are frequently not requested.

Ontario

In Ontario, the College of Physicians and Surgeons of Ontario (CPSO) sets forth many quality assurance devices. As stated in previous chapters, the College is in charge of licensing physicians and has many committees that deal with issues of quality.

The CPSO has many advantages and has had positive effects on physician quality in Ontario. The CPSO's Peer Review Program has been proven not only to help physicians in Ontario, but it has also served as a model for national framework for quality control. This Program works well because the physicians are being evaluated by their peers. It also allows the College to keep track of physicians, and correlate information on physicians to make improvements on physician quality.

One disadvantages of this CPSO Program is that the current peer review system does not reach all physicians in Ontario. Only physicians with solo practice certificates

are eligible for peer review. The problem with this is that 40-50 percent of physicians in Ontario are currently involved in some form of group practice environment (Norton, 30). As noted in Chapter IV, group practices often have their own internal reviewing systems to ensure quality of health care service.

Physician Education and Certification Methods

This section discusses the advantages and disadvantages associated with the physician education and certification methods in the United States and Canada. This discussion includes both general practitioners and specialists.

United States

Many years of education in the field of medicine are required for a person to become a physician. This education helps to ensure quality physician care. Upon completion of their education, physicians are required to become licensed in order to practice medicine. Some physicians also become board certified. Board certification is not required by the government to practice medicine, but many managed care companies require their physicians to become certified to help them provide high quality care within their organization and to help attract potential patients.

The most evident problem with physician education and board certification is that although many years of education are required to become a physician, board certification is not. Studies have shown that there is a positive correlation between physicians' results on the board certification exams and their performance in the work place (Feldstein 1999, 395-96).

Another problem with physician education and board certification is with licensure. After becoming licensed, physicians can legally perform a wide variety of medical tasks even if they have not been properly trained. If the state licensing requirements were more focused on a physician's primary area of service, the quality of medical procedures would be improved. Physicians would be licensed as experts in a specialty field of medicine rather than the medical field in general. For example, a dermatologist would not be legally allowed to give a patient anesthesia because he/she would not be licensed to do so.

Ontario

The education of physicians also plays an important part in the scheme of quality control in Canada. What medical students learn in the classroom and in their clinical experiences --the techniques, habits, and procedures-- play an important role in the overall quality of the physician. If taught improperly, these factors can cause a physician to have a substandard practice upon completion of his or her medical degree.

In Ontario there was a government project called the Educating Future Physicians of Ontario (EFPO). This project had an eight year mandate, beginning in 1990, to improve medical education in Ontario and to make it more responsive to the evolving health needs of Ontario Society. At the University of Western Ontario, the project was trying to improve the quality of physician education to meet the public's demand for higher quality physicians. The program focused on different aspects of the learning process of medical students. It also tried to change the curricula of the medical school programs to keep them current (Murray, 10).

Under the EFPO project, changing the curriculum started with a review of the needs and expectations of physicians by the public. The program aimed for direct, continuing community input into curriculum planning. One way in which the school was to get input from the community was through curriculum committees and Community Advisory Committees. Also, analysis of Canadian health data was used as a way to receive input from the public.

This project also dealt slightly with specialty physicians. Currently, Canadian specialists are only required to study within their respective specialty education requirements. EFPO attempted to change the curriculum so that specialty physicians would have to be taught the entire normal physician curriculum, in addition to the specialty education requirements.

One obstacle that has occurred with EFPO is that many professors of medicine are used to practicing and teaching a certain way, and are unreceptive to change. Changing policy on education, especially in an experimental fashion --using the EFPO project-- is difficult.

Recommendations

In order to maintain a high level of physician quality in the United States and Canada, physicians must keep on the cutting edge of medical technology. Physicians must communicate with each other to determine the safest and most practical ways to perform medical procedures. One way to accomplish this is through a peer review system. Since this system would be very large in scope in order to cover all practicing

physicians in a country, the national government would most likely be best suited for administering the peer review system.

Also, it is recommended that physicians' malpractice records and peer review evaluation results be made publicly available. This would motivate the physician to give high quality care since they would be publicly accountable for their medical practice. The Internet is an excellent way for physician quality information to be made available to patients, and also for physicians to exchange information.

In the area of physician certification, it is recommended that physician licensure be focused in specific fields. A physician should only be licensed to perform medical procedures that he/she is trained. Also, periodic reexaminations are recommended in order to ensure that the quality of physicians does not decline as physicians age.

Conclusions

There is an important relationship between the cost and quality of physician care that cannot be ignored. In general, any action meant to improve the quality of physician care must also be considered from an economic viewpoint, and vice versa. For example, there is a stark contrast between the costs and quality aspects of the fee-for-service and capitation reimbursement systems. Fee-for-service systems are often considered to provide higher quality health care, but the large costs associated with this reimbursement system cannot be overlooked. Capitation reimbursement systems attempt to remedy the economic situation, but some allege that they do so at the expense of quality (Eastaugh, 40-41).

Another example of this quality/cost connection is with Ontario's Peer Review program. The actual reviews cost the government significant funds to conduct. The outcomes on quality are positive; if the government were able to conduct more of the reviews, however, the quality of physician service would improve even further.

The connections between quality and costs must be considered in making suggestions for changes to the current physician reimbursement and practice systems. The suggested changes must take into account the many factors that can affect the cost and quality of physician services.

Chapter VI: Conclusions

This chapter recapitulates some of the results of previous chapters relating to physician reimbursement, modes of physician practice, and physician quality. It revisits the discussion on alternatives in these areas for Ontario and the United States. This chapter also gives suggestions for further study.

Summary of Results

Physician Reimbursement

There are three main ways that physicians are reimbursed: fee-for-service, capitation, and salary. All three of these systems are in effect in the United States, while Ontario exclusively uses the fee-for-service mode of physician reimbursement.

Modes of Physician Practice

There are many different modes of physician practice in place in the United States and Ontario today, as shown in Chapter IV. These modes of practice are solo and group practices, staff, open, and closed panel HMOs, and IPAs. Because of the improved potential for peer review, group practices tend to be the most effective in terms of quality, as discussed in Chapter V.

Physician Quality

There are many ways to improve physician quality. Some of these include peer review, educational reform, and government regulation. One of the best ways to maintain a high level of physician quality is through peer review. This allows the physician to receive advice and recommendations from a contemporary. In this way, physicians are able to share new ideas for improving the quality of health care.

Areas for Further Study

This section introduces areas in which this project could be expanded. Due to limitations in time and resources, these areas were not addressed in this project.

Survey of Physicians

A survey of physicians could be conducted in the United States and Canada. This survey could try to find new ways for physicians to communicate with each other. Physicians could be asked how they would improve health care. This survey could ask such questions as "Do you feel that the quality of health care in the United States/Canada is as good as it can be?", and "What role have quality assurance programs played into your professional career?" This would give first hand information on suggestions for improvements in the area of physician quality, and the state of physician morale on issues of quality.

Survey of Patients

A survey of patients in the United States and Canada could also be conducted to understand how the average person feels about health care quality and costs. Problems with the health care systems in the United States and Canada could be discovered through this type of survey, and ways to fix them could be suggested in a subsequent project.

Study of Other Provinces in Canada

Since this project focused only on the province of Ontario, another project could compare all of the provinces of Canada with each other. From this project, ways to improve the overall health care system of Canada --and the United States-- might be concluded.

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