ABSTRACT

Objectives: Every country wants a good health care system for all citizens with minimum expenditure. By comparing health care systems in Canada and Japan, both of which have a universal health care system for all citizens in its own country, an attempt was made to visualize or search for an optimal health care system.

Method: Data and information obtained were tabulated and compared from the standpoint of the effectiveness of the health insurance system and the feasibility of its application so as to propose an optimal health care system.

Results and Conclusions: Some of the suggestions and proposals made for an optimal health care system for all citizens include implementation and/or establishment of minimal user fees, centralized rational decision-making processes, private delivery system of health care, centralized computer-aided patient record system, insurance monitoring system, patient education, and physician guidelines.

ABRÉGÉ

Objectifs : Chaque pays souhaite l'établissement d'un bon système de soins de santé accessible à tous ses citoyens et ce à un coût minimum. Nous avons établi une comparaison entre les systèmes de soins du Canada et du Japon, deux pays où l'on trouve un système universel des soins de santé afin d'arriver à la visualisation d'un système de soins de santé à rendement optimal.

Méthode : Les renseignements et données obtenus ont été compilés et comparés en tenant compte de l'efficacité du système de santé, de ses possibilités d'implantation, dans le but de proposer le meilleur système de soins de santé.

Résultats et conclusions : Parmi les suggestions et propositions retenues afin de créer le meilleur service de soins de santé pour tous les citoyens, nous avons retenu l'implantation et/ou l'établissement de frais minimums pour les usagers, d'un système rationnel et centralisé de diagnostic, d'un système privé de soins, d'un système d'informatisation des dossiers des patients, d'un système de contrôle des frais d'assurance, d'un système d'éducation des patients et de directives aux médecins.

A Proposed Optimal Health Care System Based on a Comparative Study Conducted Between Canada and Japan

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Health care is one of the major concerns of every country in the world. Universal access to adequate medical care for all citizens is a system that many countries strive towards. However, this type of system requires extensive financial resources, as well as qualified professionals to administer the system, and practically speaking, no country in the world can afford to implement an unrestricted free access medical system. Japan and Canada are two countries who believe in the philosophy of universal health care coverage at an affordable cost to all citizens. In this paper, the health care systems of these two countries are compared. Similarities and differences will be discussed, and in the process of this comparative study, concerns and issues with each system will be assessed and conclusions drawn as to the benefits of each system, and how these benefits may be combined to provide a better health care system which can work as a preferred health care model for the rest of the world.

METHOD

Health care systems in Canada and Japan were examined and studied not only through the body of literature published on this subject, but also by experts and professionals in the health care field in both countries. Data and information obtained were tabulated and compared. This information was analyzed and assessed from the standpoint of the effectiveness of the health insurance system and the feasibility of its application. In this process of comparison an optimal health care system is proposed.

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RESULTS AND DISCUSSION

Both Japan and Canada provide similar socialized national health insurance to every citizen in their countries, though there are some striking differences in the means and methods of administration and operation between the two systems. Table I and Table II summarize the Japanese and Canadian health care systems respectively.

The Japanese system

In Japan, there are two types of insurance schemes. The first one is an employee-based system and the second is national health insurance. The two schemes are based on employment status. Within the employee-based insurance system, four different groups are identified:

1. Employees working in smaller firms belong to a government-managed health insurance plan;
2. Employees working in large firms are covered by their employer's insurance program, which is corporately managed. Companies with more than 300 employees generally manage their own programs, while smaller companies often join together to provide an insurance system for their employees;
3. Local and national civil servants, teachers and other staff of teaching institutes run a mutual aid association;
4. Day laborers and seamen belong to a national government-managed health insurance scheme.

TABLE I
Summary of Japanese Health Insurance Scheme

Health Insurance System		Individuals Covered	Insurer	# of Insured Persons (000)	Insurance Benefits			Financial Resources	
					Medical Benefits	Dependants' Medical Expenses	Cash Benefits	Premium	Government Payment and Aids
Employee Health Insurance	Health Insurance: Government-managed Health Insurance	employees in small and medium companies	National Government	37,911	90% (deductible will be ¥100, ¥200 or ¥300 depending on the treatment and total bill not to exceed ¥3,500)	in-patient 80% out-patient 70% (privately managed health insurance additional benefits)	injury, sickness allowance, maternity allowance, delivery expenses	approximately 8% of salary	13% of benefit costs
	Health Insurance: Privately managed Health Insurance	employees in large companies	Health Insurance Societies	32,093			same as above plus additional benefits		¥1.28 billion as benefit costs
	Health Insurance: Day Laborer's Health Insurance	daily-base employees	National Government	81			injury, sickness allowance, maternity allowance, delivery expenses		13% of benefit costs
	Health Insurance: Seamen's Insurance	seamen	National Government	312			same as above plus additional benefits		¥3 billion as benefit costs assistance
	Health Insurance: Mutual Aid Association Health Insurance	national and local government employees, and private school employees	Mutual Aid Associations	1,169					
National Health Insurance		agricultural workers	cities, towns, villages 3,249	cities, towns, villages 38,590	70%		midwife expenses, funeral expenses, etc.	N/A	50% benefit costs
		independent workers	National Health Insurance Assoc. 166	National Health Insurance Assoc. 4,650					32% - 52% of benefit costs
	Retirees Health Insurance System	Retirees from Employees Health Insurance	cities, towns, villages 3,249		insured persons – 80% dependants in-patient – 80% dependants out-patient – 70%				none

References: 1) Ministry of Health and Welfare. "Health and Welfare in Japan". Japan International Corporation of Welfare Services, 1994.
2) Ministry of Health and Welfare. "Health and Welfare Report", 1997.

The second insurance scheme is the national health insurance system, which covers those people who are not included in any of the above-mentioned employee health insurance schemes. Within the national health insurance system, there are two distinct groups: agricultural workers and the self-employed; and retirees who were originally covered by employee health insurance.[1] All the insurance schemes described are similar in terms of the range of medical services provided, the procedures for obtaining medical care and the system of reimbursement. However there are significant differences in eligibility, administration, cost sharing, cash benefits and the level of national government subsidy provided.

Members of the employee health insurance system receive coverage of 90% of the cost of medical services when they visit a hospital or clinic. Included in this coverage are costs associated with hospital stays and prescription drugs. The total medical bill cannot exceed Yen3,500 per month and there are deductibles of Yen100, Yen200, Yen300 depending on the treatment.[1] In the case of dependants, coverage is limited to 80% of the cost of in-patient services and 70% of out-patient services. Within the society-managed insurance (day-laborers insurance, seamen's insurance and mutual aid association insurance), there are some additional benefits.

Financial resources come from two main sources,

TABLE II
Summary of Canadian Health Care Insurance Coverage

Insurance provider							
Public Sector Health Care Expenditure (1993)* ($000) 51,815.9 (71.9%)				**Private Sector Health Care Expenditure (1993)($000) 20,255.6 (28.1%)**			**Total 7,201,715**
# People covered (000)	% Population covered†	Type of medical care provided	Source of financial resources	# People covered (000)	% Population covered	Type of medical care provided‡	Source of financial resources‡
28,753	100%	• physician visits • hospitalization • prescription drugs for people over 65 and on social assistance • in-patient drugs • medical services (i.e., radiology services, blood sampling, etc.)	• federal and provincial tax and/or premiums paid to provincial government	12,024¶	41%¶	• prescription drugs • dental coverage • extended health care (i.e., ambulance, medical appliances, supplemental hospital expenses, etc.) • vision care • disability income • accidental death and dismemberment	• premium shared by employer and employee

* Public sector expenditures include expenditures by the federal, provincial and municipal governments as well as workman's compensation.
† Virtually the entire Canadian population is covered under provincial health care programs.
‡ Type of medical care provided and cost to employees vary depending on the employer insurance plan.
¶ Data do not include Blue Cross organizations and other non-profit cooperatives.
References: National Health Expenditures in Canada 1975-1993, Health Canada, 1994.

insurance premiums and national support (Table I). In the case of the employee health insurance system, the insurance premiums paid by the individual amounts to approximately 8% of the salary of the insured.[1] With respect to a subsidy from the national government towards medical care costs, government-managed health insurance programs and day laborer's health insurance programs receive a 13% subsidy, while in 1992 privately managed health insurance received Yen4.85 billion as benefit costs, and seamen's insurance is subsidized by Yen 3 billion. Mutual aid association insurance is not subsidized at all (Table I).

National health insurance has a peerless payment structure that allows individual choice of method of payment. For agricultural workers and retirees, the National Health Insurance is administered by local governments in the cities, towns and villages in which the insured reside. There are also National Health Insurance Associations which manage insurance for individuals who may work in the same trade or profession, and are usually self-employed. Payments are collected by the city in which the insured lives and the insured person can choose either an income-based payment system or a fixed amount payment system.[1] Through either of these payment systems the insured is entitled to coverage of 70% of the cost of medical services (in the case of retirees the insured person receives 80% coverage and dependants receive 80% coverage for in-patient services and 70% for out-patient services). The national financial support to subsidize this system varies with agricultural workers receiving a subsidy of 50% of the cost of benefits, the self-employed 32-52% of benefit costs and retirees having no subsidy.

In general, individuals covered by the mutual aid associations and the society-managed insurance systems receive better benefits than individuals covered by government-managed health insurance schemes and those insured under National Health Insurance (who receive the least generous benefits).[2] Nevertheless, all insured individuals receive coverage of an extensive range of medical services including physician consultation, pharmaceuticals, therapeutic appliances, surgery, hospitalization, hospital nursing, transportation, etc. Preventive health care activities, expenses associated with delivery of babies and the cost of non-prescription drugs are not included.

The Canadian system

Canadian health policy has led to the goal of providing universal access to medical care for all Canadians, irrespective of their ability to pay for medical services. The current challenge is to maintain access for all Canadians to medical services within the constraints imposed by the changing social, economic and political climate. In Canada, the provinces oversee the licensing of physicians, nurses and other health professionals and determine the licensing for all hospitals. Provincial departments of health also administer medical insurance plans and finance health care facilities as well as the delivery of certain public health services.[3] Provinces receive transfer payments from the federal government to apply to health care costs, though the bulk of the provincial funding comes from general provincial tax sources (personal income, corporate income and sales tax). Under the National Medical Insurance Act of 1968 (Medicare), in order to qualify for federal cost sharing, a provincial program must meet the following basic requirements:[4,5]

- must be a publicly administered non-profit program;
- must provide universal coverage for all legal Canadians;
- must provide reasonable access to all medically necessary services without financial barriers;

- must provide insurance for all medically necessary services;
- must provide portability of benefits from province to province.

Originally, the federal government was to pay each province 50% of the national average per capita costs. This means that each province would receive a sum of 50% of the national average multiplied by its population. However, due to rising costs of health care, since 1977 federal transfer payments have been limited to a standard amount that is independent of actual expenditures. The result of this has been an increased burden on the provinces as health care costs rise and federal transfer payments stay constant.[6] Provincial programs pay for approximately 90% of all hospital and medical care,[7] though many Canadians are further covered through private insurance provided by employers. As mentioned, provincial funding comes mainly through the tax system, though Ontario also raises funds through an Employer Health Tax, and Alberta and British Columbia charge residents with taxable income a provincial insurance fee. Canadians in low income tax brackets and the unemployed are exempt from premiums, but are nevertheless covered for all medical services. Thus all Canadians are covered for essentially all acute care services for which payment comes from a single source within each province.[7] Table II summarizes the Canadian health care insurance scheme.

Provincial government programs cover a wide variety of health care expenditures.[8] These include:

1) hospital expenditures (public and private facilities for acute, chronic, convalescent care, in-patient care and some professional payments to physicians, drugs prescribed within the hospital);
2) other institutional expenditures (homes for the aged, institutions for the physically handicapped, emotionally disturbed children, nursing homes and treatment centres for substance abuse);
3) physicians expenditures (fees for professional health services provided by physicians and psychologists, physician salaries, fee payments made by Workers' Compensation Board);
4) other professional expenditures (dentists, denturists, chiropractors, optometrists, orthopedists, podiatrists, osteopaths, naturopaths, private duty nurses and physiotherapists);
5) drugs (retail expenditures on prescription drugs. Note that only people over the age of 65 and those on social assistance are entitled to reimbursement for prescription drugs. Non-prescription drugs are not covered in this plan);
6) capital expenditures (construction, repair, machinery, equipment in hospitals, clinics and homes for special care);
7) other expenditures (home care, ambulances, eye glasses, hearing aids and other appliances and prostheses, public health, prepayment administration).

The majority of private insurance plans are group insurance coverage provided by an employer or other groups such as non-profit cooperatives, though a small per-

TABLE III
Comparison of Health Insurance Systems and Related Issues in Canada and Japan

	Comparative Items	Canada	Japan
Health Insurance System	Health care insurance costs paid by patient	no direct payment by patient, but 75% of cost of health care system is paid for through taxes	40%-50% total cost (approximately 8% of salary)
	percentage of population covered by health insurance	100%	100%
	Direct cost to patient for physician visit	no cost	10% for insured 30% for dependant
	Direct cost to patient for hospitalization	no cost*	10% for insured 20% for dependant 30% for dependant
	Medical services covered by insurance program	comprehensive coverage excluding dental care and drug†	comprehensive coverage excluding nonprescription drugs
	Government financial support	72% of total health care expenditure is paid by the public sector ($51.8 million in 1993)	variable depending on insurance scheme (see Table I)
	Reimbursement methods for pharmaceuticals	based on provincial formulary†	based on national formulary
	Reimbursement methods for medical care	based on provincial reimbursement table (unlisted services are not reimbursed)	based on national reimbursement table (unlisted services are not reimbursed)
	Reimbursement monitoring system	province-based monitoring system exists	a monitoring system is in place
	Freedom to select health care providers	patient is free to select health care providers	patient is free to select health care providers
	Geographical limitations	provincial insurance is portable to all other provinces and provides limited international coverage	no limitation in domestic and international coverage
Related Issue	Medical expenses per capita ($US, 1992)	$1900	$1450 (¥217,000 in 1995)
	Health care costs as a % of GDP (1993)	10.23%	7.28%
	% of prescription medication dispensed by pharmacists	100%	26.5%‡ (March 1997, for employees health insurance)

* Through private insurance, patients have extended health benefits to cover the cost of private rooms, televisions, etc.
† Though 90% of all hospital costs are funded through provincial insurance, cost of prescription drugs only is reimbursed for people over 65 and those on social assistance.
‡ The remainder of prescription drugs are dispensed by prescribing physician.
Reference: 1) Ministry of Health and Welfare, "Health and Welfare Report", 1997.
2) Japan Pharmaceutical Association (JPA), "JPA Home Page", July 23, 1997.

TABLE IV
Suggestions and Proposals for an Optimal Health Care System

1. Maintain the universal health insurance system providing access of all citizens to adequate health care, with sufficient patient fee to discourage abuse of the system;
2. Maintain a centralized decision-making process with respect to cost of pharmaceuticals and fees for medical services;
3. Implement/maintain private delivery system of health care service to create reasonable competitive environments within the total system;
4. implement a computerized system that allows for tracking of patient medical records so as to avoid duplicate services and to speed up the medical services to the patient;
5. Reduce hospital costs through decreasing the length of hospital stays of patients and encouraging a large share of acute care practice through community and home services;
6. Institute self regulation by third parties and health care providers;
7. Provide patient education guidelines regarding the appropriate control of the disease, and provide health professionals guidelines to ensure cost-effective and high quality medical services;
8. Increase emphasis on referring to non-physician professionals to reduce the total medical expenditure;
9. Implement a system which checks reimbursement practice among health practitioners and providers;
10. Allow patients to choose types of medical services so as to guarantee the quality of medical services;
11. Encourage primary care so as to cure the disease before it becomes serious;
12. Implement as part of the system the fixed-fee-per-disease criterion to create better service with a reasonable fee;
13. Create a system in which patients and employers, or patients and governments share premium (usually 50/50) so as to share the quality and responsibility of the medical insurance system and practice;
14. Implement and encourage routine medical examination and check-up systems to detect and prevent serious diseases at an early stage;
15. Modify and update the system to meet technical and social changes and needs.

centage (less than one percent) of the population has individual private coverage. Private insurance plans vary dramatically in the type of coverage they provide as well as in the cost to the employee through premiums and as a taxable benefit. Private insurance plans may cover expenditures, or a portion of expenditures such as:

- prescription drugs;
- supplemental hospital expenditures;
- dental coverage;
- extended health care (ambulance services, crutches, braces and other medical appliances, private duty nursing, services of non-medical practitioners);
- disability income;
- accidental death and dismemberment.

Comparison of health insurance systems in Canada and Japan

A comparison between the Japanese and Canadian health care systems reveals several similarities as well as some key differences, which are summarized in Table III. For example, in Japan, insurance premiums are paid by the insured individual to insurance organizations to cover a portion of the cost of medical services. Employees of private companies and the public sector pay approximately 8% of their monthly income to insurance organizations towards health insurance. Employers and governments contribute about the same amount. Though the payment procedures of individuals who are not employed in private companies or the public sector are different from those who are employed in these sectors, the amount of the insurance premium they pay is more or less the same.

In contrast, Canada embraces a universal medical program that provides accessible medical care to all Canadians regardless of their ability to pay for these services. The medical insurance system is funded by the provincial governments and supported through tax dollars, thus the end user does not incur any direct expense for medical services, though Canadians pay for about three quarters of the cost of providing health care services through their tax dollars.[5] In addition to the insurance premiums that the Japanese pay, they are also responsible for payment of 10% of the cost of the services used, if the individual is the principal person insured. Dependants must pay 30% of the cost of treatment for outpatient services and 20% of the cost incurred if hospitalization is required. This co-payment system is meant to reduce the overall cost of medical expenses through a reduction in unnecessary use of medical services. Though Japan uses a co-payment system, the two countries have in common a health care program that provides medical services to all citizens.

Another difference between the two health care systems is at the level of the pharmacy. In Canada, a licensed pharmacist can dispense medication upon receipt of a signed prescription from a physician. Virtually 100% of prescriptions are filled in this manner. In Japan, however, in 1994 only about 15% of prescriptions are dispensed through a pharmacy, while physicians dispense the other 85% of prescription medication themselves. There is an attempt to reverse this procedure, as the temptation to physicians may be to prescribe more expensive medications because they benefit directly from the sale of the drug.

In Canada all medical services, including physician visits and hospitalization costs, are covered by provincial health plans, though extended health benefits (such as private hospital rooms), dental care and drug costs are not covered (with the exception of prescription drugs for the elderly and those on social assistance). In Japan, the cost of non-prescription medication and labour and delivery costs are not covered through the insurance premium plan. The cost of dental and prescription drug coverage adds a significant burden to the insurance system, but is very popular with the Japanese people and is considered to be an essential component of the insurance system.

Both countries base reimbursement of drugs and medical care on a formulary basis (a national system in Japan and a provincial system in Canada). A system for monitoring reimbursement exists in both countries.

Another common element between the two health care systems is the ability for the patient to freely choose health care providers. Insurance providers do not select physicians or pharmacists for the patient. In addition, both countries provide portable insurance. For example, in

Canada, health insurance provided by one province can be used in any other province. Therefore Canadians are covered by home province insurance while travelling anywhere within Canada. In fact, provincial health insurance will partially reimburse a patient for costs incurred in foreign countries. This system of coverage is similar in Japan.

In summary, though there are many similarities between the Canadian and Japanese health care systems, including coverage of all citizens by a government-managed insurance system, the major difference between the two approaches is that the Japanese employ a co-payment system while the Canadian system is funded entirely through public funds (mainly through the tax system). There has been much debate as to whether the co-payment method reduces the overall cost of medical services, though it appears that since the institution of co-payment in Japan, the total number of patient visits to hospitals and clinics has decreased. Thus, the co-payment system may address the issue of over-use of a system that appears to be "free". The higher per capita costs of health care in Canada compared to Japan ($1900US vs $1450US) may support the theory that user fees decrease the total cost of health care. Though cost sharing by patients can be shown to have some constraining effect on utilization of medical services for mild to semi-serious illness, it is unlikely to play a role in more serious cases, which appear to account for the bulk of national health care costs.[9,10]

In Canada, the Canada Health Act of 1984 mandates that the health care system deliver medically necessary health care at no cost to patients. The basic premise of this legislation is to ensure that all Canadians, regardless of their economic status, will have access to medical care without incurring a financial burden, as even a small user fee may deter lower income families from seeking medical attention if they cannot afford to pay the fee. Thus, without changes to this statutory act, user fees are not feasible in Canada. Since 75% of the cost of health care is paid for by the public through their taxes, the taxpayers should have an incentive to consider the cost of health care. However there are no well-established standards for taxpayers, medical professionals or third party insurers to judge the effectiveness of the health care system with respect to the cost of administering it.[5] Nor are there incentives for system-wide efficiencies that would decrease overall costs (such as closure of hospitals that are not operating at full capacity).[11]

A proposed system

Both Canada and Japan have been relatively successful in stabilizing the growth rate of health care costs as a percentage of GDP, though Japan spends significantly less on health care costs (7.3% of GDP compared to 10.1% of GDP in Canada in 1993). Both the Japanese and Canadian systems have particular strengths and weaknesses, but both systems could benefit from a better-controlled, more cost-effective system that continues to provide adequate health care to all citizens. A number of suggestions to improve internal evaluation of each system and to improve efficiency as well as quality of care are given in Table IV. These suggestions are summarized below:

1) Though basic differences between the two systems exist, reviews of these two systems[2,5] have uncovered similar benefits and made similar recommendations for basic improvements to the health care systems in each country. Both countries benefit from a universal medical insurance system that ensures reasonable access to all citizens. Japan seems to have been more successful at cost containment with respect to health care expenditures as a portion of GDP.[2,8] This may be due to a reduction of overall health care costs through the co-payment system.
2) Studies have shown that the method of developing a single set of payment rules through a centralized decision-making process, such as those in Japan and Canada, are more successful at limiting the growth of health care spending than less structured approaches.[12] This centralized process of making decisions on payment structure for both drugs and health care providers should be operated through the use of drug formularies and fee-for-service structures. Though these are national systems in Japan and provincial in Canada, both systems are said to keep overall costs down.[12] In fact costs appear to be lower where the public role is highest.[13] Relatively stable costs combined with universal coverage ensure a high degree of public popularity for national health care systems.[14]
3) A private delivery system of health care service (particularly, of hospital services) is also an effective way to help reduce health care costs.[11]
4) A well-controlled computer system which keeps the medical record of each patient would allow access of patient medical information in an efficient manner, including a drug profile for each patient. This computer system should work to keep track of patient visits to hospitals and physicians, and could be networked from hospital to hospital in order to generate a cohesive database. Once a patient has been admitted to hospital, any hospital in the nation could then access a particular patient's record through this computer network to clarify the patient's previous medical history when required.

It would be important for such a network system to be equipped with a security management program in order to protect patient confidentiality. The network system could be linked with a personal information card system in which a personal information card the size of a regular credit card would be incorporated with IC (integrated circuit) or optical fibre which can store numerous pieces of patient information. Personal information cards of some form are currently used in some part of both countries. A patient would carry his/her own personal information card on which his/her medical record is stored including demographic data, results of laboratory tests and other tests, history of medical treatments and profile, and physicians' comments. Each time a patient visited a clinic, hospital, or pharmacy, the new data generated from the up-to-date treatment, test or dispensing would be added to the personal information card. Use of such a personal information card would increase the effectiveness of medical care by eliminating duplicate tests and treat-

ments. It would also work to detect duplicate dispensing of drugs and potentially harmful drug interactions. The security of this personal information card should be maintained with double or triple password security or other adequate security measures.

5) Hospital costs account for a large portion of medical cost. Therefore, patients should be cared for in out-patient clinics, community care facilities and at home as much as possible. In order to promote home care, both general practitioners and pharmacists can play an important role. Recently, in Japan, the insurance system decided to pay pharmacists for their home-care services. A pharmacist can receive 5,500 yen per month per patient. In order to shorten the hospital stay of the patient, this reimbursement program for pharmacists should be expanded so that more professional services by the pharmacist can be performed. The amount of reimbursement to pharmacists for their home-care services is much less than that of a hospital stay. In addition, pharmacists are well qualified for such home-care services as monitoring drug intake and other pharmaceutical care.
6) In Japan each year, newspapers report the result of investigations conducted by insurance monitoring associations on illegal claims committed by hospitals and physicians. In the event of a serious violation, practitioners lose their registered health-insurance practitioner's status; that is, they can no longer claim for reimbursement from the health insurance organization. This monitoring system helps to reduce high medical expenses by preventing unnecessary and illegal claims to the insurance organization. This type of monitoring body also checks and warns the pharmacy dispensing operations. Charges for cognitive services not based on true documented practices may be detected. In the worst case a person's right to claim for reimbursement may be taken away.
7) Patients should be counselled occasionally regardless of disease status. Serious illness would be prevented by the administration of a patient education program conducted on an ongoing basis. Often a lifestyle change based upon the instruction given by medical professionals will help to prevent the onset of disease. This type of educational program should be implemented into the system as a routine, mandatory practice. Besides routine patient education, a regular medical check-up would be an effective means of preventing and detecting diseases. In Japan, almost everybody, no matter where they work, receives regular medical check-ups, usually once a year. These check-ups normally include blood tests, X-ray examination, cardiograph, stomach radiation, blood pressure measurement, and hearing tests. Physicians can also be instructed to increase the overall cost-effectiveness per patient. Instruction given both physicians and patients should contribute to improving cost-effectiveness of medical treatment and decreasing overload of the physicians that can result in a financial burden to the health insurance system.
8) Physicians are often amongst the highest paid of all occupations. By limiting to physicians true medical works and leaving non-medical works to professionals such as paramedics, physical therapists, nurses, pathologists, microbiologists, X-ray technicians, etc., the cost of health care could be decreased.

In conclusion, though both countries provide health care systems that seem to meet the needs of the population, both are striving to maintain effectiveness in the face of decreasing public funds through cost containment measures and evaluation of the health care systems to allow maximum level of service with the most cost-effective levels of expenditures. Incorporation of some of the suggestions outlined in this paper may help other nations in the world reach the goal of more efficient and cost-effective health care programs.

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