Medical Errors in Canada: A Sideways Glance at a Universal Problem

In the Oregon's Future Spring 2004 Forum, we discussed medical errors in the US and Oregon—but this is not just a US problem. In May of 2004, The Canadian Adverse Events Study revealed that adverse events in Canadian hospitals cause between 9,000 and 24,000 deaths a year. The Canada Institute for Health Information extrapolated that non-lethal adverse events cause Canadians to spend more than one million extra days in the hospital. The Canadian press reported this figure as the same amount of hospital beds needed to care for every woman in Canada experiencing pregnancy and childbirth at the same time.

The report surprised health officials all over Canada and projected that one in 13 patients (7.5 percent) treated in Canadian hospitals will experience an adverse event such as a surgical error or complications because of an incorrectly prescribed drug. Dr. Peter Norton, co-author of the study, believes the number of adverse events may be underestimated. Compared to Australia, Britain, and New Zealand studies, Canadian medical error rates are lower. But when compared to similar studies in US hospitals, Canadian care givers commit twice as many errors. Critics blame poor communication among different tiers of care, from doctors and nurses to pharmacists. Healthcare officials and the press in Canada discuss the fact that hospitals have not invested in computer-based charts and patient health records that can be accessed by all health-care providers—a problem the US system also faces. In fact, the percentage of hospitals who have invested in this type of health information technology in both countries is about 15 percent.

Authors of the report concluded that of the almost 2.5 million annual hospital admissions in Canada, about 185,000 are associated with a medical error and that close to 70,000 are probably preventable. The Canadian Institute for Health Information's web site provides the complete results of the study and a comparison of methodologies used in studies in the US and developed countries with universal healthcare systems.

Jay Hutchins

Universal Problems & Universal Healthcare:

6 COUNTRIES — 6 SYSTEMS

by Albert DiPiero, MD, MPH

The United States is the only modern, industrialized nation without some version of universal access to healthcare services. All other industrialized countries have addressed the policy and the financial challenges of universal access through a wide variety of methods. Universal healthcare is functioning in these countries at a fraction of the spending seen today in the United States. On a per capita basis, the next biggest spender after the United States is Switzerland, which spends only 68 percent as much. Canada and the United Kingdom spend 57 percent and 44 percent as much per capita as the United States. Despite these differences, there is no evidence to suggest that our level of spending helps us achieve the superior health status of the Canadians, Japanese and Europeans.

Each of these systems has elements that may be attractive to Americans but also elements that may be culturally an anathema, whether it is the restrictions on private insurers in Canada, the government established physician fee schedules in France, or compulsory social insurance in Switzerland. The point to note is that each country has found a model of universal coverage that conforms to the country's cultural and political norms and that single payer is not the only path to accomplishing universal coverage.

Canada—Medicare

Canada provides lifetime health insurance to all its residents through a publicly funded health insurance plan administered independently by each province (Provincial Health Plan). There is no link between health insurance and employment, so insurance is permanent

and fully portable. The Canadian system is the prototypical single payer system. This is the ultimate use of pooling: everyone in the province is covered by one insurance plan and each

In Canada private insurance is not permitted for services covered by the Provincial Health Plan.

Provincial Health Plan serves as the one payer of healthcare services in each province. Private insurance is not permitted for services covered by the Provincial Health Plan. *(Please see Mark Kaplan's Myths and Realities of the Canadian Medicare in this issue of* **Oregon's Future** *—JH)*

United Kingdom—National Health Service

Great Britain takes a different path to universal healthcare. In Britain, healthcare is provided through the National Health Service (NHS), which began in 1948 on a vision of universal, comprehensive, free care for the entire population. The British system is founded on the concept of society fulfilling an obligation for maintaining the health of its people. The NHS is funded mainly through national tax financing. Unlike in the United States, there is no link between employment and health insurance within the NHS, so access to healthcare is universal, lifelong, and fully portable. However, Britain does permit coexisting private health insurers to provide insurance that covers the same services as the NHS. Physicians are either general practitioners, who are paid by either capitation or salary, or specialists who are salaried employees of the NHS. Specialists, however, may perform part-time private practice work outside of the NHS to supplement their incomes. The NHS is usually portrayed as the prototypical centralized, command-and-control socialized system. It cannot be driven by consumer demand beyond the budget. However, the NHS has gone through periodic reforms that swing between centralization and devolution of responsibility to the periphery.

In Britain, unlike the United States there is no link between employment and health insurance.

Currently, under the Labor government of Tony Blair, reforms are again emphasizing localism and also consumer-oriented service. Under recent reforms, general practitioners are part of Primary Care Trusts whose governing bodies are elected locally to foster local accountability. Primary Care Trusts receive a budget based on uniform national prices for conditions and procedures and commission services from specialists and hospitals. Patients will choose their specialists and the Primary Care Trusts will have incentives to manage within their budgets and coordinate care for the benefit of the local communities. To improve the quality and transparency of the system physician pay will now be based on 76 quality indicators ranging from medical records to outcomes such as achieving cholesterol levels based on national guidelines. The results of these initiatives represent the most extensive reforms in the history of the NHS and will be followed closely by all nations.

France

The French healthcare system was rated number 1 in the world by the World Health Organization in 2000. The French system is based on a philosophy of solidarity (universal access to healthcare) and liberalism also known as market-based pluralism. *(Implies choice that fosters experimentation —Ed.)* Everyone is covered by national health insurance (NHI), which is mandatory—no

one may opt out. People are automatically enrolled in an insurance fund based on occupational status. In France universal coverage was achieved in incremental steps with all residents finally covered in 2000. Patients pay for outpatient care directly and are then reimbursed by the NHI. There is co-insurance but no deductibles and patients suffering from chronic illnesses are exempted from payments. In addition to NHI, 90% of the population obtains supplemental insurance to cover other benefits and perks.

The French system is diverse and delivers great freedom to the patient and the providers. Outpatient providers are predominantly independent solo practitioners, operating private practices and are reimbursed fee-for-service. The fee is based on a national fee schedule set by the NHI. The fees are tightly restrained and are the main method of cost control. As a result, average physician income is one-third the level of U.S. physicians. However, certain physicians—mainly specialists—are given the right to bill the patient extra for services. Patients can see any physician they choose without referral. French hospitals consist of public hospitals and private proprietary hospitals. In fact, proprietary hospitals make up a greater portion of hospital beds in France than in the United States. Proprietary hospitals are paid a per diem rate negotiated with the NHI while public hospitals are reimbursed via a global budget. The NHI sets the allowable reimbursable prices for prescription drugs.

The NHI funding comes from employer and employee payroll taxes, a general tax on all earnings and special taxes (tobacco, alcohol, pharmaceuticals, etc). The NHI accounts for 76% of healthcare expenditures and supplemental private insurance and out-of-pocket expenses cover 12% and 11% respectively.

The French healthcare system has similar problems to other modern countries.

The French health system receives high satisfaction marks from the population and is among the world leaders in measures of population health status. This is accomplished with per capita spending at 52% of the level in the United States.

The French healthcare system has similar problems to other modern countries. In the May 2004 edition of the Christian Science Monitor Peter Ford reports the 15 billion dollar deficit the system created this year. Reforms being discussed in France include the same reforms discussed in other nations with and without universal healthcare systems: computerizing patient records, encouraging patients to visit their family doctors before going to expensive specialists, boosting the use of cheaper generic drugs, and making patients pay a nominal charge for each visit to a doctor. Ford's article reports that a French government study earlier this year found that the French take nearly four times more tranquilizers than their neighbors, and that 350 people a day are hospitalized due to toxic interactions between prescription drugs. *(Health Minister Philippe Douste-Blazy told a parliamentary commission "Profound reforms are urgent.")*

Switzerland

As a democracy with an advanced economy and a demanding population that values high technology medical care, Switzerland may provide some lessons for the United States.

The Swiss system is characterized by a mix of public and private financing and public and private healthcare delivery organizations, a high degree of choice and responsiveness to patient desires, and a decentralized regulatory system. This mirrors the Swiss political system, which is a confederation of 23 cantons. The federal government's legislative power is limited to what is granted by the cantons and healthcare regulation, financing, disease prevention and education takes place at the cantonal level.

Switzerland spends 68 percent of what the United States spends per capita on healthcare and dedicates 11.1 percent of its GDP to healthcare. In terms of per capita spending on healthcare and as a percentage of GDP, Switzerland is second only to the US.

On a per capita basis, the next biggest spending after the United States is Switzerland, which spends only 68 percent as much, while Canada and the United Kingdom spend 57 percent and 44 percent as much per capita as the United States.

In contrast to insurance in France, Germany and the United States, health insurance in Switzerland was always individual insurance, with no link to employment or profession or class. The system also guarantees that the poor have access to the same system as the rest of the population. All insurers must offer the basic benefit package and are required to accept all applicants. People can choose among any of the nonprofit social insurance funds or private insurers that operate in the canton. Because of the uniformity of the benefits, insurers compete on price and quality of service.

There is no variation in premium within an insurer based on medical status, age or gender. But there are significant differences in the price of the basic package between insurers. Premiums are not income adjusted. But the system enables access to the insurance market for everyone by providing tax-financed subsidies so that no individual spends more than 10% of income on health insurance premiums. Cost-sharing exists in the form of deductibles and co-insurance, with out-of-pocket expense limits set by the federal government.

Within each canton, the insurers collectively negotiate fees with the service providers, including hospitals and physicians. Health insurers end up directly paying for 48% of annual healthcare expenditures, private households pay for 24%, cantons and local governments pay for 15% and old age and disability and accident insurance pays for the rest.

In addition to Compulsory Basic Social Insurance, the Swiss have access to supplemental insurance, which may be provided through the social insurance

funds or private for-profit insurers. Supplementary insurance is not considered necessary to receive excellent care.

Healthcare is delivered by private office-based physicians paid fee-for-service and by salaried physicians who are hospital employees. The outpatient-based physicians are organized into medical associations. For the patient there is complete freedom of choice of physicians.

Hospitals are public or private, nonprofit or for-profit and must be on the list of the accepted hospitals in a canton to be reimbursed by the social insurance funds. Both the federal government and the canton provide subsides to hospitals. This has led to a large capacity of hospital beds, and relatively long lengths of stay. The Swiss have recently started experimenting with global budgets and condition-based payments as a method of controlling hospital expenses.

Single payer is not the only path to accomplishing universal coverage.

Pharmaceuticals are part of the basic package. About a third of all medications are covered with only a 10% co-insurance. The rest of medications are paid for in full by patients or by supplemental insurance. Only recently has there emerged a drive to control drug spending through the use of generic medications.

Given the system of open-ended, fee-for-service healthcare, Switzerland faces the familiar problem of spiraling healthcare spending. Swiss health policy experts point out the lack of incentives for either providers or patients to seek out efficient, high value care. The system contains the elements of market competition, such as multiple insurers and private sector providers and hospitals, but the reality has been a focus on patient choice rather than true market competition. The debate now centers on either a path of greater government centralization or more open price and quality competition with safeguards for the poor. Either path will challenge the Swiss population to face the costs of their deep belief in universal access to technologically advanced healthcare with no explicit rationing.

Taiwan

Taiwan has never had private, commercial insurers and serves as another example of a universal healthcare system that was crafted to meet the cultural expectations of a specific country.

In 1995 Taiwan implemented its National Health Insurance (NHI) program, a universal, single payer health insurance system. The goal of the NHI was to provide unrestricted access to healthcare for all Taiwanese regardless of ability to pay. Prior to 1995, healthcare in Taiwan was financed through ten different public insurance programs that each covered a specific sector of the population (such as farmers or government employees or the poor). Under this system, 41 percent of the population was uninsured (compared to an uninsured rate of 15 percent in the United States today).

Under growing political and public pressure, the governing Nationalist Party initiated a planning program for national health insurance that lasted from 1986 to 1993. In 1993, the NHI bill was submitted to Parliament and passed on July 19, 1994. Providers and the public anticipated a gradual implementation.

Then in a bold move preempting political opponents, President Lee Teng-Hui announced that the NHI would go live on March 1, 1995. The Public quickly supported the program, which took only 8 months to implement. NHI is a single payer system that makes use of the power of pooling: every Taiwanese must enroll and must contribute. Today 96% of the population participates.

The NHI is administered by a single government department that is financed through premiums and taxes. The NHI is funded by yearly income-adjusted premiums. The payment of the premium is divided among employers, government, and the family. By law, administrative overhead is kept at 3.5 percent of the total budget (vs. 10 to 15 percent for private US insurers and 2 percent for U.S. Medicare).

Through the NHI, Taiwan implemented an open-ended, fee-for-service system. The healthcare delivery system consists of publicly and privately (86 percent) owned hospitals. Physicians in Taiwan are either paid on salary or are self-employed owners of their own practices. Providers in Taiwan have three main sources of revenue: fee-for-service payment from the NHI based on a national fee schedule; patient co-payments; and the direct sale to patients of products and services not covered by the NHI.

Cost sharing consists of the equivalent of co-payments applied for each component of the services (physician care, hospital care, etc). These are waived for the care of major illnesses and preventive services. Yearly caps on the cost sharing exist, but critics complain that the cost sharing is regressive falling proportionally greater on the sick and poor. Patients have full freedom to go to any provider or hospital of their choice and treatments are completely left in the hands of providers and patients. There is no explicit rationing of care, no waiting lists and no referral requirements.

The result has been a rapid expansion in medical system utilization with evidence of over treatment, low quality care, and over capacity. The perception among providers is that the set fees are too low. And so, in a fee-for-service system, providers respond by increasing the volume of services provided—leading to unnecessary services and improper care. Furthermore, providers are permitted to resell medications directly to patients at a profit, leading to improper overmedication. Raising the fee schedule has been proposed. But politicians cannot turn to the public and ask for increased funding to raise fees in the face of widespread reports of waste and poor quality. The NHI has responded to troublesome deficits by adjusting the levers at its disposal: by increasing premiums, increasing

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co-payments and implementing global budgets.

The NHI has started experimenting with incentive-based payment such as its fee-for-outcome program in which providers are reimbursed for meeting process and outcomes goals for five major diseases. NHI has also implemented an innovative advance in Health Information Technology. Residents will receive a national heath card used to access an electronic medical record that contains all personal health information and acts as a communication tool between providers, the NHI and patients.

The challenges of the Taiwanese system are well known to all government run fee-for-service systems, including Medicare in the United States. However, policy advisors consider Taiwan's experiment as an interesting model. Taiwan provides an example of the rapid scope of change that is possible within an economically advanced society when political and cultural forces come together. Despite inflation driven by over-utilization of the Taiwanese system, national healthcare spending on universal care has risen modestly and accounts for only 6.02 percent of gross domestic product (compared to 14% in the USA in 2001).

Germany

Germany has a national health insurance system that achieves universal coverage with coexisting private insurance and private sector providers.

In 1883, Germany became the first country in the world to mandate health insurance. It started with one segment of workers and slowly expanded to mandate coverage for the entire population. The German national health insurance system is built on the communitarian concept of solidarity meaning that everyone, regardless of class, uses and shares the same health system. At the same time, Germany preserves its pluralistic roots by maintaining a decentralized system with insurance and healthcare delivery operated at the regional level within standards set at the national level.

In 1883, Germany became the first country in the world to mandate health insurance.

Insurance is provided through independent, nonprofit, regulated, "sickness funds" based on an individual's place of employment or region. Each sickness fund is governed jointly by employers and employees. The sickness funds are financed by required employer and employee-contributions through a payroll tax, with each contributing an average of around 7% of wages.

Since 1993, individuals are allowed to choose among sickness funds, which compete for members. Ninety-two percent of Germans are insured through sickness funds. About 8% are insured privately or are wealthy enough to forgo insurance. And about 7% of those covered by national health insurance sickness funds also purchase private insurance to cover amenities.

Even though sickness funds are employment-based, the insurance is fully portable. If a person looses his job, the individual and family retain membership in the sickness fund with no change in benefits. Retirees also remain covered by their sickness fund, with a portion of healthcare expenses covered by retirement funds. There are no deductibles and co-pays are minimal and are waived for the poor and those with chronic illnesses. Total out-of-pocket payments are not permitted to exceed 2% of an individual's annual income.

The healthcare delivery system is mainly private. Ambulatory physicians join regional physician associations, which receive a global budget from sickness funds within their region. The physician association pays ambulatory physicians fee-for-service based on a uniform fee schedule. The fees may be reduced through the year if necessary to stay within the global budget. Hospital physicians are salaried and are paid from the per diem payment made from sickness funds to the hospital.

Like all other systems, the German system has struggled with cost containment. Over the past few years it has addressed escalating costs by implementing global budgets for ambulatory care, regional spending caps for pharmaceuticals and condition-related payments for hospitals. In addition, Germany has come late to the evidence-based medicine quality movement. Providers have had exceptional autonomy and only now are the quality of care and the variations in services being scrutinized with regard to effects on cost and safety. Other critical complaints include the realization that the large number of sickness funds add administrative overhead that is greater than other systems with national health insurance. Yet, Germany remains a visible reminder of a system with multiple insurers and private sector providers that manages to provide healthcare coverage to its entire population while spending 57% of what the United States spends per capita on healthcare and dedicating 10.7% of its gross domestic product to healthcare.

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Healthcare

		Canada	United Kingdom	France	Switzerland	Taiwan	Germany
Access		Universal lifetime coverage via the individual's provincial health plan	Universal, free lifetime health care paid for by the NHS	Universal mandatory coverage via National Health Insurance	Universal Compulsory Basic Social Insurance	Universal lifetime coverage via National Health Insurance	Universal coverage via mandatory enrollment in "sickness funds." Some
Insurance	**Government**	Provincial health plans act as single payer in each Province	National Health Service available to all residents	National Health Insurance Funds based on occupational status	NONE (Regulated non-profit or private for profit insurance mandatory for all citizens)	Government run, single payer National Health Insurance	NONE (Regulated non-profit or private for profit insurance mandatory for all citizens)
	Private	Prohibited except for amenities	Co-existing private insurance permitted	Supplemental private insurance to cover amenities	Regulated, non-profit social insurance funds provide Compulsory Basic Social Insurance as well as voluntary supplemental insurance Regulated, private, for profit insurers also offer the basic package and supplemental insurance	Prohibited Independent, nonprofit, regulated "sickness funds" mandatory for most	Independent, nonprofit, regulated "sickness funds" mandatory for most Germans. People above a certain income threshold may opt out of sickness funds and buy private insurance.
Funding		Transfers from federal government and Provincial general funds	National tax financing	Employer and employee payroll taxes, a general tax on all earnings, and special taxes	Federal, cantonal and local taxes; individual premiums (subsidized based on means-testing), and patient co-pays	National taxes plus income-adjusted premium	Employer and employee payroll taxes
Delivery System	**Physicians**	Private & independent	Specialists are salaried employees of NHS, but may also do private work on the side. Ambulatory physicians are general practitioners who are independent contrators	Independent solo practitioners, private group practices, health centers, and hospital based physicians.	Private office-based physicians; hospital based physicians are salaried employees of the hospital	Self-employed owners of their own practices or salaried employees of hospitals	Private ambulatory physicians Hospital physicians are employees of
	Hospitals	Private and Public	Public NHS hospitals or private hospitals	Private, proprietary, and public	Public or private, for-profit and nonprofit	Public and private	Public and priate
Provider Payment	**Physician**	Fee-for-service based on a Provincial fee schedule	Specialist - Salaried Primary Care - Salaried or Capitated	Outpatient physicians paid fee-for-service based on a national fee schedule set by the Government	Office-based physicians are paid fee-for-service. Hospital physicians are salaried	Self-employed physicians paid fee-for-service based on a national fee schedule set by the Government. Physicians supplement income through the direct sale of medications	Ambulatory physicians are paid fee-for serivce, based on uniform fee schedule, from a budget of their regional physician asssoc-iation. Hospital physicians are salaried
	Hospital	Global budget	Negotiated contracts with local Primary Care Trusts	Per diem for private hospitals; Global budgets for public hospitals	Per diems or global budgets depending on the Canton	Global Budgets	Diagnosis-related groups system
Benefits	**Hospital**	Yes	Yes	Yes	Yes	Yes	Yes
	Outpatient	Yes	Yes	Yes	Yes	Yes	Yes
	Drugs	Varies between provinces	Yes	Yes	Yes, but only for those on formulary	Yes	Yes
	Dental	Limited and varies between provinces	Yes	Yes	Yes, limited	Yes	Yes
	Home care	Limited and varies between provinces	Yes	Yes	Yes	Yes	Yes
	Complementary and Alternative Medicine	Unknown	Unknown	Yes	Yes	Yes	Yes
	Cost sharing	None; free care for anyone with a provincal health card	None; free care within NHS	Coinsurance with exemptions for people with chronic conditions	Coinsurance with out-of-pocket limits set by government	Copays which are waived for major illnesses and preventive care	Minimal copays. Out-of-pocket expenses not to exceed 2% of annual income
	Choice of providers	Full freedom of choice of providers, hospitals within a Province	Reforms are moving toward a greater consumer choice. Patients have choice of general practitioner. Hospital choice permitted if wait for elective pro-cedures exceeds 6 months	Full freedom of choice of providers and hospitals	Full freedom of choice of providers and hospitals. Compulsory insurance pays only for those hospitals on an approved list in each Canton.	Full freedom of physicians and hospitals	Full freedom of physicians and hospitals
	Cost control methods	Mandatory global budgets for hospital/health regions, negotiated fee schedules for health care providers, formularies for drugs, and limits on the diffusion of technology	National budget, fee-schedules and salaries and queuing	National fee schedule and hospital global budgets	National fee schedule; Canton budgeting	National fee schedules and global budgets	National Fee-schedules based on global budgets
System Costs	**Health spending as % of GDP**	9.7%	7.6%	9.5%	11.1%	6%	10.7%
	Per capita total health spending as % of US per capita spending	57%	41%	52%	68%	15.7%	57%