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International Health Care: A Twelve Country Comparison

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Within the United States and among other high-income countries, health care has become an international topic of major concern. One reason for this interest is pragmatic: National health risks such as AIDS, flu, and bioterrorism have global impact, affecting international health, politics, and commerce.¹ Another reason is ethical: Even within countries with high per capita incomes, inequities in the access, financing, and delivery of health services often mean the poor are sicker and pay proportionately more for care than the rich.² In fact, making financial access to and provision of health care both equitable and cost-effective are the predominant values driving most ethical and political arguments for changing national health-care systems.³

Beginning during the 1990s, market-driven changes and the commercialization of health services—strengthening the role of the private sector, encouraging user fees, providing pay-for-performance, and separating the financing and service provision functions—have transformed the financing and organization of health care both in the United States^{4,5} and around the world.⁶ Although some researchers believed these changes would address the US healthcare system's shortcomings,⁷ other researchers since the early 1990s have been looking toward the healthcare systems in Canada^{8–11} and in Western Europe^{12,13} for solutions. Given the United States's reliance on voluntary, employer-based insurance, lessons can also be drawn from other countries that employ a broad mix of health financing options, including compulsory and voluntary individual or employment-based health insurance. Such comparisons should help inform the debate on changing the healthcare system in the United States, a debate that now has added urgency with President Obama's pledge to make health care more accessible and affordable for all citizens.

In this chapter, 12 national healthcare systems are compared: Argentina, Brazil, Canada, Germany, Greece, Indonesia, Mexico, the Netherlands, Sweden, Turkey, the United Kingdom, and the United States. This is a diverse set of nations, representing a range of low-, middle-, and high-income nations, with per capita incomes in 2006 ranging from \$3,310 (Indonesia) to \$44,070 (United States) in international dollars adjusted for purchasing parity.¹⁴ Whatever the level of per capita income, national healthcare systems can be characterized and evaluated in terms of who may be treated, for how much money, and with what expected outcome. Every healthcare system must deal with the trade-off among issues of financial access, cost, and quality. In the first section, the focus is on two factors that influence these issues: (1) Financing, that is, how monies are mobilized and allocated for the provision of health care; and (2) how health services are organized, that is, who provides services and the relative weights placed on the provision of primary and tertiary care. We seek to answer the question, “How and to whom is health care provided, and with what effect?” The following sections provide a brief review of the historical development and current organization and financing within each national health system, focusing on three prototypes for achieving universal access. The final section provides a set of lessons learned from comparing these 12 national health systems, which will help inform the debate on reforming health care in the United States.

The Financing, Organization, and Outcomes from the Provision of Health Care

Table 1.1 compares 12 national health systems on simple measures of financial access to, cost of, and quality of health care. The left-hand column lists each country according to its quality and cost performance. Within the 12-country comparison, Sweden anchors the high end, while Indonesia anchors the low end.

Table 1.1 Comparisons among 12 Nations on the Financial Access, Cost, and Quality of Health Care

Country	Financial Access	Cost (2006)	Quality (2003)
Listed by Quality and Cost Results	Degree and Form of Insurance Coverage	Percentage of GDP for Health Care	Health-Adjusted Life Expectancy at Birth (HALE)
Sweden	Universal access via a devolved national health service with supplementary, private insurance	8.9% 0.3% Δ avg.	73 years 6.0 Δ avg.
Canada	Universal access within a devolved, single-payer system with supplementary, private insurance	10.0% 1.4% Δ avg.	72 years 4.6 Δ avg.

Table 1.1 (Continued)

Country	Financial Access	Cost (2006)	Quality (2003)
Germany	Universal access within a compulsory system of social insurance and substitutive, private insurance	10.4% 1.8% Δ avg.	72 years 4.6 Δ avg.
United Kingdom	Universal access via a devolved national health service with supplementary, private insurance	8.4% -0.3% Δ avg.	71 years 3.6 Δ avg.
Netherlands	Universal access via a compulsory system of private insurance with supplementary, private insurance and government subsidies	9.3% 0.7% Δ avg.	71 years 3.6 Δ avg.
Greece	Universal rights and variable access within a system of national health services (ESY), social insurance, and private insurance	9.9% 1.3% Δ avg.	71 years 3.6 Δ avg.
United States	Variable access within a system of employment-based, voluntary insurance, social insurance, and public programs and services	15.3% 6.7% Δ avg.	69 years 1.6 Δ avg.
Argentina	Variable access within a multipayer system of employment-based social insurance, private insurance, and public health services	10.1% 1.5% Δ avg.	65 years (2.4) Δ avg.
Mexico	Universal rights but variable access within a system of employment-based social insurance, public health services, and private insurance	6.2% -2.5% Δ avg.	65 years (2.4) Δ avg.
Turkey	Universal access within a single-payer system that includes both publicly and privately owned health services	5.6% -3.1% Δ avg.	62 years (5.6) Δ avg.
Brazil	Universal rights but variable access within a system of national and contracted services, along with substitutive, private insurance	7.5% -1.2% Δ avg.	60 years (7.4) Δ avg.
Indonesia	Variable access within a system of employment-based social insurance and private insurance, with public health services	2.2% -6.5% Δ avg.	58 years (9.4) Δ avg.
		8.79% avg.	67.4 avg.

Source: WHOSIS: WHO Statistical Information System, World Health Organization, retrieved November 24, 2008, from <http://www.who.int/whosis/en/>.

Financial Access to Health Care

The access column in Table 1.1 incorporates information about how each nation organizes and finances its healthcare system. The assessments of access are based primarily on financial access because it is the most amenable to policy interventions and because comparative data are most readily available on this aspect of access. National healthcare systems display three distinct configurations for ensuring universal access: (1) a government-owned, national health service (Sweden and the United Kingdom); (2) a national, compulsory social or private insurance (Canada and the Netherlands, respectively); or (3) a mixture of compulsory social and private insurance (Germany). Interestingly, both Greece and Turkey combine a national health service with a mixture of compulsory social and private health insurance. The lack of universal financial access in the United States is and has been the focus for most of its health reform debates.

Financing can be broken out into two aspects: the direct versus indirect provision of health services by various national governments.¹⁵ Direct financing of health services occurs if the main health insurer or government—whether national, regional, or local—owns healthcare facilities and employs healthcare professionals, as in Greece, Sweden, and the United Kingdom. Indirect financing, in contrast, occurs if the main insurer or government contracts for the provision of various health services. For example, the provincial and regional governments in Canada, the sickness funds in Germany, and the insurance companies in the Netherlands contract with providers for health services.

Costs of Health Care

The percentage of gross domestic product (GDP) devoted to healthcare expenditures provides a convenient and meaningful ratio for comparing healthcare costs (see Table 1.1). Due, in part, to lower transaction costs,¹⁶ the direct financing of health care in Sweden and the United Kingdom averages 8.65% of the GDP and is less costly than the indirect financing in Canada, Germany, and the Netherlands, which averages 9.9% of the GDP. **Figure 1.1** expands upon this point and shows both the level of GDP and the international dollars (adjusted for purchasing power parity) per capita devoted to health care by each of the 12 nations in 2006. Taking into account the dollars per capita for health care is important, as less wealthy nations have to spend a greater percentage of their GDP in order to achieve comparable levels of funding. Nonetheless, the United States clearly spent much more on health care than any other country in 2006 (15.3% GDP; \$6,714 per capita). Indeed, even when taking the influence of per capita GDP on health expenditures—i.e., wealthy nations typically spend more on health than poor nations—the United States spends far more than other nations of comparable wealth. This holds true even when taking into account the increased demand for health services from an aging population within the United States and is most likely due to the prices for services.¹⁷

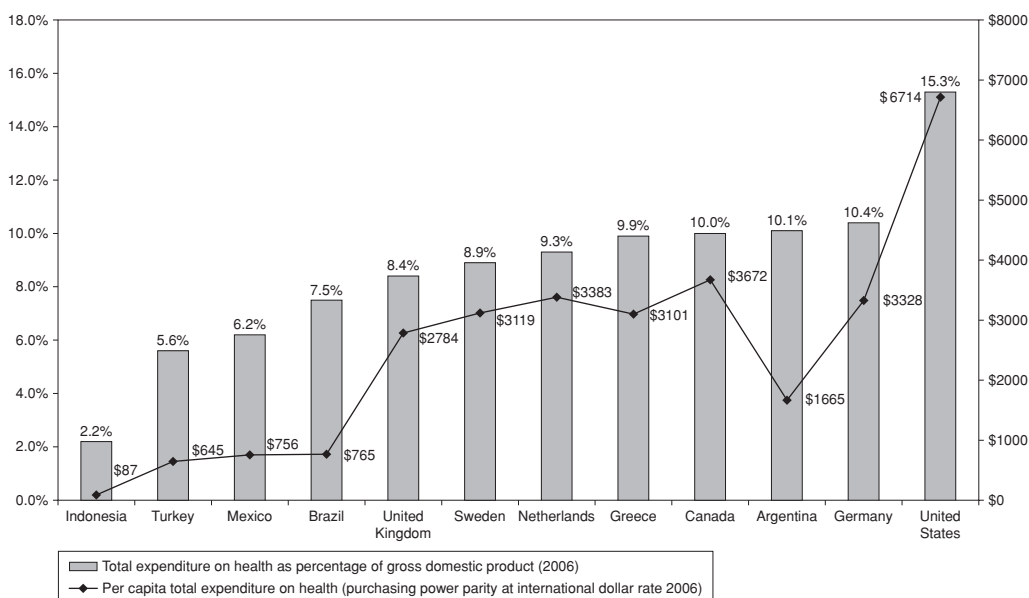


FIGURE 1.1 Comparisons among 12 Nations on the Percentage of Gross Domestic Product and Per Capita Spending on Health Care in 2006. Data from *WHOSIS: WHO Statistical Information System*, World Health Organization, retrieved November 24, 2008, from <http://www.who.int/whosis/en/>.

Quality of Health Care

Although the total cost of health in the United States and other high-income countries is a focus of many attempts at reform, the focus of recent efforts in the United States is on obtaining greater value for the money spent. Ideally one would like to compare national healthcare systems on the basis of clinical outcomes and quality of life. The right-hand column in Table 1.1 shows quality, based on a population measure of health-adjusted life expectancy (HALE); this is probably the single best proxy available for assessing health outcomes across the 12 countries in the comparisons. HALE estimates the average number of years that a person can expect to live in “full health” by taking into account years lived in less than full health due to disease and/or injury. For example, the average HALE for the six countries with universal financial access is 71.7 years; in contrast, the average HALE for the United States is 69 years, while the average HALE for the five middle- and low-income countries is 62 years.

Figure 1.2 shows how the United States fares in comparisons across the 12 countries on two measures of HALE when compared to two preventable healthcare outcomes—infant mortality and maternal mortality at birth. The health quality outcome index in Figure 1.2 subtracts the sum of the standardized scores for preventable deaths (infant and maternal) from the sum of the standardized scores for female HALE and male HALE. While this is a crude measure of

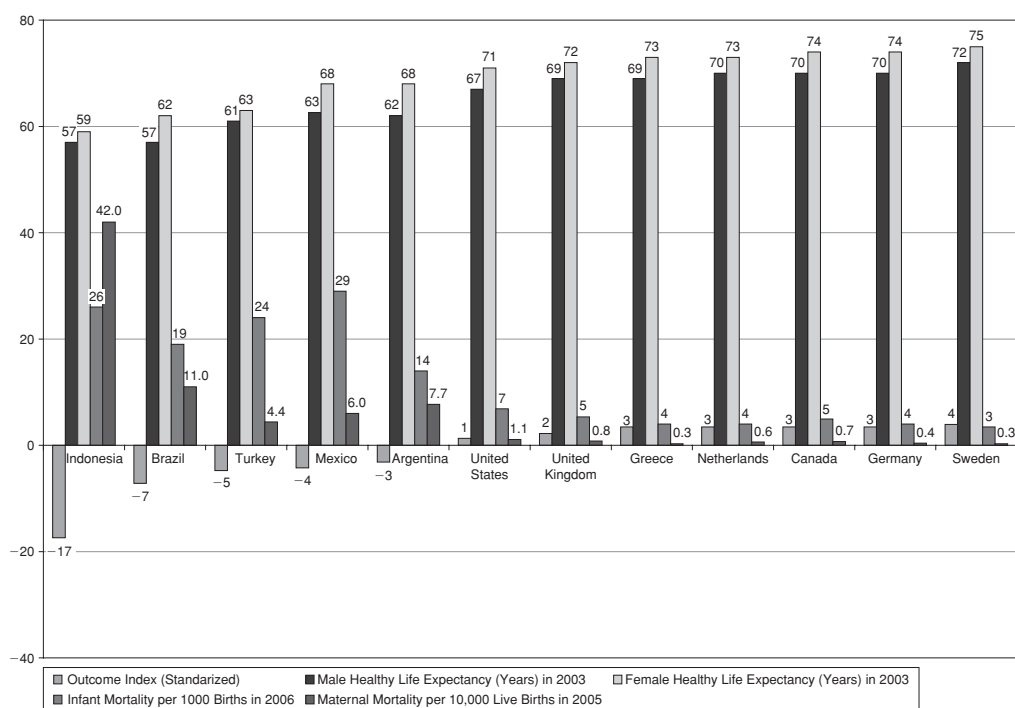


FIGURE 1.2 Comparisons among 12 Nations on Four Health Care Outcome Measures, Ordered by Standardized Outcome Index. Data from *WHOSIS: WHO Statistical Information System*, World Health Organization, retrieved November 24, 2008, from <http://www.who.int/whosis/en/>.

amenable healthcare quality, it does take into account both healthy life expectancy and the provision of maternal and infant care. Based on this outcome index, the United States is ranked 7th out of the 12 national health systems under comparison, the same point as the United States ranking in Table 1.1. All of the countries with higher rankings provide universal financial access to their citizens. Interestingly, the health quality outcome index also suggests changes to the rankings listed in Table 1.1, with Germany, the Netherlands, and Greece moving up in the rankings by one or two places, and Canada and the United Kingdom falling in the rankings by one and two places, respectively. These changes undoubtedly reflect the addition of infant and maternal mortality in the health outcome index. Taken together, infant and maternal mortality is an important proxy for health system quality since most birth-related deaths are preventable, assuming diet, living conditions, and healthcare provision are adequate. Significantly, that set of presumptions may be questionable not only in low- and middle-income countries with large inequities in family income such as Argentina, Brazil, and Mexico,¹⁸ but also in the United States, which has had increasing inequities in family income distribution.¹⁹

Toward an Institutional Framework for Understanding Health System Constraints

Clearly, the United States should be able to obtain far better value for the amount of money it spends on health care. Given that countries such as Sweden, Germany, and Canada obtain better healthcare outcomes (see Figure 1.2) and spend less than the United States (see Figure 1.1), we should be able to learn some lessons from examining their healthcare systems, as well as the systems in Greece, the Netherlands, and the United Kingdom that obtain better cost-benefit ratios than the United States. At the same time, it would be wise to look at those middle- and low-income nations that are also addressing healthcare financial access, cost, and quality issues, particularly Indonesia, Mexico, and Turkey, which are all undergoing major healthcare reforms.

At the national level, both the allocation of healthcare resources and the funding sources for health care establish institutional constraints on health system efficiency and effectiveness. For example, three health resource indicators, along with a health outcome indicator, help illuminate not only the diverse ways in which health care is organized, but also how the configuration of these resources impacts effectiveness and efficiency. **Figure 1.3** displays the density of hospital beds, nurses and midwives, and physicians in each of the 12 countries, ordered by the total (combined) density of these three resources. The country with the highest combined density of

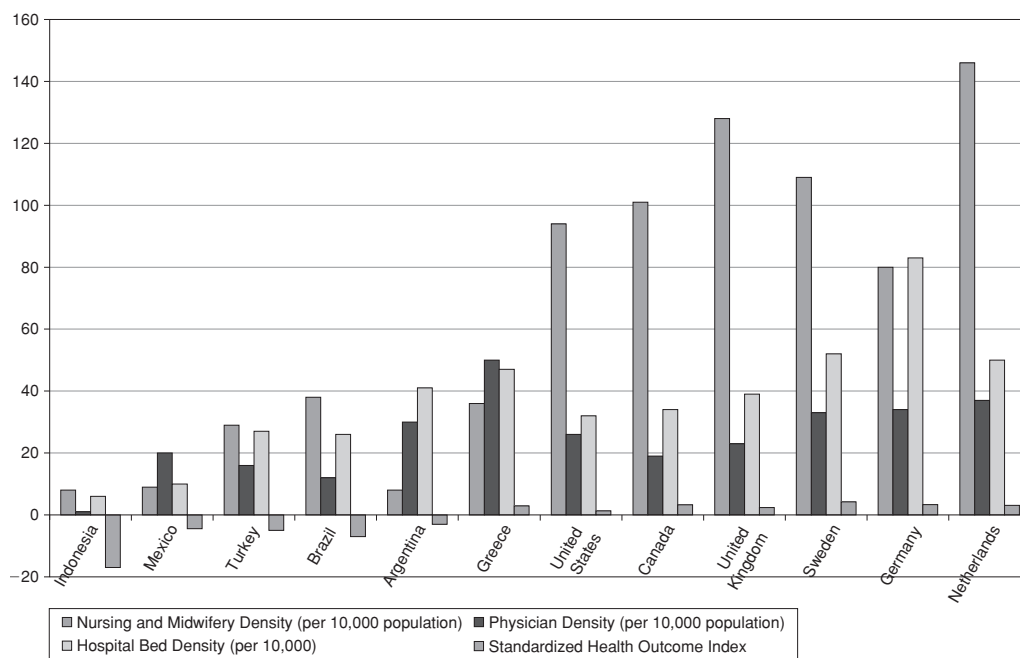


FIGURE 1.3 Comparisons among 12 Nations on Density of Hospital Beds, Nursing and Midwifery, and Physicians, Ordered by Combined Density. Data from *WHOSIS: WHO Statistical Information System*, World Health Organization, retrieved November 24, 2008, from <http://www.who.int/whosis/>.

these three resources is the Netherlands, while Indonesia has the lowest density. The outcome index reported in Figure 1.3 is the same standardized health outcome displayed in Figure 1.2. Not surprisingly, improved health outcomes correlate with increases in the allocation of health resources, illustrating that effectiveness improves as more total resources are devoted to health care.

More interestingly, the four countries with established, high-performing primary care networks—Canada, the Netherlands, Sweden, and the United Kingdom—display a greater reliance on nursing and midwifery in relationship to both physicians and hospitals than do other countries. This configuration of resources is more efficient than others. For example, among the high-income countries, this difference is particularly pronounced in comparison to Germany and Greece, both of which have relatively higher numbers of hospital beds per capita. In addition, Argentina, Greece, and Mexico are the only countries that have proportionately more physicians than nurses and midwives, a clearly high-cost configuration. Moreover, with the exception of Canada, the four countries with a primary care configuration of resources also devote lower levels of their gross domestic product to health care (see Figure 1.1) while obtaining comparable or better health outcomes. However, taking into account only Figure 1.3, both Canada and Sweden obtain the best health outcomes given the health resources they allocate to health care. Next, we turn to a discussion of the ways in which health care is financed, further illuminating a key constraint on health system performance.

Figure 1.4 compares the sources of revenue for health expenditures in each of the 12 national health systems. Taking into consideration the organization of these national health systems, these sources of revenue for health expenditures help explain both the flexibility and constraints facing each country. Only the three countries at the top (UK, Sweden, and Canada) and the two countries at the bottom (Germany and the Netherlands) of Figure 1.4 offer universal financial access. The United Kingdom, Sweden, and Canada rely primarily on taxation; in contrast, Germany achieves universal financial access through compulsory social insurance, as did the Netherlands in 2006. (Currently, the Netherlands achieves universal financial access via compulsory private insurance.) On one hand, financial access to health care within these national health systems does not come without rationing and limiting access to secondary and, especially, tertiary health care.²⁰ On the other hand, mixing sources of funding and types of financing often leads not only to high costs, but also to limited financial access and poor quality outcomes. For example, the mixture of public services and social and voluntary private insurance within the Mexican and US health systems, along with the fragmentation among the various subsystems of care, effectively limits access to health care. In 2000, approximately 38.4 million US citizens (13.7%) were without health insurance,²¹ while roughly 57 million Mexicans (58.7%) were without health insurance in 2000.^{22,23} However, since 2004, the Mexican government has expanded its public health insurance and public assistance for the poor, while the United States has not. Consequently, in 2007, approximately 45.7 million US citizens (15.3%) were without health insurance,²¹ while about 35 million Mexicans (30%) were without health insurance.²⁴

Synthesizing the discussion to this point, **Table 1.2** displays a framework for describing the primary, secondary, and tertiary means of financing and organizing health care that have been

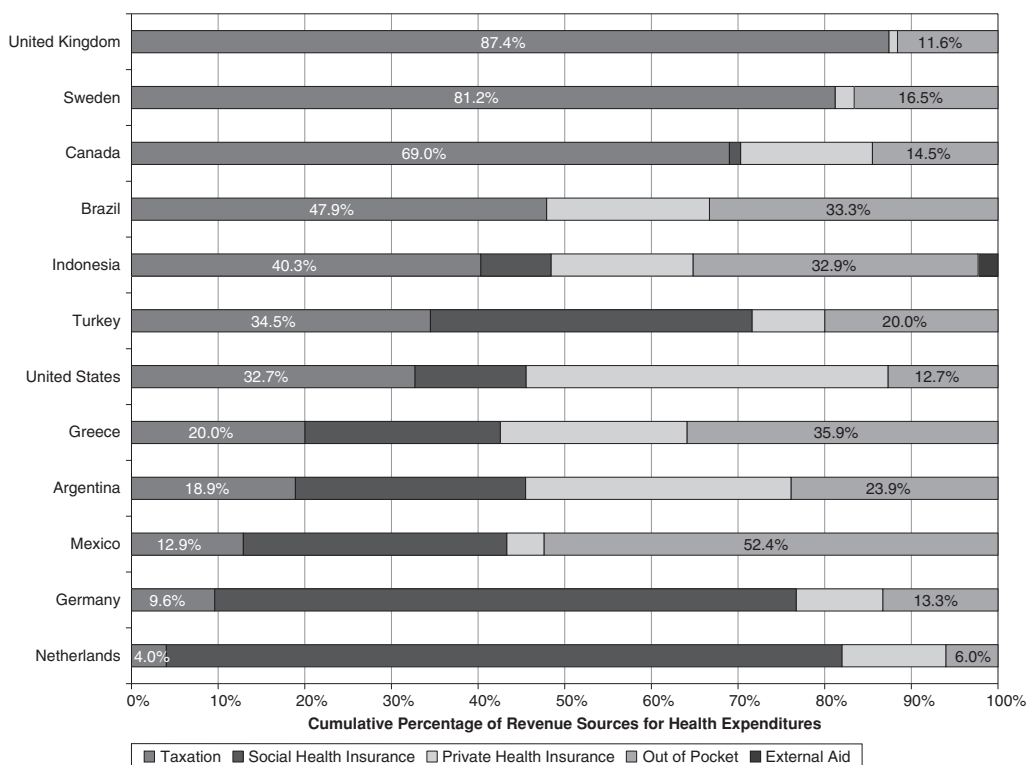


FIGURE 1.4 Comparisons among 12 Nations on Sources of Revenue for Health Expenditures, Ordered by Reliance on Taxation (2006). Data from *WHOSIS: WHO Statistical Information System*, World Health Organization, retrieved November 26, 2008, from <http://www.who.int/whosis/>.

adopted by the 12 nations. Clearly, every nation relies on at least three means to finance and two means to organize health services.

Caution must be used, however, when interpreting Table 1.2. First, the percentage of the population covered, rather than the magnitude of the source of revenue is the main factor in determining the categorization. Second, the categorization is not directly linked to health system performance; for example, Greece, Sweden, Turkey, and the United Kingdom rely primarily on taxation to support national or public health services, and each country also relies on out-of-pocket payments as a secondary or tertiary means to fund the indirect provision of health services. However, these countries do so with different levels of funding (see Figure 1.1) and achieve varying levels of access (see Table 1.1) and quality (see Figure 1.2).

The next section reviews the historical development and current organization and financing within selected national health systems. This section is organized around three health system prototypes, depending upon their primary means of financing and organizing health care. The United Kingdom and Sweden exemplify the tax-funded, direct provision of health services prototype. Each of these countries has achieved universal access, relatively low costs,

Table 1.2 Primary, Secondary, and Tertiary Means of Financing and Organizing Health Care in 12 Countries

	Direct Provision of Health Services	Indirect Provision of Health Services
Taxation	GREECE, SWEDEN, TURKEY, UNITED KINGDOM INDONESIA <i>Argentina, Mexico</i>	BRAZIL, CANADA <i>United States</i>
Social Health Insurance		ARGENTINA, GERMANY MEXICO, TURKEY, UNITED STATES, GREECE <i>Indonesia</i>
Private Compulsory Insurance		NETHERLANDS GERMANY
Private Voluntary Insurance		UNITED STATES CANADA <i>Brazil, Sweden, United Kingdom</i>
Out-of-Pocket Payments		MEXICO ARGENTINA, BRAZIL, GREECE, SWEDEN, UNITED KINGDOM <i>Canada, Germany, Netherlands, Turkey</i>
Key	Primary: LARGE CAPITALIZATION; Secondary: SMALL CAPITALIZATION; Tertiary: <i>Italicized</i>	

and moderate- to high-quality outcomes with their national health services. Canada's system of compulsory national insurance exemplifies a tax-funded prototype with indirect provision of health services. This system has achieved universal access, with moderate- to high-quality outcomes. The compulsory insurance prototype is exemplified by the German and the Dutch systems, which indirectly provide health services funded by mandatory social and private insurance, respectively; these prototypes have achieved universal access and moderate to high quality, albeit with slightly higher costs. Lastly, we will discuss those countries pursuing mixed models, including Argentina, Brazil, Greece, Indonesia, Mexico, Turkey, and the United States.

Tax-Funded Models for Direct Provision of Health Services

While both Sweden and the United Kingdom make use of national health services that provide universal access to health care to all of their citizens, they differ in the degree to which those services are decentralized and locally controlled. Nonetheless, each country recently has engaged in reforms to control expenses, reduce waiting times for specialized services, ensure the quality of care, and develop national health information networks.

The United Kingdom's National Health Service

While formally implemented in 1948, the UK's National Health Service (NHS) has its roots both in the laws for aiding the poor established in the 1600s and in the mutual aid societies that flourished in Great Britain during the 1840s. Well-to-do employers lent support to these societies in order to help sick, but lowly paid, employees. While such measures in combination with the Poor Law system reduced the demand on general tax revenues, public outrage over the poor condition of recruits for the Boer War (nearly one half of whom were considered unfit for service) led to the School Medical Service Act of 1907 and to an investigation by the Royal Commission on the Poor Laws and Relief of Distress. This commission issued two reports in 1909—a majority report, advocating better charity care, and a minority report, advocating a unified medical service. The reports laid out the issues involved in establishing a national system of health care.²⁵

Based on the Royal Commission's reports, the National Health Insurance Act of 1911, introduced to Parliament by Lloyd George, and virtually unopposed except by physicians, established statutory insurance for all manual workers earning less than £160 (about \$780) per year. (Interestingly, most physicians supported a mixture of voluntary health insurance and government-funded medical services for the poor, thus advocating a system similar to that in the United States today.) Contributions from both employees and employers were required, with the government funding the administration of the insurance and covering exceptionally low-income and indigent persons' contributions.²⁶

The period from World War I through 1938 established many of the values and the concepts on which the NHS would be based. Several significant documents emerged during this time, including the 1920 Dawson Report on healthcare policy, which advocated a hospital-centered integrated system of care; the 1920 Cave Report on saving voluntary hospitals; the 1926 Report of the Royal Commission on National Health Insurance; and the 1930 and 1938 Reports of the British Medical Association on national medical care policy that increased its public stature and enabled it to have considerable voice in health policy.²⁵ By the late 1930s, the number of people covered under mandatory (and voluntary) health insurance had steadily increased, especially as income thresholds for mandatory insurability were raised. Nonetheless, during the Depression, dissatisfaction with the national health insurance's "means-tested" coverage and limited benefits reached a level requiring major reforms.²⁷ Under Winston Churchill's Conservative government and the chairmanship of Sir William Beveridge, an Interdepartmental Committee on Social Insurance and Allied Services was created and charged with surveying the existing national policies of social insurance, including healthcare insurance. The Beveridge Report, issued in 1942, made sweeping recommendations to expand all branches of social insurance, from old-age pensions to disability benefits. In particular, it set the stage for the NHS by recommending the establishment of a national health service to provide medical and rehabilitation treatment to all citizens.

After World War II, the Labour Party won control of the government and sponsored the National Health Services Act of 1946. This draft legislation for creating a national health service was the target of fiery debates between the British Medical Association and the Minister of

Health, Aneurin Bevan, a Welshman and former coal miner. The final legislation for the NHS, implemented in July 1948, contained a number of compromises: (1) universal coverage was financed primarily by general revenues, with social insurance contributions limited to a small percentage of the total; (2) GPs were paid via capitation; (3) nearly all public and voluntary hospitals were put under the control of the national government; (4) public hospitals were permitted to maintain up to 5% of beds for private patients of consultants, that is, senior hospital physician specialists; and (5) health centers were limited to a few experimental facilities.²⁶

The basic structure of the NHS, as Roemer underscores, was balanced across the four primary stakeholders providing health care, including the general practitioners, the community hospitals and their staffs of specialists, the medical school–affiliated teaching hospitals, and the local public health authorities. This four-fold structure within the NHS was maintained until 1974, even though problems of coordinating care across the four branches and the increasing dominance of specialized hospital care led to calls for reform during the 1960s. To enhance local control, in April 1974, the NHS was reorganized to include 90 area health authorities (AHAs) and 14 regional health authorities (RHAs). By the late 1970s, the usefulness of the AHAs for coordinating and responding to local needs was brought into question. Rather than adding a fourth level of bureaucracy into the NHS, it was decided that the District Health Authorities (DHAs) would be consolidated into units serving populations of about 250,000. Thus, the former AHAs' responsibilities were devolved to DHAs.²⁶

During the 1980s, the Thatcher-led Conservative government tried to control rising health-care costs through cutbacks on the global budgets to the RHAs and the expansion of the private medical sector. Not only were physicians encouraged to devote part of their practice to private patients, but also employers and employees were allowed tax deductions for private insurance. Hence, the private market for health care expanded rapidly, from less than 2% of the population being covered by voluntary insurance in 1969 to about 6.3% in 1980²⁶ and to more than 10% in 1990.²⁸ Even though only 6% of the total healthcare expenditures during 1987 occurred in the private sector, both the public and the medical professions became increasingly disenchanted with the NHS. Indeed, 1987–1988 was a year of crisis for the NHS, with hospitals closing down thousands of beds to meet budget constraints, long queues forming for all types of care, delays and cancellations for critical surgery, and DHAs running out of money.

In response to this turmoil, the Conservative government considered radical changes to the NHS, resulting in a white paper in 1989 that set out the reforms implemented between 1990 and 1991.²⁷ These reforms instituted an internal market, separating purchasers (e.g., district and local authorities) from providers (e.g., GPs and hospitals). The intent was to decentralize the NHS, encourage internal competition, and improve efficiency. This effort was redirected when the Labour government gained control and launched its own plans for the NHS in 1997.²⁹ Under Prime Minister Tony Blair, the separation between providers and purchasers continued, along with the devolution of services and their management to the departments of health under the leadership of the secretaries of state in England, Northern Ireland, Scotland, and Wales. However, the NHS initially underwent recentralization of funding and programs within each of these ministries,³⁰ while the responsibility for purchasing health services was devolved to various entities in England, Scotland, Wales, and Northern Ireland.³¹

Ambitious reforms—The NHS Plan—were announced during the summer of 2000 to reduce waiting times, increase access to care, improve the quality of care, upgrade and expand hospitals and primary care facilities, and develop a responsive internal market with clear financial incentives for providing value to patients.³² Major changes in the NHS system structure and its financing were introduced in a series of steps, ranging from a new consultant (specialist physician) contract in 2003 and a new general practitioner (primary care physician) contract in 2004, to a payment by result (PbR) scheme for acute and specialist hospital services in 2004, to an 18-week limit on all waits for treatment referrals by the end of 2008.³³

Current System Structure and Financing

All residents of the United Kingdom (England, Wales, Scotland, Northern Ireland, as well as the island states of Guernsey, Isle of Man, and Jersey) are covered under the National Health Service, which is funded through national taxes. Within England, the Department of Health (DH) is in overall charge of the NHS, with a cabinet minister reporting as secretary of state for health to the prime minister. The department controls England's 10 Strategic Health Authorities (SHAs), which oversee all NHS activities in England. In turn, each SHA is responsible for the strategic supervision of all the NHS trusts in its area. The devolved NHS administrations of Northern Ireland (Health and Social Care, HSC³⁴), Scotland (NHS Scotland³⁵), and Wales (NHS Wales³⁶) plan, organize, and manage their services separately.³⁷ In other words, as purchasers and providers of health care, the government entities for England, Northern Ireland, Scotland, and Wales retain the responsibility for health legislation and general policy. Healthcare expenditure planning takes place within each government's general public expenditure planning process. NHS funding for the following year is established during this process.

In 2006, taxes raised by the national government accounted for 87.4% of total expenditures on health care. Out-of-pocket payments include payment for nonprescription medications, ophthalmic and dental services, and private health care (although the latter may be covered through private health insurance). In 2006, out-of-pocket expenditures accounted for 11.6% of total healthcare expenditures. Both for-profit and nonprofit companies provide private health insurance, which accounted for about 1.0% of total health expenditures in 2006.¹⁴

Comprehensive health services are provided by the NHS, ranging from preventive to primary to acute to rehabilitative care. Within the NHS England, these services include inpatient and outpatient hospital care, physician services, inpatient and outpatient drugs, dental care, and mental health care. Citizens may choose a general practitioner within their locale, as well as have a choice for specialist care. All hospital and specialist services are supplied without charge to the patient; however, user charges occur for outpatient drugs, dentistry, and ophthalmology. These charges are regulated, depending on treatment, and may be waived (e.g., sight test) or subsidized based on income and other criteria.³⁸

The following discussion of health system structuring, including hospitals and physicians, focuses only on the NHS in England, which provides services to the largest population segment in the United Kingdom. On one hand, secondary and tertiary care services are overseen by 175 acute trusts, which manage hospitals. There are also 60 mental health trusts and 12 ambulance trusts.³⁷ On the other hand, primary care trusts (PCTs) not only organize and provide primary

care services via general practitioners, dentists, opticians, and pharmacists but also commission hospital and other specialist services for local populations. Currently, the 152 PCTs in England control about 80% of the total NHS budget.^{33,37} Foundation trusts (FTs) were first established in April 2004, and they have greater financial and operational oversight than do other acute trusts and mental health trusts within the NHS. The 117 FTs, including 33 mental health trusts, are subject to NHS performance inspection, but are independently regulated by Monitor, rather than by the SHAs.³⁹ Another recent innovation are care trusts, which provide both health and social services; there are currently eight pilot care trusts. Taken together, there are 235 acute trusts, specialist trusts, and foundation trusts.³⁷

Hospitals.

The 1600 NHS hospitals and specialty centers are managed by the 235 NHS trusts and FT noted earlier. Secondary and tertiary care services are provided in these locations; a subset of hospitals offer emergency care services, while specialty hospitals and centers offer mental health services.³⁷ In 2004, there were 3.9 hospital beds per 1000 people.¹⁴

Physicians.

The British Medical Association negotiates with the Department of Health to determine the NHS payment systems for both general practitioners (GPs/primary care physicians) and consultants (physician specialists). The NHS has a well-developed primary care system made up of GPs, midlevel providers (e.g., midwives and practice nurses), and other healthcare professionals. General practitioners may be independent contractors or salaried employees. However, most GPs are independent, self-employed professionals within partnership-based group medical practices. Whether as a member of a group medical practice, as a solo practitioner, or as a salaried employee, the GP provides preventive and primary care, acts as a gatekeeper to specialized care, and receives payments from a PCT. These payments include a mix of capitation fees, fixed allowances for practice costs, fees linked to quality processes and outcomes, and specific fees for enhanced services and the dispensing of drugs. Acute trusts and foundation trusts employ consultants on either a full-time (~40 hours) or part-time basis and pay them on a set salary scale based on seniority, with additional payments for extended services and clinical skills. As has been the tradition, both full-time and part-time consultants may supplement their salary by treating private patients.⁴⁰

Present Problems and Initiatives

The NHS Plan of 2000 introduced a myriad of reforms,³² and the NHS has made many improvements to problems the health system faced just a few short years ago. One past critical issue for the NHS was queues, or waiting lists. Patients could potentially wait more than a year for treatment. Today, most patients wait only a few weeks for specialist referrals. Moreover, the introduction of walk-in centers for urgent ambulatory care, along with the extension of practice hours for GPs by PCTs, has made it possible for most people to access primary care within 48 hours or less. Additionally, the Quality Outcomes Framework for paying GPs has increased the

quality of care for patients, especially those with chronic conditions, and has improved their outcomes and satisfaction with treatment.³³

Critical problems facing the UK's health system include higher expectations because of greater wealth across the nation and the continuous improvement and development of information technology, changes in demand because of an aging demographic, ease of access to information for the general public, changes in the types of diseases and health conditions being treated, new and advancing treatment options, and finally, a new work environment that features increased complexity and a greater emphasis on quality work. In 2008, a review of the NHS was conducted to determine the next steps for improving quality of care. The initial steps that were identified include incorporating population-specific wellness and prevention services. To accomplish this task, such services will be incorporated into PCTs. Also, a Coalition for Better Health (replacing the Health Commission) has been created to involve the government, private sector organizations, and other entities in the pursuit of improved health outcomes, with an initial focus on reducing obesity and creating a healthy workforce.⁴¹

One of the most dramatic initiatives set forth by this review is the implementation of the first National Health Service Constitution. The NHS Constitution was developed by a group of stakeholders that included patients, employees, community members, and policy experts. The main purpose of this document is to guarantee the existence of the NHS, with reexamination of its premises to occur every 10 years. It also summarizes patient rights and outlines what the NHS promises to provide to its employees. The constitution clarifies national standards of care that have been set forth by Parliament, as well as local standards of accountability.⁴¹

Overall, the UK's National Health Service provides universal access to basic health services at low cost relative to other high-income countries (see Figure 1.1), with moderate- to high-quality outcomes (see Figure 1.2). To address the problems of waiting lists for specialized services, an undercapitalized and aging infrastructure, and quality of care problems, the Labour government decentralized the NHS, devoting more resources to both specialized services and hospital infrastructures, and implementing performance management initiatives. These initiatives have, by and large, had some success. To build on these changes, the latest report from the NHS sets out important goals pertaining to both patient-centered, quality care and the improvement of workplace culture and conditions.

Sweden's National Health Service

The roots of governmental involvement in Swedish health care go back at least to the mid-18th century when the monarchy paid provincial doctors to see indigent patients without charge. Similarly, in the mid-19th century the monarchy required county councils to provide hospital care for indigents. By the mid-20th century, a national health insurance fund had been created to pay for primary care.⁴² In 1975, faced with growing concerns about rising costs, fragmented yet ever increasing demands for care, and an inflexible, centralized system, the Swedish cabinet appointed a Commission of Inquiry to develop new legislation for medical care.⁴³ The commission was directed to specify overall goals and criteria for all aspects of health and sickness care under the guiding principle that everyone living in the country has an equal right to such care.

The commission's recommendations were reviewed by the Parliament in 1981, and the legislation took effect in 1982. This act set general guidelines and parameters for the organization of medical care following four basic tenets:

- equality of care and the promotion of good health;
- counties would have total responsibility and accountability for medical care;
- physicians were to direct all medical activity and delegate responsibility to others as much as possible;
- the national government would be responsible for setting regulations to protect individuals and stating conditions for employment in medical care settings.

In accord with Swedish culture, details concerning planning and implementation were left to the county councils and local authorities.⁴⁴

As a result, Swedish citizens' home addresses determined the hospitals, primary healthcare centers, and the physicians from which they could seek healthcare services. This decentralized system, however, led to the inequitable distribution of providers and resources during the 1980s. As in the United Kingdom, Swedes faced waiting lists and limited access to certain services, depending upon locale. Moreover, Sweden had intensive resource constraints based on a faltering economy and an aging population. Beginning in the early 1990s, Sweden embarked on a series of changes to health policy—known as the ADEL reforms—which were heavily influenced by the British NHS internal market reforms. While the two best-known efforts were the “Dala model” in Kopparberg County and the experiments in Stockholm County, at least a third of Sweden's counties also introduced innovations in service delivery.⁴⁵ For example, patient choice was emphasized through the separation of purchasers and providers, an internal market regulated by contracts, competitive tendering, and the encouragement of the private sector.⁴⁶ Despite sustained criticisms^{47–49} and changes in policy direction toward cooperation and long-term contracting,⁵⁰ an assessment of the Stockholm County reforms indicated that performance-based incentives have improved physicians' productivity and efficiency, while maintaining their satisfaction with working conditions.⁵¹

After 1992, the role of financing changed for county councils. With the ADEL reform, local municipalities were held responsible for social welfare services to elderly individuals, as well as the disabled. They also became responsible for long-term inpatient care. These changes significantly reduced the long-term care costs within the NHS, shifting these expenses against the tax revenues devoted to local social welfare.⁵² The reforms of the 1990s addressed the problems of cost containment within a decentralized National Health Service with universal access and high-quality outcomes. Since 1995, each county council has rationed care using the principles of human rights, individual need, solidarity, and cost-effectiveness. Many elective procedures (e.g., in vitro fertilization) were not performed unless the patient directly paid for the service.⁵² To further control utilization and costs, Sweden's central government managed physician training, capital expenditures, and equalization and incentive grants to the county councils. County councils and municipalities imposed tight fiscal controls on the number of healthcare personnel and on their salaries. During the 1990s, overall employment in health care was reduced by 25%.⁴⁸ Other cost-control mechanisms that were introduced include rationing based on evidence-

based care, as well as comparative effectiveness evaluations of medical technologies.⁵³ These cost-control measures were very effective in the 1990s, as Sweden was the only Organization for Economic Cooperation and Development (OECD) country to continually reduce health expenditures during that decade.⁵⁴ However, the rationing introduced in the 1990s resulted in high out-of-pocket costs and reduced services.

The 1992 Guarantee of Care Act attempted to balance fiscal restrictions with consumer responsiveness, mandating that patients placed on a waiting list for nonacute, low-priority problems should have services provided within three months.⁵⁵ Moreover, the National Board of Health and Welfare produced a set of guidelines concerning quality in 1994. These guidelines were updated in 1997 by a law requiring the health services to implement a system of continuous quality improvement (CQI). During this period, guidelines were developed for prioritizing the treatment of patients according to the severity of their injury, illness, or disease.⁵⁴ Several national organizations were involved in this effort to diffuse CQI methods and tools throughout Swedish health care, with most of the actual CQI work performed at the local level.⁵⁶ The Federation of County Councils, which, as a result of a merger with the Federation of County Councils become the Association for Local Authorities and Regions) developed 50 healthcare quality registers to implement and benchmark CQI systems in health care. The Federation also promoted a competition for a Swedish Health Services Quality Award.⁵⁷ Currently, the Swedish Association for Local Authorities and Regions and the National Board of Health and Welfare provide regional comparisons of quality and efficiency in Swedish health care. This work relies on multiple measures of medical-care outcomes, patient experiences, care availability, and costs.⁵⁸

During 1997 and 1998, drug reform was implemented in two phases. The first phase of the reform included a new National Drug Benefit Scheme that regulated co-payments and was kept separate from the cost ceiling applied to medical treatments. The second phase, in 1998, placed all responsibility for the costs of drug treatments in the hands of the county councils.⁵⁴ Beginning in 1999, additions were made to the 1982 Health Care Act that required more from the city council on behalf of patients. These changes dramatically enhanced and increased patient rights. Under these additions, patients have the right to choose their primary care provider as well as what treatment option they will pursue if multiple options are available. Patients are also free to request a second opinion from anywhere in the country.⁵⁴

Current System Structure and Financing

The National Health Service covers all Swedish citizens, as well as immigrants and foreign residents. Although a basic package of care services is not set, the NHS typically provides preventive care, public health care, prescription drugs, inpatient and outpatient care, dental care, long-term care and rehabilitation, and mental health care services.⁵⁹ The NHS has three levels of organization: national (Ministry of Health and Social Affairs, National Board of Health and Welfare, as well as other regulatory agencies), regional (Swedish Association of Local Authorities and Regions), and local (20 county councils, the island of Gotland, and 200 municipalities). At the national level, the government sets forth principles and policies either through laws and regulation or through negotiation. The National Board of Health and Welfare typically represents the central government in negotiations with the Swedish Association of Local Authorities and

Regions.⁶⁰ It also acts as the supervisory and advisory agency for health and social services, as well as licensing agency for all healthcare personnel. On one hand, county councils have authority over primary and inpatient care, including public health and preventive care. On the other hand, the municipalities determine the housing, social support, and health care for the elderly and disabled.⁵⁹

Patients are able to choose their principal healthcare provider. Choices may also be made concerning outpatient facilities and health centers in the county council. A referral may be necessary for care outside the individual's county council.⁵⁹ Income taxes are levied on residents with rates determined by county councils and municipalities. The average collective rate of taxation of local income is around 30%. Health care accounts for about 85% of total county expenditures.

In 2006, national, county, and municipal taxes accounted for 81.2% of total expenditures on health care. Out-of-pocket expenditures accounted for 16.5% of total healthcare expenditures. Dental and pharmaceutical co-payments, as well as supplemental charges for private physicians, are the major costs associated with out-of-pocket expenses. Private health insurance accounted for about 2.3% of total health expenditures in 2006.¹⁴

Hospitals

Sweden has 73 hospitals. Specialty care is provided by 65 district/county hospitals; 60 of these hospitals provide 24-hour emergency care and are owned by county councils. Both secondary and tertiary care are provided by eight regional, academic medical hospitals.⁶⁰

Physicians

More than 90% of physicians belong to the Swedish Medical Association, a union and professional organization for medical practitioners. The SMA negotiates general employment conditions (e.g., salaries, benefits, working hours) for its members through collective agreements, primarily with county councils.⁶¹ In 2004, a total of 26,400 licensed physicians were employed in Sweden, with 21,900 employed within the NHS. Most physicians are specialists employed in hospitals (12,500 plus 5000 licensed residents). The 4400 general practitioners within the NHS serve as family doctors, but not as gatekeepers, and are employed by the county councils. Physicians employed within the NHS typically are paid a salary if they are specialists; general practitioners may be remunerated prospectively via capitation. Physicians in private practice (2000 in 2004) may set their own fee-for-service rates, but must adhere to county and national guidelines if they are to be reimbursed by the NHS and must have a contract with the county council. Otherwise these private practice physicians must use the regulated fee schedule or receive payment directly from the patient.^{62,63} Basic care—preventive, primary, and public health—is provided at 1000 public health centers. In addition to physicians, patients may receive care from district nurses and other midlevel providers.⁶⁰

Present Problems and Initiatives

The decentralized Swedish NHS has used rationing to maintain high-quality care, to contain costs, and to uphold universal access to basic health services. One result of rationing is that citi-

zens face both out-of-pocket costs for some health services and delays in accessing needed health services. On the one hand, to address the equity problems created by out-of-pocket charges, there are caps on both yearly out-of-pocket charges for health services and for pharmaceutical products. On the other hand, to address the chronic problem of patient wait lists, Sweden enhanced its national patient care guarantee in 2005, and it has allowed county and municipal councils to shift toward more contractual agreements with private providers, which now account for about 10% of all healthcare services. The care guarantee states that no patient should have to wait for more than three months once it has been determined what care is needed. If this time limit is exceeded, the county council is obligated to pay for services elsewhere, including the patient's travel costs.⁶⁰

Another problem of a decentralized system is the lack of systemwide data for comparing, and improving, performance at the county and municipal levels. However, the National Board of Health and Welfare and the Swedish Association of Local Authorities and Regions have recently established a model for comparing and evaluating healthcare outcomes. This effort has resulted in yearly reports “to stimulate and support local and regional efforts to improve healthcare services, both in terms of clinical quality and medical outcomes, and in terms of patient experience and efficient use of resources.”^{58,252} Moreover, these two entities, along with other national stakeholders, are committed to creating a robust system for health information exchange for both healthcare providers and patients.⁶⁴

Summary Lessons: Using Tax-Funded Models for Direct Provision of Health Care

While the United Kingdom and Sweden provide universal access to health care by relying primarily on taxes to fund the direct provision of care, each country has followed different paths and encountered different problems. The UK's NHS is a historically centralized system of care, which from the start had a network of primary care providers. These GPs acted as gatekeepers, implicitly rationing and limiting access to specialists and hospitals, thus containing costs that Sweden has struggled to reduce. However, until recently, the United Kingdom experienced long waiting lists for specialized services and an undercapitalized and aging infrastructure. To address these problems, the United Kingdom decentralized the NHS, devoting more resources to primary care trusts and allowing them to direct patients to those specialized services within hospitals where access was available. To ensure quality, the NHS has implemented performance management initiatives, established a Care Quality Commission, and invested in its infrastructure, including a national health information system linking ambulatory and acute care providers.

In contrast, the already decentralized Swedish NHS has drawn on evidence-based medicine and explicitly rationed health services for almost two decades. It has done so while maintaining high-quality care, containing costs, and upholding universal access to basic health services. These efforts have been complemented both by a focus on quality improvement and by the development of a national health information network. Nonetheless, Swedish citizens have faced high out-of-pocket costs and delays in specialty care. As a result, the Swedish NHS has

established caps on out-of-pocket expenses, established a patient care guarantee, and expanded contracting with both public and private providers to ensure timely access to health services.

Tax-Funded Model for Indirect Provision of Health Services

While Canada shares with Sweden and the United Kingdom a single-payer model of funding health services, it differs in that health providers are not employed by the state, and the federal or provincial governments typically do not own healthcare facilities. Ten provinces and three territories administer the Canadian system of Medicare, with the federal government recently instituting reforms to ensure equitable funding for, and access to, health services.

The Canadian Healthcare System

Canadian public health insurance has always resembled a quilt more than a uniform blanket covering the nation.⁶⁵ Beginning as far back as 1909—when the province of Saskatchewan enacted the Rural Municipalities Act, leading to the creation of local medical care insurance schemes—the provision of medical care to its citizens has been of major concern for Canada.^{25,66} Various initiatives to provide medical care were instituted individually by some of the provinces, but it was not until 1943, after examining about 40 plans from other countries, that proposals to provide federal subsidies to provincially administered health insurance programs were first presented to the Canadian House of Commons.⁶⁷ Despite much discussion and endorsement, the provinces were unable to reach agreement on a specific proposal and several provinces proceeded with universal hospital insurance on their own.²⁶

By the 1950s, provinces that provided insurance were being compared to provinces without such plans, as well as to early regionally organized capitation plans in the United States. Only the three provinces that had developed state-supported plans were judged to be adequately supplying medical care to their residents, and with costs comparable to—or less than—those provinces without such systems.²⁵ Moreover, during the 1950s, Canadian leaders and physicians began to actively support the premise that there should be reasonable access to quality health care for all Canadians independent of financial means. By 1959, a fully universal government-operated hospital insurance system, providing 50% federal funding for provincial expenditures on medically necessary hospital care, was in place.^{68,69} However, when Saskatchewan implemented government-run insurance for physicians' services in 1962, physicians were strongly opposed and a bitter and unsuccessful 23-day strike by physicians ensued. As their worst fears failed to materialize and as they quickly became the highest-paid physicians in the country, professional opposition to the program decreased, and by 1971, all provinces and territories operated physician insurance programs.^{25,70}

As Canada moved into the highly inflationary 1970s, problems began to develop with the program. The provinces were unable to control their individual health services priorities and the federal government lost control of its health budget since it was forced to match whatever

the provinces spent.⁶⁸ During 1977, the matching formulas were abandoned and the federal contribution was changed to an indexed per capita block grant. Additionally, the Extended Health Care Services Program was initiated to entice the provinces to develop less expensive support services such as home and ambulatory health care. The Canadian Health Act was passed in 1984 to consolidate all the earlier laws that authorized federal subsidies to the various insurance plans. As a result, there is a single, government-operated provincial health plan that is the sole payer for hospital and physician care in each of the 12 provinces/territories. The 1984 Health Act also eliminated (1) all user charges for physician and hospital services, (2) any extra billing by physicians, and (3) private insurance for covering services available under the provincial health plans; moreover, the Health Act increased eligibility to all residents regardless of their employment status.^{25,67,70} Additions made to the Canada Health Act in 1996 and 1997 made provisions for federal contributions to health and social services. The 1996 and 1997 revisions consolidated contributions into the Canada Health Transfer (CHT) and Canada Social Transfer (CST). The combined CHT and CST transfers of taxes and cash payments equalizes funding and allows territories and provinces to control their systems of health care and social programs in accord with their own priorities.⁷¹ Nonetheless, the provincial and territorial health systems must meet the dictates of the Canada Health Act and provide social assistance with no minimum residency.

Current System Structure and Financing

Canada indirectly provides health services through a tax-funded public system, which is accessible by all Canadians.⁷² Citizens receive coverage for ambulatory services, inpatient services, prescription medications, physician services, community health services, disease prevention programs, and health protection programs. Home care is covered at varying levels.⁷³ While the provincial and territorial governments oversee the provision of health services in their jurisdictions, the federal government is directly in charge of the healthcare services for the following groups: Royal Canadian Mounted Police, veterans, members of the armed forces, inmates in federal jails, Inuit, and status Indians.

Federal, territorial, provincial, and municipal governments share the costs of health care. In 2006, taxes accounted for 70.4% of total expenditures on health care. Supplementary private insurance accounted for 15.1%, and out-of-pocket payments for 14.5%, of total health expenditures; these sources were used primarily for drugs and dental care. Social security accounted for the remaining 2% of public expenditures on health in 2006.¹⁴

Hospitals

Canadians were served by 535 general hospitals (61,906 beds; about 3.4 hospital beds per 1000 people) in 2005.^{14,74} Most hospitals are nonprofit, autonomous entities that provide inpatient and ambulatory services and diagnostic testing, as well as other services. Hospitals are staffed with physicians, registered nurses, licensed practical nurses, registered psychiatric nurses, aides, and various other healthcare professionals. In many hospitals, the staff works to provide patient care through a primary care team.

Physicians

In 2007, there were 63,682 physicians (1.92 physicians per 1000 people) in Canada.⁷⁵ About half of all physicians are general practitioners, who act as gatekeepers for secondary and tertiary health services.^{18,76} Most GPs and specialists are paid on a fee-for-service basis; their fee schedules vary based on provincial and territorial government negotiations with regional medical associations. Some GPs, such as community clinic physicians, and a few specialists, such as hospitalists, are salaried. Recently, some provinces have been shifting toward a mixed payment method for both GPs and specialists, combining fee-for-service with a salary or capitation component.⁷⁷

For example, the provincial government of Ontario revised its physician services agreement with the Ontario Medical Association. This new agreement not only increases base payments to physicians, but also incentivizes physicians to enroll unattached patients, to work collaboratively with other healthcare providers to coordinate patient care, to increase on-call coverage, to reduce avoidable emergency department admissions, to manage diabetic patient care, to increase psychiatric care services, and to enhance interdisciplinary care service for the frail elderly.⁷⁸

Present Problems and Initiatives

Like Sweden, Canada provides universal access with high-quality care, but struggles to contain costs. Like the United Kingdom, Canada implicitly rations care through primary care gatekeeping and by imposing waiting lists for specialized care. Recent reforms have focused on maintaining high quality and reducing waiting times while controlling costs. In addition to federal and provincial oversight of healthcare budgets, a variety of methods are used to control costs, including technology evaluations and rationalization and hospital budgets administered by local or regional health authorities. At the hospital, provincial, and national levels, Canada monitors health performance and quality. Significantly, in 1999, all first ministers (except the premier of Quebec) signed a Social Union Framework, which provided a collaborative structure for social policy, including assurances for collecting and sharing healthcare data. In addition, two other entities have contributed to this national effort: the Canadian Institute for Health Information and the Canadian Council on Health Services Accreditation.

Since 2000, the Canadian Institute for Health Information has produced annual reports on health indicators.⁷⁹ It has worked cooperatively with Accreditation Canada (formerly the Canadian Council on Health Services Accreditation), which accredits the entire range of healthcare services, from Regional Health Authorities to hospitals to home care. In 1995, it introduced Client-Centered Accreditation, thereby ensuring principles of quality improvement were incorporated into accreditation standards. In 2000, its AIM (Achieving Improved Measurement) Project updated the accreditation process with standardized performance indicators based on four quality dimensions: responsiveness, system competency, client/community focus, and work life.⁸⁰ Beginning in 2008, it launched the Qmentum Accreditation Program, with special focus on quality improvement and patient safety.⁸¹

Canada's recent health reforms increased spending on public health and measures to maintain fiscal sustainability of the public health sector. In 2003, the prime minister and the provincial and territorial leaders agreed to an Accord on Health Care Renewal. This policy dedicates the government to a sustainable public healthcare system and provides for an action plan through which leaders agreed to provide first-dollar coverage for certain short-term and acute home care needs. At the same time, the leadership declared that by 2011, 50% of the Canadian population would have access to a primary care provider. An addition to the accord in 2004 provided for home care, catastrophic drug coverage, and pharmaceutical management. In September 2004, a 10-Year Plan to Strengthen Health Care was released and called for the reduction of wait times and a greater focus on primary healthcare reform.¹⁸

Another issue that the Canadian health system is facing, along with many other countries, is its aging population. Although the healthcare system in Canada appears sustainable now, the fear is that once the population ages and the expectations for care change, that it will lose its sustainability. Increased life expectancy, along with a lower birth rate and the retirement of the baby boomer generation, will contribute to the change in utilization of care and an increase in spending on health care.⁸²

Overall, the decentralized Canadian healthcare system achieves universal access, high quality, and moderate costs through implicit and explicit rationing of services. Its efforts to maintain this balanced approach to health deserves continued scrutiny by other health systems.

Compulsory Insurance Model for Indirect Provision of Health Services

Both Germany and the Netherlands rely on compulsory health insurance that is used to purchase health services from various health providers. Recent legislation in both countries has reformed how and by whom health insurance is purchased. On one hand, the Dutch have implemented an individual mandate for health insurance; on the other hand, the Germans have made access to health insurance both a right and a requirement within an employment-based insurance system. Significantly, as part of these reforms, both countries have also implemented risk equalization schemes to incentivize health insurers to compete on the basis of health quality and efficiency, while ensuring equitable and affordable access to a basic package of health services for all.

The German Healthcare System

The German healthcare system has its roots in cooperative organizations, called sickness funds, which were sponsored by guilds during medieval times. These sickness funds provided financial security to guild members and their families in the event of illnesses or injuries, usually by levying fixed fees two or three times a year on all guild members. Importantly, the sickness funds operated on the basis of maximizing social solidarity (group cohesion) rather than on the basis of minimizing individual losses. (Individualistic self-interest, by contrast, is the basis for the current US system of indemnity insurance, which attempts to spread risk across individuals and

exclude those with exceptionally high risk potential.) As the German states became more mercantile between the 16th and mid-19th centuries, the sickness funds were extended by various communities to include not just craftsmen, but also miners, foundry workers, and other artisans.⁸³

However, the rapid industrialization of the newly unified Germany in the late 19th century created a large urban population of factory workers who were no longer adequately covered by the community-based and craft-centered sickness funds. Under the urging of chancellor Otto von Bismarck, the Parliament (Reichstag) in 1883 enacted compulsory national health insurance for all hourly laborers in order to secure social stability. The Health Insurance Act of 1883 and other acts to extend accident insurance for factory workers (1884) and agricultural workers (1886), as well as old-age and disability pensions (1899), established Europe's first social welfare state.⁸⁴ During the ensuing years from 1883 to 1975, statutory health insurance was expanded to include not only blue-collar workers, but also the following categories: transport and commercial workers (1901), agriculture and forestry workers and domestic servants (1911), civil service employees (1914), unemployed people (1918), seamen (1927), dependents of fund members (1930), voluntary participants earning wages above the statutory limits (1941), pensioners (1941), farm workers and salesmen (1966), self-employed agricultural workers and dependents (1972), and students and disabled persons (1975).⁸⁵ The results of this expansion included exponential growth in sickness fund enrollment, steady consolidation of the sickness funds,⁸³ and a large increase in the number of physicians.⁸⁵

During the first three decades of this expansion, the sickness funds exercised a great deal of power. Each fund was free to hire anyone to provide health care, often negotiating extremely low fees from doctors who had not passed their board exams, and typically restricted fund members from seeing physicians who did not hold a contract with a fund. During the hyper-inflationary period following World War I, cost pressures and physician dissatisfaction with the worker-dominated sickness funds resulted in businesses joining physicians in calls for health-care reform. The balance of power began to swing more to the physicians' side as the Weimar Republic issued a series of decrees to meet the demands of this stakeholder coalition, culminating in the Weimar Settlement of 1931. This decree increased the ratio of physicians to fund members, recognized medicine as a profession, and created sickness fund physician associations (*Kassenärztliche Vereinigungen*—KVs). Significantly, each physician was now legally bound to join a KV in order to receive payments from a sickness fund. Most importantly, each KV established a bargaining monopoly for local physicians vis-à-vis the numerous sickness funds with whom physicians previously had to arrange separate contracts. From this point forward, the KVs have served as the primary mechanism through which physician charges flow to sickness funds and fund payments flow to physicians.

The fall of the Third Reich divided Germany, creating two distinct health systems: (1) the Federal Republic of Germany, initially under Allied occupation, continued with the decentralized, sickness fund-based system begun under Bismarck and (2) the German Democratic Republic, under Soviet oversight, developed a centralized, state-directed health system similar to the former USSR's command-and-control model. These separate healthcare systems were conjoined after the 1990 reunification, with major reforms occurring in East Germany in order to

make it similar to the West German system. In Western Germany, the period after the occupation through the 1960s was one of growth driven by the increasing prosperity of the newly reconstructed Germany. However, during the 1970s, the growth of healthcare expenditures began to exceed the growth in GDP to such a degree that a series of reforms were instituted to contain costs.⁸³ One of the most notable elements of these acts was the establishment in 1987 of the Council for Concerted Action in Health Care—a panel of 70 representatives from the interested parties in health care—to set a ceiling on the rate of growth for ambulatory and dental care and pharmaceutical and other medical supplies.¹² Since that time there have been five more notable attempts at reform: the 1992 Health Care Structure Act, the 1996 Hospital Expenditure Stabilizing Act, the Second Statutory Health Insurance Restructuring Act of 1997, the 2004 Statutory Health Insurance Modernization Act, and, most recently, the 2007 Strengthen Competition in the Statutory Health Insurance Act.⁸⁶

In 2004, the Statutory Health Insurance Modernization Act was passed, ending a five-year struggle between the two major political parties in Germany: the Social Democratic Party (SDP) and the Christian Democratic Party (CDU). The act was intended to stabilize social health insurance contribution rates and to improve overall quality and efficiency. In order to achieve these goals, several actions were taken. Among other things, some benefits were excluded from the social health insurance (SHI) package, co-payment requirements were restructured, and new sources of income for SHI were created through budget subsidies. The Federal Joint Committee was introduced, combining several federal committees already in existence in order to create one source of coordinated decision making.⁸⁷

The 2007 reforms revolved around several key issues within the German healthcare system. This new legislation addressed prevention and improving the coordination of activities among the various players in the system. Other changes included adjustments to long-term care insurance contributions and fundamental changes to the compensation and financing portion of SHI.

Current System Structure and Financing

Every German is eligible to participate in the statutory, social insurance system. Individuals above a determined income level have the right to obtain private health insurance. Because of the 2007 reforms, every individual must obtain either statutory (beginning in 2007) or private health insurance (beginning in 2009).⁸⁸ In 2006, social health insurance accounted for 67%, while private health insurance accounted for 10.1% of health expenditures. Government taxes covered 9.6%, with out-of-pocket costs accounting for the remaining 13.3% of health expenditures.¹⁴

The chief system for financing health care is through contributions toward statutory, social health insurance (SHIs) funds, which included about 220 funds in 2009.⁸⁶ In 2002, the average contribution rate was 14% of an employee's salary, with that cost being shared between employee and employer. The unemployed, the homeless, and immigrants are covered through a special sickness fund financed through general revenues. The benefits covered include health screening and prevention, nonphysician care, ambulatory medical services, inpatient care, home nursing care, dental care, and some types of rehabilitation. Early reforms during this

decade shifted costs to patients via user charges. Co-payments exist for pharmaceuticals, non-physician care, dental treatments, ambulance transportation, and initial hospitalization or rehabilitation. Nonetheless, these charges are limited or exempted for those with low incomes or chronic illnesses, or those who are under 18 years.⁸⁷

The Federal Ministry for Health and the Parliament are in charge of health care at the national level. Decision-making authority is shared between the federal government and the 16 Lander (states). One of their most significant roles is to oversee the sickness funds and voluntary insurance companies, ensuring a level playing field for competition. Because sickness funds vary in their income and expenditures depending upon their pools of insured people, a compensation scheme operates to equalize these differences, requiring transfers of income from low-cost sickness funds to sickness funds with high expenditures based on age, gender, and disability. Beginning in 2009, the risk equalization scheme also takes into account the morbidity of the insured population using 106 morbidity groups based on 80 diseases. The intent of this reform is to prevent risk selection by sickness funds, to improve care for patients with chronic or catastrophic illnesses, and to provide a level playing field in which sickness funds may compete based on quality and efficiency.⁸⁹

Hospitals

In 2009, Germany had about 2200 general hospitals,⁸⁶ and about 8.3 hospital beds per 1000 people in 2006.¹⁴ Private for-profit hospitals account for around 20% of the total, with non-profit private hospitals accounting for more than 40%.⁹⁰ However, all of these hospitals contract with the social insurance funds. Sources for hospital funding include operating costs from the sickness funds and investment costs from the Lander. The 1992 Health Care Structure Act and subsequent pieces of legislation introduced an inpatient prospective payment system. Representatives of the sickness funds negotiate with individual hospitals over prospective payment rates.

Physicians

In 2009, Germany had about 300,000 doctors,⁸⁶ and about 3.4 physicians per 1000 people in 2006.¹⁴ Most GPs and specialists are self-employed and paid based on fee-for-service with budget ceilings. For services to patients covered by social health insurance funds (SHIs), the fee-for-service reimbursement is subject to some controls. SHIs and regional physicians' associations negotiate the total amount to be distributed to physicians under the fee-for-service payments. SHIs make the payment to regional physicians' associations for all their affiliate physicians, and physicians' associations distribute the payments among affiliated physicians based on the Uniform Value Scale and other additional rules. The 2007 reform abolishes the aforementioned prospective fee-setting mechanism, and a fixed fee schedule with performance bonuses for high-quality care is expected to come into effect in 2009. For services to private patients, physicians are paid on a fee-for-service basis by private health insurance and receive out-of-pocket payments. Some GPs and specialists are salaried employees and work in hospitals. Both salaried GPs and specialists can also treat and bill private patients based on a fee schedule for private patients.⁷⁷

Present Problems and Initiatives

The German model of indirectly providing health services funded by mandatory social and private insurance has achieved universal access and high quality, but historically has struggled to contain costs for hospital and ambulatory care. Various techniques have been used to control costs, including prospective payment systems, global budgets, and uniform value scales. The 1992 Health Care Structure Act and subsequent legislation introduced an inpatient prospective payment system. Representatives of the sickness funds negotiate with individual hospitals over prospective payment rates. Interestingly, because of competition among funds, selective purchasing for inpatient services (similar to preferred provider contracts in the United States) has recently become an issue. Based on negotiations on per capita rates, physicians' associations receive global budgets from the sickness funds. The associations, in turn, use a Uniform Value Scale (EBM) to reimburse their physician members. To prevent false claims or overutilization, the physicians' associations closely monitor physician reimbursement claims and sanction with fines and other measures those physicians who abuse or defraud the associations.⁹⁰

Similarly, physician specialty societies have monitored and attempted to improve the quality of medical care through structural means. However, after passage of a revised social security act on quality assurance, physicians' associations have started quality management projects. The Social Code Book V (SGB V) introduced the Federal Coordination Committee (FCC) and the Federal Committee Hospital as well as determining the duties of the Federal Committee for the Improvement of Quality Assurance (FCIQA). The responsibility of these committees is to ensure use of quality assurance measures. Many institutions and commissions have also developed quality assessment activities focusing on evidence-based medicine.^{91,92}

Immediate issues facing Germany's SHI system begin with demographic changes. Due to a low birthrate and a longer life expectancy, the German population is getting increasingly older. As a result, there are fewer citizens of working age to replace individuals that retire. In 1995, there were 4.4 working individuals for every 1 retiree, but by 2020 this will be reduced to 2.1 for every 1. Additionally, Germany has challenging unemployment rates and income erosion, which makes cost containment even more difficult.⁹³ Another challenge is the rising cost of health care. Germany ranks below only the United States, France, and Switzerland in annual healthcare spending,⁹⁴ so keeping up with the latest in technology and medical advances might become difficult if costs need to be reduced.

In summary, the German model of compulsory health insurance has achieved universal access while containing costs by creating competition among health insurers, by reducing benefits, and by shifting costs to the insured. In doing so, the Germans have adopted many US managed care techniques to provide incentives for efficient care provision by providers. Germany has also addressed concerns about quality by engaging in comparative effectiveness research via its Institute for Quality and Efficiency in Health Care.⁹⁵

The Dutch Healthcare System

Prior to World War II, health care in the Netherlands was provided largely through private enterprise and charity, with the government's role limited to monitoring the quality of care and

ensuring the provision of preventive care. During the postwar years, however, the government took an increasingly more central role in the financing and regulation of primary through tertiary care, creating a complex mixture of private enterprise and government oversight.^{96,97}

The Sickness Funds Decree of 1941 and 1948 mandated that sickness funds must contract with all physicians in their region, simultaneously guaranteeing free choice of doctor by patients and eliminating competition among physicians.⁹⁷ The Decree of 1948 also created guidelines for social insurance to ensure financial access to health care among the poor while the Netherlands underwent a decade-long period of tightly planned reconstruction.⁹⁶ The Sickness Funds Insurance Act (*Ziekenfondswet—ZFW*) of 1964 replaced the Decree of 1948. The ZFW specified the level of income under which social insurance was compulsory for acute and short-term illnesses, and it obligated sickness funds to contract with all providers in their regions.⁹⁷

The General Special Sickness Expenses Act (*Algemene Wet Bijzondere Ziektekosten—AWBZ*) of 1967 provides universal insurance for catastrophic and long-term illnesses, including physical and mental handicaps. The Health Care Tariffs Act (*WTG*) of 1980, implemented in 1982, allows a special government office to set the parameters for a bargaining process between providers—hospitals, physicians, and other medical professionals—and buyers, including both sickness funds and private insurers, for determining tariffs. This legislation strengthened the power of the associations both for providers (especially GPs and specialists) and for insurers by institutionalizing a bilateral monopoly.^{96,97}

The Health Insurance Access Act (*WTZ*) of 1986 required private insurers to provide “specified risk groups a comprehensive benefits package for a legally determined maximum premium.”^{97,1446} The purpose of this legislation was to counteract the premium differentiation and market segmentation that since the 1970s had eroded the preservation of universal coverage for the elderly and other high-risk groups. In 1989, these benefits were extended to all people over 65; in 1991, they were mandated for all people who were privately insured who paid more than the maximum standard premium.

While price controls and government restrictions on hospital capacity and physician supply certainly had an impact during the 1980s, their total effect was disappointing.⁹⁸ Neither sickness funds nor physicians had any incentives to improve efficiency, while sickness funds and private insurers were unable to direct patients to the most cost-effective providers. At the same time, universal access to acute care was being threatened by the growing market segmentation and premium differentiation by private insurers. Within this context, the Dutch government set up an advisory Committee on the Structure and Financing of Health Care, chaired by Dr. W. Dekker. The Dekker Report, published in March 1987, proposed major changes in the health-care system that were subsequently endorsed by two coalition cabinets in 1988 and 1990.^{97,99} However, the managed competition envisioned in the Dekker Report did not become a reality until the 2006 Health Insurance Act (*ZVW*). Up until 2006, all citizens with an annual income below a set level were required to enroll under the *Ziekenfondswet* (Medical Insurance Access Act, or ZFW) into a public social insurance fund for acute and short-term health care (65% of the population in 2004). Those with an annual income above the determined level were required to purchase private social health insurance for medical care.¹⁰⁰

Current System Structure and Financing

On one hand, all citizens are covered under the Algemene Wet Bijzondere Ziektekosten (Exceptional Medical Expenses Act, or AWBZ) that provides funding for long-term, disability, and chronic psychiatric care. On the other hand, in 2006, the ZVW reforms were passed, which altered the structure of the sickness funds and private insurance for acute and primary care. Under the new financing scheme, individuals are no longer automatically enrolled in a health insurance plan. Rather, they are required by law to enroll in a plan of their choosing. This reform attempts to shift the Dutch system from supply- to demand-driven care. To attract members, insurance companies can offer competitive premiums for the basic benefits mandated by the government; many companies also offer extra voluntary benefit packages for services not covered under the base package. Regulation of the system is provided for in the ZVW and is performed by two entities, the Health Care Insurance Board (CVZ) and the Health Insurance Monitoring Board (CTZ). When the Health Market Regulation Act was passed in July 2006, the CTZ merged with the Health Care Tariffs Board to form the Netherlands Health Care Authority (NZa).¹⁰¹

Hospitals

In 2007, there were 3.0 acute hospital beds per 1000 people.¹⁰² For-profit and not-for-profit hospitals may be either privately or publicly owned. In 2006, the Dutch government passed legislation (Wet Toelating Zorinstellingen—WTZi) that deregulates planning for hospitals and other providers, allowing them more autonomy for building and capacity decisions. However, the high-tech hospitals associated with academic medical centers remain centrally regulated.¹⁰³

Physicians

In 2005, there were 60,519 physicians, or about 3.7 physicians per 1000 people.¹⁴ About a third of all physicians are general practitioners who provide preventive and primary care and serve as gatekeepers for secondary and tertiary care services. GPs may be paid via a combination of capitation and fee-for-service, with performance bonuses for preventive care services and managing chronic diseases. Most specialists are self-employed and paid on a fee-for-service basis. However, specialists working in university or municipality hospitals and physicians-in-training are paid salaries. They supplement their incomes by working at night or during the weekend.⁷⁷ With the reforms of the health insurance system, selective contracting with health providers has also started to occur, which will undoubtedly change the physician payment system.¹⁰⁴

Present Problems and Initiatives

The Dutch health system of indirect provision of care funded through compulsory health insurance offers universal access and has produced high quality at moderate costs. The system differs most markedly from the German system in the use of primary care providers as gatekeepers. Current problems include delays in accessing GPs, waiting lists for specialty care, and security and privacy concerns about the introduction of electronic health records.¹⁰⁵ The

last is a new problem, while the former have been recurring. The recurring problems are discussed first.

To address the delays and waiting list problem, the Dutch are relying on the expansion of after-hours care and on managed competition. After-hours care (defined as care from 5 P.M. to 8 A.M. and on weekends) is provided by primary care cooperatives that integrate telephone consultations with nursing triage, face-to-face consultations with GPs, and house calls by GPs.¹⁰⁶ Both physician and patient satisfaction with this approach is high; in comparison to other models, it has “scale advantages with characteristics of strong primary care, such as high accessibility, continuity and coordination of care.”¹⁰⁷

To encourage efficiency and greater access for medically necessary tertiary care, a system based on Diagnosis Treatment Combinations (DBC) is now used to reimburse hospitals and medical specialists, replacing per diem rates. This prospective payment system takes into account the degree to which the demand for care falls to the hospital and the medical specialists, how demand for care should be handled, and the costs associated with this service. It differs from DRGs in that the entire episode of care, including outpatient treatment, is included.¹⁰⁸ Although the payments associated with this prospective payment system initially were set by the Dutch Ministry of Health, beginning in 2005 hospitals could negotiate prices with health insurers for a growing subset of DBCs. In 2005 these negotiations affected about 10% of the DBCs; by 2009 that had grown to 34% of the DBCs. This segment of services has seen faster growth than the government-regulated DBCs, alleviating some of the waiting list pressures.^{103, 104}

However, both the after-hours care primary care cooperatives and managed competition via use of the DBCs rely on the implementation of electronic health records linking not only healthcare providers but also patients. The Dutch Ministry of Health is establishing a national infrastructure for data exchange of electronic health records (EHRs) among both providers and patients. The core of this infrastructure is an index that connects all EHRs of a patient. Because of concerns with patient confidentiality and liability, the launch of this EHR initiative has been more difficult than anticipated.¹⁰⁵

One of the successes in the Netherlands has been its focus on quality outcomes through health technology assessment and evidence-based medicine.¹⁰⁹ Based on 1989 legislation, quality management is the responsibility of both healthcare professionals and management, with input from insurers and patients. Three different approaches have been undertaken to manage healthcare quality.¹¹⁰ The National Organization for Quality Assurance in Hospitals (CBO) not only conducts peer review activities of physician practices, but also supports efforts aimed at quality assurance in hospitals. In addition, 28 scientific societies accredit various medical specialties, conducting site visits that assess quality process management, use of guidelines, and the evaluation of patient satisfaction and treatment outcomes. Medical specialty and general practice associations have developed numerous consensus guidelines and evidence-based medicine protocols for treatment and diagnosis, with input from patient organizations and third-party payers.¹¹¹

Overall, the Dutch healthcare system, with its primary care gatekeeping, has shared with the United Kingdom the problem of waiting lists for specialty care. Like Germany, it also has struggled to contain costs and sought to implement managed competition and managed-care tech-

niques. The Dutch system, arguably, has been more effective in containing costs because of its history and focus on primary care, health technology assessment, and evidence-based medicine; it has also established a risk equalization pool that allows private insurers to compete based on price and service, rather than competing based on risk avoidance.

Summary Lessons: Using Compulsory Insurance for Indirect Provision of Health Care

Both the German and Dutch models of compulsory health insurance provide universal access to basic health services and achieve very good to excellent quality as measured by a variety of health outcomes. However, both systems have struggled to contain costs, and both have either adopted or independently developed certain managed care techniques, ranging from primary care gatekeeping and capitation to DRGs and disease management. Both health systems also have introduced various forms of managed competition between insurers and providers to increase efficiency. While the Dutch reforms are too recent to assess their overall effectiveness, they show promise as a way to reduce governmental payments for health care, but do require serious governmental regulation to ensure that managed competition benefits Dutch citizens. The German approach to managed competition has many similarities, albeit within a system of employer-based health insurance. Both Germany and the Netherlands have introduced risk equalization schemes for health insurers, an approach that has great merit for the United States and other countries.

Mixed Models for Provision of Health Services

With the exception of Greece and Turkey, all of the national health systems that follow mixed models for the funding and provision of health services have not yet achieved universal access to health insurance. Those nations include Argentina, Brazil, Indonesia, Mexico, and the United States. Many of these countries have declared health care as a right, but rely on both public and private systems of care. The most common mix is one of social health insurance combined with tax-funded, direct, and indirect provision of care. Regardless of the funding mix, all of these countries are attempting to reform health care to expand insurance coverage and access to care. First, we ponder, a brief review of each national healthcare system and its problems, beginning with Argentina and ending with the United States. We then suggest the most likely prototype and path that would stabilize each health system while ensuring universal access to health insurance.

The Argentine Healthcare System

The main forces in Argentina's health services sector have historically been large labor unions, large federations representing individual professionals, and private hospitals. Between 1960 and 1990, the public health sector serving the poor declined, while the social security sector grew. At this time, a multitude of these social insurance organizations (*obras sociales*) grew under trade union control. The government played little, if any, role in health care. Rather, the health services

sector was negotiated between the *obras sociales* from the demand side and the medical federations and private hospitals on the supply side. In 1970, health coverage was mandated by law for employees/employers within the various trade unions, and unsuccessful attempts were made to equalize coverage among the multitude of *obras sociales* throughout the 1980s.¹¹²

After the hyperinflationary years of the 1980s and the transfer of political power to a new regime with extraordinary powers, reforms favored deregulation/privatization. Many of the *obras sociales* suffered from financial deficits and were ripe for reform at this point. Their financial trouble prompted providers to require higher co-payments from beneficiaries and flooded the public health system. The new government attempted to centralize social security contributions into a single fund (SUSS) in 1991. A series of reforms during the 1990s attempted to promote competition among *obras sociales* by allowing some freedom of choice to beneficiaries and mandating minimum coverage. In addition, reforms focused on funding by promising the *obras sociales* that the government would pay the difference between contributions received and the actual cost of services and dictating that the *obras sociales* pay for services provided to their beneficiaries at public hospitals. Estimates from 2001 indicate that 52% of the population was covered by some kind of health insurance, dropping more than 10% from 1991 estimates.¹¹³ Despite insurance reforms aimed at achieving universal coverage,¹¹⁴ the dependence on employment-based social insurance (*obras sociales*) probably decreased the percentage of the population with coverage.^{115,116}

Current System Structure and Financing

The Argentine health system combines tax-funded, direct provision of health services with compulsory social and private health insurance with indirect provision of services. Around 10% of the population purchases private, substitutive health insurance. Treatment services, especially inpatient care, are emphasized. Other coverage available includes transplants, dental care, services for hemophiliacs, dialysis for chronic patients, and psychological care, but these are covered with variability among different *obras sociales*. Employees gained some freedom to choose among insurance plans in 1997. The reforms that have introduced managed care also have increased the burden of co-payments (20–30%) by those covered by *obras sociales*.¹¹⁷

During 2006, private expenditures accounted for 54.5% of the total expenditure on health, of which 23.9% was out-of-pocket. Social health insurance plans (*obras sociales*) accounted for 26.6% of health expenditures, while taxation accounted for the remaining 18.9% of health expenditures.¹⁴ Despite the creation of a National Health Services Superintendency under the Ministry of Health and Social Action,^{116,118} the federal government does not play the central role in regulating health care. Rather, that regulation is the result of contracts between payers, intermediaries, and direct providers.¹¹⁹

Hospitals

Beginning in the 1990s, attempts were made to decentralize public hospitals; 20 hospitals and some specialized centers or social programs became the responsibility of provinces. Several public hospitals were created as self-managed entities. Public hospitals receive funding from their jurisdiction and insurance like *obras sociales*, as well as from private insurance and out-of-pocket

payments; however, they have suffered from poor reimbursements from these third-party payers.¹¹⁹ In 2000, there were about 4.1 hospital beds per 1000 people.¹⁴

Physicians

In 1998, there were 108,800 physicians, or about 3.0 physicians per 1000 people.¹⁴ General practitioners in private practice work on a per capita basis, while private specialists or physicians providing ambulatory services are paid on either a fee-for-service or per capita basis. Public physicians are paid salaries.¹²⁰

Present Problems and Initiatives

At the start of the 21st century, Argentina faced severe economic problems, and in 2002 it devalued its currency. While this action eventually reinvigorated the economy, it created immediate and severe disparities in access to health care. Many low-income workers lost their social health insurance benefits and became reliant upon publicly provided services, which became increasingly underfunded. As a result, adequate and balanced funding of the public health (direct provision of care) system and the *obras sociales* (indirect provision of care) system continues to be major challenges. At the same time, there have been many unintended consequences from the introduction of managed care during the 1990s. On the one hand, price competition among providers was introduced into the system with the reforms of the early 1990s in which the *obras sociales* were free to contract with providers without scheduled fee restrictions. The new managed-care funding system discouraged overprovision or overcharging. With the reforms of 1993, *obras sociales* could mandate accreditation or other criteria for categorizing healthcare providers in order to enhance quality. On the other hand, managed care cost containment, along with inadequate monitoring and regulation from the public health system, has encouraged the transfer of expensive private insurance and *obras sociales* patients from private to public hospitals. Increased income testing at public hospitals has also decreased access by the working poor, who increasingly pay out-of-pocket for services.¹²¹

Despite efforts to reform, the Argentinean healthcare system in 2006 was characterized by financial segmentation among those with social health insurance and/or private health insurance, and those reliant on publicly provided services. As a result of the varied sources of financing, the decentralization of the public provision of care, and discrepancies in wealth across regions, access to health services is fragmented, with those reliant on the public provision of care typically receiving fewer services, with more delays, and with uneven quality. Thus, the system of public provision of health services to the poor in conjunction with the purchasing of privately provided health services by those with social health insurance (*obras sociales*) and/or private health insurance, has led to inequitable access and quality of care across the population as a whole. However, this is not out of the ordinary as health care in Argentina has historically been known for operating under high degrees of inefficiency and inequity.¹²⁰

In summary, Argentina's mixture of indirect and direct public provision of care based on taxes, along with both a compulsory social health insurance (*obras sociales*) and a voluntary private insurance market, remains both inefficient and inequitable. Recent reforms have had some positive results, for example, in reducing the impact of catastrophic illnesses on the poor.

However, additional reforms such as extending risk-pooling mechanisms, improving the benefit package, and regulating the private sector would improve the equity of care and reduce costs.¹¹⁷ Without such changes, Argentina will continue to have difficulty in providing access, controlling costs, and improving healthcare quality.

The Brazilian Healthcare System

The Brazilian government has funded the indirect provision of health services through social security insurance from both public and private employers since the 1930s. Under social security, access was limited based on participation in the formal labor market and rationed according to categorization within that market. At the same time, chronic care facilities were funded directly through the Ministry of Health.

As the authoritarian regime took control of Brazil in 1964, the government took an increasingly central role in the health sector, both to stimulate economic growth of the private sector and to legitimize political control. Social security was unified into a single national institution and coverage was expanded to more and more employees. However, those in the informal labor market were still excluded. In the 1970s, medical care became the responsibility of the Instituto Nacional de Assistencia Medica da Previdencia Social (INAMPS). Both public and private health services were based on fee-for-service payments, with no control over the kind of medical care provided. This encouraged high-cost, specialized, hospital-based treatment and discouraged preventive and primary care. From the 1970s, access was expanded to include workers in all segments of the economy (with variable benefits based on contributions) and universal emergency services. Increased demand for health services during this period, as well as subsidies from the military regime, spurred the growth of the private health sector. However, funding continued to be supported by compulsory payroll contributions. Thus, funding levels were variable and problematic during the economic recession of the 1980s.¹²²

Capitalizing on problems during the 1980s, the Health Movement (a group of intellectuals, health professionals, and left-wing militants from opposition parties) succeeded in associating the demand for healthcare services with the demand for a democratic regime. The 1988 constitution defines health care as a right for all citizens and a responsibility of the state. The Unified Health System (SUS) was created at this time. The national, state, and municipal governments share responsibility for health care. However, the private health system is not integrated with the public system and has been regulated by public health authorities for only a short time. Beginning in 1993, municipal governments began to take on more responsibility for health care.¹²³

Current System Structure and Financing

Brazil relies on both a public and a private subsystem, and covers about 75% of the population through the public health sector. The public health system relies on taxes to provide or contract for health services. In 2003, about 24.5% of the population had private health insurance.¹²⁴

The Ministry of Health is responsible for regulating standards of care. The public system provides most primary and secondary care, as well as emergency services. There are several types of private, supplementary health insurance with varying types of coverage. However,

most affluent Brazilians opt for substitutive private health insurance, provided either through employment or directly purchased. Employer-managed health plans provide services for employees of large public or private organizations and offer a wide variety of services, including dental care. Both group medical companies and medical cooperatives cover substitutive services based on prepaid arrangements.¹²³

Taxes at the federal, state, and municipal levels accounted for 47.9% of total health expenditures in 2006. Private expenditures on health accounted for 52.1% of total health expenditures in 2006, of which out-of-pocket expenditures accounted for 33.3% of all healthcare expenditures.¹⁴

Hospitals

In 2002, there were 2.6 hospital beds per 1000 Brazilians.¹⁴ Inpatient care occurs mostly within private hospitals with reimbursement from public funds. In contrast, most outpatient care occurs in public institutions. In 2002, public hospitals accounted for only 31% of all hospital beds in Brazil. Most secondary and tertiary care is located in the most affluent and populated regions of Brazil. The federal government uses a prospective payment mechanism to reimburse both public and private hospitals. Each state receives funds based on quotas and is subject to financial caps.¹²⁴

Physicians

In 2000, there were 198,153 physicians, or about 1.2 physicians per 1000 people.¹⁴ General practitioners do not play a gatekeeping role; specialist care is emphasized. Starting in 1998, financing of ambulatory services began to be distributed on a per capita basis to municipalities. Health insurance companies incorporate both reimbursement and delivery of services within health provider networks, similar to preferred provider organizations in the United States. The number of doctors has increased dramatically over the past 30 years, with the number in private practice growing most rapidly.¹²⁵

Present Problems and Initiatives

Brazil faces both market pressures to privatize its public system from an affluent middle and upper class, and political pressure to extend public access to all of its population from a disenfranchised lower-middle and lower class.¹²³ This tension often results in equivocal health policies. For example, Brazil represents one of the largest markets in the world for drugs, many of which are banned within the countries producing them because of the lack of regulation and inspection. The primary problems within the Brazilian healthcare system have included insufficient financing and mechanisms to control expenses; conflicts between the public and private health systems and between levels of government; and the prevailing curative care model.¹²² Reforms to decentralize the SUS have addressed both its financing and governance issues, placing both more control and more funding responsibilities onto states and municipalities.¹²⁵

The activities of the federal government in Brazil are guided by a multiyear plan (PPA) that determines the issues of importance for the next four years. Within the PPA for 2004 to 2007, approximately 18 priorities were related to health, including increased access to low-cost

prescription medication, quality improvement throughout the healthcare system, greater oversight of health activities and financial resources, decentralization of the system to the regional level, and approval of the National Health Plan. In 2006, a new commitment was developed entitled “Pact for Life: Strengthening the SUS and its Management.” This pact changed the way the federal, state, and municipal levels of government interact with one another. Specifically, part of the pact outlined a commitment to solidarity on the regional level as the system worked toward decentralization.¹²⁴ Underscoring this commitment, the Organisation for Economic Co-operation and Development recommends that Brazil’s success with inter-municipal initiatives for procurement and its success with flexible arrangements for hospital administration and human resource management should be broadly disseminated at the state and municipal level.¹²⁶

The SUS also continues to focus on the importance of primary care. This strategy includes promoting health and working with Brazilians to encourage preventive medicine. The Family Health Programme created in 1994 has proven to be one of the most effective programs for providing care for families in health clinics, hospitals, or even their homes.¹²⁷ It has also significantly reduced the level of infant mortality during the past decade.¹²⁸

Overall, Brazil’s mixture of indirect and direct public provision of care based on taxes, along with a private system supported by employers has made significant steps toward providing universal access to primary care. Challenges facing Brazil include not only controlling costs and improving healthcare quality, but also sustaining and continuing to improve access to care within its public system.

The Greek Healthcare System

Until the establishment of the Ministry of Hygiene and Social Welfare in 1922, Greeks had very limited financial access to care, with about 10% of the population covered. The first serious attempt to increase access to health care in Greece occurred in 1934 with the creation of the social security organization, IKA, which covered about 30% of the Greek population. After an unsuccessful attempt to establish a national health system in the 1950s, social health insurance coverage expanded to include employees in the public and financial services sectors, self-employed professionals, and agricultural workers. IKA established its own infrastructure for providing health services, while public and private insurance contracted with private physicians for primary care and both public and private providers of secondary and tertiary care. This system remained throughout the political turmoil of the 1970s.¹²⁹

A national health system (ESY) was finally established in 1983 to make good on a promise that all citizens have “equal rights to high quality social and health care, and treatment.”¹³⁰ A fundamental goal with the establishment of ESY was to clearly separate public and private health systems with the intent that the private system would disappear; hence, publicly employed physicians were prohibited from private practice. The Ministry of Health and Welfare was tasked with leading massive reforms of the public healthcare system in the 1980s. Plans were to consolidate all social insurance funds into one; place all publicly funded hospitals under the ESY and to expand their functions; prohibit new, as well as the expansion of existing, private hospitals; establish a network of urban and rural primary care centers; and devolve deci-

sions to 10 health regions. Only a portion of these reforms was accomplished. The most significant was the establishment in rural areas of 176 clinics for preventive and primary care, 19 small hospitals, and 3 large university hospitals. Additionally, since 1983, the number of social insurance funds funded by employers has been cut in half, from around 80 to 30.^{130,131}

Plans to establish urban clinics, consolidate social insurance funds, and decentralize the ESY's administration, however, did not materialize. Although prohibitions on private hospital facilities were loosened in the 1990s, the private market has flourished by providing ambulatory diagnostic and therapeutic care.¹³² Also, private, substitutive, and supplementary insurance has actually grown since the establishment of ESY.¹³⁰

Current System Structure and Financing

Presently, the Greek healthcare system is a combination of tax-funded, direct provision and social insurance-funded, indirect provision of care. All citizens have access to physician services, outpatient and inpatient care, health promotion and disease prevention, prescription drugs, and dental care. However, variations in coverage still exist based on the social insurance fund. Most social insurance covers lost income due to illness or maternity, while the largest four social insurers cover nearly every possible healthcare service or product, short of cosmetic surgery. Long-term care is covered almost exclusively by private funds and is relatively rare. Co-payments for pharmaceuticals are 25%, while out-of-pocket payments for private physicians, outpatient, and inpatient services vary.¹³⁰

State and national taxes fund ESY. In 2006, taxation accounted for 20% of total health expenditures. National and employer-sponsored funds like IKA and the other social insurance accounted for 22.5% of the health expenditures in 2006.¹⁴ Private funding in the form of both insurance and out-of-pocket money funded the remaining 30% of the healthcare system in 1992, growing from 2.9% (GDP) in 1980 to 5% (GDP) in 2004.¹³³ As of 2006, out-of-pocket payments accounted for 35.9% of total health expenditures, while private insurance accounted for 21.6% of total expenditures.¹⁴

Hospitals

Although the hope was to strangle private hospitals with reforms in 1983, both private and public hospitals remain. Public hospitals are financed primarily by tax revenue, with the addition of social insurance funds and user fees. Because hospitals are concentrated in urban areas, Greek citizens receive less overall inpatient care than do other European citizens. As of 2000, there were 139 public and 218 private facilities.¹³⁰ In 2005, there were about 4.7 hospital beds per 1000 people.¹⁴

Physicians

In 2005, there were 55,556 physicians, or about 5 physicians per 1000 people.¹⁴ In 1996, the relative distribution of specialized doctors was 81:19 between public and private hospitals. In addition, only 5% of all specialists served rural citizens, who made up 25% of the Greek population. General practitioners are supposed to serve a gatekeeping function by referring patients to specialized primary or other secondary care; however, that has not been the case. Relatively few physicians choose general practice.¹²⁹

Present Problems and Initiatives

Greece's ESY, unlike the NHS in the United Kingdom or Sweden, is still in the process of absorbing its social health insurance subsystem of care. As a result, it faces a unique set of problems in controlling health service costs and ensuring equitable quality of care. While the ESY directly provides both health facilities and employs physicians, nurses, and other health professionals, funding comes both from taxation and compulsory social health insurance. Moreover, the ESY does not have the capacity to provide health services to all citizens, nor restrain the overutilization of hospital services. The IKA and other social health insurers contract with both public and private providers, maintaining the vitality of the private sector. In addition, the largest social health insurer, IKA, provides a network of primary care polyclinics in urban areas, undercutting the ESY's gatekeeping efforts at the primary care level.

At the same time, insufficient pay for public physicians and inefficient management of public hospitals has encouraged a "black market" of informal payments for physician services and preferential treatment.¹³⁰ Public funds pay for all hospital expenses not covered by social insurance. Thus, the system is demand-led, with no incentives for cost control. Public physicians are paid a salary with public and social insurance funds. While these salaries increased dramatically after 1983, they were still comparatively low. Thus, methods for paying physicians encourage the long-established practice of unofficial payments. Some estimate these "black market" payments supplement physician salaries by about 40%.¹²⁹ The Greek health-care system has displayed issues with resource allocation due in part to transactions that take place between the public and private sectors. This system has also had difficulty with efficiency measures, and the implementation of health information systems has been slow. Additionally, very little performance monitoring is done and there is no mapping of health conditions within the country's population.¹³³

In 2002, reforms established a public organization (ODIPY) for financially managing health resources of all major social insurance funds. The various social insurance funds are to be consolidated into one main fund in an attempt to separate purchasing from the provision of healthcare services. On the provider side, 17 semiautonomous health regions have been established to decentralize the ESY, improve its decision making and accountability, and enhance its ability to invest in primary care centers in urban areas.¹³⁰ This movement toward an internal managed market was designed to emphasize prevention and health promotion and also to deal with the overutilization of health services, especially by urban hospitals.¹³⁴ Reforms also sought to remedy the problems with informal payments. The government agreed to pay physicians in three ways: a monthly payment, an annual capitation fee, and a productivity bonus. However, physicians would also be allowed to work additional hours in private practice under a fee-for-service system.¹³⁰

The return of the conservative party in 2004 led to numerous legislative developments that focused on administering health service delivery and did not address other major issues, including fragmentation in funding. However, in 2005 the private finance initiative (PFI) was introduced in order to increase private support for construction and maintenance of the health sector infrastructure.¹³³

Overall, the Greek health system has in place the necessary reforms to create a viable national health service along with a single-payer financing system, but only if the public funding and political will to implement existing policies is sufficient. Significantly, the consolidation of the 30 social insurance funds via the proposed ODIPY is one means to ensure sufficient revenue for the expansion of the ESY and to establish a single-payer system. Such consolidation, in combination with the ESY, would establish a public sector monopsony. That purchasing structure, with sufficient oversight and regulation, could then set the conditions for efficient purchasing of health services from both public and private health providers.¹³²

Alternatively, because of the differences in revenue and risk across the social health insurance plans and the ESY, Greece should consider establishing a risk equalization scheme similar to those schemes recently introduced in Germany and the Netherlands. Such a change would continue the multipayer system currently in place. However, by equalizing risk via reallocating funds across the social health insurance plans and the ESY, there would be further incentives from all purchasers to promote efficient and high-quality care.

The Indonesian Healthcare System

As a Dutch colony, Indonesia received little investment in health care prior to 1910, with the exception of smallpox vaccinations. Starting in the 1930s, the government devoted resources to health education and disease prevention and had developed a robust public health infrastructure prior to World War II. After the Japanese invaded in 1942, the public system collapsed and the general health of the country deteriorated. Following the postwar period and independence from the Netherlands in 1950, a network of maternal and child health centers was established, but with only one physician for every 100,000 people. These centers gradually were expanded into a network of community health centers that were heavily frequented by the 1980s. However, Western-style medicine was often used in conjunction with *dukun* (traditional healers) especially in rural areas. Indeed, the Department of Health estimated that *dukun* attended upwards of 90% of rural births in the early 1990s.¹³⁵

Current System Structure and Financing

The Republic of Indonesia's health system is a complex mix of private expenditures; tax-funded, direct provision of services; compulsory social insurance; and voluntary private insurance. In 2006, public expenditure on health accounted for 50.4% of total health expenditures, of which 10.1% of expenditures were raised from social security payroll deductions and 2.3% from external sources. Out-of-pocket expenditures accounted for 32.9% of all healthcare expenditures, and private health insurance accounted for only 16.7% of total health expenditures.¹⁴

Government employees, the military, Indonesians employed in the formal sector, and the poor are covered under the Indonesian social insurance programs (PT Askes, Jamsostek). Private insurance covers a small but growing percentage of the population. Public hospitals and outpatient facilities provide services for those without social or private insurance, estimated at 70% of the population. Both public and private facilities provide primary through tertiary

services. Those covered by PT Askes receive services mainly in public facilities. Preventive and primary care are emphasized in public services. Patients pay user charges in public facilities.

Civil servants, civil service pensioners, the armed forces, and their families and survivors receive services from PT Askes, which is funded through payroll contributions of 2% and an additional 0.5% from the government. PT Jamsostek is a semicompulsory system for employees of firms with more than 10 employees and is also financed through payroll deductions of 3% to 6% paid entirely by the employer. To address the substantial increase in the underserved and poor, the government instituted an additional program called the National Social Security System, or Sistem Jaminan Sosial Nasional. Launched in 2005, this program covers around 60 million people. It is administered following managed care principles and receives a monetary contribution from the government.¹³⁶

Hospitals

In 2005, Indonesia had 1268 hospitals, with 642 government and 626 nongovernmental hospitals. Of these hospitals, 995 were general hospitals and 273 were specialty hospitals.¹³⁷ Policy analysts argue that the high level and unpredictability of user fees deters utilization of hospitals. Private hospitals (both for-profit and not-for-profit), which represent about half of all hospital facilities, are the dominant provider of inpatient care.¹³⁸

Physicians

In 2006, there were 44,564 general practitioners and 12,374 physician specialists, supported by 308,306 nurses and 79,152 midwives. Because of the many rural villages throughout the nation's archipelago, Indonesia relies on 7669 health centers to provide primary and some secondary care. These include District Health Centers (2077 with beds) that provide a wide range of medical, preventive and obstetrical services. One or more physicians, with nurse support, staff these centers. Sub-District Health Centers (5592 without beds) provide limited medical services and are staffed by either a physician or nurse. Transportation vehicles (all-terrain vehicles and/or motor boats) are available in most rural subcenters. Preventive and primary care is provided by Integrated Health Centers; these are managed by the community, provide maternal and child health, diarrheal control, family planning, nutritional development, and immunization services at the village level.^{137,138}

Present Problems and Initiatives

The health sector experienced significant changes between 2001 and 2005 as a result of the political and socioeconomic decentralization process initiated in 2000. District governments were given full discretion in prioritizing which sectors to develop and were provided the authority to develop and budget their own health plans with funds they generate themselves and those received from the central government. Unfortunately, decentralization reduced the emphasis on health sector development and adversely affected the provision of services.

In response, the Ministry of Health issued a new strategic plan for health in 2006. The government's new health plan focuses on increasing health financing, particularly public funding,

and extending social health insurance beginning with the expansion of the Sistem Jaminan Sosial Nasional, the noncontributory managed care program providing government-subsidized insurance for the poor.¹³⁷

Indonesia's mixture of tax-funded, direct provision of services, along with social health insurance and voluntary private insurance, has had many difficulties ensuring access to quality services, particularly for the poor and lower income population. A major reform toward a national health system would probably result in the most benefit for the poor and lower-middle-class, if it can garner sufficient political support. Alternatively, Indonesia should consider establishing a single-payer system with substitutive private health insurance. This latter approach might encounter less resistance and allow the national government to continue to expand services to the poor.

The Mexican Healthcare System

The Mexican constitution of 1917 established the government's responsibility for social welfare, including health care, but the Ley del Seguro Social (social security law) of 1943 paved the way for a system of social security. During the 1950s, the most politically powerful groups of employees were granted access to health care through the ISSSTE; these groups worked primarily within the military and public service. Although the percentage of Mexican workers covered by the social security system increased through 1970, this has included only those working within the formal labor market. Other Mexicans—for example, self-employed professionals, craftsmen, landowners, and agricultural workers—were covered by the Ministry of Health (IMSS).¹³⁹

During the economic crisis in the 1980s, reform focused on a complete overhaul of the health system and the establishment of a decentralized, national health system (IMSS-Solidarity). Article 4 of the constitution guaranteed the right to health care for all Mexicans. However, of the 31 Mexican states, only the 14 most economically stable ones achieved decentralization. In the remaining poorer states, healthcare services deteriorated when federal subsidy was reduced. The private health sector grew during this time partly due to changes in insurance regulations under NAFTA. In addition, most reforms were suspended under new presidential leadership.¹³⁹

Beginning in 1995, another wave of reforms attempted to diversify services and financing, allow users some choice in providers, and open up the medical services industry for those with private insurance or coverage within social security. In addition, the IMSS-Solidarity offered a basic package of low cost, high impact, and public health interventions, which were designed to meet the needs of the one third of the Mexican population with no regular source of medical services. Thus, a clearer division between private and public health subsystems was created.¹⁴⁰

Until recently, Mexico relied on a threefold method of insuring and providing health services: (1) a national health subsystem (Ministry of Health and IMSS-Solidarity); (2) a set of compulsory employment-based social insurance subsystems (IMSS and ISSSTE), which covered approximately 50% of the population in 2000; and (3) a private health insurance market. While about 50% were covered by social health insurance in 2000,¹⁴¹ estimates of those who had access to at least basic health services ranged between 70% and 90%.^{142,143}

Current System Structure and Financing

To address the needs of the uninsured, the Mexican health system recently underwent a massive reform, which allowed for the formation of the System of Social Protection in Health (SSPH). The reform focuses on the 50 million uninsured Mexicans who have not been able to access healthcare services through the compulsory social health insurance programs that previously were in place. The SSPH program is funded largely by federal taxes, as well as contributions from municipal governments. Families also pay a small premium; however, the poorest 20% of families are exempt from the payment. The insurance component of the plan covers all individuals who are not covered by social security because they are self-employed, unemployed, or out of the workforce.^{144,145} The System of Popular Social Security (SISSP), another form of social insurance, was implemented in 2006 to reduce the number of marginalized individuals in Mexico. In addition to providing housing and retirement benefits, the SISSP offers health services to the nation's poorest population.¹⁴⁶

In 2006, out-of-pocket expenditures accounted for 52.4% and private insurance 4.3% of all healthcare expenditures. Taxes at the federal, provincial, and municipal levels accounted for 12.9% of healthcare expenditures. Depending upon employment, social health insurance is financed through either bipartite employer and employee contributions or tripartite contributions that include federal funds; social health insurance accounted for 30.4% of total health expenditures in 2006.¹⁴

Hospitals

In 2004, there was 1 hospital bed per 1000 people.¹⁴ During this same period, Mexico had more than 4000 hospitals and 77,705 beds; however, only 1047 hospitals were in the public sector. Nonetheless, the public sector accounts for most hospitals beds. Also, whether privately or publicly owned, 86.8% are general hospitals, and most provide emergency and secondary care services.¹⁴⁶

Physicians

Mexico had 195,897 physicians (2 per 1000 people) in 2000,¹⁴ with most providing primary care. In 2002, 45% of all physicians were specialists. Around 27% of physicians work only in private practice where they are paid on a fee-for-service or per capita basis, while the remaining 73% are in public practice. Most physicians in public practice receive salaries, which they may supplement through private practice.¹⁴⁶

Present Problems and Initiatives

Structurally, the Mexican health system has a fragmented funding scheme, has had low public health expenditures, lacks resources and infrastructure within the public sector, has geographic and regional misdistribution of facilities, and is unevenly regulated.¹⁴⁷ The fragmentation of the public sector is a result of specific laws that govern social security. Both private and public sector salaried workers have a right to social security with comprehensive benefits; this legislation divides the population. One section of the population has compulsory health insurance and the

other section without is covered by the federal and state ministries of health. Further problems are evidenced in the social security subsystem, which encourages duplication of supply, resource waste, unfair costs to consumers, and serious coordination problems. In the IMSS-Solidarity public subsystem, there is little consumer choice and concern for quality of care. Budgets and salaries are not tied to productivity or efficiency. Moreover, there is no regular system of accreditation for either public or private healthcare facilities.¹⁴⁸ At the same time, the health system has produced highly inequitable health outcomes, with the working poor suffering the most.¹⁴¹

Initial reports on the impact of Popular Health Insurance (PHI), the operational program of the SSPH, show that overall federal health expenditures had been growing substantially up until the year 2004, but was level in 2005 because social security spending dropped off that year. Overall federal health spending decreased 2.1% in 2006, which resulted in an overall decline of resources in the public sector as well as a redistribution that favored PHI at the expense of the IMSS. The health impact of PHI has also been examined, and although it is unlikely that PHI has had a measurable effect on health in a few short years, mortality data for 1995, 2000, and 2005 show a moderate decrease.¹⁴⁷ Moreover, a rigorous study of the PHI between 2005 and 2006 shows that it has had a positive impact on the public sector by creating greater access to health services for the poorest segment of Mexicans.²⁴

In summary, Mexico has made significant steps toward improving access to the poorest segment of its population. However, it faces the daunting challenge of improving the quality of health services while containing costs. Consolidating the public and social health insurance subsystems into one fund and under one authority would reduce fragmentation and lower administrative costs.¹⁴⁹ A single-payer system would enhance the Mexican government's expansion of health insurance and services to the poor.

The Turkish Healthcare System

During the first two decades following the establishment of the Republic of Turkey in 1923, the country focused on public health programs to control malaria, tuberculosis, and other infectious diseases and established educational programs for healthcare personnel. After World War II, the establishment of the Social Insurance Organization (SIO) helped to provide health, disability, and retirement benefits to workers. During the next decade, the SIO developed a network of hospitals and other facilities for employees to receive health services. A turning point in the provision of health services occurred with the enactment in 1961 of the "Basic Health Law." This act authorized the provision of health services free or partly free-of-charge at the point of delivery. Health service providers were to be paid from premiums and general taxation. The aim was to expand healthcare services—ranging from preventive to tertiary care—and to ensure access to the whole population. However, key aspects under the act, such as collection of premiums, were not implemented.¹⁵⁰ As a result, a large number of public and private agencies emerged to provide and finance health care.¹⁵¹

Until recently, Turkey's health system was a combination of tax-funded, direct provision and social insurance-funded indirect provision of care. This system provided financial coverage to about 85% of the population through some kind of public or private health insurance. In 2003, most people were covered through one of three forms of social health insurance: (1) the Social

Insurance Organization (SSK; 46.3% of the population); (2) the Social Insurance Agency of Merchants, Artisans, and Self-employed (Bağ-Kur; 22.3% of the population); or (3) the Government Employees Retirement Fund (GERF; 15.4% of the population). Less than 1% of the population was covered by private insurance. Those without formal social or private health insurance were issued a Green Card, providing them with access to preventive, primary care, and emergency care in the healthcare facilities managed by the Ministry of Health (MoH). However, as in Greece, informal cash payments also existed, with most of it going toward physician services. Since 2003, Turkey has been implementing a Health Transformation Program (HTP) with the goal of establishing a national health service. The HTP objectives include improving governance, efficiency, user and provider satisfaction, and long-term fiscal sustainability.¹⁵²

Current System Structure and Financing

In 2005, all healthcare facilities that were part of the SSK were transferred to the Ministry of Health.¹⁵³ This change was one key element of the eight-part plan underlying the HTP.

Key elements of the HTP include: i) establishing the MoH as a planning and supervising authority; ii) implementing Universal Health Insurance (UHI) uniting all citizens of Turkey under a single Social Security Institute (SSI); iii) expanding the delivery of health care and making it more easily accessible and friendly; iv) improving the motivation of health personnel and equipping them with enhanced knowledge and skills; v) setting up educational and scientific institutions to support the system; vi) securing quality and accreditation systems to encourage effective and quality health-care services; vii) implementing rational drug use and management of medical materials and devices; and viii) providing access to effective information for decision making, through the establishment of an effective Health Information System.¹⁵²

Other significant changes to the health system have included: (1) The integration of the social security and health insurance institutions—SSK, Bağ-Kur, and GERF—under one institution, the SSI; (2) unification of benefits and management systems (e.g., databases, claims, utilization review) across the different social health insurance plans; (3) movement away from fee-for-service and toward prospective-payment systems that include pay-for-performance incentives; (4) deployment of an integrated primary care system in about a third of the provinces; (5) increased hospital autonomy over resource allocations, coupled with greater accountability to the Ministry of Health; and (6) establishment via the 2008 Social Security and Universal Health Insurance Act of a single-payer system for all public patients.¹⁵²

Taxes paid for 34.5% of total health expenditures in 2006. Out-of-pocket payments, including user charges, accounted for 20% of total health expenditures. Social insurance funded by employer and employee contributions accounted for about 37% of all healthcare expenditures. Private insurance accounted for 8.5% of all health expenditures in 2006.¹⁴

Hospitals

There were about 1200 hospitals in 2007 (2.7 beds per 1000 people in 2006).¹⁴ The Ministry of Health owns and operates 850 hospitals, while 350 are privately owned. Certificate of need legislation restricts the growth of the private sector and reduces duplication of services with publicly owned hospitals. Payment mechanisms for both public and private hospitals are in flux, and the Australian DRG prospective payment system has been piloted in 47 public hospitals. It is likely that a combination of prospective payments and global budgets will be used to control the costs of public hospitals.¹⁵²

Physicians

Turkey had 116,014 physicians, or about 1.6 per 1000 people in 2006.¹⁴ There is a relatively high proportion of specialists compared to general practitioners. Most physicians are paid salaries, and hospital-based specialists are eligible also for performance-based bonuses, which are adjusted to encourage full-time status. There is and has been concern about the current number of physicians being able to meet the demand in Turkey. To overcome this shortage, the Ministry of Health has opened new medical schools and implemented a family medicine–based integrated primary care initiative. Much of primary care has been the responsibility of midwives and nurses, but the integrated primary care initiative has increased the supply of family medicine physicians, both through a rigorous training and an innovative payment system. Family physicians in the integrated primary care initiative receive capitation payments, with incentive bonuses for preventive care services.¹⁵²

Present Initiatives and Problems

Turkey has made good progress in establishing universal access to its national health service. One of the more successful developments has been the introduction of family medicine as a model for providing integrated primary healthcare services. A pilot project was started in 2005, and as of 2008, 23 of 81 provinces in Turkey had adopted the family medicine model.¹⁵² This model calls for the provision of greater preventive and curative basic services to the population. The main providers in this model are state-owned health centers, staffed by a physician, nurses, midwives, health technicians, and medical secretaries. The principal goal is to provide health care to the population with an emphasis on individuals in rural areas where access continues to be a problem. Primary care is also provided by vertically arranged preventive care centers and other primary care clinics operated by the private sector. The main barriers of this new primary care model are the lack of sufficiently trained public health professionals and low enthusiasm of medical practitioners to fulfill duties of preventive and public health services within community health centers. These obstacles might be overcome by providing better working conditions, especially salary, recruiting appropriately trained staff, and collaborating with academic public health departments to determine community health needs.¹⁵⁴

Other future challenges include completing the HTP initiatives previously outlined, especially improving the quantity and quality of health personnel, developing and implementing quality and accreditation systems for healthcare services, managing drug and medical technology costs,

and establishing a nationwide health information system. Long-term challenges include improving the public health infrastructure, addressing geographical inequities in access to health services, containing costs, and improving provider performance and efficiency.¹⁵²

In summary, Turkey has traveled much farther along the path toward a tax-funded, direct provision model than its neighbor, Greece. It has done so by embracing a single-payer system, with public and private health service providers. The 2003 through 2008 reforms have created direct and centralized control of publicly owned healthcare services and have emphasized the coordination of financial, informational, and regulatory activities. On one hand, Turkey is rapidly developing a public system with a healthcare purchaser–provider arrangement similar in many ways to the NHS in the United Kingdom. On the other hand, Turkey has developed the flexibility to purchase services from both public and private healthcare providers, echoing the flexibility recently introduced in Sweden’s NHS.

The United States Healthcare System

Organized health care in the United States began with the almshouses and pest houses of the 1700s. Local governments established these facilities to feed and shelter the orphaned, homeless, elderly, disabled, and chronically or mentally ill, and they provided health care as a secondary function. During the industrial revolution in the United States, advances in science and medical technology all aided in the demand for, and the subsequent development of, nongovernmental for-profit and not-for-profit hospitals. Along with medical advancements came the need to standardize medical education and training. In 1910, Abraham Flexner led a study of medical education. The Flexner Report sparked systematic efforts to standardize medical education.¹⁵⁵ At this same time, concerns about workers’ access to health insurance led progressive politicians such as Teddy Roosevelt and the Bull Moose Party to support compulsory, employer-based, social health insurance in the 1912 presidential election. Roosevelt’s loss to Wilson, coupled with the United States’s entry into World War I, signaled the death of this reform effort. As with other attempts to create a federally supported national health insurance during the 1920s and 1930s, the Progressives met stiff resistance from both physicians and small businesses.¹⁵⁶

During World War II the federal government controlled prices and wages, and many US employers began paying for health insurance as a way to attract and retain employees. At the same time, nonprofit hospitals expanded their missions to care for mentally and physically wounded veterans.¹⁵⁷ After World War II, President Truman pressed Congress for several years to approve legislation establishing national health insurance, but again, reforms were resisted by businesses and physicians.¹⁵⁶ Nonetheless, direct federal involvement in hospitals began in 1947. The Hill-Burton Act was intended to fund the construction of hospitals in rural areas, but amendments extended it to provide grants that matched the funds generated by a community. The federal government’s involvement continued to grow in the mid-1960s with the creation of Medicare (social health insurance for the elderly) and Medicaid (health welfare for the poor) under President Johnson. These programs, along with employer-sponsored health insurance, increased the demand for hospital-based health services. By 1970, hospitals were the center of healthcare services, and healthcare costs had risen dramatically, fueled by Medicare’s “cost-plus” reimbursements.^{157,158}

From 1980 through 1990, health care became less centered in hospitals and outpatient care grew, as both the government and insurers tried various cost containment efforts. The enactment of an inpatient prospective payment system (PPS) for Medicare in 1983 encouraged hospitals, physicians, and healthcare entrepreneurs to enter the ambulatory care arena through joint ventures. In addition, managed care organizations gained market share, and for-profit hospital chains emerged. Moreover, medical technology permitted sophisticated procedures to be delivered in ambulatory rather than inpatient facilities. During the 1990s, small and large employers engaged in managed care contracting in opposition to the national health insurance reforms proposed by President Clinton. At the same time, integrated delivery systems emerged through hospital consolidations and mergers, and through acquisitions of physician practices, long-term care facilities, ancillary services, and health plans. The increasing cost of delivering health care and patients' demands for convenient "one-stop shopping" were two drivers for integration; a third driver was the bargaining leverage gained through market dominance as health systems and networks responded to cost containment pressures from managed care organizations and employers.^{159,160}

Current System Structure and Financing

The current US health system comprises a voluntary, employer-based private insurance subsystem, social health insurance for the elderly, and tax-funded, direct and indirect provision of care. Health expenditures in 2006 were funded through a combination of taxation (32.7%), social health insurance (13.1%), private health insurance (41.5%), and out-of-pocket payments (12.7%).¹⁴ Together, public (27.1%; 80.3 million people) and private (68.0%; 201.7 million people) health insurance covered about 84.2% of the population in 2006, with 15.8% of the population uninsured. Note: 10.9% of the population were covered both by public and private insurance.¹⁶¹ Benefit packages vary with the type of insurance, but typically include inpatient and outpatient hospital care and physician services. Many private plans also include preventive services, dental care, and prescription drug coverage. User charges vary by type of insurance, but typically include outpatient and prescription drug co-payments, as well as deductibles for hospitalization.

The federal government is the single largest healthcare insurer and purchaser. Medicare covers health services for the elderly, the disabled, and those with end-stage renal disease. Administered by the Centers for Medicare and Medicaid Services (CMS), Medicare covered 13.8% of the population in 2006.¹⁶² The program is financed through a combination of payroll taxes, general federal revenues, and premiums. It accounted for 19.04% of total health expenditures in 2006.¹⁶³ Medicaid, a joint federal–state health benefit program, covers targeted groups of the poor (e.g., pregnant women, families with children, and the disabled). Medicaid is administered by the states, which operate within broad federal guidelines overseen by the CMS. It covered 12.9% of the population in 2006^{161,164} and accounted for 14.65% of total health expenditures in 2006. The program is financed by federal tax revenues (8.65% of total health expenditures in 2006), which match tax revenues raised by each state (6.4% of total health expenditures in 2006).¹⁶³ The ratio of matching federal funds varies for each state depending upon its per capita income. The State Children's Health Insurance Program (SCHIP)

is a state–federal health benefit program targeting poor children. SCHIP is jointly administered by the CMS and the states and is funded by federal and state taxes (0.4% of total health expenditures in 2006).¹⁶³

Private insurance is provided by not-for-profit and for-profit health insurance companies and is regulated by state insurance commissioners. Individuals can purchase private health insurance, although most people receive employer-based insurance. Many large employers self-fund health benefits for their employees, using insurance companies as third-party administrators. Private insurance covered 68.8% of the total population, with 59.7% of the population receiving employment-based insurance in 2006.¹⁶² Private insurance, including that provided by employers, accounted for 34.61% of total health expenditures in 2006.¹⁶³

Hospitals

In 2005, there were about 3.2 hospital beds per 1000 people.¹⁴ In 2007, the United States had 4897 community hospitals, of which 2913 were not-for-profit, 873 were for-profit, and 1111 were public (owned by state or local governments). In contrast, the federal government operated only 213 hospitals (serving veterans, active members of the armed services, and Native Americans) in 2007. Hospitals typically are parts of organized delivery systems, with most US community hospitals being either a member of an integrated delivery system ($n = 2730$) and/or network ($n = 1472$) in 2007.¹⁶⁵ For-profit, not-for-profit, and public hospitals are paid through a combination of methods: per diem charges, case rates, capitation, and prospective payments based on DRGs (diagnostic-related groups).

Physicians

In 2000, there were 730,801 physicians, or about 2.6 physicians per 1000 people.¹⁴ General practitioners usually have no formal gatekeeper function, except within some managed care plans. While the majority of physicians are in private practice, increasingly physicians are being employed by medical group practices, hospitals, health maintenance organizations, or organized delivery systems.⁷⁷ They are paid through a combination of methods: charges, discounted fees paid by private health plans, capitation contracts with private plans or public programs, and direct patient fees.

Present Problems and Initiatives

The US health system presently faces concerns about the rising number of the uninsured, increases in insurance premiums, and ineffective and uncoordinated care. Past efforts to address cost and quality issues highlighting the complexity of problems facing the fragmented US system of health care will be discussed.

To control costs, the United States has deployed managed care within the employer-based insurance market and has mandated various cost containment measures in both Medicare and Medicaid. During the 1990s, third-party payers and private insurers attempted to control cost growth through a combination of selective provider contracting, discounted price negotiations, utilization control practices, risk-sharing payment methods, and other managed care techniques. Although managed care techniques contained the costs of care during most of the

1990s, premium costs have recently increased at a rate above inflation. Government efforts to curb costs have had mixed results. Following the Balanced Budget Act of 1997, the federal government introduced additional prospective payment systems and reduced reimbursements for hospitals, physicians, and others providing services to Medicare and Medicaid recipients.¹⁶⁶ While these efforts contained governmental costs, many of these costs have been passed on through providers to patients, increasing the burden of out-of-pocket expenses. This problem is most noticeable for Medicare beneficiaries who often face steep out-of-pocket costs for drugs and other noncovered services.

Ironically, quality of care did not become a public issue until managed care, with its explicit rationing, became dominant in the United States; as a managed care backlash emerged within the public during the late 1990s, so did concerns about medical errors and reduced services.¹⁶⁷ Nonetheless, practically all US hospitals have established continuous quality improvement programs in order to comply with voluntary standards imposed by accrediting bodies such as the Joint Commission (<http://www.jointcommission.org>). A voluntary private–public endeavor, the National Committee for Quality Assurance (NCQA) accredits private health plans and has been instrumental in developing the Healthcare Effectiveness Data and Information Set (HEDIS), which is used by more than 90% of US health plans. During the 1990s, the NCQA had a growing impact on improving the quality of patient care provided through managed care organizations; participating organizations voluntarily report patient satisfaction and other measures of quality as measured using HEDIS, and NCQA produces report cards on their performance.¹⁶⁸ Additionally, the federal government through the Agency for Healthcare Quality and Research funds numerous efforts to improve clinical and overall quality, including evidence-based medicine guidelines and protocols. Other notable initiatives include pay-for-performance, which has been championed and piloted by the Bridges to Excellence coalition (programs reward physicians for improving cardiac and diabetes outcomes and using health information technology), the Leapfrog Group (Hospital Rewards Program), and Medicare (multiple demonstration projects for both hospitals and medical group practices). Lastly, the Institute for Healthcare Improvement (IHI) has promoted quality improvement and patient safety around the world. Within the United States, the IHI has had remarkable impact through campaigns such as the 100,000 Lives Campaign (2004–2006) and the 5 Million Lives Campaign (2006–2008).

Nonetheless, healthcare costs, quality (continued problems with effective, coordinated, safe, and timely care), and financial access remain concerns to the US public and legislators. Numerous proposals for reforming the US health system were proposed in 2000–2001 when the US federal government had a significant budget surplus. Several of those proposals took into account the long history of opposition to a National Health Service in the United States,¹⁶⁹ and put forth plans to achieve universal insurance coverage within the health system.^{170–172} A consistent focus in these proposals was that voluntary, employer-based health insurance should become compulsory.

Now, under President Obama's administration, and in the face of an international recession and a significant federal deficit, health reform has reemerged as a high priority. The fiscal year 2010 budget includes \$630 billion over the next 10 years to help finance health reform. Both

the Senate and the House of Representatives have debated multiple models for reforming US health care, ranging from single-payer models to multipayer models, with either individual- or employer-based mandates. However, as of August 2009, the key legislative proposals from both the House and the Senate are focused on multipayer models, with individual-based mandates for health insurance.¹⁷³

Recall that making financial access to and provision of health care both equitable and cost-effective are the predominant values driving most ethical and political arguments for changing national healthcare systems. Each national health system discussed in this chapter has dealt with trade-offs among financial access, cost, and quality in order to provide both equitable and cost-effective health care. These trade-offs are, in turn, influenced by two key factors: (1) financing, that is, how monies are mobilized and allocated for the provision of health care; and (2) how health services are organized, that is, who provides services and the relative weights placed on the provision of primary and tertiary care. Both of these factors provide the basis of our recommendations for reforming US health care, which we articulate in the concluding section of this chapter.

Summary Lessons: Using Mixed Models for Funding and Providing Health Care

All of the countries using mixed models for funding and providing health care have problems ensuring that quality care is equitably accessible and is cost-effective. As a result, all of these countries have been reforming their health systems. On one hand, during the past decade, Turkey enacted a transformational health reform to achieve universal financial access to care; on the other hand, Greece enacted incremental health reforms primarily to contain costs. However, most of these countries—Argentina, Brazil, Indonesia, Mexico, and the United States—have or are attempting to incrementally improve access to care.

Turkey has avoided many of the problems Greece has faced by establishing a decentralized, publicly funded primary care network, consolidating its social health insurance into one fund, centralizing the management of its public hospitals, and providing universal access to health insurance. If it can continue to grow its economy and implement its reforms, Turkey will soon transform its mixed model system to a national health service with a substantial public–private provider partnership.

Shared Concerns and Learning Opportunities

The comparisons of the United States with the 11 countries in this chapter raise a number of issues. Do these countries face the same social, economic, and demographic problems as the United States? On the one hand, the industrialized countries that have been examined to this point share many similarities with the United States; on the other hand, many of the middle- and low-income countries face greater social, economic, and demographic problems.

As **Table 1.3** illustrates, one major demographic characteristic of the United States is its large population—ranging from 32.4 times the size of Sweden to 3.4 times the size of

Table 1.3 Demographic, Economic, and Social Comparisons among 12 Nations, Ordered by GDP per Capita

	GDP per Capita (PPP US dollars, 2007 est.)	Distribution of Family Income (Gini Index)	Surface Area (square kilometers)	Population (2008; in thousands)	Population Density (square kilometer)	Growth Rate (2008)	International Ranking by Population (2008)
Indonesia	\$ 3,121	36.3	1,919,440	237,512	123.7	1.2	4
Brazil	\$ 9,500	56.7	8,511,965	196,343	23.1	1.2	5
Turkey	\$12,000	43.6	780,580	71,893	92.1	1.0	17
Mexico	\$12,400	50.9	1,972,550	109,955	55.7	1.1	11
Argentina	\$13,100	49.0	2,766,890	40,482	14.6	1.1	30
Greece	\$30,600	33.0	131,940	10,723	81.3	0.1	74
Germany	\$34,100	28.0	357,021	82,370	230.7	0.0	15
United Kingdom	\$35,000	34.0	244,820	60,944	248.9	0.3	22
Sweden	\$37,500	23.0	449,964	9,045	20.1	0.2	88
Canada	\$38,600	32.1	9,984,670	33,213	3.3	0.8	37
Netherlands	\$39,000	30.9	41,526	16,645	400.8	0.4	59
United States	\$45,800	45.0	9,826,630	303,825	30.9	0.9	3

Sources: US Bureau of the Census. 2008. *International Data Base: Vital Rates* [Internet: <http://www.census.gov/ipc/www/idb/summaries.html>], and Central Intelligence Agency. 2008. *The World Factbook* [Internet: <https://www.cia.gov/library/publications/the-world-factbook/index.html>].

Germany. Only Indonesia and Brazil have a population nearing the size of the United States. Another major characteristic of the United States is its per capita income; it is the highest in this comparison group, but is typically grouped with other high-income nations such as Canada, Germany, Greece, the Netherlands, Sweden, and the United Kingdom. Others in this comparison have moderate per capita incomes, except Indonesia. Both the United States and Canada have moderate growth rates, while all of the European countries have low, and the middle- and low-income countries high, growth rates. Importantly, the high growth rates in the middle- and low-income countries place special demands on their healthcare systems for prenatal, maternal, and childcare services, which are best met by primary care networks of providers.

Arguably, of the 11 other countries that have been reviewed, the German and Dutch healthcare systems are the most comparable to the US system.^{174,175} However, lessons can also be drawn from the United Kingdom's and Sweden's National Health Service and Canada's single-payer models, albeit with careful attention to the fundamental differences with the US system.

Toward US Convergence with the Three Prototypical Healthcare Systems?

During the early 1990s, the changes in not only Germany and the Netherlands, but also in both the United Kingdom and Sweden created a mixture of regulation and market competition that seemed to converge with the government-driven reforms that President Clinton proposed in the United States.¹⁷⁶ That is, the vision of a US healthcare system of managed competition with a budgetary cap on total spending was similar to what was already occurring in Canada and several European countries, including the Netherlands, Sweden, and the United Kingdom.¹⁷⁷ With regard to financing health care, Canada, Sweden, and the United Kingdom rely primarily on income as well as other taxes to fund health care, and a single payer—the government—disburses these funds. In contrast, Germany and the Netherlands rely largely on payroll taxes for funding health care, disbursing these funds via a multipayer mixture of either public or private insurance. The problem facing each country, as Chris Ham notes, is that it must determine how to combine the control of expenditures at the macro level with real incentives for efficiency at the micro level. The country that is able to solve this puzzle will indeed be the envy of the world.^{178, p. 1224}

Within this context, it is significant that Canada, Germany, the Netherlands, Sweden, and the United Kingdom have been implementing various elements of managed competition in order to address the problem Ham has underscored. In each of these countries, managed competition has been viewed as a way to increase providers' efficiency when delivering health care, thus balancing the macromanagement of financing health care practiced in each country with a quasi-market mechanism for micro-managing expenditures.¹⁷⁹

Aided by the concern over the rising costs of health care, market-driven reforms—predominately managed care mechanisms for financing and integrating systems or networks for delivering health care—were rapidly adopted throughout many regions in the United States during the 1990s. These reforms had the most impact, respectively, on reducing the demand for health care and improving the effectiveness of medical interventions across the continuum of care. Although the benefits of managed care and the effectiveness of integrated delivery systems certainly can be questioned, together they can be credited with containing the aggregate costs of health care in the United States to 13.6% of the gross domestic product from 1992 through 1996.¹⁸⁰

Currently, while elements of the United States's managed care practices—ranging from DRGs to disease management—are being implemented or considered by almost all of the national health systems we have reviewed, and the integration of care delivery is a concern for all of these health systems, the convergence between the United States and these systems is limited. Emphasizing this point, Saltman and Figueras argue that the United States needs to consider both supply-side controls on, and more extensive federal regulation of, health care in order to achieve the same degree of cost containment as has been achieved by these prototypical healthcare systems.¹⁸¹

Conclusions about Health Systems Prototypes

Healthcare systems like the United Kingdom's and Sweden's provide universal access to health care by relying primarily on taxes to fund the direct provision of care, but each country must ra-

tion health services in order to control costs. On one hand, the United Kingdom's network of primary care providers serve as gatekeepers, implicitly rationing by limiting access to specialists and hospitals, thus controlling costs. On the other hand, the already decentralized Swedish NHS uses explicit rationing to maintain high-quality care, to contain costs, and to uphold universal access to basic health services. Rationing, however, shifts the costs of elective health services to consumers, increasing out-of-pocket expenses.

An alternative to this prototype is Canada's tax-funded, indirect provision of care. The decentralized Canadian healthcare system achieves universal access, high quality, and moderate costs through implicit (e.g., primary care gatekeeping) and explicit (e.g., technology assessment) rationing of services. Like Sweden, the Canadian system's rationing shifts elective service costs to consumers, increasing out-of-pocket and supplementary private insurance expenditures.

Both the German and Dutch models of compulsory health insurance provide universal access and achieve high quality, albeit through public (German) and private (Dutch) insurance. Both have adopted certain US managed care techniques and have introduced different forms of managed competition between insurers and providers to increase efficiency. To counter the risk avoidance and resulting inequitable financial access inherent within any system relying on multiple social health insurance funds, both the Dutch and the Germans have introduced risk equalization schemes.

Lessons for Reforming the US Health System

As the United States addresses concerns about financial access for its uninsured population while attempting to contain the costs of health care, five recommendations may be drawn from this review of these 11 healthcare systems. These recommendations focus on providing equitable access and creating healthcare value through (1) universal financial access, (2) integrated primary care, (3) evidence-based health improvement, (4) performance-based payment systems, and (5) integrated health information systems.

Adopt an Individual Compulsory Health Insurance Model

The US health system is unique in relying on voluntary, employer-based health insurance for most of its population. As with Mexico, the reform that would be the least disruptive and would generate the least amount of stakeholder resistance in the United States would be the Dutch (individual) compulsory health insurance model. The legislation being debated in Congress proposes various ways that such a compulsory insurance model could be enacted; what has been lacking has been the political will and coherent vision to enact such a reform in a meaningful way.

A compulsory individual insurance model has several prerequisites, including (1) a basic set of services that every insurer must cover, (2) guaranteed issue to anyone seeking coverage from an insurer, (3) a fixed premium from the insurer for all those insured under the basic coverage, and (4) a *post hoc* risk equalization scheme. This fourth element, especially, is necessary since it

would deter health insurers from making premiums unaffordable to high-risk individuals. On the one hand, an insurer with sicker enrollees would have those costs offset by the risk equalization fund at the end of each year; on the other hand, an insurer with healthier enrollees would forgo a portion of the premium set aside in the risk equalization fund. The four elements, taken together, would allow private insurance companies to offer basic insurance packages to anyone, without assuming untoward risk. Lastly, if health insurers are to compete on a level playing field across the United States, regulation of health insurance should be at the federal level.

Adopt Integrated Preventive and Primary Care

Regardless of the health system prototype, countries that have established integrated primary care services have had remarkable improvements in their population's health status. Brazil, Indonesia, and Turkey are exemplars of this trend in moderate and low-income countries. Variations of this model are also deployed in Canada, Germany, the Netherlands, and the United Kingdom. Because the focus is on preventive and primary care services that enhance wellness within families and across generations, integrated primary care is more than a gate-keeping model for controlling access to high-cost, tertiary care. Within high-income countries with rapidly aging populations, various models of integrated primary care address the problems of chronic diseases and help to coordinate the continuum of care. The after-hours primary care collaboratives in the Netherlands, in conjunction with a national health information system, is one innovative way to address concerns about 24-hour access to care. The medical home model in the United States is another way to approach these concerns while reaping the benefits inherent in providing preventive and primary care to everyone.

In the medical home model, the primary care provider is responsible for three types of services: (1) preventive care, including patient education to improve self-care; (2) primary care; and (3) coordination of secondary and tertiary care. On the one hand, preventive and primary care services maintain wellness and cure or manage common ailments; on the other hand, coordinating secondary and tertiary care reduces hospitalization and rehospitalization, especially for those with chronic illnesses. To establish medical homes, the United States must address several shortcomings in its current system, including funding for such services and the maldistribution of primary care physicians relative to specialists. Recognizing and encouraging the use of mid-level providers in underserved areas throughout the United States is one way to address the supply issue; another is to provide more equitable funding for primary care physicians; and a third is to expand the training and incentives for medical students choosing primary care as a specialty.

Put into Practice Evidence-Based Health Improvements

Closely linked with the need to adopt an integrated preventive and primary care model is the need to improve health care by using evidence-based medicine and evidence-based management practices. Different countries are using different approaches, ranging from comparative effectiveness research for drugs (e.g., Germany and the United Kingdom) to establishing evidence-

based guidelines for treating various diseases (e.g., the Netherlands and Canada) to safety registries for medical devices (e.g., Sweden).

Within the United States, evidence-based medicine is well recognized and many guidelines have been developed, but there remain significant delays in the adoption of best medical practices among physicians, hospitals, and other healthcare providers. Currently, Medicare has implemented a pay-for-reporting system for physicians, hospitals, and other providers, allowing it to track various quality indicators and aspects of best medical practices. Moreover, the American Recovery and Reinvestment Act of 2009 created the Federal Coordinating Council for Comparative Effectiveness Research, providing both funding and oversight for such research within the Agency for Healthcare Research and Quality, the National Institutes for Health, and the Offices of the Secretary of Health and Human Services. While these initiatives are a start, the United States needs to maintain this investment in research and implement best practices by incentivizing health providers.

Establish Performance-Based Payment Systems

Aligning the incentives for health providers with the desired outcomes for patients, for communities, and for regional and national populations is a major challenge, but one worth addressing. Not surprisingly, Canada, Germany, the Netherlands, Sweden, Turkey, the United Kingdom, and the United States have, and are experimenting with, various forms of performance-based payment systems for hospitals and physicians, as well as other healthcare providers.

Within the United States, Medicare should deploy various performance-based payment systems for hospitals, physicians, and other providers. Fortunately, Medicare is testing a pay-for-performance payment system through the Premier Hospital Quality Incentive Demonstration, and has developed a plan for deploying value-based purchasing within its fee-for-service program. However, a system is needed to pay for integrated preventive and primary care services that maintain the wellness, cure the non-acute illnesses, manage the chronic conditions, and coordinate the secondary and tertiary care for Medicare recipients. The United States could base a performance-based system for primary care on the United Kingdom's system of GP payments, which uses a mix of capitation fees, fixed allowances for practice costs, bonus payments linked to quality processes and outcomes, and specific fees for enhanced services (such as coordination of care).

Implement a National Health Information System

The United States should develop a system for sharing electronic health records among healthcare providers and with patients. National health information systems are being established in most high- and some moderate-income countries. Canada, Germany, the Netherlands, Sweden, Turkey, the United Kingdom, and the United States are all in different phases of development, with the systems in Sweden and the United Kingdom the most developed at this time. Both the Swedes and the English have devoted significant funding to these initiatives. Importantly for the United States, the success of both performance-based payment systems and evidence-based health improvement initiatives depend on the rapid collection and sharing of health data.

In the United States, two critical initiatives for establishing a national health information system are included in the American Recovery and Reinvestment Act of 2009. One is a four-year program for each state to develop a health information exchange; the other is a four-year program for establishing 70 regional extension centers to promote the adoption of electronic health records by primary care providers. While the two initiatives provide a welcome launching pad for the adoption and meaningful use of electronic health records for primary care providers within underserved areas of the United States, a funding model is needed to develop a sustainable health information system. Given our recommendation that the United States adopt an individual health insurance model, private insurers should also be required to support the national health information exchange. One method would be a per capita charge that is part of the premium for each individual. At the same time, both the Medicare and Medicaid programs should have a portion of program funding devoted to supporting the national health information exchange.

In closing, the US healthcare system can benefit from looking at the successes and failures within other systems. We believe that the insular focus of many of the healthcare reform discussions during the past decade miss the opportunity to gain perspective and insight from other healthcare systems. Certainly, it is hoped that makers and all healthcare stakeholders will begin to take a look around the world in order to improve the financing, organizing, and delivery of health care in the United States.

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