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Explaining High Health Care Spending in the United States: An International Comparison of Supply, Utilization, Prices, and Quality

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ABSTRACT: This analysis uses data from the Organization for Economic Cooperation and Development and other sources to compare health care spending, supply, utilization, prices, and quality in 13 industrialized countries: Australia, Canada, Denmark, France, Germany, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States. The U.S. spends far more on health care than any other country. However this high spending cannot be attributed to higher income, an older population, or greater supply or utilization of hospitals and doctors. Instead, the findings suggest the higher spending is more likely due to higher prices and perhaps more readily accessible technology and greater obesity. Health care quality in the U.S. varies and is not notably superior to the far less expensive systems in the other study countries. Of the countries studied, Japan has the lowest health spending, which it achieves primarily through aggressive price regulation.

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INTRODUCTION

Health care spending is a key component of any industrialized country's economy. It provides a major source of employment, often for highly skilled workers and in rural areas without other significant industries. In addition, the development of drugs and medical technologies can lead to breakthrough products, innovation hubs, and new markets. Most important, health spending satisfies fundamental individual and social demands for services that bring improved health, greater productivity, and longer lives.

Compared with most other sectors of the economy, a large share of health care is publicly funded. In all industrialized countries, with the exception of the United States, health care affordability is ensured through universal insurance-based or tax-financed systems.[1] In the U.S., public funds contribute to health care through

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insurance programs like Medicare and Medicaid, as well as through tax policy that supports employer-sponsored health insurance, delivery systems like the Veterans Health Administration, and research by the National Institutes of Health. Because of the significant public sector stake in health care, ensuring we receive value for this investment is a compelling social concern.

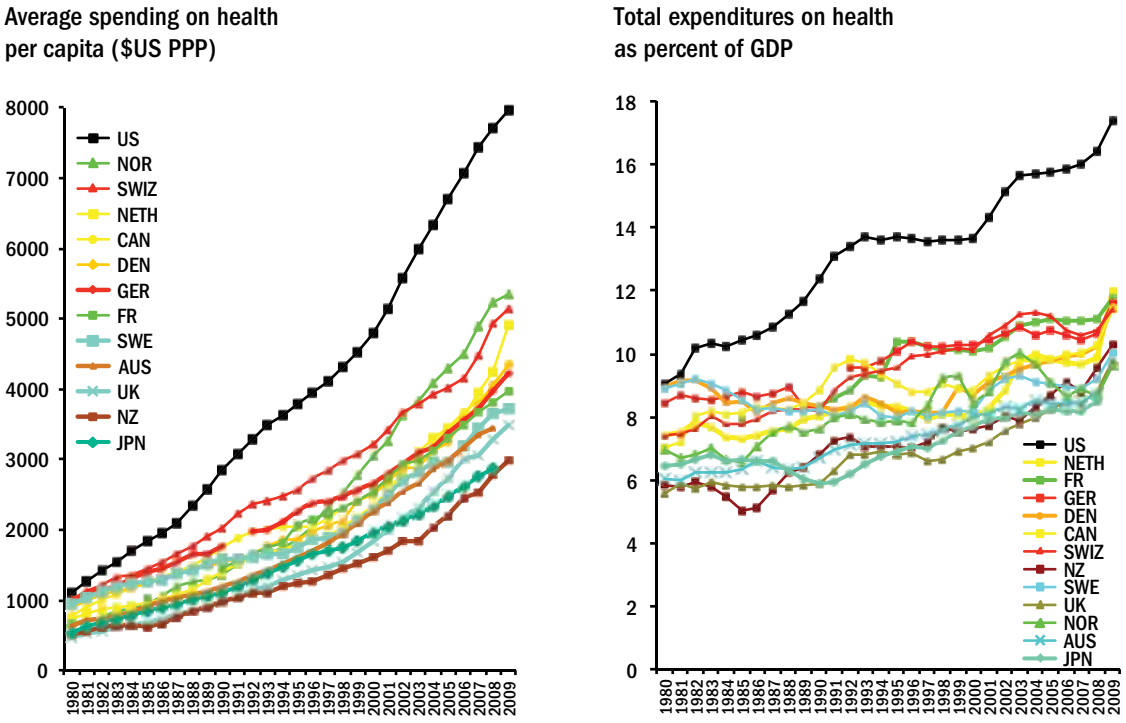
This study updates previous cross-national studies sponsored by The Commonwealth Fund using health data from the Organization for Economic Cooperation and Development (see Methods).[2,3] It compares health care spending, supply, utilization, prices, and quality in 13 industrialized countries: Australia, Canada, Denmark, France, Germany, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the U.K., and the U.S. The analysis finds that the U.S. spends more than all other countries on health care, but this higher spending cannot be attributed to higher income, an aging population, or greater supply or utilization of hospitals and doctors. Instead, it is more likely that higher spending is largely due to higher prices and perhaps more readily accessible technology and greater obesity. Despite being more expensive, the quality of health care in the U.S. appears to be variable, with better-than-average cancer survival rates, middling in-hospital mortality rates for heart attacks and stroke, and the worst rates of presumably preventable deaths due to asthma and amputations due to diabetes compared with the other study countries. In contrast, Japan, which has the lowest health spending among these countries, controls costs primarily through aggressive price regulation—demonstrating the powerful correlation between health care prices and total spending.

KEY FINDINGS

Health Care Spending in the U.S. Is Far Greater Than in Other Industrialized Countries

As previous studies have shown, health care spending in the U.S. dwarfs that found in any other industrialized country. In 2009, U.S. spending reached nearly $8,000 per capita. The other study countries spent between one-third (Japan and New Zealand) and two-thirds (Switzerland and Norway) as much (Exhibits 1 and 2).[4]

Exhibit 1. International Comparison of Spending on Health, 1980–2009



Note: PPP = Purchasing power parity—an estimate of the exchange rate required to equalize the purchasing power of different currencies, given the prices of goods and services in the countries concerned.
Source: OECD Health Data 2011 (Nov. 2011).

Exhibit 2. Health Spending in Select OECD Countries, 2009

	Population (millions)	GDP per capita[b]	Total health spending		Health spending, by source of financing		
			Per capita[b]	% GDP	Public	Private	Out-of-pocket
Australia	22.0	$39,924	$3,445[a]	8.7%[a]	$2,342[a]	$476[a]	$627[a]
Canada	33.4	$38,230	$4,363	11.4%	$3,081	$646	$636
Denmark	5.5	$37,706	$4,348	11.5%	—	—	—
France	62.6	$33,763	$3,978	11.8%	$3,100	$587	$291
Germany	81.9	$36,328	$4,218	11.6%	$3,242	$424	$552
Japan	127.5	$32,431	$2,878[a]	8.5%[a]	$2,325[a]	$99[a]	$454[a]
Netherlands	16.4	$41,085	$4,914	12.0%	—	—	—
New Zealand	4.3	$28,985	$2,983	10.3%	$2,400	$184	$399
Norway	4.8	$55,730	$5,352	9.6%	$4,501	$43	$808
Sweden	9.3	$37,155	$3,722	10.0%	$3,033	$69	$620
Switzerland	7.7	$45,150	$5,144	11.4%	$3,072	$504	$1,568
United Kingdom	60.9	$35,656	$3,487	9.8%	$2,935	$188	$364
United States	306.7	$45,797	$7,960	17.4%	$3,795	$3,189	$976
OECD Median	***10.7***	***$33,434***	***$3,182***	***9.5%***	***$2,400***	***$193***	***$559***

[a] 2008.
[b] Adjusted for differences in cost of living.
Source: OECD Health Data 2011 (Nov. 2011).

Accounting for differences in national income, the U.S. still far outspent the other countries, dedicating more than 17 percent of its gross domestic product (GDP) to health care compared with 12 percent or less in all other countries. These figures reflect health spending inflation that has rapidly surpassed GDP in recent decades.

While there is a positive correlation between health spending and per capita income in the 34 member countries in the Organization for Economic Cooperation and Development (OECD), the higher spending observed in the U.S. does not seem primarily attributable to greater income. In the wealthiest of the study countries, Norway, health spending accounts for only 9.6 percent of GDP—nearly 8 percentage points less than in the U.S. (Exhibit 2). Based on national income and health spending in other OECD countries, a linear regression would predict that U.S. health spending would be $4,849 per capita or 11 percent of GDP—far less than is actually observed.[5]

Public spending in the U.S. accounted for almost half of all health spending in 2009, whereas in other countries it accounted for between 60 percent (Switzerland) and 84 percent (Norway and the U.K.) However, in terms of spending per capita, only Norway ($4,501) had higher public health care spending than the U.S. ($3,795). In fact, public per capita spending in the U.S. exceeded total per capita health spending in Sweden, the U.K., Australia, New Zealand, and Japan.

U.S. Has Smaller Elderly Population and Fewer Smokers, But Higher Obesity Rates

One potential explanation for the high level of U.S. health care spending is to attribute it to the aging population, as the baby boom generation enters retirement age with correspondingly greater health care needs. However, this theory does not appear to be borne out. While the population is growing older, the U.S. has a relatively young population compared with the other study countries (Exhibit 3). Only 13 percent of the U.S. population was older than 65 in 2009, compared with the OECD median of nearly 16 percent. New Zealand was the only study country with a smaller elderly population than the U.S., whereas more than one-fifth of the populations of Germany and Japan were over 65. Moreover, the proportion of the U.S. population over age 65 has grown relatively slowly in recent years, rising only 0.5 percent since 1999, suggesting that an aging demographic has not been a primary driver of health spending increases over the past decade.

Exhibit 3. Determinants of Health in Select OECD Countries, 2009

	Percent of population over age 65		Tobacco consumption (% population age 15+ who are daily smokers)		Obesity (% population with BMI ≥ 30)	
	1999	2009	1999	2009	1999	2009
Australia	12.3%	13.3%	22.1%[e]	16.6%[b]	21.7%	24.6%[b]
Canada	12.5%	13.9%	23.8%[e]	16.2%	13.6%[c,d]	24.2%[a]
Denmark	14.9%	16.1%	31.0%	19.0%	—	—
France	15.9%	16.7%	28.0%	26.2%[a]	8.2%[c,d]	11.2%[a,c]
Germany	16.1%	20.5%	24.7%	21.9%	11.5%[c]	14.7%[c]
Japan	16.7%	22.7%	33.6%	24.9%	2.8%	3.9%
Netherlands	13.5%	15.2%	27.8%	28.0%	8.7%[c]	11.8%[c]
New Zealand	11.7%	12.8%	26.0%	18.1%[b]	18.8%[e]	26.5%[b]
Norway	15.4%	14.8%	32.0%	21.0%	6%[d,c]	10.0%[a,c]
Sweden	17.3%	17.9%	19.3%	14.3%	8.1%[c]	11.2%[c]
Switzerland	15.2%	17.2%	28.9%[f]	20.4%[b]	6.8%[c,e]	8.1%[b,c]
United Kingdom	15.8%	15.8%	27.0%[e]	21.5%	20.0%	23.0%
United States	12.5%	13.0%	19.2%	16.1%	30.5%[f]	33.8%[a]
OECD Median	***14.5%***	***15.8%***	***26.0%***	***21.5%***	—	—

Note: BMI = body mass index.
[a] 2008.
[b] 2007.
[c] Self-reported data as opposed to directly measured; tends to underestimate.
[d] 1998.
[e] 1997.
[f] 2000.
Source: OECD Health Data 2011 (Nov. 2011).

Lifestyle and behavior are also major determinants of health, which in turn have an impact on health care needs and spending. The OECD reports on several health-related lifestyle and behavioral indicators, including tobacco consumption and obesity. Adults in the U.S. were the least likely to be daily smokers than in all of the study countries except for Sweden. In 2009, 16 percent of U.S. adults were daily smokers compared with the OECD median of 21.5 percent (Exhibit 3). In Japan, France, and the Netherlands, one-quarter or more of the population over age 15 are smokers. Over the past decade, smoking rates have declined in all countries except the Netherlands.

The story is very different for obesity, which is defined as having a body mass index (BMI) equal to or greater than 30. One-third of the U.S. population is obese—higher than the proportion in any OECD country. However, in many countries only self-reported data (rather than direct measurements) are available, which tend to underestimate obesity. Notably, more than one-fifth of the population is also obese in several study countries, including New Zealand (27%), where the prevalence jumped by nearly 8 percentage points over the past decade compared with only 3 percentage points in the U.S. (Exhibit 3).

Higher rates of obesity undoubtedly inflate health spending; one study estimates the medical costs attributable to obesity in the U.S. reached almost 10 percent of all medical spending in 2008.[6] However, the younger population and lower rates of smoking likely have an opposite effect, reducing U.S. health care spending relative to most other countries.

U.S. Has Below-Average Supply and Utilization of Physicians, Hospitals Beds

Another commonly assumed explanation for higher U.S. health care spending is that the utilization or supply of health care services in the U.S. must be greater than in

other countries. OECD data suggest, however, that this assumption is unfounded, at least when it comes to physician and hospital services. There were 2.4 physicians per 1,000 population in the U.S. in 2009, fewer than in all other study countries except Japan. Likewise, patients had fewer doctor consultations in the U.S. (3.9 per capita) than in any other country except Sweden (Exhibit 4).

Hospital supply and use showed similar trends, with the U.S. having fewer hospital beds (2.7 per 1,000 population), shorter lengths of stay for acute care (5.4 days), and fewer discharges (131 per 1,000 population) than the OECD median (Exhibit 4). Exhibit 5, however, shows that hospital stays in the U.S. were far more expensive than in the other study countries, exceeding $18,000 per discharge compared with less than $10,000 in Sweden, Australia, New Zealand, France, and Germany. This could indicate that U.S. hospital stays tend to be more resource-intensive than in other countries or that the prices for hospital services are higher.

Prices for Drugs, Office Visits, and Procedures Are Highest in the U.S.

Exhibit 6 shows prices for selected health services and products to be higher in the U.S.—far higher, in some cases—than in the other study countries. According to an analysis by Gerard Anderson of IMS Health data, U.S. prices for the 30 most-commonly prescribed drugs are one-third higher than in Canada and Germany, and more than double the prices in Australia, France, Netherlands, New Zealand, and the U.K. (Exhibit 6).[7] Notably, prices for generic drugs are lower in the U.S. than in these other countries, whereas prices for brand-name drugs are much higher.

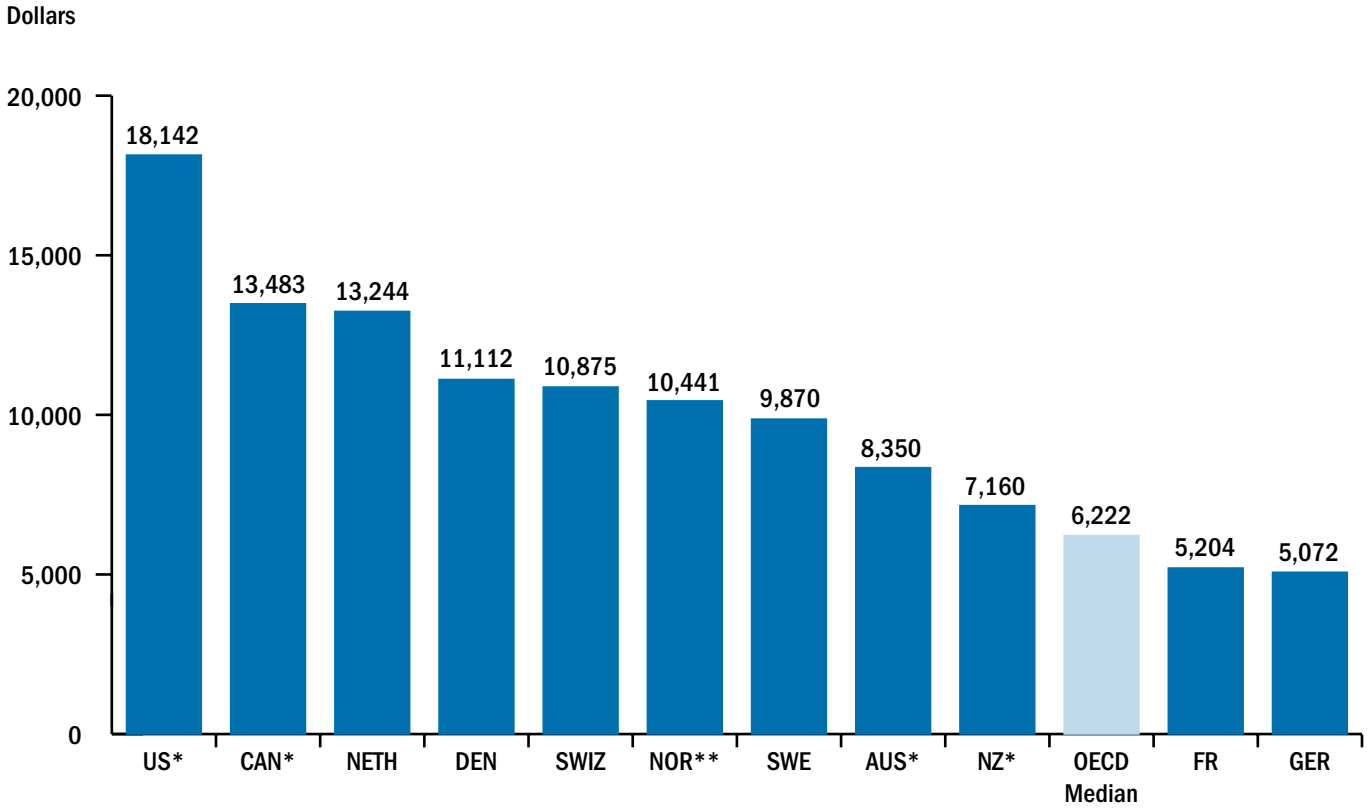
Spending on physician services is an even larger component of total health spending than pharmaceuticals. In an analysis published in *Health Affairs* in 2011, Miriam Laugesen and Sherry Glied found U.S. primary care physicians generally receive higher fees for office visits and orthopedic physicians receive higher fees for hip replacements than in Australia, Canada,

Exhibit 4. Supply and Utilization of Doctors and Hospitals in Select OECD Countries, 2009

	Physician supply and use		Hospital supply and use		
	Practicing physicians per 1,000 population	Doctor consultations per capita	Acute care hospital beds per 1,000 population	Average length of stay for acute care (days)	Hospital discharges per 1,000 population
Australia	3.0[a]	6.5	—	5.9[a]	162[a]
Canada	—	5.5[a]	1.8[a]	7.7[a]	84[a]
Denmark	3.4[a]	4.6	2.9	—	170
France	—	6.9	3.5	5.2	263
Germany	3.6	8.2	5.7	7.5	237
Japan	2.2[a]	13.2[a]	—[d]	—[d]	—[d]
Netherlands	—	5.7	3.1	5.6	117
New Zealand	2.6	4.3[b]	—	5.9[a]	142[a]
Norway	4.0	—	2.4	4.6	177
Sweden	3.7[a]	2.9	2.0	4.5	166
Switzerland	3.8	4.0[b]	3.3	7.5	168
United Kingdom	2.7	5.0	2.7	6.8	138
United States	2.4	3.9[a]	2.7[b]	5.4	131[a]
OECD Median	***3.0***	***6.3***	***3.2***	***5.9***	***160***

[a] 2008.
[b] 2007.
[c] Adjusted for differences in cost of living.
[d] A significant amount of hospital care is dedicated to long-term care in Japan, making cross-national comparison difficult.
Source: OECD Health Data 2011 (Nov. 2011).

Exhibit 5. Hospital Spending per Discharge, 2009
Adjusted for Differences in Cost of Living



* 2008.
** 2007.
Source: OECD Health Data 2011 (Nov. 2011).

Exhibit 6. Drug Prices and Physician Fees in Select OECD Countries

	Prices for 30 most commonly prescribed drugs, 2006–07 (U.S. set at 1.00)[a]			Primary care physician fee for office visits, 2008[b,c]		Orthopedic physician fee for hip replacements, 2008[b,c]	
	Brand name	Generic	*Overall*	Public payer	Private payer	Public payer	Private payer
Australia	0.40	2.57	0.49	$34	$45	$1,046	$1,943
Canada	0.64	1.78	0.77	$59	—	$652	—
France	0.32	2.85	0.44	$32	$34	$674	$1,340
Germany	0.43	3.99	0.76	$46	$104	$1,251	—
Netherlands	0.39	1.96	0.45	—	—	—	—
New Zealand	0.33	0.90	0.34	—	—	—	—
Switzerland	0.51	3.11	0.63	—	—	—	—
United Kingdom	0.46	1.75	0.51	$66	$129	$1,181	$2,160
United States	1.00	1.00	1.00	$60	$133	$1,634	$3,996
Median (countries shown)	***0.43***	***1.96***	***0.51***	***$53***	***$104***	***$1,114***	***$2,052***

[a] Source: Analysis by G. Anderson of IMS Health data.
[b] Adjusted for differences in cost of living.
[c] Source: M.J. Laugesen and S.A. Glied, "Higher Fees Paid to U.S. Physicians Drive Higher Spending for Physician Services Compared to Other Countries," *Health Affairs,* Sept. 2011 30(9):1647–56.

France, Germany, and the U.K. (Exhibit 6).[8] This was true whether the payers were public or private, though in every country private payers paid higher fees than public payers (where data was available). Not surprising, Laugesen and Glied also found that U.S. primary care doctors ($186,582) and particularly orthopedic doctors ($442,450) earned greater income than in the other five countries (Exhibit 7).

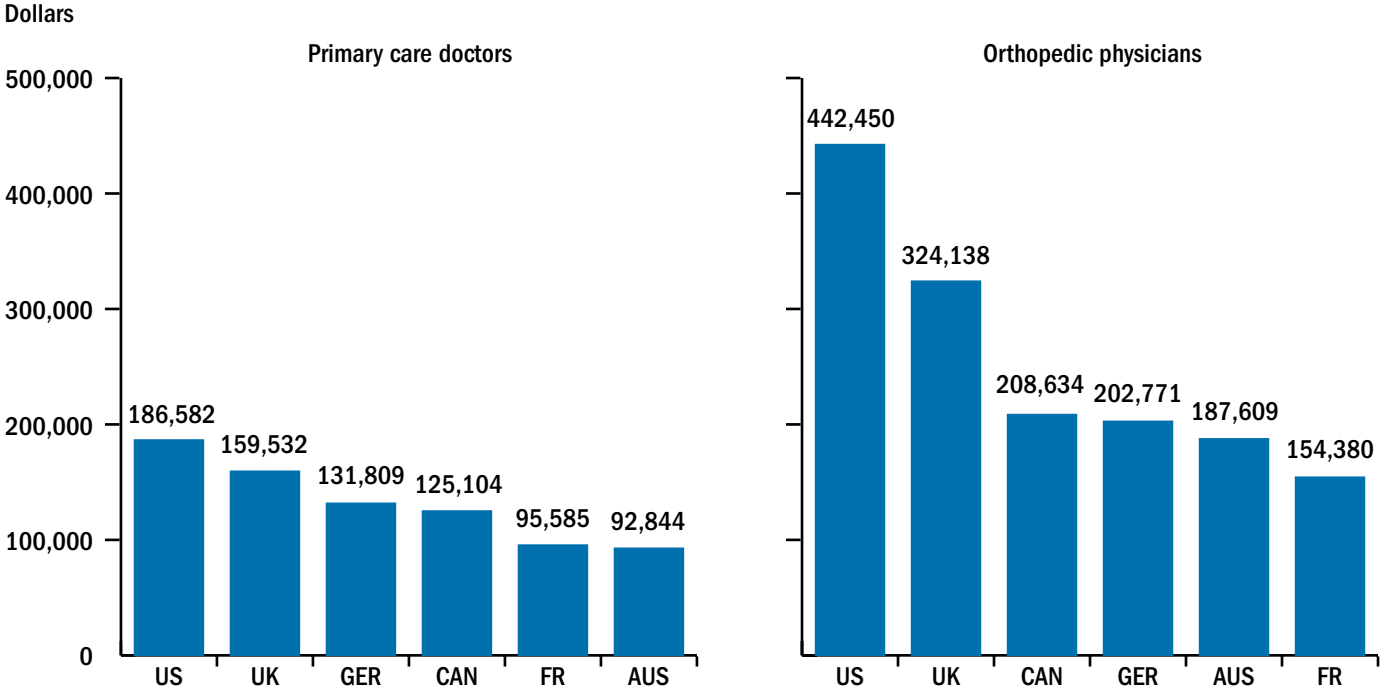
Use of Expensive Medical Technology More Common in the U.S.

The final potential explanation for high U.S. health spending considered in this study is greater use of more expensive medical technology than other countries. The OECD tracks the volume of several types of procedures, including hip and knee replacements—two generally elective procedures that involve expensive medical devices. In 2009, the U.S., along with Germany, performed the most knee replacements (213 per 100,000 population) among the study countries, and 75 percent more knee replacements than the OECD median (122 per 100,000 population). However, the U.S. performed barely more hip replacements than the OECD median, and significantly less than several of the other study countries (Exhibit 8).

The OECD also tracks the supply and utilization of several types of diagnostic imaging devices—important and often costly technologies. Relative to the other study countries where data were available, there were an above-average number of magnetic resonance imaging (MRI) machines (25.9 per million population), computed tomography (CT) scanners (34.3 per million), positron emission tomography (PET) scanners (3.1 per million), and mammographs (40.2 per million) in the U.S. in 2009 (Exhibit 9). Utilization of imaging was also highest in the U.S., with 91.2 MRI exams and 227.9 CT exams per 1,000 population. MRI and CT devices were most prevalent in Japan, though no utilization data were available for that country.

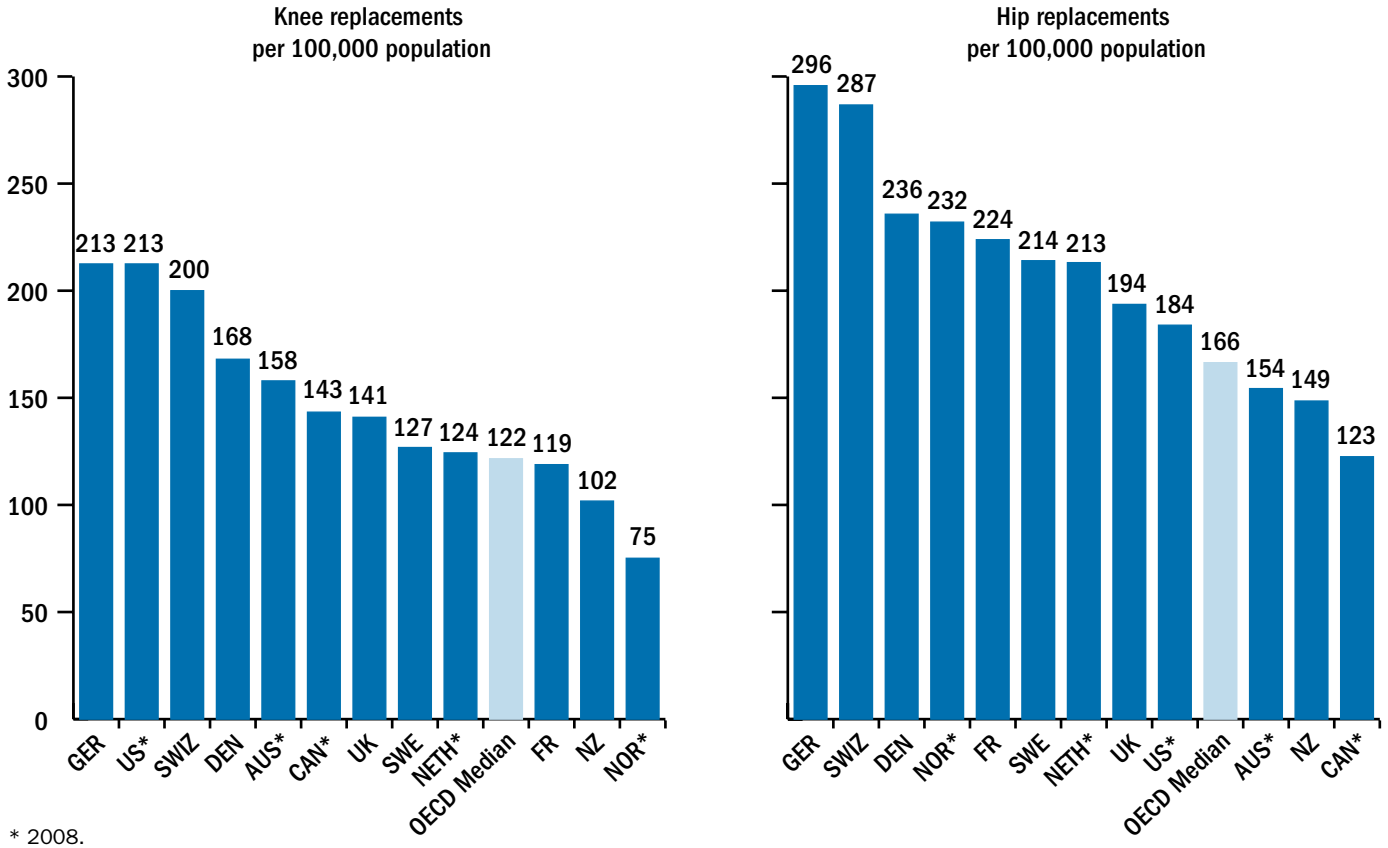
The International Federation of Health Plans—a membership organization of health insurance companies from over 30 countries—issues an annual report tracking

Exhibit 7. Physician Incomes, 2008
Adjusted for Differences in Cost of Living



Source: M. J. Laugesen and S. A. Glied, "Higher Fees Paid to U.S. Physicians Drive Higher Spending for Physician Services Compared to Other Countries," *Health Affairs,* Sept. 2011 30(9):1647–56.

Exhibit 8. Volume of Knee and Hip Replacements, 2009



* 2008.
** 2007.
Source: OECD Health Data 2011 (Nov. 2011).

Exhibit 9. Diagnostic Imaging in Select OECD Countries

	MRI machines			CT scanners			PET scanners	Mammographs
	Devices per million pop., 2009[c]	Exams per 1,000 pop., 2009[c]	MRI scan fees, 2011[d]	Devices per million pop., 2009[c]	Exams per 1,000 pop., 2009[c]	CT scan (head) fees, 2011[d]	Devices per million pop., 2009[c]	Devices per million pop., 2009[c]
Australia	5.9	23.3	—	38.7	93.9	—	1.1	24.3
Canada	8.0	43.0	—	13.9	125.4	$122[e]	1.1	—
Denmark	15.4	37.8[a]	—	23.7	83.8[a]	—	5.6	17.0
France	6.5	55.2	$281	11.1	138.7	$141	0.9	—
Germany	—	—	$599	—	—	$272	—	—
Japan	43.1[a]	—	—	97.3[a]	—	—	3.7[a]	29.7[a]
Netherlands	11.0	43.9	—	11.3	65.7	—	4.5	—
New Zealand	9.7	—	—	14.6	—	—	0.5	26.4
Switzerland	—	—	$903	32.8	—	$319	3.0	33.2
United Kingdom	5.6[a]	—	—	7.4a	—	—	—	9.0
United States	25.9[b]	91.2[b]	$1,080[f]	34.3[b]	227.9[b]	$510[f]	3.1[a]	40.2[a]
Median (countries shown)	***8.9***	***43.0***	**—**	***15.1***	***122.8***	**—**	***1.1***	***17.3***

[a] 2008.
[b] 2007.
[c] Source: OECD Health Data 2011 (Nov. 2011).
[d] Source: International Federation of Health Plans, *2011 Comparative Price Report: Medical and Hospital Fees by Country* (London: IFHP, 2011).
[e] Nova Scotia only.
[f] U.S. commercial average.

health care prices around the world.[9] Data from their 2011 report indicate that the U.S. commercial average diagnostic imaging fees ($1,080 for an MRI and $510 for a CT exam) are far higher than what is charged in almost all of the other countries (Exhibit 9). This combination of pervasive medical technology and high prices showcases two potent drivers of U.S. health spending, and a possible explanation for the outsized share of resources we dedicate to health care relative to the rest of the world.

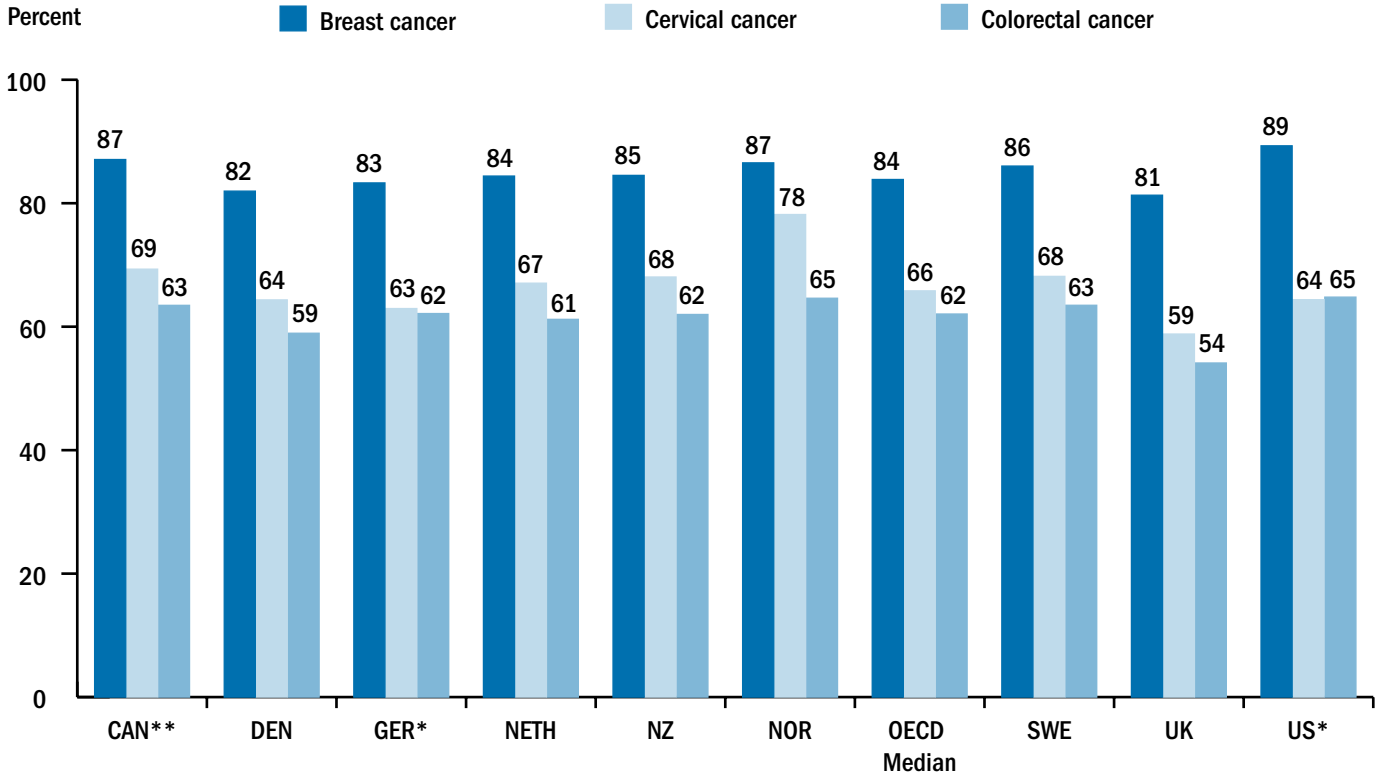
Despite High Health Care Spending, Quality Indicators Show Variable Performance in the U.S.

An array of health care quality indicators included in the 2011 OECD Health Data database provides insight into the performance of each country's health care system. The findings make clear that, despite high costs, quality in the U.S. health care system is variable and not notably superior to the far less expensive systems in the other study countries.

Exhibit 10 shows the five-year survival rates for breast, cervical, and colorectal cancers. The U.S. had the highest survival rates among the study countries for breast cancer (89%) and, along with Norway, for colorectal cancer (65%). However, at 64 percent, the survival rate for cervical cancer in the U.S. was worse than the OECD median (66%), and well below the 78 percent survival rate in Norway—indicating significant room for improvement. Notably, the U.K. had the lowest survival rates for all three forms of cancer.

Exhibit 11 shows rates of potentially preventable mortality due to asthma (for those between ages 5 and 39) and lower-extremity amputations due to diabetes per 100,000 population. On both measures, the U.S. had among the highest rates, suggesting a failure to effectively manage these chronic conditions that make up an increasing share of the disease burden.[10] Exhibit 11 also shows rates of in-hospital fatality rates—that is, the ratio of in-hospital deaths among people admitted with a particular condition—within 30 days of admission for

Exhibit 10. Five-Year Survival Rate for Select Cancers, 2004–2009



Note: Breast and cervical cancer rates are age-standardized; colorectal cancer rates are age–sex standardized.
* 2003–08.
** 2002–07.
Source: OECD Health Data 2011 (Nov. 2011).

Exhibit 11. Quality Indicators in Select OECD Countries, 2009

	Asthma mortality among ages 5 to 39 per 100,000 population	Diabetes lower extremity amputations per 100,000 population	In-hospital fatality rate within 30 days of admission per 100 patients[c]		
			Acute myocardial infarction	Ischemic stroke	Hemorrhagic stroke
Australia	0.13	11.0	3.2	5.7	17.2
Canada	0.17[b]	9.5	3.9	6.3	20.6
Denmark	0.08	18.1	2.3	2.6	16.4
France	—	12.6[b]	—	—	—
Germany	0.17[b]	33.7	6.8	4.0	13.8
Japan	—	—	9.7[a]	1.8[a]	9.7[a]
Netherlands	0.09[a]	12.0[b]	5.3[b]	5.7[b]	22.5[b]
New Zealand	0.43[b]	7.0	3.2	5.4	21.1
Norway	0.27	9.9	2.6	2.8	11.6
Sweden	0.01[a]	5.7	2.9[b]	3.9[b]	12.8
Switzerland	—	7.4[a]	4.5[a]	—	14.8[a]
United Kingdom	0.27	4.8	5.2	6.8	19.3
United States	0.40[b]	32.9[a]	4.3[a]	3.0[a]	21.0[a]
OECD Median	***0.09***	***9.9***	***4.6***	***4.9***	***19.3***

Note: Rates are age–sex standardized.
[a] 2008.
[b] 2007.
[c] Figures do not account for death that occurs outside of the hospital, possibly influencing the ranking for countries, such as the U.S., that have shorter lengths of stay.
Source: OECD Health Data 2011 (Nov. 2011).

acute myocardial infarctions and ischemic and hemorrhagic stroke.[11] U.S. performance on these measures was middling: the fatality rate for acute myocardial infarctions was roughly average in the U.S. (4.3 deaths per 100 patients) compared with the study countries, the rate for ischemic stroke (3.0 deaths per 100 patients) was somewhat better than average, and the rate for hemorrhagic stroke (21.0 deaths per 100 patients) was somewhat worse than average.

DISCUSSION

U.S. health care spending, which reached nearly $8,000 per person annually in 2009, has outpaced GDP growth for the past several decades and far exceeds spending in any other country. The analysis in this brief suggests that this spending cannot be attributed to higher income, an aging population, or greater supply or utilization of hospitals and doctors. Instead, it is more likely that higher spending is largely due to higher prices and perhaps because of more readily accessible technology and greater rates of obesity. Despite being more expensive, the quality of health care in the U.S. does not appear to be notably superior to other industrialized countries.

Such an expensive health system creates an enormous financial strain and can pose a barrier to accessing care. For many U.S. households, health care has become increasingly unaffordable. In 2010, four of 10 adults went without care because of costs and the number of either uninsured or "underinsured" (i.e., people with health coverage that does not adequately protect them from high medical expenses) increased to more than 80 million.[12] A 2007 survey in five states found that difficulty paying medical bills contributed to 62 percent of all bankruptcies, up 50 percent from 2001.[13] For the average worker with employer-based health insurance, growth in premiums and cost-sharing has largely erased wage gains over the past decade.[14]

Rising health care spending has a profound effect on public budgets as well. Federal spending on Medicare and Medicaid increased from 1 percent to 5 percent of GDP between 1970 and 2009, and is projected to reach 12 percent by 2050.[15] The Congressional Budget Office has identified it as the primary cause of projected federal budget deficits.[16] Medicaid spending also impacts state budgets, increasing faster than and potentially crowding out other socially desirable budget items, such as education and infrastructure.

While all the countries in this study struggle in one way or another with health care costs, financing the U.S. health system requires a unique commitment of resources. Were the U.S. to spend the same share of GDP on health care as the Netherlands—the country spending the next-largest share of GDP—savings for the nation as a whole would have been $750 billion in 2009 alone. Were the U.S. to spend the same share of GDP as Japan, savings would have totaled $1.25 trillion—an amount larger than the U.S. defense budget.

As the lowest-spending nation in this study, Japan offers an interesting contrast to the U.S. In some ways, the two countries' health systems share similar features. Japan operates a fee-for-service system, characterized by unrestricted access to specialists and hospitals.[17] Advanced medical technology also appears to be widely available, with Japan having the most CT scanners and MRI machines among the countries in this study. Yet health spending in Japan as a share of GDP has increased by only 2 percentage points in the past three decades, compared with an increase of more than 8 percentage points in the U.S. over the same period.

Notably, the Japanese do not restrain spending by restricting access; rather, they do so by aggressively regulating health care prices.[18] Every two years, a panel of experts uses volume projections to revise the national fee schedule, which determines the maximum prices for nearly all health services, to keep total health spending growth within a target set by the central government. Providers' profitability is also monitored, and when certain categories of providers (e.g., acute care hospitals or ambulatory specialists) demonstrate significantly greater profitability than the average, prices for their services are reduced. Despite such overt price controls, the results are hard to dispute—the Japanese enjoy the longest life expectancy in the world.

In the U.S., private payers individually negotiate prices with health care providers, in a process characterized by administrative complexity and a lack of transparency. For example, hospitals often charge different payers widely varying prices that are, on average, far below those listed on hospitals' official price lists.[19] The economist Uwe Reinhardt and others have argued that such price discrimination is not in the public interest, and that an all-payer system—as in Japan, Germany, and several other nations—would be more equitable, efficient, and potentially effective at reining in spending growth.[20] Such a system is not completely foreign to the U.S. The state of Maryland has operated an all-payer system for hospitals since 1977, and has seen costs per admission rise slower than the national average.[21]

Inevitably, efforts to control health care spending involve trade-offs, and many such efforts—whether restricting access or regulating prices—come with a cost. Lower drug prices may lead to less research and development and, consequently, fewer pharmaceutical breakthroughs. Lower provider incomes could reduce the quality of applicants choosing a career in medicine. These drawbacks need to be measured against the opportunity costs of health care crowding out other forms of public investment, and of vulnerable household budgets being exposed to the most expensive health care system in the world.

Methods

The Organization for Economic Cooperation and Development (OECD) annually tracks and reports on more than 1,200 health system measures across 34 industrialized countries, ranging from population health status and non-medical determinants of health to health care resources and utilization. This analysis examined 2011 OECD health data for 13 countries: Australia, Canada, Denmark, France, Germany, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States. This brief presents data for the year 2009 or, where not available, 2008 or 2007. The median for all OECD countries is also included in Exhibits 2, 3, 4, 5, 8, 10 and 11; for Exhibits 6 and 9, the median is included for only the countries shown, because of incompleteness of data. All currency amounts are listed in U.S. dollars (USD) and adjusted for national differences in cost of living.

Data are also included from an analysis by Gerard Anderson of IMS Health data on pharmaceutical prices; an analysis by Miriam Laugesen and Sherry Glied on physician fees and income, originally published in *Health Affairs*; and the International Federation of Health Plans on the cost of diagnostic tests.

Notes

1 S. Thomson, R. Osborn, D. A. Squires, and S. J. Reed, *International Profiles of Health Care Systems, 2011* (New York: The Commonwealth Fund, Nov. 2011).

2 Organization for Economic Cooperation and Development, *OECD Health Data 2011* (Paris: OECD, Nov. 2011).

3 D. A. Squires, *The U.S. Health System in Perspective: A Comparison of Twelve Industrialized Nations* (New York: The Commonwealth Fund, July 2011); G. F. Anderson and D. A. Squires, *Measuring the U.S. Health Care System: A Cross-National Comparison* (New York: The Commonwealth Fund, June 2010); G. F. Anderson and B. K. Frogner, "Health Spending in OECD Countries: Obtaining Value per Dollar," *Health Affairs,* Nov./Dec. 2008 27(6):1718–27; G. F. Anderson, B. K. Frogner, and U. E. Reinhardt, "Health Spending in OECD Countries in 2004: An Update," *Health Affairs,* Sept./Oct. 2007 26(5):1481–89; G. F. Anderson, P. S. Hussey, B. K. Frogner et al., "Health Spending in the United States and the Rest of the Industrialized World," *Health Affairs,* July/Aug. 2005 24(4):903–14; U. E. Reinhardt, P. S. Hussey, and G. F. Anderson, "U.S. Health Care Spending in an International Context," *Health Affairs,* May/June 2004 23(3):10–25; G. F. Anderson, U. E. Reinhardt, P. S. Hussey et al., "It's the Prices, Stupid: Why the United States Is So Different from Other Countries," *Health Affairs,* May/June 2003 22(3):89–105; U. E. Reinhardt, P. S. Hussey, and G. F. Anderson, "Cross-National Comparisons of Health Systems Using OECD Data, 1999," *Health Affairs,* May/June 2002 21(3):169–81; G. F. Anderson and P. S. Hussey, "Comparing Health System Performance in OECD Countries," *Health Affairs,* May/June 2001 20(3):219–32; G. F. Anderson, J. Hurst, P. S. Hussey et al., "Health Spending and Outcomes: Trends in OECD Countries, 1960–1998," *Health Affairs,* May/June 2000 19(3):150–57; and G. F. Anderson and J. P. Poullier, "Health Spending, Access, and Outcomes: Trends in Industrialized Countries," *Health Affairs,* May/June 1999 18(3):178–92.

[4] All dollar amounts are adjusted for differences in the cost of living between countries.

[5] Regression includes all OECD countries, except Luxembourg. For health spending per capita: coefficient = 0.125 and intercept = –876. For health spending as a percentage of GDP: coefficient = 0.000121 and intercept = 5.589. Similar analysis in Anderson and Frogner, "Health Spending in OECD Countries," 2008.

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[8] M. J. Laugesen and S. A. Glied, "Higher Fees Paid to U.S. Physicians Drive Higher Spending for Physician Services Compared to Other Countries," *Health Affairs,* Sept. 2011 30(9):1647–56.

[9] International Federation of Health Plans, *2011 Comparative Price Report: Medical and Hospital Fees by Country* (London: IFHP, 2011), available at http://www.ifhp.com/documents/2011iFHPPriceReportGraphs_version3.pdf.

[10] Centers for Disease Control and Prevention, Chronic Diseases and Health Promotion.

[11] This measure does not account for deaths that occur outside the hospital to which the patient was admitted, meaning rates may be influenced by referral patterns and hospital lengths of stay.

[12] Underinsured adults are those between ages 19 and 64 with: family out-of-pocket medical care expenses (not including premiums) that are 10 percent or more of income; among low-income adults (i.e., incomes below 200 percent of the federal poverty level), medical expenses that are 5 percent or more of income; or per-person deductibles that are 5 percent or more of income. See C. Schoen, M. M. Doty, R. H. Robertson, and S. R. Collins, "Affordable Care Act Reforms Could Reduce the Number of Underinsured U.S. Adults by 70 Percent," *Health Affairs,* Sept. 2011 30(9):1762–71.

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