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A Comparison Of Hospital Administrative Costs In Eight Nations: US Costs Exceed All Others By Far

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ABSTRACT A few studies have noted the outsize administrative costs of US hospitals, but no research has compared these costs across multiple nations with various types of health care systems. We assembled a team of international health policy experts to conduct just such a challenging analysis of hospital administrative costs across eight nations: Canada, England, Scotland, Wales, France, Germany, the Netherlands, and the United States. We found that administrative costs accounted for 25.3 percent of total US hospital expenditures—a percentage that is increasing. Next highest were the Netherlands (19.8 percent) and England (15.5 percent), both of which are transitioning to market-oriented payment systems. Scotland and Canada, whose single-payer systems pay hospitals global operating budgets, with separate grants for capital, had the lowest administrative costs. Costs were intermediate in France and Germany (which bill per patient but pay separately for capital projects) and in Wales. Reducing US per capita spending for hospital administration to Scottish or Canadian levels would have saved more than \$150 billion in 2011. This study suggests that the reduction of US administrative costs would best be accomplished through the use of a simpler and less market-oriented payment scheme.

All nations struggle with rising health care costs, but the United States remains a cost outlier. In 2010 it spent 17.6 percent of its gross domestic product on health care—far more than the next-highest spenders, the Netherlands (12.0 percent) and France and Germany (both 11.6 percent).¹ Several factors help explain the US excess spending: greater use of high-tech interventions;² more emphasis on specialty care and the underprovision of primary care;³ higher drug prices;⁴ and higher physician fees.⁵

A few studies have noted US health insurers' and providers' outsize administrative costs, mostly in relation to Canadian costs.⁶⁻¹³ How-

ever, no research has compared the administrative costs of hospitals across nations representing a broad spectrum of health care systems. Cross-national differences in accounting standards make such international comparisons challenging. To address this challenge, we assembled an international team of health policy experts to analyze hospital administrative costs for eight nations: Canada, England, Scotland, Wales, France, Germany, the Netherlands, and the United States. This article summarizes the findings of this research team and offers some lessons for policy makers who are searching for payment strategies that minimize administrative overhead.

Study Data And Methods

DATA SOURCES AND ANALYSIS To assess the impact of a range of payment strategies, we analyzed data from nations with widely varying health care systems. Three of the nations—England, Scotland, and Wales—are within the United Kingdom. Each has a public National Health Service (NHS) funded by taxes, but the three systems vary in their hospital funding.

Canada has a single-payer public insurance system in each province. France has a system akin to a single-payer social insurance model. However, payments are funneled through several nominally separate insurance funds. Germany and the Netherlands have compulsory, multipayer social insurance systems, but the Netherlands is transitioning to a market-based payment system. The United States has a largely private, multipayer health care system.

For each nation we obtained official hospital cost accounting data that covered most or all hospitals. The data were for 2010 or 2011.

Starting with the comprehensive Medicare Cost Reports submitted by US hospitals, we developed a classification scheme that apportioned costs between clinical and administrative functions, including information technology (IT). We distributed a few costs, such as employee benefits, between the clinical and administrative categories. We allocated capital costs to administrative and clinical cost centers based on each center's share of total operating expenses. We excluded research and teaching costs. These methods emulate those employed in previous analyses of US and Canadian hospitals.⁹

The level of detail in the Medicare data allowed us to identify administrative costs incurred at any US hospital location—for example, costs for a ward secretary or a clinic receptionist. Some administrative arms of clinical functions, such as nursing administration, were categorized separately. In other cases, Medicare required hospitals to allocate administrative costs incurred in clinical units to administrative categories.

Data for Canada, the Netherlands, England, Scotland, and Wales were sufficiently detailed to allow full replication of this analysis. However, in the German and French data, clerical work performed at clinic or ward locations was sometimes charged to a clinical cost center, as were some IT costs. Hence, for these two nations we could not fully apply the US-based classification scheme. Instead, we constructed an alternative, narrower measure for the German and French data, which we called central administration costs. This category excluded IT costs and administrative or clerical work on wards and at other clinical locations. Data to calculate this narrower measure were available for all but

the UK nations.

For each of the eight nations we reviewed detailed documentation describing hospital expense categories, and we mapped those categories to the US ones. In most cases, this mapping was straightforward, because the available documentation provided sufficiently detailed descriptions or lists of items subsumed under each category to resolve ambiguities. When uncertainties remained, we obtained additional specific descriptions of the items included in the category from national experts and officials. In some cases, we also consulted Medicare auditors to ascertain where such items would be classified in the US cost reporting scheme.

The online Appendix summarizes the data sources and classification schemes employed for each nation.¹⁴ However, the voluminous documentation of the cost reporting schemes for several nations precluded listing all of the available details even in the Appendix. For instance, the instruction manual for Medicare Cost Reports is over 500 pages long.

To generate per capita cost estimates, we assumed that the administration share of costs at hospitals for which we lacked data (for example, those in Quebec and private hospitals in England) was the same as the administration share at other hospitals in that nation. All figures were adjusted to US dollars using purchasing power parities for the appropriate year.

Time trend data on administrative costs were available only for the United States and Canada. However, time trend data on administrative full-time equivalents (FTEs) as a share of total FTEs (which likely tracks trends in the administration share of costs) in the hospital and community health sectors were available for the United Kingdom. This allowed us to assess precise time trends for administrative costs in the United States and Canada and approximate time trends in the United Kingdom.

LIMITATIONS Several caveats apply to our findings. First, nations differ in many ways besides health care financing. The mix of services provided by hospitals, especially their role in ambulatory care, varies across nations. Many US hospitals operate outpatient clinics that provide both specialty and primary care. In contrast, hospitals in most other nations provide only specialty outpatient services.

Similarly, our figures for US, Canadian, and Dutch hospitals excluded most physician compensation. In contrast, the hospital spending figures in the other nations included substantial physician compensation for care delivered on the premises. For instance, German hospitals employ large numbers of physicians whose average pay is relatively low.

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Even the definition of *hospital* may vary somewhat both within and across nations. For instance, in some nations, hospital accounts include the costs of ambulance services. Some US hospitals' Medicare Cost Reports include some services that are provided by affiliated home care agencies, while others' reports cover only those activities carried out within the hospital's walls—as is generally the case with financial figures for hospitals in some other nations.

However, these differences across nations should not have greatly distorted our estimates. In all nations, the core inpatient services account for the bulk of budgets.

Moreover, previous studies have found that at least for the United States and Canada, administrative costs associated with physician compensation (equivalent to 26.9 percent of physicians' gross incomes in the United States versus 16.1 percent in Canada) were similar, in percentage terms, to hospital administrative costs.⁹ In contrast, Dutch hospital expenditures include some costs of administering reimbursements for physicians not employed by the hospitals, which would have led us to slightly overstate hospital administrative costs.

A further limitation is that our data sources excluded some hospitals in most of the nations we studied (notably, eight university centers in the Netherlands) and a larger number of institutions (NHS Foundation Trust and private hospitals) in England. However, limited data from NHS Foundation Trusts' audited year-end accounts for 2010–11 indicate that their administrative staffing levels are similar to those of the NHS hospitals in England that we studied. UK private hospitals' administrative costs may be higher than those of NHS hospitals, but they account for a small proportion of expenditures. Furthermore, the omission of a few large Dutch university hospitals is unlikely to distort our estimates, since size was not related to administrative costs among the hospitals in the Netherlands for which we had data.

For the United States, we lacked data on military hospitals and those in the Department of Veterans Affairs, which do not file Medicare Cost Reports. The exclusion of these federal hospitals with global budgets, which probably have low administrative costs, might have caused us to slightly overestimate US administrative costs. However, Medicare Cost Reports omit profits and most advertising, which cannot be billed to Medicare. This would have caused us to underestimate US overhead costs.

Other limitations are that there is no international standard for hospital cost accounting, and that our alignment of categories was imperfect. Our analysis allocated some capital costs to ad-

The proportion of hospital costs devoted to administration was highest in the United States, at 25.3 percent.

ministration, based on the administration share of operating expenses. Our analysis handled capital costs uniformly across the eight nations. However, it should be noted that Dutch hospitals' capital costs are higher than those in the United States, and about double those of the other European nations.

Our data do not address the question of which components of administrative spending drive international differences. However, fragmentary data from other sources suggest that a larger number of managers and clerical workers—not differences in wage levels, benefit costs, or non-wage costs—explains much or all of the higher administrative costs in US hospitals compared to hospitals in the other nations we studied.^{8,11,15,16}

Finally, our study did not include the administrative costs of insurers and regulators who deal with hospital payments.

Study Results

Exhibit 1 presents an overview of the health systems and hospital funding mechanisms of the eight nations. For additional details on coverage and hospital payment in the eight nations, see Appendix Exhibit A1.¹⁴

Canada, Scotland, and Wales pay hospitals global operating budgets (similar to the way in which a US firehouse is funded), with separate grants for capital needs such as new buildings and expensive new equipment. France and Germany use tightly regulated all-payer diagnosis-related group (DRG) payment systems, with separate public grants for most capital needs.

England also uses all-payer DRGs, but hospitals negotiate contracts for some services with local agencies. The Netherlands combines elements of DRG-like payment with market-based pricing (for example, pricing based on bargaining between individual hospitals and individual insurers). In both England and the Netherlands, hospitals increasingly depend on operating surpluses or profits to meet their capital needs.^{17,18}

Health care spending in 2010 ranged from

EXHIBIT 1
Principal Hospital Financing Characteristics Of Eight Nations, 2011

Nation	Insurance coverage	Funding for hospital operating budgets	Primary source of capital funds
US	Multipayer; loosely regulated; substantial OOP; many people uninsured	Per patient payments; mechanisms (such as DRGs, per diem, and FFS), regulations, and rates differ by payer	Operating surpluses or profits
Canada	Single public payer in each province; universal coverage for hospital and physician care; minimal OOP; private coverage only for items not covered by public plan	Global, lump-sum budgets	Funds allocated directly by the provincial government
France	Universal social insurance; minimal OOP; optional private coverage reimburses patients' cost sharing	DRGs, uniform for all patients	Lump-sum payments for capital and other public missions
Germany	Tightly regulated, multipayer social insurance; minimal OOP; higher-income people may opt for private insurance with enhanced services and higher premiums	DRGs, uniform for all patients	Lump-sum payments from the states
Netherlands	Regulated, multipayer, private insurance; compulsory basic benefit package; optional supplementary coverage; minimal OOP	DBC (DRG-like system): about 30,000 DBCs; rates uniform for 2/3 of DBCs, negotiated between hospital and insurer for 1/3	Operating surpluses and capital add-ons included in the uniform DBC rates, but not in negotiated DBCs rates
England	Universal NHS coverage; prominent market features; most services purchased at local level by groups of GPs; minimal OOP; private coverage for care outside the NHS	60% from DRGs with uniform rates; 40% from lump-sum contracts negotiated with local agencies	Operating surpluses, with a central review of planned major investments
Scotland	Universal NHS coverage with few market features; virtually no OOP; private coverage for care outside the NHS	Global, lump-sum budgets	Funds allocated directly by the government
Wales	Universal NHS coverage with decreasing market features since 1999; virtually no OOP; private coverage for care outside the NHS	Global, lump-sum budgets	Funds allocated directly by the government

SOURCE Authors' analysis. **NOTES** OOP is out-of-pocket, or patients' spending. DRG is diagnosis-related group. FFS is fee-for-service. DBC is diagnostic-treatment-combination. NHS is National Health Service. GP is general or family practitioner.

9.6 percent of GDP in the United Kingdom to 17.6 percent in the United States (Exhibit 2). Germany had the largest supply of both hospital beds and physicians per 1,000 population, while the United States had the most specialists, measured as a percentage of all physicians.

The US population had smaller percentages of elderly people and smokers, compared to the populations of other countries, but its percentage of obese people was second only to Scotland's (Exhibit 2). Life expectancy was similar in the United States and Scotland, trailing that in the other nations by about two years.

HOSPITALS' TOTAL ADMINISTRATIVE COSTS
The proportion of hospital costs devoted to administration was highest in the United States, at 25.3 percent (Exhibit 3). This was more than twice the percentages for Canada and Scotland, which spent the least on administration. Hospitals' administrative costs were notably higher in the Netherlands than in other European nations.

Differences were more marked when expressed as a percentage of GDP or in dollars per capita. For example, hospital administration

costs ranged from 1.43 percent of GDP in the United States (\$667 per capita) to 0.41 percent of GDP (\$158 per capita) in Canada (Exhibit 3).

Among the UK nations, Scotland's administrative costs were lowest, England's were highest, and Wales's were in between (Exhibit 3). This ranking correlates roughly with the role of market mechanisms in those nations' health care systems. The NHS internal market reforms introduced throughout the United Kingdom during the 1990s separated the commissioning and provision of care, with price-based competition among hospitals. Scotland reversed these market-based reforms soon after devolution in 1999; Wales did so somewhat later, in 2009.

In the United States, for-profit hospitals had higher administrative costs (27.2 percent) than did nonprofit (25.0 percent) or public (22.8 percent) institutions. Teaching hospitals, few of which are for-profit, had lower-than-average administrative costs (23.6 percent), as did rural facilities (24.7 percent, compared to 25.5 percent for urban hospitals).

Administrative costs for hospitals in Maryland

EXHIBIT 2

Demographic Characteristics And Health Expenditures, Resources, And Indicators For Eight Nations

	US	Canada	France	Germany	Netherlands	UK		
						England	Scotland	Wales
DEMOGRAPHIC CHARACTERISTICS								
Population older than 64 (%)	13.1	14.4	17.3	20.7	15.6	16.2	16.8	18.6
GDP per capita (PPP-adjusted US \$)	46,747	39,070	34,136	37,402	42,166	35,687	32,215 ^a	32,239 ^b
Smokers (percent of population older than 14) ^c	15.1	16.3	23.3	21.9 ^d	20.9	21.5 ^d	24.0	23.0
Obese people (percent of population older than 14) ^c	28.1	17.5	12.9	17.3 ^d	11.6	26.1	28.2	22.0
People with insurance (percent of population)	81.3 ^d	100.0 ^d	99.9 ^d	100.0 ^d	98.8 ^d	100.0 ^d	100.0 ^d	100.0 ^d
EXPENDITURES								
Health care spending								
Per capita (PPP-adjusted US \$)	8,233	4,445	3,974	4,338	5,056	3,433 ^e		
Percent of GDP	17.6	11.4	11.6	11.6	12.0	9.6 ^e		
Health insurance overhead and government health administration per capita (PPP-adjusted US \$)	587	147	274	233	183	— ^f	— ^f	— ^f
RESOURCES								
Physicians								
Number (per 1,000 population)	2.6	2.4	3.3	4.1	2.9 ^d	2.7	2.3 ^b	2.5
Percent specialists	87.7	53.0	51.3	58.0	57.7	70.9 ^e		
Hospital beds (per 1,000 population)	3.1 ^d	3.2 ^d	6.4	8.3	4.7 ^d	3.0	3.3	4.0
Average length of acute care hospital stay (days)	5.4	7.7	5.2	7.3	5.6	6.6	4.8	6.2
HEALTH INDICATORS								
Life expectancy (years)								
Females	81.1	83.1 ^g	84.7	83.0	82.7	82.6	80.6 ^d	81.8
Males	76.2	78.5 ^g	78.0	78.0	78.8	78.6	76.0 ^d	77.6
Infant mortality (per 1,000 live births)	6.1	5.1 ^g	3.6	3.4	3.8	4.2	3.7	4.0

SOURCE Authors' analysis of health data from the following sources: (1) Organization for Economic Cooperation and Development. OECD health statistics (see Note 1 in text). (2) Scottish Government. Health and community care [Internet]. Edinburgh: Scottish Government; [cited 2014 May 7]. Available from: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Health>. (3) Welsh Government. Health statistics Wales [Internet]. Cardiff: Welsh Government; 2012 [cited 2014 May 20]. Available from: <http://wales.gov.uk/docs/statistics/2012/120927hsw12en.pdf>. **NOTES** Data are for 2010 except where otherwise indicated. PPP is purchasing power parity. ^aExcludes costs for care outside of Scotland. ^bData are for 2011. ^cOlder than fifteen for Scotland and Wales. ^dData are for 2009. ^eData are for England, Scotland, Wales, and Northern Ireland. ^fNot available. ^gData are for 2008.

EXHIBIT 3

Total Hospital Administrative Costs And Spending In Eight Nations, 2010

	US	Canada	France	Germany	Netherlands	UK		
						England	Scotland	Wales
TOTAL HOSPITAL EXPENDITURES								
Per capita, (PPP-adjusted US \$)	2,634	1,271	1,357	1,245	1,631	1,458 ^a	1,416	1,482
Share of GDP (%)	5.63	3.25	3.98	3.33	3.87	4.09 ^a	4.39	4.60
CENTRAL ADMINISTRATION^b								
Share of hospital costs (%)	15.51	7.40	8.77	9.00	10.85	— ^c	— ^c	— ^c
HOSPITAL ADMINISTRATION								
Share of hospital costs (%)	25.32	12.42	— ^c	— ^c	19.79	15.45	11.59	14.27
Share of GDP (%)	1.43	0.41	— ^c	— ^c	0.77	0.63 ^a	0.51	0.66
Expenditures per capita (PPP-adjusted US \$)	667	158	— ^c	— ^c	323	225 ^a	164	211

SOURCE Authors' analysis of data from the following sources: (1) Organization for Economic Cooperation and Development. OECD health statistics 2014 (see Note 1 in text). (2) Information Services Division, NHS National Services Scotland. Net expenditure, by board of treatment, by care type [Internet]. Edinburgh: NHS National Services Scotland; 2012 [cited 2014 Jul 23]. Available from: http://www.isdsotland.org/Health-Topics/Finance/Publications/2011-11-29/Costs_R300s_2011.xls. (3) Welsh Government. Health statistics Wales. Cardiff: Welsh Government; 2012. (4) Form TFR3E, the Final Accounts NHS Trusts TFR (Treasury Financial Reports) for 2011. (5) Monitor—independent regulator of NHS foundation trusts. NHS foundation trusts: consolidated accounts 201/11 [Internet]. London: Stationery Office; 2011 Jul 14 [cited 2014 May 7]. Available from: <http://www.monitor-nhsft.gov.uk/sites/default/files/NHS%20Foundation%20Trusts%20Consolidated%20Accounts%201011%20website%20file.pdf>. **NOTES** Data for the Netherlands are for 2011. Data for England, Scotland, and Wales are for April 1, 2010–March 31, 2011. Figures for Scotland and Wales are for National Health Service (NHS) hospitals only. PPP is purchasing power parity. GDP is gross domestic product. ^aIncludes NHS Trusts and Acute NHS Foundation Trusts. ^bCentral administration costs exclude costs of information technology and of administrative or clerical work on wards and at other clinical locations. ^cNot available.

(the only state with all-payer hospital rate setting, the type of reform that some policy experts suggest might reduce administrative costs)¹⁹ were 25.2 percent of total hospital costs. This did not differ from the national average ($p = 0.94$). Despite Maryland's all-payer rate-setting system, copayments, deductibles, documentation requirements, clinical guidelines, and so forth differ across payers.²⁰

HOSPITALS' CENTRAL ADMINISTRATION COSTS Hospitals' central administration costs followed a pattern similar to that for total administrative costs. Central administration costs were highest in the United States, followed by the Netherlands (Exhibit 3).

TIME TRENDS US hospital administrative costs rose from 23.5 percent of total hospital costs (\$97.816 billion) in 2000 to 25.3 percent (\$215.369 billion) in 2011. In the same period, the hospital administration share of GDP rose from 0.98 percent to 1.43 percent (Exhibit 4). The proportion spent on administration by Canadian hospitals fell slightly from 1999 (12.9 percent)⁹ to 2011 (12.4 percent).

The administration share of hospital FTEs in the United Kingdom rose from 13.8 percent in 1980 to 23.9 percent in 2009.²¹ This change reflects mostly trends in England, where 84 percent of the UK population lives, and coincided with market-oriented reforms. The UK time trends are shown in Appendix Exhibit A2.¹⁴

Discussion

Hospitals' administrative overhead varied more than twofold across the nations we studied as a share of total hospital costs and more than fourfold in absolute terms. These costs were far

higher in the United States than elsewhere.

WHAT LIES BEHIND THESE DIFFERENCES? In all nations, hospital administrators must procure and coordinate the facilities, supplies, and personnel needed for good care. In nations where administrators have few responsibilities beyond these logistical matters, administration seems to require about 12 percent of hospital expenditures.

Modes of hospital payment can increase the complexity and costs associated with two additional management tasks: garnering operating funds and securing capital funds for modernization and expansion.

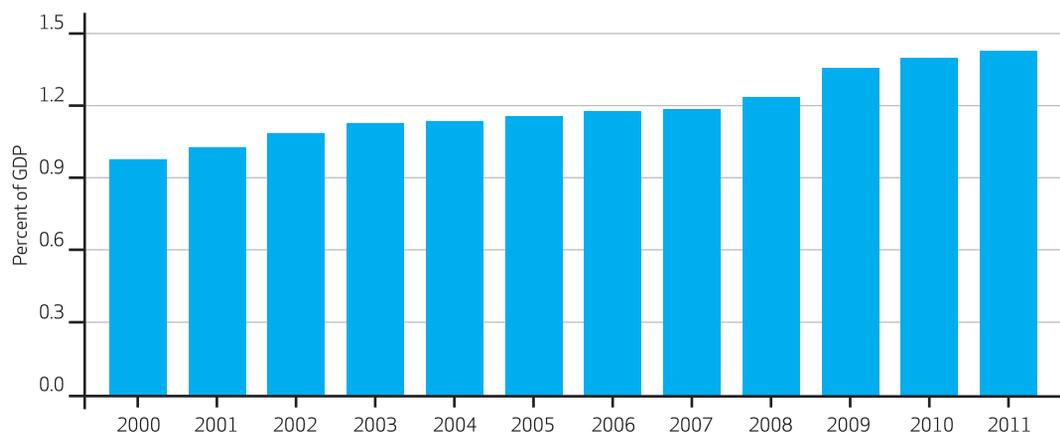
Garnering operating funds requires little administrative work in nations such as Canada, Scotland, and Wales, where hospitals receive global, lump-sum budgets. In contrast, per patient billing (for example, using DRGs) requires additional clerical and management personnel and special-purpose IT systems. This is true even in countries—such as France and Germany—where payment rates, documentation, and billing procedures are uniform.

Billing is even more complex in nations where each hospital must bargain over payment rates with multiple payers, whose documentation requirements and billing procedures often vary, as is the case in the United States and the Netherlands.

Differences in how hospitals obtain capital funds also appear to affect administrative costs. The combination of direct government grants for capital with separate global operating budgets—as in Scotland and Canada—was associated with the lowest administrative costs. (Wales has recently transitioned to such a system, reversing previous market reforms.) Hospitals in France

EXHIBIT 4

US Hospital Administration Costs As A Percentage Of Gross Domestic Product (GDP), 2000-11



SOURCE Authors' analysis of data from Medicare Hospital Cost Reports.

and Germany, where direct government grants account for a substantial share of hospital capital funding, have relatively low administrative costs despite per patient, DRG-based billing.

Administration is costliest in nations where surpluses from day-to-day operations are the main source of hospital capital funds: the United States and, increasingly, the Netherlands and England. In such health care systems, the need to accumulate capital funds for modernization and expansion stimulates administrators to undertake the additional work that is needed to identify and pursue profit opportunities.

This entrepreneurial incentive rewards hospitals that cut unnecessary operating costs and thereby improves efficiency. However, it can also reward hospitals for devoting resources to activities that decrease efficiency, such as advertising; upcoding bills—that is, exaggerating the severity of patients' illnesses in order to bill for higher DRGs;²² and cherry-picking profitable patients, physicians and services while avoiding unprofitable ones.

The performance of US for-profit hospitals—whose explicit goal is profitability and whose administrative costs are high—helps clarify whether, on balance, entrepreneurial incentives improve efficiency. Compared to other US hospitals, for-profit institutions spend less on clinical personnel such as nurses²³ but provide costlier care.^{24,25} Similarly, in Germany for-profit hospitals don't appear to be more efficient than other hospitals.²⁶

The divergence between Scotland and England is also instructive. Administrative costs are low in Scotland, where hospitals don't bill for individual patients and capital projects are funded by direct government grants—which leaves administrators little leeway for financial entrepreneurship. In contrast, the administration share of costs is higher (and apparently rising) in England, where per patient billing has largely replaced global hospital budgets and recent market-based reforms encourage entrepreneurialism.

Hospital administrative costs appear to be driven by the complexity of the reimbursement system and the mode of capital funding. However, other factors could explain our findings. The greater intensity of care in US hospitals might explain why administrative costs are higher in that country than elsewhere. But the relatively low administrative costs of US teaching hospitals (which have high care intensity) argues against this explanation.

A heavier regulatory burden in the United States and the Netherlands than elsewhere might also impose administrative costs on hospitals. Some of this burden—for example, regu-

Hospital administrative costs appear to be driven by the complexity of the reimbursement system and the mode of capital funding.

lations regarding privacy and translators in the United States—is unrelated to payment. Nonetheless, much of it reflects the tussle over reimbursement.

Our findings could also reflect a shift of responsibility (and costs) for some planning and budgeting tasks out of hospital offices and into the offices of government agencies and insurers in nations that have more centrally directed hospital systems. Perhaps the use of global budgets, regulated DRG pricing, and centralized capital allocation increases out-of-hospital costs to administer hospital payments and to monitor hospitals' activity and compliance. Our hospital-based analysis would not capture such costs, but they must be modest: Other nations spend far less than the United States on administration by government and insurers (Exhibit 2).

DO HIGHER ADMINISTRATIVE COSTS YIELD BENEFITS? If more administration eliminated clinical waste or enhanced patients' choices and market competition, administration's share might rise, but total costs would fall.²⁷ However, we found the opposite pattern: Total hospital costs were highest in the nations that had the highest hospital administrative costs. Moreover, Americans enjoy the widest choice of insurers, but patients in several nations with low administrative costs are free to choose to receive care at any hospital.

Nor do higher administrative costs appear to be associated with better care within the United States. A comprehensive meta-analysis of fifteen studies found that death rates at for-profit hospitals (adjusted for severity of illness, patients' socioeconomic status, and hospitals' teaching status) were 2 percent higher than those at non-profit hospitals.²⁸ For-profit hospitals also score lower on Medicare quality measures,²⁹ and their patients perceive their care less favorably,³⁰ compared to nonprofit institutions.

Reforming the US health care system so that it operated on a single-payer basis could result in large savings on administration.

Overall, there is no evidence that the high administrative costs in the United States translate into superior care.³¹

Policy Implications

Our data hold lessons for policy makers. Hospital payment strategies can shift vast sums from care to administration, and vice versa. In the United States, administration consumes an increasing share of hospital budgets—a share that is far higher than in nations with simpler and less market-oriented payment schemes. To put the differences in perspective, in 2011 rolling back US spending for hospital administration

to the 2000 level (adjusted for inflation and population growth) would have saved \$74.4 billion. Reducing US spending to Canada's or Scotland's level on a per capita basis would have saved \$158 billion or \$156 billion, respectively—equivalent to 1 percent of the US GDP.

Reforming the US health care system so that it operated on a single-payer basis could result in large savings on administration. In contrast, current policy initiatives may boost administrative costs. Pay-for-performance schemes add new documentation requirements and incentives for data mining of patients' records to ferret out exceptions (for example, finding the phrase "patient refused test" in free-text entries). Similarly, DRGs have long given hospitals incentives to find and document clinically insignificant comorbidities among inpatients, and the transition to accountable care organizations (ACOs) adds incentives to extend upcoding to outpatients. The ACO strategy also stimulates hospitals to develop bureaucratic structures to carry out tasks that resemble components of managed care, such as referral management, underwriting, and utilization review.

In other nations, policy makers should take into account the added administrative costs of moving to activity-based funding (for example, DRGs) and market-based allocation of new capital investments for hospital modernization and expansion. The administrative burdens of pro-market reforms should be weighed against their putative benefits. ■

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NOTES

- 1 Organization for Economic Cooperation and Development. OECD health statistics 2014 [Internet]. Paris: OECD; [cited 2014 Jul 23]. Available from: <http://www.oecd.org/els/health-systems/health-data.htm>
- 2 Squires DA. Explaining high health care spending in the United States: an international comparison of supply, utilization, prices, and quality [Internet]. New York (NY): Commonwealth Fund; 2012 May [cited 2014 May 7]. Available from: http://www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2012/May/1595_Squires_explaining_high_hlt_care_spending_intl_brief.pdf
- 3 Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83(3):457–502.
- 4 Patented Medicine Prices Review Board. Annual report 2010: comparison of Canadian prices to foreign prices [Internet]. Ottawa (ON): PMPRB; [last modified 2011 Jun 9; cited 2014 May 7]. Available from: <http://www.pmprb-cepmb.gc.ca/english/view.asp?x=1503&mid=1331>
- 5 Laugesen MJ, Glied SA. Higher fees paid to US physicians drive higher spending for physician services compared to other countries. *Health Aff (Millwood)*. 2011;30(9):1647–56.
- 6 Office of Technology Assessment. International comparisons of administrative costs in health care [Internet]. Washington (DC): Government Printing Office; 1994 Sep [cited 2014 May 7]. (Pub. No. OTA-BP-H-135). Available from: http://govinfo.library.unt.edu/ota/Ota_1/DATA/1994/9417.PDF
- 7 Himmelstein DU, Woolhandler S. Cost without benefit. Administrative waste in U.S. health care. *N Engl J Med*. 1986;314(7):441–5.
- 8 Himmelstein DU, Lewontin JP, Woolhandler S. Who administers? Who cares? Medical administrative and clinical employment in the United States and Canada. *Am J Public Health*. 1996;86(2):172–8.
- 9 Woolhandler S, Campbell T, Himmelstein DU. Costs of health care administration in the United States and Canada. *N Engl J Med*. 2003;349(8):768–75.
- 10 Pozen A, Cutler DM. Medical spending differences in the United States and Canada: the role of prices, procedures, and administrative expenses. *Inquiry*. 2010;47(2):124–34.
- 11 Cutler DM, Ly DP. The (paper) work of medicine: understanding international medical costs. *J Econ Perspect*. 2011;25(2):3–25.
- 12 Casalino LP, Nicholson S, Gans DN, Hammons T, Morra D, Karrison T, et al. What does it cost physician practices to interact with health insurance plans? *Health Aff (Millwood)*. 2009;28(4):w533–43. DOI: 10.1377/hlthaff.28.4.w533.
- 13 Kahn JG. Excess billing and insurance-related administrative costs. In: Yong PL, Saunders RS, Olsen LA, editors. *The healthcare imperative: lowering costs and improving outcomes: workshop series summary*. Washington (DC): National Academies Press; 2010. p. 142–51.
- 14 To access the Appendix, click on the Appendix link in the box to the right of the article online.
- 15 Worldsalaries.org. International average salary income database: office clerk salaries—international comparison [Internet]. [place unknown]: Worldsalaries.org; c2008 [cited 2014 May 7]. Available from: <http://www.worldsalaries.org/officeclerk.shtml>
- 16 Bureau of Labor Statistics. International comparisons of hourly compensation costs in manufacturing, 2012 [Internet]. Washington (DC): Department of Labor; 2013 Aug 9 [cited 2014 May 7]. Available from: <http://www.bls.gov/fls/ichcc.pdf>
- 17 Boyle S. United Kingdom (England): health system review. *Health Syst Transit*. 2011;13(1):1–483.
- 18 Maarse H, Jeurissen P, Ruwaard D. Concerns over the financial sustainability of the Dutch healthcare system. *CESifo DICE Report*. 2013; 11(1):32–36.
- 19 Reinhardt UE. The many different prices paid to providers and the flawed theory of cost shifting: is it time for a more rational all-payer system? *Health Aff (Millwood)*. 2011;30(11):2125–33.
- 20 Maryland Hospital Association. Achievement, access, and accountability: Maryland's all-payer hospital payment system [Internet]. Elkridge (MD): The Association; [cited 2014 May 7]. Available from: http://www.hsrcr.state.md.us/documents/HSCRC_PolicyDocumentsReports/GeneralInformation/AshbyReport2007.pdf
- 21 Hawe E, Yuen P, Baillie L. *OHE guide to UK health and health care statistics*. London: Office of Health Economics; 2011 Jul.
- 22 Silverman E, Skinner J. Medicare upcoding and hospital ownership. *J Health Econ*. 2004;23(2):369–89.
- 23 Woolhandler S, Himmelstein DU. Costs of care and administration at for-profit and other hospitals in the United States. *N Engl J Med*. 1997; 336(11):769–74.
- 24 Silverman EM, Skinner JS, Fisher ES. The association between for-profit hospital ownership and increased Medicare spending. *N Engl J Med*. 1999;341(6):420–6.
- 25 Devereaux PJ, Heels-Ansdell D, Lacchetti C, Haines T, Burns KE, Cook DJ, et al. Payments for care at private for-profit and private not-for-profit hospitals: a systematic review and meta-analysis. *CMAJ*. 2004; 170(12):1817–24.
- 26 Tiemann O, Schreyögg J, Busse R. Hospital ownership and efficiency: a review of studies with particular focus on Germany. *Health Policy*. 2012;104(2):163–71.
- 27 Danzon PM. Hidden overhead costs: is Canada's system really less expensive? *Health Aff (Millwood)*. 1992;11(1):21–43.
- 28 Devereaux PJ, Choi PT, Lacchetti C, Weaver B, Schünemann HJ, Haines T, et al. A systematic review and meta-analysis of studies comparing mortality rates of private for-profit and private not-for-profit hospitals. *CMAJ*. 2002;166(11):1399–406.
- 29 Jha AK, Orav EJ, Epstein AM. Low-quality, high-cost hospitals, mainly in the South, care for sharply higher shares of elderly black, Hispanic, and Medicaid patients. *Health Aff (Millwood)*. 2011;30(10):1904–11.
- 30 Jha AK, Orav EJ, Zheng J, Epstein AM. Patients' perception of hospital care in the United States. *N Engl J Med*. 2008;359:1921–31.
- 31 National Research Council. *U.S. health in international perspective: shorter lives, poorer health*. Washington (DC): National Academies Press; 2013.