By Dante Morra, Sean Nicholson, Wendy Levinson, David N. Gans, Terry Hammons, and Lawrence P. Casalino

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US Physician Practices Versus Canadians: Spending Nearly Four Times As Much Money Interacting With Payers

ABSTRACT **Physician practices, especially the small practices with just one or two physicians that are common in the United States, incur substantial costs in time and labor interacting with multiple insurance plans about claims, coverage, and billing for patient care and prescription drugs. We surveyed physicians and administrators in the province of Ontario, Canada, about time spent interacting with payers and compared the results with a national companion survey in the United States. We estimated physician practices in Ontario spent $22,205 per physician per year interacting with Canada's single-payer agency—just 27 percent of the $82,975 per physician per year spent in the United States. US nursing staff, including medical assistants, spent 20.6 hours per physician per week interacting with health plans—nearly ten times that of their Ontario counterparts. If US physicians had administrative costs similar to those of Ontario physicians, the total savings would be approximately $27.6 billion per year. The results support the opinion shared by many US health care leaders interviewed for this study that interactions between physician practices and health plans could be performed much more efficiently.**

Dante Morra (dante.morra@uhn.on.ca) is an assistant professor in the Department of Medicine, University of Toronto, in Ontario.

Sean Nicholson is a professor in the Department of Policy Analysis and Management at Cornell University, in Ithaca, New York.

Wendy Levinson is chair of the Department of Medicine at the University of Toronto.

David N. Gans is vice president of innovation and research at the Medical Group Management Association, in Englewood, Colorado.

Terry Hammons is a senior fellow emeritus at the Medical Group Management Association.

Lawrence P. Casalino is chief of the Division of Outcomes and Effectiveness Research and the Livingston Farrand Associate Professor of Public Health in the Department of Public Health at Weill Cornell Medical College, in New York City.

Total health spending per capita in the United States, adjusted for differences in purchasing power, is 87 percent more than in Canada ($7,290 compared to $3,895 per year).[1] Many factors contribute to the high cost of health care in the United States, but there is broad consensus that administrative costs in the health care system are high and could be reduced.[2–4] Interactions between physician practices and health insurance plans are one prominent component of administrative costs.

We recently published the results of a survey of US physician practices that estimated the time spent by physicians, nurses, and office staff on interactions with health plans. The survey found that at least $31 billion is spent on these activities annually in the United States.[5] These estimates are broadly consistent with the findings of other studies that used different methods.[6–8]

Physician practices in the United States must interact with many health plans in the US multipayer system. Moreover, interactions increase with plans' attempts to "manage care," such as requiring prior authorizations for many specialist, imaging, and hospital services. Each health plan offers many different insurance products to consumers, and each may have its own formulary (or list of approved drugs); prior authorization requirements; and rules for billing, submitting claims, and adjudication. In contrast, Canadian physicians generally interact with a single payer that offers a single product, and they are subject to fewer managed care requirements.

By estimating the cost to Canadian practices of interacting with the Canadian single payer, then comparing this to the cost to US practices of interacting with health plans, it is possible to provide an estimate of the "extra" costs to US physicians of the nation's multipayer, managed care system of health insurance. We conducted a survey of physician practice interactions with the single payer in Ontario, Canada, that paralleled our survey of practices in the United States. Ontario includes approximately one-third of the Canadian population; its single-payer model is generally representative of the Canadian system.

Study Data And Methods

Details of the methods used for the US survey have been published elsewhere.[5] We present details of the methods used in the Ontario study, with reference to the US study when relevant.

SAMPLING STRATEGY Using the 2006 MD Select Canadian Masterfile (a Canadian database of physicians and large group practices), we sent surveys to a random sample of 150 family physicians, 180 specialist physicians, and the business managers of all 93 large group practices (three or more physicians) in Ontario that met our inclusion criteria. Our goal, in Ontario as in the United States, was to include office-based physicians in private practice, so we excluded physicians working in academic and hospital practices and physicians working in salaried delivery models such as Canadian Community Health Centers. We also excluded physicians whose revenues came mainly from patient self-payments rather than from payers, so we excluded physicians practicing outside of the single-payer system such as cosmetic surgeons.

THE SURVEY We created separate survey instruments for physicians and for business managers. The instruments were based on a review of the literature and on thirty-seven interviews across the United States (twenty-seven) and Canada (ten) with physicians, health plan executives, and practice administrators. The surveys were pilot-tested on twenty-two administrators and physicians—fifteen in the United States and seven in Canada. We mailed a survey to all physicians in the sample and a separate administrator survey to business managers in the group practices.

The physician survey asked about the time spent interacting with payers (in minutes per day) by the physician responding and by the clinical staff working directly with that physician. These interactions included time spent addressing formulary issues and time spent providing information for staff to work on denied or improperly paid claims. The administrator survey and the administrator section of the physician survey asked about "practicewide costs"—the costs of billing and time spent on interactions with payers by staff responsible for supporting all the practice's physicians.

In Ontario, as in the United States, solo and two-physician practices are predominantly managed by the physicians themselves, so for these practices we used physicians' answers to the administrator part of the physician survey to estimate the practicewide costs. For practices with three or more physicians, we estimated practicewide costs from the administrator survey completed by the business managers.

The US and Ontario survey instruments used identical questions, but questions not relevant in Ontario were not included in that survey. Notably, the Ontario single-payer system does not credential physicians, or require prior authorization, so the Ontario survey did not ask about time spent on these activities.

Surveys were mailed to Ontario physicians and administrators in July 2006, and follow-up mailings were sent in September and November to individuals who had not responded. The mailings included a letter of support from the Ontario Medical Association; a five-dollar bill was included in the first and the third mailings.

STATISTICAL ANALYSIS We captured time spent by the physician and by staff working directly with the physician from the physician surveys (direct physician time), and time spent by staff working for the practice as a whole from the administrator component of the surveys (practicewide time). Practicewide time was divided by the number of physicians in the practice to estimate practice time per physician. We calculated total per physician time interacting with payers by adding the time spent by staff working for the practice as a whole (practice time per physician) to the time spent by physicians and by staff working directly with the physicians (direct physician time).

Time was converted to dollars per year by multiplying time spent by each type of physician and staff member by their respective average hourly wage rates, using external data on compensation and benefits.[9–12] For comparison, we converted Canadian costs into US dollars using the purchasing power parity exchange rate (1.21) for 2006 (the market exchange rate was 1.13).[13]

Because payment rates differ between the United States and Canada, we also report adjusted Canadian costs as if the Canadian physicians and staff were paid at US rates. We further provide cost estimates for Canada by adjusting the payment rate to match the practice size and specialty mix of the respondents to the US survey, thereby weighting the Canadian responses

to match the US composition of physician providers. We use the adjusted cost estimates throughout this article, although the adjusted and unadjusted results were very similar. We conducted *z* tests of differences between pairs of weighted means to determine whether the time and cost of interacting with payers were statistically different in the United States compared to Canada.

The estimated costs to US physician practices presented in this article are somewhat higher than the costs reported in our previous article.[5] In that article, we focused only on the costs of interacting with private health plans, excluding the traditional Medicare and Medicaid programs. In this article, we estimate the costs to US physician practices of interacting with all payers, including Medicare and Medicaid, in order to be consistent with the Ontario data.[5]

Our study was approved by the Institutional Review Boards of the University of Toronto, Weill Cornell Medical College, and the University of Chicago.

LIMITATIONS This study has several limitations. First, we used responses to surveys, rather than direct observation, to estimate the time spent by physician practices on interactions with payers. However, a direct observation study large enough to be representative would be extremely costly.

Second, our Canadian estimates are based on one Canadian province. Ontario is, however, the most populous province.

Third, although our Ontario-adjusted response rate was quite high at 78 percent, the weighted response rate across the entire population was 60.5 percent. This might affect the generalizability of the results.

Finally, we did not include the cost of interactions with payers for hospital-based and academic physicians; including these costs would make the total costs of interacting with payers higher.

Study Results

Of the 423 Ontario physicians and administrators sampled, 114 were ineligible (physicians and administrators who were in academic, hospital-based, or community health center practices, or were cosmetic surgeons). Of the 309 remaining physicians and administrators, 216 completed surveys, for an overall raw response rate of 70 percent. The response rate, adjusted according to American Association for Public Opinion Research standards, was 78 percent overall; 73 percent for administrators, 74 percent for family physicians, and 84 percent for surgical and medical specialists.[14,15] In the US companion survey, the overall adjusted response rate was 57.5 percent; the adjusted response rate for Ontario and the United States combined (weighted for the number of respondents to each survey) was 60.5 percent.

Exhibit 1 presents a breakdown of the Ontario and US survey respondents. As noted above, because physicians practicing in groups of only one or two physicians tend to serve as the administrators themselves, we used the administrator section of the survey sent to physicians in these practices. We sampled all of the group practices (three or more physicians) available in Ontario (ninety-three) and reported the clinics as specialty or primary care on the basis of which physician type was most prevalent in the clinic.

The total time spent by physicians interacting with the Ontario single payer was 2.2 hours per week—significantly less than the 3.4 hours spent by US physicians on interacting with multiple payers (Exhibit 2). Most of the difference resulted from US physicians spending one hour per week, on average, obtaining prior authorizations.

The most striking differences between Ontario and the United States are in the time spent by staff other than physicians on interactions with payers. US nursing staff (including medical assistants) spent 20.6 hours per physician in the practice per week interacting with payers—nearly ten times the 2.5 hours spent by Ontario nursing staff. US nursing staff spent more time in every category of interaction—most notably, obtaining prior authorizations, on which US nursing staff spent 13.1 hours per physician per week. US clerical staff spent 53.1 hours per physician per week, compared to 15.9 hours in Ontario; most of this difference results from time spent by clerical staff in the United States on billing and obtaining prior authorizations.

US senior administrators also spent more time per physician than those in Ontario, mostly on overseeing claims and billing tasks. Very little time was spent in Ontario or in the United States on submitting quality data to payers or reviewing data on quality.

When time spent on interactions with payers is converted to US dollars using the Canadian purchasing power parity exchange rate for 2006 (1.21),[13] Ontario physician practices spent $20,410 per year per physician on these interactions, compared to $82,975 in the United States (Exhibit 3). When the Ontario costs are adjusted to US physician and staff salary rates, the Ontario cost per physician increases slightly to $21,335; it increases a little more (to $22,205) when also adjusted to make the Ontario specialty mix the same as in the United States.

EXHIBIT 1

Physician And Practice Administrator Survey Respondents In Ontario And The United States

Respondents	Practices with 1–2 physicians	Practices with 3 or more physicians	Total
ONTARIO PHYSICIANS			
Primary care	27 (16%)	50 (29%)	77 (45%)
Specialists	66 (39%)	28 (16%)	94 (55%)
Total	93	78	171
ONTARIO ADMINISTRATORS			
Primary care	—[a]	40 (89%)	40 (89%)
Specialists	—[a]	5 (11%)	5 (11%)
Total	—[a]	45	45
US PHYSICIANS			
Primary care	228 (33%)	151 (23%)	379 (57%)
Specialists	156 (23%)	133 (20%)	289 (43%)
Total	384	284	668
US ADMINISTRATORS			
Primary care	—[a]	122 (63%)	122 (63%)
Specialists	—[a]	72 (37%)	72 (37%)
Total	—[a]	194	194

SOURCE Authors' analysis. [a]Not applicable.

Discussion

Our survey results indicate that the cost to Ontario physician practices of time spent interacting with the Ontario single payer are 27 percent of the costs that US practices incur interacting with multiple payers (using the $22,205 figure for the adjusted Ontario costs). The difference in cost between US and Ontario physicians, when adjusted for US payment rates and specialty mix, is $60,770 per physician.

If US physicians had similar administrative costs to Ontario physicians, the total savings would be approximately $27.6 billion per year. This calculation includes an estimated 454,000 active office-based physicians in the United States.[5,16] These savings would be larger if physicians who are not office based were included. Their costs of interacting with health plans are likely to be lower than those for office-based physicians, but not negligible. The notable difference between the United States and Ontario is that nonphysician staff members in the United States spend large amounts of time on billing and obtaining prior authorizations.

Steffie Woolhandler and colleagues aggregated various data sources to estimate that the total administrative costs in the US health care system were $294.3 billion.[17,18] They estimated

EXHIBIT 2

Mean Hours Per Physician Per Week Spent On Interactions With Payers In Canada And The United States

Personnel	Formularies	Claims/billing	Quality data	Credentialing	Prior authorizations	Total (SE)[a,b]
CANADA						
Physicians	1.0	1.2	0.0	—[c]	—[c]	2.2 (0.34)
Nurses	1.3	1.2	0.0	—[c]	—[c]	2.5 (0.34)
Clerical staff	—[c]	15.9	0.0	—[c]	—[c]	15.9 (1.24)
Senior administrators (hrs/year)	—[c]	23.5	1.1	—[c]	—[c]	24.6 (7.36)
UNITED STATES						
Physicians	1.3	0.9	0.0	0.1	1.0	3.4 (0.17)
Nurses	3.6	3.8	0.0	0.2	13.1	20.6 (1.17)
Clerical staff	—[c]	45.5	0.1	2.0	6.3	53.1 (2.37)
Senior administrators (hrs/year)	—[c]	173.7	3.3	—[c]	0.3	163.2 (16.51)

SOURCE Authors' analysis. **NOTE** SE is standard error. [a]Values in the total column may not equal the sum of the activity-specific values because of missing values from some respondents. [b]For all values in this column, the difference between Canada and the United States is significant at $p < 0.001$. [c]Not applicable.

EXHIBIT 3

Mean Dollar Value Of Hours Spent Per Physician Per Year For All Types Of Interactions With Payers

Personnel	United States (SE)	Canada (SE)	Canada costs with US salaries[a]	Canada costs with US salaries and US specialty mix[b]
Physicians	$17,775 (932)	$6,191 (1,074)[c]	$8,422[c]	$9,616[c]
Nurses	$23,478 (1,332)	$2675 (366)[c]	$2,349[c]	$2,302[c]
Clerical staff	$37,010 (1,650)	$10,766 (715)[c]	$9,178[c]	$9,603[c]
Senior administrators	$4,712 (458)	$779 (415)[c]	$1,386[c]	$684[c]
Total	$82,975 (3,453)	$20,410 (1,404)[c]	$21,335[c]	22,205[c]

SOURCE Authors' analysis. **NOTES** 2006 Canadian values are converted to US dollars via the purchasing power parity exchange rate. SE is standard error. [a]Assumes Canadian staff and physicians are paid at US wage rates. Wage rates are higher in the United States for all services. [b]Assumes Canadian staff and physicians are paid at US wage rates and assumes an identical sample mix of specialty and practice sizes as in the US sample. [c]The difference between Canada and the United States is significant at $p < 0.001$.

that Canada's per capita administrative costs were only 29 percent of US costs ($307 in Canada compared to $1,059 in the United States). These estimates included administrative costs from all parts of the system (hospitals, physician practices, health plans, and nursing homes) and included all components of costs such as insurance premiums and office rent. Woolhandler and colleagues did not provide data on specific components of costs—such as obtaining prior authorization—to physician practices.

Both our estimates and those of Woolhandler and colleagues suggest that US physician practices spend far more than Canadian practices on interactions with health plans. However, it would be incorrect to assume that all of the extra US costs represent waste. To some extent, these costs result from having a multipayer system and from attempts by the multiple payers to manage costs and care. Having multiple payers clearly generates more administrative costs than a single-payer system.

These costs should be balanced against possible benefits generated by such a system—for example, benefits that may arise from competition, innovation, and choice among insurance products.[19,20] Prior authorization requirements increase administrative costs for physicians and health plans but may reduce the amount of inappropriate care provided; savings and increased quality generated by reducing inappropriate care should be matched against the costs of prior authorization. To our knowledge, no reliable estimates of these savings exist.

Summary And Policy Implications

Research aimed at estimating differences across the full range of costs and benefits in single- versus multiple-payer systems would be useful, albeit difficult. In our study we focused on a more modest goal: to directly compare the administrative costs of interacting with payers by office-based physicians using a similar methodology and survey instrument in Canada and the United States.

Administrative tasks are wasteful if their costs exceed the benefits they generate or if the same benefits could be achieved at a lower cost. During our thirty-seven interviews with health plan executives and with physician leaders and business managers of physician practices, we found disagreement about benefits generated, but widespread agreement that interactions between physician practices and health plans in the United States could be performed much more efficiently. This would reduce costs both for physicians and for health plans.

There was general agreement that standardizing transactions as much as possible and conducting them electronically rather than by mail, fax, and phone would reduce costs and reduce the "hassle factor" of physician and staff interruptions for phone calls. However, health plans that want to differentiate themselves may resist standardization in areas such as prior authorization and formularies.

Recently, specific recommendations—with a good deal of overlap—have come from the Institute of Medicine,[21] the Massachusetts General Physicians Organization,[22] UnitedHealth Group,[3] and the broad-based Healthcare Administrative Simplification Coalition.[23] Key recommendations include the following:(1) creating common, possibly mandatory standards for interactions (billing, claims payment, prior authorization, and so on); (2) making all standard interactions electronic (rather than through the phone or mail); (3) using a single credentialing process; (4) using a single quality measurement process; and (5) using automated verification at the point of care of patient eligibility for health insurance benefits.

Some progress is being made. The Council for

Affordable Quality Healthcare makes it possible for physicians to submit materials for credentialing electronically.[24] Health plans (and hospitals) can use these materials to credential physicians, avoiding the costs of submitting materials multiple times and in different formats. The council is also working to address other forms of administrative inefficiency in relations between physicians and health plans

Section 1104 of the Affordable Care Act of 2010 instructs the secretary of health and human services to take steps to simplify interactions between providers and health plans. The reform bill also supports the implementation of new payment methods such as bundled payments and increased emphasis on pay-for-performance, as well as new forms of organization such as accountable care organizations.

In the short run, these new forms of payment and of organization—assuming that they do become common—are likely to increase the administrative burden for physicians and health plans. In the longer term, these new forms should move the system away from fee-for-service payment and thus reduce the administrative costs involved in producing, reviewing, and processing claims for each service provided. In addition, accountable care organizations and organizations that receive bundled payments would have incentives to be cost-conscious, so the heavy costs associated with prior authorizations and formularies would probably be reduced.

The price of inefficiencies is not only the cost measured in this study. When these inefficiencies result in frequent interruptions in the work of physicians and their staff, they are likely to interfere with patient care. Everyone—health plans, physicians and their staffs, and patients—will be better off if inefficiencies in transactions between physicians and health plans can be reduced. ■

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ABOUT THE AUTHORS: DANTE MORRA, SEAN NICHOLSON, WENDY LEVINSON, DAVID N. GANS, TERRY HAMMONS & LAWRENCE P. CASALINO

Dante Morra is an assistant professor in the Department of Medicine at the University of Toronto.

In this issue, Dante Morra and coauthors present the results of a survey of physicians in the Canadian province of Ontario about the time they spend interacting with health insurance plans. The authors compare these results with a national survey in the United States. The Canadian survey found that Ontario medical practices spend 27 percent as much time on insurance matters as US practices, which translates to an annual cost of $22,205 for the average Ontario physician, compared to $82,975 for a US physician practice.

Morra is the clinical site director of general internal medicine at Toronto General Hospital, an assistant professor in the Department of Medicine at the University of Toronto, and an adjunct professor at the Rotman School of Management of the University of Toronto. He is the cofounder and medical director of the Center for Innovation in Complex Care, which pioneers new models of care. His research focuses on hospital process improvement. He received his medical degree from the University of Toronto and his master of business administration degree from the Rotman School of Management.

Sean Nicholson is an associate professor at Cornell University.

Sean Nicholson is an associate professor in the Department of Policy Analysis and Management at Cornell University and a faculty research fellow at the National Bureau of Economic Research. He has a doctorate in economics from the University of Wisconsin-Madison.

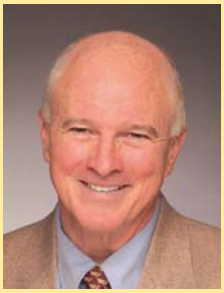
Wendy Levinson is chair of the Department of Medicine at the University of Toronto.

Wendy Levinson is the Sir John and Lady Eaton Professor at the University of Toronto, where she is chair of the Department of Medicine. She was on the faculty of the Oregon Health Science University and the University of Chicago Medical School and is an expert in physician-patient communication. She received her medical degree from McMaster University, in Hamilton, Ontario.

David N. Gans is vice president of innovation and research at the Medical Group Management Association.

David Gans is vice president of innovation and research at the Medical Group Management

Association, an organization for professionals in group practice medical management, where he focuses on patient safety and quality. He has a master of science degree in education from the University of Southern California and a master of health administration degree from the University of Colorado.



Terry Hammons is a senior fellow emeritus at the Medical Group Management Association.

Terry Hammons is a senior fellow emeritus at the Medical Group Management Association. He has been on the medical school faculties of the University of Iowa and Case Western Reserve. As deputy director of the Physician Payment Review Commission from 1987 to 1990, he helped develop Medicare physician payment reform in 1989. He has a master's degree in economics from the Massachusetts Institute of Technology and a medical degree from Washington University School of Medicine.

Lawrence P. Casalino is the Livingston Farrand Associate Professor at Weill Cornell Medical College.

Lawrence Casalino, who assembled this team of authors, is the chief of the Division of Outcomes and Effectiveness Research in the Department of Public Health at Weill Cornell Medical College. He is the Livingston Farrand Associate Professor of Public Health there. For twenty years he worked as a family physician in private practice. He has a master of public health degree and a doctorate in health services research from the University of California, Berkeley. His areas of expertise include the health care delivery system, physician-hospital relations, and accountable care organizations.