

# Physician Responses to Global Physician Expenditure Budgets in Canada: A Common Property Perspective

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**G**LOBAL BUDGETING APPROACHES TO RESOURCE allocation and cost control are gaining increasing attention in the health sector (Schwartz, Glennerster, and Saltman 1996). Since the early 1990s their use has spread rapidly in the physician sector in Canada; every Canadian province now has a global budget in the fee-for-service sector of its public insurance program (Barer, Lomas, and Sanmartin 1996). A global physician expenditure budget, also referred to as a global physician “expenditure cap,” spells out the total amount of funds available to reimburse physicians in a jurisdiction for specified services provided during a defined period of time. Physicians assume some liability for expenditures above the global budget. Under a “hard” cap, physicians are fully liable for expenditures in excess of the budget so that, if the hard cap is enforced, actual expenditures for services delivered during the year will not exceed the budget. Under a “soft” cap, also called an expenditure target (Glaser 1993), physicians and the funder share liability for excess expenditure in a prearranged manner (e.g., 50 : 50). Actual expenditures can exceed the budget, but physicians are penalized for doing so. Funders most commonly recoup excess expen-

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The Milbank Quarterly, Vol. 75, No. 3, 1997  
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350 Main Street, Malden, MA 02148, USA, and 108 Cowley Road,  
Oxford OX4 1JF, UK.

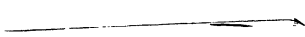
ditures for which physicians are liable through concurrent or future fee reductions.

Placing a global budget over a fee-for-service payment system comprising thousands of independent physician practices, each billing against the budget, creates a significant utilization management challenge for the profession, a challenge made more difficult by the paucity of management levers available to policy makers in either the profession or the government. To make matters worse, at the same time that an expenditure cap intensifies the profession's need for collective, cooperative approaches to utilization management, the "beggar-thy-neighbor" facet of global caps makes gaining that cooperation more difficult. A global cap creates a strategic game among fee-for-service physicians, a game that can generate growing utilization as each physician noncooperatively increases billings in an attempt to capture a sufficient share of the budget. From an individual physician's perspective under a cap, the benefits of increased billing accrue to him- or herself while the costs are spread among all physicians (in the form of fee adjustments when total billings exceed the budget). A physician who restrains his or her billing when others do not also do so risks losing the most financially; that same physician gains the most by not restraining billing when all others do so. Hence, a physician's behavior depends in part on how he or she thinks other physicians will respond. The capped budget also exacerbates internal divisions within the profession as subgroups of physicians (defined, for example, by specialty, age, urban/rural location) vie for *their* share of the fixed budget (Katz et al. 1997).

These incentive and management problems pose serious obstacles to the successful use of global physician expenditure caps. Global caps, especially hard caps, can unquestionably contain costs, but unless these management problems are overcome caps can be extremely destabilizing both for the profession and for government policy (Barer, Lomas, and Sanmartin 1996). Explosive utilization growth deriving from strategic responses by individual physicians to the individual-collective incentive conflict may appear inevitable. But analyses of other sectors characterized by the same incentive conflict, most notably common property resources (e.g., water aquifers, fisheries, shared grazing land), demonstrate that such an outcome is not inevitable. These analyses also indicate that crafting "better" financial incentive structures, although important, is only one (and not necessarily the dominant) consideration in managing utilization.

In this article we report on a case study of the experiences of two Canadian provinces with global physician expenditure caps: Alberta and Nova Scotia. Between the two provinces, only Nova Scotia displays evidence of explosive utilization growth under the cap, despite the fact that it better designed the financial incentive structure of its cap policy to reduce the financial advantage of increased utilization. We use a framework derived from the study of common property resources to analyze the provinces' experiences under physician expenditure caps, particularly in order to understand the utilization responses. Aspects of the analysis also draw on a more general analytic framework for studying funding structures and the associated financial incentives, a framework that emphasizes the critical role played by interpretive processes that translate funding structures into financial incentives for affected individuals and organizations (Giacomini et al. 1996). Because an identical funding structure may impart different meanings to different actors in a health care system, it may create different behavioral incentives.

Data for the case study were collected from semistructured interviews with key individuals in the provincial ministries of health and the medical associations, a review of relevant documents, and a survey of practicing physicians. Across the two provinces we interviewed 14 individuals chosen for their knowledge of the process that led up to the implementation of global budget policies, of the global budget policies themselves, and of how events have unfolded under the policies. The interviews focused on government objectives for the global budget policies, the communication of the policies to physicians, and the interpretation of and responses to the policies by the medical associations and physicians. The review of documents focused on the negotiated agreements that defined the global budget policies, information sent to physicians by the medical association explaining the agreements, media reports, and data from the ministries of health, the medical associations, and other published sources. Finally, we surveyed by mail (with repeat mailings and postcard reminder) a random sample of 100 physicians in each province to probe their understanding of the global budget policies, their interpretations of the meaning of the policies, and their responses to the policies. Because the response rate was relatively low (43 percent), and changes in the design of the policies over time (see below) made it difficult to interpret some answers, we use survey responses only selectively to illustrate findings from other sources.



## Physician Expenditure Cap Policies: Design and Responses in Alberta and Nova Scotia

Canada's public insurance system covers all "medically required" physician services at no cost to the patient. There is no balance billing by physicians, and the purchase of private insurance to cover services included in the public plan is prohibited. Fee-for-service payment dominates in the physician sector in each Canadian province. Fee levels and other aspects of physician remuneration are set through periodic negotiations between each province's government and medical association.

Both Alberta and Nova Scotia introduced hard global physician expenditure caps on April 1, 1992, as part of long-term, multiyear agreements. Hard caps have been in force in each province since that time. The initial levels of the caps differed across the two provinces: Alberta provided an immediate increase (5.5 percent) over the previous year's expenditure and included provisions for budget increases in subsequent years; Nova Scotia's policy provided no budget increase in the first two years of the cap, permitted a 3 percent increase in the third year, and made provisions for increases in subsequent years. In each province, however, only 18 months after implementation, newly elected governments reopened the agreements seeking budget reductions. In Alberta, a 10 percent budget reduction was negotiated in May 1994, and a further reduction of approximately 5 percent was negotiated in December 1995. In Nova Scotia, a two-year agreement signed in March 1995, after more than a year of acrimonious negotiation, provided for a 7.5 percent budget reduction. In both provinces, the new agreements also modified the design of the global cap and related policies in light of their initial experiences.

Physician utilization responses to the global cap differed notably across the two provinces. A comparison of real fee-for-service expenditures in each province (adjusted for fee changes and changes in the definition of global budgets over the period) reveals that whereas utilization was well controlled in Alberta, it increased throughout the period in Nova Scotia (table 1). Nova Scotia's steady utilization growth (as measured by real, fee-adjusted expenditures) left total utilization in 1994-95 at 7.7 percent above the 1991-92 base and utilization per physician at 6.8 percent above its base-year level. This growth required reductions to the fee schedule on at least three occasions in an effort to keep expenditures within the budget.

TABLE 1  
Utilization Growth under the Global Expenditure Caps: Alberta and Nova Scotia

Year	Alberta				Nova Scotia			
	Total expenditures		Expenditures per physician		Total expenditures		Expenditures per physician	
	Adjusted expenditures <sup>a</sup> (million \$)	Proportion of base-year expenditures	Number of physicians	Expenditure per physician	Adjusted expenditures <sup>a</sup> (million \$)	Proportion of base-year expenditure	Number of physicians <sup>b</sup>	Expenditures per physician
1991/92	823.5	1.000	4,351	189,266	266.2	1.000	1,760	151,250
1992/93	832.4	1.011	4,441	187,435	272.7	1.025	1,759	155,031
1993/94	825.0	1.002	4,584	179,973	277.2	1.041	1,857	149,273
1994/95	842.7	1.023	4,552	185,127	286.7	1.077	1,775	161,521

<sup>a</sup>The adjustment removes the effects of fee changes and changes in the definition of the global budgets.

<sup>b</sup>Number of active civilian physicians, excluding interns and residents. The measure includes the small proportion of physicians who do not bill fee-for-service. With the exception of the anomalous one-year jump in this measure of physician supply in Nova Scotia in 1993-94 (for which a comparison with a billings database indicates that there was not a comparable jump in the number of physicians billing the plan), trends in this measure of supply and in the number of physicians who bill the plan have historically moved in parallel.

Source: Canadian Institute for Health Information (1997).

In contrast, total utilization in Alberta was essentially flat for the first two years of the cap policy, followed by a moderate increase in the third year, which in 1994–95 left it at just 2.3 percent above the 1991–92 base. Change in physician supply, however, meant that utilization per physician in 1994–95 was actually 2.2 percent below its base-year level. Physicians were so sensitized that a small fee reduction of 0.9 percent in August 1993 caused utilization to drop by 3 to 4 percent. At one point, the head of the general practice section of the Alberta Medical Association (AMA) even sent a letter to GPs, encouraging them to increase utilization, which had fallen so much that they were going to end the year well under budget (utilization did increase, but it still came in under budget). Later, when utilization growth once again became a concern, a letter from the AMA to all of its members was followed by a drop in utilization.

These utilization differences are all the more surprising because Nova Scotia's global cap was accompanied by policies to mitigate the financial incentive problem discussed above. Simultaneously with the global cap, Nova Scotia introduced individual-level billing thresholds (partly at the behest of the medical association). Individual billing thresholds help control utilization directly by penalizing high billers and indirectly by potentially engendering cooperation: they assure physicians that no individual can draw excessively on the global budget without penalty. Alberta had no individual-level thresholds, a design feature that neither the AMA nor the Alberta government pressed hard for in the negotiations. Focusing purely on financial incentive structures, one would predict better-controlled utilization in Nova Scotia. The common-property framework suggests other factors that may explain this seemingly anomalous finding.

### Using a Common-Property Framework to Understand the Utilization Responses

A global budget married to fee-for-service payment is directly analogous to a common-property resource (Hurley and Card 1996). Dollars are the resource; the budget is the limited pool of the resource; physicians are the users who draw on the common, shared budget; and over-use leads to "depletion" of the resource over time (excessive withdrawals in one period lead effectively to a smaller pool the next period as the

government recoups the money by imposing “clawbacks”). From an economic perspective, this problem can be characterized as rent dissipation, whereby the above-average earnings of physicians dissipate as the return on effort expended falls with fee clawbacks. A notable difference between a global physician budget as a common-property resource and many natural resources managed in common is that the size of the physician budget is unambiguously politically determined rather than naturally determined. This difference has implications for reaching and maintaining management solutions—for instance, it allows for political bargaining to expand the budget—but it does not affect the basic nature of the incentive problem.

Analyses of common property have identified conditions associated with successful, sustainable management of such resources by users. Achieving these preconditions depends on the nature of the resource itself (its physical properties and the technologies available for drawing on it), the context in which it is used (e.g., number of users, extent of user heterogeneity, uses to which the resource is put), and the institutional arrangements devised to manage use. Salient institutional arrangements associated with successful management include collective, participatory, decision-making arrangements at multiple levels (e.g., for operational rules and for processes of collective decision making); a clear definition of the boundaries of the resource and of the eligible users; clear rules of use; mechanisms for monitoring collective and individual-level use; sanctions for “violators” of agreed-upon rules; and low-cost mechanisms to resolve the inherent conflict among users. Critical aspects of context, the properties of the resource, and these key institutional arrangements constitute the main elements of the analytic framework (Ostrom 1990; Oakerson 1992; Bromley 1992). We use these elements to understand the experiences in Alberta and Nova Scotia under caps.

### *Economic Context*

Two economic factors likely played a role in the different utilization responses: the background economic pressure faced by physicians in each province when caps were introduced; and the relative (i.e., compared to historical levels of funding) size of the capped budgets in each province. Table 2 lists selected indicators of the economic context of

TABLE 2  
Selected Indicators of the Economic Context of Practice in  
Nova Scotia and Alberta prior to Expenditure Cap Policies

	1987-88	1988-89	1989-90	1990-91	1991-92	
<b>Across-province absolute fee-level index<sup>a</sup></b> (100 = median fee schedule among provinces)						<b>Mean</b>
Nova Scotia	112.0	116.8	111.1	111.0	n/a	112.7
Alberta	119.9	120.0	114.6	115.3	n/a	117.7
<b>Within-province fee index<sup>b</sup> (1986 = 100)</b>						<b>Percent change</b>
Nova Scotia	103.0	107.5	108.9	112.5	115.6	12.2
Alberta	100.7	102.7	105.9	109.0	113.8	12.9
<b>Physician/100,000 pop<sup>c</sup></b>						<b>Mean</b>
Nova Scotia	179.5	185.6	192.6	191.3	191.0	188.0
Alberta	156.6	163.6	164.2	163.1	165.8	162.6
<b>Average nominal gross billing per fee-for-service physician<sup>d</sup></b>						<b>Mean</b>
Nova Scotia	n/a	n/a	122,297	125,588	132,747	126,877
Alberta	n/a	n/a	151,233	156,005	169,075	158,771
<b>Average real gross billings per fee-for-service physician<sup>e</sup></b> (1986 fee dollars)						<b>Mean</b>
Nova Scotia	n/a	n/a	112,302	111,633	114,833	112,923
Alberta	n/a	n/a	142,807	143,124	148,572	144,834

<sup>a</sup>Health and Welfare Canada (1988, 1989, 1990, 1991).

<sup>b</sup>Health Canada (1994).

<sup>c</sup>At December 31 of fiscal year. Physician supply measure is Active Civilian Physicians, excluding interns and residents. Physician supply and population figures are taken from Canadian Institute for Health Information (1997).

<sup>d</sup>Canadian Institute for Health Information (1996).

<sup>e</sup>Payments adjusted using the index from Health Canada (1994).

practice in the two provinces in the years preceding the expenditure cap policies. Together they suggest that physicians were under greater economic pressure in Nova Scotia. Although the percentage change in fees in the five years preceding the expenditure cap policies was roughly comparable in the two provinces (12.2 percent vs. 12.9 percent), on average, the absolute level of fees in Nova Scotia's schedule was lower than in Alberta's. (In a comparison of fee schedules across the provinces,



Nova Scotia had a five-year mean fee index of 112.7 vs. 117.7 for Alberta.) In addition, both the physician-to-population ratio and the rate of growth in physician supply preceding the cap policies were higher in Nova Scotia (188.0 vs. 162.6 and 6.4 percent vs. 5.9 percent, respectively). In combination, the lower fees and higher physician density led to nominal billings per physician of approximately \$30,000 less in Nova Scotia than in Alberta and a slower rate of growth in such payments in Nova Scotia in the years preceding the cap. Finally, adjusting for fee changes during the period, underlying utilization per physician in Nova Scotia had been growing at just over one-half the rate of growth in Alberta. All of these factors suggest that, on average, at the start of caps, physicians in Nova Scotia were under greater economic pressure than physicians in Alberta and that they may have had a smaller economic margin on which to absorb budget and fee reductions.

The difference between the provinces in the relative size of the budget in which expenditure caps were introduced may also have contributed to the different utilization responses. Nova Scotia's tight first-year budget (0 percent increase) pressured physicians from the start. The early fee reductions caused by overexpenditure started a losing dynamic among physicians: work harder to maintain income, cause the payment rate to fall, work even harder, and so on. In contrast, Alberta's early budget increases made the cap policies more palatable to physicians, created less pressure that would generate a utilization response, and provided breathing space for Alberta's physicians and the AMA to adjust to a cap. This, however, is not the whole story. The early budget increases were subsequently taken away. And, in the period under caps, both the rate of growth in physician supply and the rate of growth in population, which represent the most important sources of utilization pressure on a fixed budget, were greater in Alberta than in Nova Scotia. Finally, like Alberta, the province of Ontario had budget increases in the first years of its cap policy, during which expenditures came in under budget. In the third year, budget reductions like those experienced in Alberta were imposed and since then, unlike Alberta, expenditures have risen continuously, requiring sizable income clawbacks or holdbacks. Hence, although the early budget increase likely plays a role in explaining the differential responses, especially right after the caps were introduced, they do not explain the sustained utilization control in Alberta.

*Collective, Participatory Decision Making  
among Physicians*

Successful management of common-property resources depends on workable institutional arrangements for collective, participatory decision making that gives users a voice. The analysis of the two provinces suggests that differences in their approaches to negotiating the expenditure cap policies, in the types of agreements each association sought to negotiate, and in the process for approving the negotiated agreements in the profession may have fostered greater physician acceptance in Alberta.

Compared to Alberta, the negotiation approach used in Nova Scotia led to a less stable working relationship between the association and the government and to a greater sense of alienation by physicians. The negotiation approach adopted by the Medical Society of Nova Scotia (MSNS) and the provincial government through the 1970s and 1980s has been characterized as one of mutual accommodation (Lomas, Charles, and Greb 1992). Negotiations were informal, the parties involved knew each other well, and there was a history of working together on a personal level at the highest levels of government to solve problems. Although this personalized approach worked relatively well when negotiating and allocating fee increases, it proved unstable in the face of budget reductions. Physicians felt deeply betrayed and personally affronted by the budget cuts. Physicians, for example, interpreted a decision (made on equity grounds) to impose on them the same percentage budget cut as on other publicly paid individuals to mean that physicians were simply “another group of civil servants”—that their professional status was not being properly recognized. The personalized approach meant that few stable institutional structures existed through which the profession and the government could conduct discussions when relations soured. The working relationship between the government and the MSNS broke down, hindering their ability to resolve difficult issues created by the expenditure caps. In the process leading up to the March 1995 agreement, for example, negotiations between the two parties twice broke off and the MSNS suspended its participation in the government–physician Joint Management Committee, which oversaw the administration of many aspects of the cap policy.

In contrast, although the negotiation approach in Alberta in the early 1990s has also been characterized as one of mutual accommodation, it had been preceded in the 1970s and 1980s by an adversarial,

confrontational style with little trust on each side. During the earlier adversarial phase, the government and the AMA had developed stronger institutional processes for accommodating differences and for conducting negotiations in the face of prolonged conflict. Consequently, despite strained relations created by budget cutbacks, the parties were able to depersonalize issues, maintain a constructive working relationship, and move difficult discussions forward. The relationship between the government and the profession did not break down as it did in Nova Scotia.

The two associations also sought to negotiate quite different types of agreements. The MSNS sought, in the words of one interviewee, an "ironclad" agreement that defined as explicitly and precisely as possible not only the responsibilities of various parties but also the specific mechanisms for carrying them out. In contrast, given the uncertainty as to how events would unfold under the cap, the AMA sought a flexible agreement that would allow solutions to be devised as specific problems arose. So, for instance, although the Alberta agreement clearly specified who was responsible for ensuring that expenditures remained within budget, it left open the specific mechanism for doing this and provided the scope for consultation with physicians in deciding upon the mechanism. These different approaches had two important consequences. Nova Scotia's approach begat a greater sense of betrayal and disillusionment when the new government ultimately broke the agreement. But more important, the rigidity and structure of its agreement precluded both adaptation and any pretense that physicians could influence implementation of the policy.

Finally, Alberta's approval process for the negotiated agreement may have fostered greater physician acceptance than did Nova Scotia's. Nova Scotia's approval process required only a vote of the executive committee of the Medical Association. Final approval of the negotiated agreement in Alberta, however, required ratification by a vote of the AMA's physician membership. The vote resulted in a 73 percent approval among voting physicians (Walker 1992a). Although only 56 percent of eligible physicians voted, the ratification process provided them with a voice at an early and critical stage, and endorsement by three-quarters of the most active and engaged physicians later shielded the AMA from certain membership criticisms. When the association and the policies were challenged (see, for example, Walker 1992b, *Medical Post* 1992), the AMA could point to the approval vote for the agreement.

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In each province tensions between the association's staff and leadership, on one hand, and the physician membership, on the other, were exacerbated by the negotiated agreements that established expenditure caps in each province. The agreements split the tangible benefits and tangible costs along medical-association-practicing-physician lines. The "compensation," or tangible benefits negotiated for accepting an expenditure cap, accrued primarily to the medical associations in the form of a greater voice in health care policy making, sole representation status for the association in negotiations over physician remuneration, and a more secure funding base through either mandatory dues payment to the association by all physicians (in Nova Scotia) or inducements for joining the association (in Alberta). The tangible costs—lower incomes—fell squarely on practicing physicians (although in the short term this was ameliorated in Alberta by the initial budget increase). Many physicians saw the initial cooperative approach adopted by the MSNS and the AMA as a sign that their associations had been coopted by the government and no longer represented the interests of the average physician.

These factors combined to engender a greater sense of alienation among physicians in Nova Scotia than in Alberta, as well as a sense that the policy was imposed upon them. An interviewee from Nova Scotia noted that, in reaction to the 1992 agreement, there was a perceptible reversal in the traditional top-down flow of policy formulation within the MSNS. The membership played a more active role in defining the parameters for the negotiations leading to the 1995 agreement.

### *Defining the Boundaries of the Budget and Eligible Users*

Unambiguously defining the boundaries and the eligible users of the resource helps ensure a common understanding of the collective limits and makes it easier to know when an outside individual or organization is encroaching on the resource. Both provinces launched initiatives to define (or redefine) the boundaries of the capped budget and to limit who was eligible to draw on the budget. The initiatives are similar enough across the provinces (and indeed across all the other provinces) that they are unlikely to be critical factors in understanding the differential utilization responses in Alberta and Nova Scotia. They do, how-

ever, highlight some of the challenges faced in implementing global budgets in the fee-for-service physician sector and some of the “perverse” side effects of the expenditure cap policies.

Unlike the task of defining the boundaries for natural resources, where physical and natural factors play a dominant (though not exclusive) role, defining the boundaries for a public budget is an inherently social and political exercise. This political–social dimension can hinder achieving physician agreement about the nature of the collective problem and alternative solutions. Some physicians argue that the best strategy in the face of the cap is not to manage utilization but to lobby to expand the budget through political actions. Indeed, in each province the medical associations and physicians waged political and public relations campaigns that challenged the global budget policies in general and the budget reductions in particular. The most successful public relation efforts built precisely on the public’s concern for access to high-quality care by portraying physicians as defenders of the system fighting against ill-advised and capricious government actions (Cernetig 1995; Moulton 1994).

Physicians quite legitimately worked to limit inappropriate claims on the capped budgets by calling on the government to clarify and better enforce existing legislation that prohibited billing the public insurance plan for nonmedically necessary services requested by third parties (e.g., an employment physical) and for services associated with worker compensation claims. But in defending the borders of their newly defined budget, physicians also hampered other policy initiatives. Physicians at times resisted the movement of certain diagnostic services from an inpatient to an outpatient or office setting because it can shift billings for the technical component of a procedure (intended to cover, for example, equipment, supplies) from the inpatient hospital budget to the capped physician budget. And although the global cap increased physician interest in alternative payment modalities (Alberta Medical Association 1995), disagreement about the amount of funds to be transferred from the fee-for-service budget when a physician changes modalities has forestalled the development of these alternatives.

Physicians’ attempts to relieve the economic pressure of the cap were at times potentially in conflict with broader system goals. De-insuring services from the public plan, which agreements in both provinces called for, is a case in point. De-insuring services benefits physicians by reducing pressure on the capped budget while expanding income-earning

opportunities in the unconstrained private sector. It can, however, conflict with the stated principle of ensuring reasonable access to all medically necessary services. Similarly, uncoordinated provincial efforts to limit the growth in the number of physicians who can bill the public plan in a province, as occurred when Alberta included a provision in its 1994 agreement that called for a short-term restriction on issuing billing numbers to non-Alberta-trained physicians, hinder attempts to develop national health human resource policies. Physician mobility in Canada has been reduced by a series of provincial policies that limit the ability of new or relocating physicians to obtain a public insurance billing number or to be reimbursed at the full listed fee (Barer, Lomas, and Sanmartin 1996).

### *Rules of Use, Monitoring, and Sanctions*

Rules of use ensure that withdrawals are kept to a sustainable level and that no one individual draws excessively on the budget, helping to ensure that the resource is shared equitably. Such rules require monitoring and sanctioning mechanisms, which are embodied in cap policies in the holdback/clawback mechanisms and individual billing thresholds. These go to the heart of the incentive problem. Nova Scotia's policy, which clearly delineated the consequences of exceeding the budget at the collective level and provided incentives to control billings at the individual level, was better designed to mitigate the collective-individual incentive problem.

Each province's 1992 agreement vested a newly created joint government-medical association management-consultation committee with the responsibility for regularly monitoring expenditures against the budget and implementing holdback/clawback adjustments required to ensure that expenditures stayed within budget. The Nova Scotia agreement prescribed that, when adjustments were required, the joint committee make across-the-board adjustments to the master unit value (the base scale for its fee schedule). In contrast, the 1992 Alberta agreement left the choice of adjustment mechanism to the finance subcommittee of the joint committee. The mechanism could be across-the-board fee adjustments, selective fee adjustments based on the source of utilization growth (by service category, specialty group, or geographic region), or methods other than fee adjustments. The committee could consult within profession in making such judgments.

At the individual level, Alberta's 1992 policy did not include individual-level billing thresholds. Nova Scotia's included individual-level billing thresholds specific to each of five specialty groupings (general/family practice, medical specialties, surgical specialties, hospital-based physicians, and technology-based physicians). The thresholds were set so that approximately the top 5 percent of billing physicians in each grouping were affected. Once a physician reached the threshold in his or her specialty grouping, additional claims were paid at 40 percent of the normal fee in the first year, 50 percent in the second, and 60 percent in the third year of the agreement.

The renegotiated agreements reached in 1994 and 1995 reinforced these tendencies across the provinces, strengthening the incentives targeted at individual physicians in Nova Scotia while weakening them in Alberta. Physicians in both provinces disliked fee adjustments, which made revenues unpredictable and which they found disturbing because the previous 20 years of negotiations (and a national debate over balanced billing) had imbued fees with ideological and symbolic meaning. (Tuohy [1988] analyzes the role of such ideological and symbolic factors in the context of the debate over balance billing that took place in Canada a decade ago.) From a public relations perspective the AMA also resisted upward fee adjustments when expenditures were below budget (as they were the first two years) because the public perceived such changes as an income increase for physicians during a time of general fiscal restraint. Both provinces therefore wanted to change the clawback/holdback mechanisms. In its 1994 and 1995 agreements, Alberta opted to use the accumulated surpluses from the first two years (supplemented by monies from the government) to create a reserve fund for handling budget surpluses and shortfalls. The reserve fund reduced the need to adjust fees by acting as a holding fund for surpluses and as a source of funds to pay back the government when expenditures exceeded the budget. The AMA also negotiated a right to allocate monies from the reserve fund to address specific issues of concern to the profession (e.g., additional malpractice premium subsidies and a transition adjustment program for physicians adversely affected by the cap). This reserve pool approach simultaneously served a number of purposes: better public relations, fee stability, flexible responses to novel problems associated with the cap, and a new role for the AMA as manager. It also shielded individual physicians even more from immediate consequences of excessive billing.

In contrast, in return for a guarantee that the master unit value would not be adjusted during the life of the 1995 agreement, physicians in Nova Scotia opted to substitute increased limitations at the individual level for regular overall budget reconciliations. It added a set of common individual billing thresholds (i.e., the same for all physicians) on top of the specialty-group-specific thresholds already in place. Reconciliation of total expenditures against total budget would only occur at the end of the two-year agreement. The agreement ended in March 1997, and dispute over how to handle the overage is presently taking place.

### *Conflict Resolution*

The caps created two primary axes of conflict: between the profession and the government and among physicians within the profession. Conflict between the government and the profession has existed since the start of public insurance and bilateral negotiations over fee changes, but expenditure caps intensified this conflict. Both provincial agreements specified conflict resolution mechanisms (binding arbitration) to be used when negotiations over new agreements reached an impasse. No such disputes have gone to binding arbitration under caps. The agreements also specified conflict resolution mechanisms for resolving differences within the joint government–association committees and differences of interpretation regarding provisions of an agreement. Again, these mechanisms appear not to have played a large role in handling conflict under caps in either provinces.

Much of the conflict between the profession and the government played out in the political arena (as occurred in the public relations campaigns to win the backing of the public described above) or at the negotiating table (as was evident during the spring of 1994 through 1995 when the government and the AMA were in nearly constant negotiations and through 1994 when negotiations in Nova Scotia alternately stalled and started up). As has been noted, the political, public conflict between physicians and the government was more heated in Nova Scotia than Alberta. In both provinces, new governments elected in 1993 imposed the budget cuts. Compared to the MSNS, however, the AMA faced a more popular, maverick provincial government that garnered national attention for its novel deficit-cutting strategies. This may have made the AMA more cautious about how it challenged the



government in public (and also deflected physician criticism of the AMA, which could do little against such a formidable opponent).

Neither association has formal conflict resolution mechanisms for resolving internal disputes among groups of physicians, and neither developed new ones under caps. Internal conflict among physicians has blocked progress over some issues within the medical associations (e.g., implementing a relative value scale for the fee schedule), but in neither province were the difficulties judged to be so severe as to require formalized internal conflict resolution mechanisms.

## Conclusions

Amid the many parallels in the two provinces, three critical differences stand out that may underlie the divergent utilization responses. One is the differing economic pressure the caps created for physicians in the two provinces. At least initially, the global cap in Nova Scotia put greater economic pressure on its physicians than did the cap in Alberta. The second is the extent to which the respective governments and medical associations were able to maintain constructive working relationships. Although the cap policies strained working relationships in both provinces, the Alberta government and the AMA were more successful in maintaining a constructive relationship. The third difference is the extent to which the AMA appears to have achieved better physician “buy-in” to its approach under global caps. These three phenomena are probably linked: greater economic pressure creates utilization problems, growing utilization sours relations, and sour relations exacerbate utilization responses. A downward spiral can develop as trust and good will break down (both among physicians and between physicians and the government) and individual physicians perceive that they have to work harder to stay in the same place. Common management of a global budget is too complex to work without physician–government mechanisms that enable adaptation and flexibility during implementation, and it depends too much on voluntary restraint to work without basic acceptance by physicians.

In the physician sector the nature of the users and the nature of the “resource” make their acceptance particularly important. The medical profession is accustomed to autonomy and self-regulation. Physicians more readily accept solutions from within the profession than any im-

posed from outside. As a practical matter, the nature of physician budget withdrawals makes monitoring and enforcement difficult for a central agency (whether governmental or professional) and, at times, even for peers. Budget withdrawals are highly decentralized (both geographically and organizationally), making central oversight at the time of withdrawal difficult. A large proportion of withdrawals occur in a highly private context (each physician's office), hindering peer oversight. Withdrawals are made using diverse "technologies": from simple office visits to diagnostic tests to invasive procedures, each of which may occur in a variety of settings, making it difficult at times to link actions with amounts of withdrawals. And because the appropriateness of a service or intervention is specific to each patient encounter, without information from a patient's medical record a third party often has difficulty judging the reasonableness of a particular withdrawal. Billing records eventually make an individual's withdrawals clear, but not until many months have elapsed, creating a time lag that dilutes the link between action and sanction. Furthermore, retrospective, across-the-board clawbacks do not differentiate between justified and unjustified utilization.

Alberta's better physician acceptance of caps may be linked to a number of factors. The agreement that introduced caps included a budget and fee increase, initially generating at least one tangible benefit for a typical community physician. When the budget cuts did hit, the AMA faced a highly popular provincial government, which may have engendered a certain fatalism among practitioners and deflected criticism of the AMA. The association members explicitly approved the agreement that introduced the cap policy, so they had endorsed the policy. Finally, and perhaps most critically, given the uncertainty as to how events would unfold under a cap, the AMA and Alberta Health's approach was more open ended and flexible, allowing them to craft solutions as issues arose and permitting the AMA to involve physicians (even if only through consultation) in developing responses. The agreement made clear that when expenditures exceeded the budgets, payment adjustments were to follow. It also spelled out who was to decide upon and implement the adjustments. However, it deliberately provided the flexibility to craft adjustments to the particular circumstances underlying the utilization growth.

This contrasts markedly to the approach adopted by the MSNS of seeking an ironclad agreement that predefined as explicitly and as precisely as possible not only the responsibilities of various parties but also the specific process mechanisms. Although the principles of making

rules explicit and mitigating individual incentives are consistent with the general lessons of the common-property literature, the process by which the rules were formulated ignored the basic prescriptions regarding the crucial role of participatory, consultative processes. The fact that in the end Alberta may not actually have engaged in a great deal more consultation may be immaterial. Alberta's process was designed to allow for it and to alleviate physicians' concerns that they would be subject to "arbitrary" rules ill-suited to events as they unfolded.

Recently reported experiences in Germany are broadly consistent with this (Schwartz and Busse 1996). Legislation passed there in 1989 replaced a system of voluntarily negotiated fixed-budget agreements between sickness funds and regional physician associations with obligatory fixed budgets, thereby removing considerable negotiating discretion between the funds and the physician associations. The law had the effect of weakening self-governing mechanisms, reducing negotiating innovations, and diminishing the importance of cooperative contracting mechanisms, and it was associated with significant increases in the number of services provided.

This central message of the common-property framework—create institutional arrangements that foster participant cooperation—which received broad support in this analysis, does not bode well for the U.S. Medicare program as it shifts to more restrictive global budgeting approaches, a shift that is exemplified in the proposed change from the volume performance system to the sustainable growth system (Physician Payment Review Commission 1996). Expenditure caps require an ongoing, meaningful working relationship between the funder and physicians. A funder can no longer simply be a payer; it must be a manager (and in many respects a comanager) as well. The success of a cap policy depends critically on creating new, and strengthening existing, institutional structures to help manage utilization and the three bilateral relationships among the funder, physician organizations, and physicians themselves. This has proved difficult enough under caps in Canada and Germany, both of which had some experience and institutional structures upon which to base such relationships (see Glaser [1994] for a more general discussion of the rise of collaborative efforts). Because the United States has historically relied on technical approaches to physician payment policies rather than negotiated approaches (Glaser 1989, 1990), it lacks organizational and institutional arrangements upon which to build more negotiation-based approaches between funders and phy-

sicians and through which physicians can manage the conflicts and divisions internal to the profession. Developing them may be further inhibited by the fragmented nature of the multipayer system in the United States and by legal regulations that potentially limit certain types of collective action by physicians.

## References

- Alberta Medical Association. 1995. *Alternative Remuneration for Primary Care: Fee-for-comprehensive Care*. Edmonton.
- Barer, M., J. Lomas, and C. Sanmartin. 1996. Re-minding Our Ps and Qs: Medical Cost Controls in Canada. *Health Affairs* 15(2):216–34.
- Bromley, D. Ed. 1992. *Making the Commons Work: Theory, Practice, and Policy*. San Francisco: Institute for Contemporary Studies.
- Canadian Institute for Health Information. 1996. Special Tabulation from the National Physician Database, August. Ottawa.
- . 1997. *Supply and Distribution of Physicians, Canada, 1961 to 1995*. Ottawa.
- Cernetig, M. 1995. Alberta Doctors Attack Cuts in Health Care. *Globe and Mail* (November 17): A4.
- Giacomini, M., J. Hurley, J. Lomas, V. Bhatia, and L. Goldsmith. 1996. The Many Meanings of Money: A Health Policy Analysis Framework for Understanding Financial Incentives. (Working paper no. 96-06.) Hamilton, Ont.: McMaster University Centre for Health Economics and Policy Analysis.
- Glaser, W. 1989. The Politics of Paying American Physicians. *Health Affairs* 8(3):129–46.
- . 1990. Designing Fee Schedules by Formulae, Politics and Negotiations. *American Journal of Public Health* 80:804–9.
- . 1993. How Expenditure Caps and Expenditure Targets Really Work. *Milbank Quarterly* 71:97–128.
- . 1994. Doctors and Public Authorities: The Trend Toward Collaboration. *Journal of Health Politics Policy and Law* 19:705–27.
- Health and Welfare Canada. 1988. *Payment Schedule Comparison, July 1, 1987*. Ottawa: Health Information Division.
- . 1989. *Payment Schedule Comparison, July 1, 1988*. Ottawa: Health Information Division.
- . 1990. *Payment Schedule Comparison, July 1, 1989*. Ottawa: Health Information Division.
- . 1991. *Payment Schedule Comparison, July 1, 1990*. Ottawa: Health Information Division.

- Health Canada. 1994. *Changes in Payment Schedules to Provincial Medical Insurance Plans: Canada, 1986/87–1993/94*. Ottawa: Health Information Division.
- Hurley, J., and R. Card. 1996. Global Physician Budgets as Common Property Resources: Some Implications for Physicians. *Canadian Medical Association Journal* 154:1161–8.
- Katz, S., J. Lomas, C. Charles, and H.G. Welch. 1997. Physician Payment in Canada: Shooting Inward as the Circle Closes. *Journal of Health Politics, Policy and Law* (forthcoming).
- Lomas, J., C. Charles, and J. Greb. 1992. The Price of Peace: The Structure and Process of Physician Fee Negotiation in Canada. (Working paper no. 92-17.) Hamilton, Ont.: McMaster University Centre for Health Economics and Policy Analysis.
- Medical Post*. 1992. Calgary MD Angered over Fee Deal Forces AMA to Call Special Meeting. 28(July 21):2.
- Moulton, D. 1994. N.S. Doctors Prepare to Take on Government. *Medical Post* 30(May 3):2.
- Oakerson, R. 1992. Analyzing the Commons: A Framework. In *Making the Commons Work: Theory, Practices and Policy*, ed. D.W. Bromley, 41–62. San Francisco: Institute for Contemporary Studies.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.
- Physician Payment Review Commission. 1996. *Annual Report to Congress*. Washington, D.C.
- Schwartz, F.W., and R. Busse. 1996. Fixed Budgets in the Ambulatory Care Sector: The German Experience. In *Fixing Health Budgets: Experiences from Europe and North America*, eds. F.W. Schwartz et al., 93–108. New York: Wiley.
- Schwartz, F.W., H. Glennerster, and R. Saltman. Eds. 1996. *Fixing Health Budgets: Experiences from Europe and North America*. New York: Wiley.
- Tuohy, C. 1988. Medicine and the State in Canada: The Extra-billing Issue in Perspective. *Canadian Journal of Political Science* 21:267–96.
- Walker, R. 1992a. Income Cap Agreement Nets Alberta Doctors More Decision-making Clout. *Medical Post* 28 (March 3):2.
- . 1992b. AMA Heads off Physicians' Bid to Overturn Fee Deal. *Medical Post* 28(March 31):2.

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*Acknowledgments:* This research was funded by the National Health Research and Development Program of Health Canada. Support by the Ontario Ministry of Health to the Centre for Health Economics and Policy Analysis is also acknowledged.

We would like to thank all those who participated in the interviews. We also thank those who provided data: Alberta Health, the Alberta Medical Association, the Nova Scotia Department of Health and Fitness, the Medical Society of Nova Scotia, the Canadian Institute for Health Information, Morris Barer, and Claudia Sanmartin. We thank other investigators of the “Financial Incentives” Project for advice and insight, and Greg Stoddart and Mita Giacomini for helpful comments on an earlier draft of this manuscript. We also thank Robert Evans and William Glaser for extensive and helpful referee comments. Finally, we thank Victoria Vincent and Humaira Khan for research assistance. As usual, errors made in spite of all this assistance are our responsibility.

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