

Hospital Financing in Canada

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Canada is often described as having a national health insurance system; this is not entirely accurate, however, since each of the 10 Canadian provinces (and two territories) administers its own health insurance plans. Although the hospital and medical components of those plans are subject to federal guidelines, the provincial governments make their own decisions about health care financing and payment of providers, benefits other than hospital and medical care, and the organization of health services. Despite some heterogeneity among provinces, however, the provincial health systems have several features that are common across the provinces.

To qualify for federal contributions, provincial hospital and medical insurance plans must fulfill federal eligibility and coverage standards, which include public nonprofit administration, portability of benefits across provinces, comprehensive coverage defined as “all medically necessary services,” accessibility, and universal coverage. All 27 million Canadian residents, regardless of age or financial or health status, are entitled to participate in their respective provincial plans. Provinces can insure benefits in addition to hospital and physician services, but they are left to each province’s discretion and vary among provinces.

Among the Organisation for Economic Cooperation and Development (OECD) countries, Canada is unique in having no private-sector involvement in hospital and medical insurance. Private insurers cannot compete with the public medical and hospital insurance programs, but can only cover services not covered by provincial plans (e.g., outpatient prescription drugs, dental care, cosmetic surgery, optometry, physiotherapy). A large percentage of the population has some private coverage, usually paid by employers. Hospitals (and physicians) are largely prohibited from



treating both patients whose care is paid for by provincial plans and patients who pay directly. The prohibition of private insurance for benefits covered by the provinces virtually establishes provincial governments as single payers of much of the health care received by Canadian residents.

Provincial health plans are financed almost entirely from general revenues (from provincial sources and federal transfers to provinces), raised through personal, corporate, sales, payroll, and other broad-based taxes (residents of Alberta and British Columbia also pay monthly premiums). In 1993, provinces funded approximately 70 percent of Canada's total health expenditures (which includes federal transfer payments) and paid for almost 90 percent of all physician and hospital charges. The remaining 30 percent of national health spending came predominantly from private payments, mainly for the costs of long-term care, adult dental care, nonprescription drugs, and other items (27).

The simple story of Canadian hospital financing—which might be summed up as single-source public funding allocated to hospitals via global budgets established by provincial Ministries of Health—offers a relatively accurate picture. However, this general description masks both provincial/territorial variations in the details of hospital funding and the different ways in which hospital capital and operating costs are paid for and allocated. The objective of this chapter, therefore, is to clarify the general story, with particular emphasis on recent new provincial funding initiatives for hospital operating costs and on the less well-understood capital funding process.¹ Approaches to funding capital and operating costs are described in more detail for several provinces to illustrate the general structure of the Canadian hospital financing system.

STRUCTURE OF THE HOSPITAL SECTOR

Hospitals were brought into the Canadian health care system under the Hospital Insurance and Diagnostic Services Act (HIDS) of 1956 (41). (For the purposes of this chapter, “hospitals” are acute care and rehabilitation care facilities, some of which also contain extended care beds.)² By 1961, all provinces had met the terms and conditions required to receive federal funds for hospital cost-sharing. Since that time, hospital care in Canada has been provided largely through publicly owned and funded nonprofit institutions. There is virtually no private acute care hospital sector in Canada, although an active private long-term care sector includes a variety of chronic care institutions. These institutions, even though privately owned, receive a significant amount of public funding. (The *Canadian Hospital Directory* lists over 50 private hospitals, but most are psychiatric, drug and alcohol rehabilitation, and long-term care facilities.)

PHYSICIANS

For nearly all Canadian physicians, hospitals serve as free workshops. General/family practitioners may admit patients directly to a hospital or may refer their patients to specialists who may then recommend hospitalization. In either case the primary care practitioner or specialist can follow the patient into the hospital and bill the provincial medical plan for hospital visits or for surgical procedures or assists. Physicians are paid fees for inpatient services but are responsible for none of the hospital costs incurred.

Many specialists (particularly tertiary care subspecialists) are hospital based; some have their offices within the physical confines of the hospital. Most hospital-based physicians, however, are

¹This document reflects the situation in Canada as of the spring of 1993, and rapid changes occurring in the provinces may render it an inaccurate representation of hospital financing in 1995.

²For more detail on hospital classifications, see (13,40).

paid fees for services from provincial medical plans rather than from the hospital's budget. Also, a sizable number of diagnostic physicians (e.g., radiologists, pathologists) are in salaried hospital positions. Many of the services they provide are also paid for on a fee-for-service basis to the hospital by the provincial medical plan.

A small (but growing) number of specialists is negotiating alternative payment arrangements with provincial medical plans. For example, a teaching hospital-based neonatology unit may negotiate with the provincial ministry of health for sessional (half-day) payments to its practitioners or even for block operating funds. These funds generally flow to the hospital separately from its operating budget; they derive from a different branch of the provincial ministry.

In general, like the United States but different from most of the other five countries in this study, the only physician costs that appear in a hospital's operating budget are for salaried medical staff, such as the heads of clinical departments or diagnostic salaried positions, postgraduate medical students (interns and residents), or physicians serving in administrative posts (e.g., CEOs or vice presidents). These costs represent only a very small fraction of the total cost of physicians' services delivered in hospitals.

HOSPITAL OPERATING COSTS

■ Financing Model

Historical Hospital Financing Approach

Hospital funding in the early years of the public program was characterized by either line-by-line budgeting or per diem reimbursement. Under line-by-line budgeting, individual institutions negotiated specific budgetary line items with provincial ministries of health. The total budget allocation for an individual hospital was the aggregate of the line items. Reallocation of funds between different line items was severely restricted, and the effort involved in scrutinizing the

line-by-line detail eventually persuaded ministries to move away from this approach.

Per diem reimbursement involved retrospective adjustments to hospital operating budgets based on the actual number of inpatient days of care provided, leaving provincial ministries with a large open-ended line in their budgets. (For example, a special request for additional funding in British Columbia in fiscal year 1980-81, amounting to almost 25 percent of hospital expenditure estimates, was required to cover actual per diem costs that year [24]). Inflation-adjusted per capita hospital expenditures increased by 7.6 percent annually during the 1960s, in part because funding increases were relatively generous and also because ministries tended to cover year-end budget deficits.³

The line-by-line budgeting approach has largely disappeared (although about 20 percent of hospital budgets in Québec continue to be determined on a line-by-line basis [14], and Alberta only recently moved away from this method [28]). The move toward "global budgeting" began in Ontario in the late 1960s (17). With this method, budget negotiations focused on the total budget rather than on individual activity or cost centers within the budget (and hospitals gained considerable flexibility in moving funds among operating lines). Under the original global budgeting method, the annual funding allocation was based on a series of relatively mechanical adjustments to the previous year's hospital expenditures. Special provisions were made for new programs, unanticipated and justifiable increases in service provision, or other unforeseen circumstances. The effort required of ministry staff in approving budgets was reduced significantly. Retrospective line-by-line review was invoked only in situations in which hospitals exceeded their budgets.

For many years the change from open line-by-line budgets to the theoretically capped global budgets lacked "teeth" for controlling the growth of hospital expenditures because most expendi-

³ Per-capita hospital expenditure data are from Barer and Evans (6) and were deflated using a GDP implicit price index (16).

ture overruns were ultimately covered by provincial health ministries. Québec tried to close off year-end coverage of deficits, and several provinces, led by Québec, experimented with a variety of incentive reimbursement schemes to motivate hospitals to use their funds more efficiently. Yet this movement had a rather checkered history (14,21), in part because of glaring failures to understand the motivations of key hospital stakeholders. For example, for some time in Ontario, hospitals could not run deficits but also could not retain the full amount of any surpluses. Not surprisingly, actual expenditures clustered tightly around approved budgets.

Only in the more fiscally constrained late 1980s and especially in the early 1990s have ministries of health become more forceful in developing institutional expectations that budgets are not starting points but rather binding constraints. Concurrent with this more hard-nosed approach have come a number of attempts to refine the criteria used to allocate funds among hospitals. The global budgeting approach remains a relatively accurate portrayal of the process today, however. In most provinces (Alberta being one exception, as will be seen later), the more recent funding innovations are applied only to the portion of the following year's funding that represents an increase over hospital budgets in the current year. To a large extent any relative inefficiencies and inequities that existed in each province when it switched to global budgeting have been fossilized. In many instances historical problems may even have been exacerbated by the current relatively ad hoc process of allocating new funds and covering deficits (35).

Current Hospital Financing Approach

Details of the current budget development, approval, and allocation process vary among provinces, but a general picture can be sketched without straying too far from the specifics of any one province. Despite some other minor sources, provincial and federal general tax revenues constitute the lion's share of funds for hospitals in Canada. There are no tax revenues earmarked specifically

for hospitals. Although provinces receive federal transfer funding for health care programs governed by the Canada Health Act, these funds fall far short of the total cost of the programs; therefore, they are treated simply as part of general provincial tax and transfer revenues. Provincial ministries of health must compete with other ministries in their provinces for a piece of the general revenue pie and must then allocate their share among hospitals, other health care institutions, health agencies and programs, private health care providers (the majority of whom are physicians), and some health research agencies and programs.

Individual hospital budgets are based largely on approved budgets from the previous year, with allowable adjustments depending on province-specific factors, such as new or expanded programs, patient increases, anticipated wage settlements or other expected increases in production costs (e.g., the costs of pharmaceutical, surgical, and other supplies), or other policies expected to affect the bed capacity of each hospital. This approach might be labeled a service-based approach to budget estimation. Ministry staff are generally responsible for developing estimates of each hospital's funding requirements. The amount of interaction between ministry staff and individual institutions during this phase of the budget development process varies considerably among provinces. Individual hospital budget estimates are aggregated to an overall hospitals line in each health ministry's budget estimating process.

An alternative approach—adopted recently in British Columbia, for example—begins with total hospital expenditures in the previous year and develops a rationale for adjusting the budget in the current year based on changes in the characteristics of the population (e.g., size or age composition) and information on alternative ways of providing services to that population. This might be labeled a more “population-based” approach to budget development.

The aggregate hospital budget line that emerges from either of these approaches is subject to modification as a result of internal provincial government negotiations over the final request from the

health ministry. Because hospital expenditures constitute the single largest item within provincial ministry of health budgets,⁴ they are subject to special scrutiny. A very small reduction in hospital allocations will easily fund a variety of other programs—a fact that has escaped neither those programs nor ministry staff.

Two factors characterizing the current situation—one resulting from the current economic environment and one the result of new policy directions (which are themselves influenced, of course, by the economic setting)—ensure that hospital funding is even more carefully scrutinized than in the past. First and most obvious is the current fiscal crisis facing all provincial governments (and the federal government). As a result of declining federal health care transfers to provinces, slow or no growth in provincial tax revenues, and increasing demands on social support programs because of slow economic growth, provincial governments are finding themselves with very little room to maneuver, and hospital funding makes a very large target. Second, various new and major provincial restructuring initiatives are attempting to create a more efficient and patient-friendly match of patient needs and levels of care by downsizing large urban hospitals, expanding community-based programs, and more generally moving patients “closer to home” (12,33). The consequent reduction in bed capacity has been matched by an expectation that hospitals will require lower budgets.

At the conclusion of the internal ministry “estimates” process, the aggregate of all hospitals’ budgets is presented to the provincial department of finance, or treasury board, as part of the health ministry’s request for funds. This request is scrutinized by treasury board staff as part of the process of determining how the province’s aggregate

budget will be allocated across competing sectors of the public economy (e.g., education, social services, justice, health, and housing). Finally, recommendations are presented to the provincial cabinet (composed of the elected ministers for each of these sectors) for approval.

The approved budget has to withstand debate in each province’s House of Commons before it passes into law. Until then, ministries do not know what their allocations will be for the fiscal year. (Unfortunately, this stage is often reached well into the fiscal year for which estimates are being debated, so that hospitals must run on faith and hope during the early part of the fiscal year.) In some provinces approval comes with very specific directives as to the internal allocation of funds among health ministry programs, allowable salary increases, and similar instructions. In other provinces the approved aggregate health budget is returned to the ministry, at which point decisions on the allocation of funds to individual program areas within the ministry must be made if the approved amount is different from the budget request. In either case the allocation to individual hospitals and other institutions is still an internal ministry responsibility. The budget estimation process will usually have generated the information necessary for this exercise. For example, in Manitoba, where the hospital budget line is developed by aggregating individual hospital estimates after adjustments for production cost increases and new programs, the allocation of available funding across institutions mirrors closely the relative size of individual hospital budgets developed during the estimates process. Whatever the detailed allocation process, hospital budget levels have been and continue to be dominated by budgeted amounts from the preceding year.⁵

⁴For example, in fiscal year 1991-92 total payments to hospitals in British Columbia were \$2.2 billion for a population of about 3 million; this represented over 40 percent of the Ministry of Health’s aggregate budget in that year. Similarly, hospital expenditures represented about 42 percent of public health care expenditures in Ontario in 1992, down sharply from about 50 percent in 1983. This reflects the overall trend shown in figure 2-1.

⁵In 1988, for example, the previous year’s funding accounted for 92 percent of the funding allocated to Ontario hospitals; the remainder was made up of a variety of adjustments for inflation, service increases, and new or expanded programs (31).

New approaches for allocating hospital funds have been adopted in recent years in several provinces. It is important to note, however, that these initiatives still leave the previous year's base budget for each institution largely intact. In some provinces the new adjustments are applied only to the annual increment in funding levels (i.e., new funds for the current year are allocated on the basis of new rules, but base budgets remain largely unchanged); in Alberta the adjustments affect 5 percent of each hospital's previous year's budgeted amount.

These approaches indicate an increasing interest among ministries of health in making hospital budgets more sensitive to the relative efficiency of different institutions given the mix of patients served (e.g., in Alberta and Ontario) or to changes in population composition and patient flows (or the needs of a hospital's catchment area) (e.g., in British Columbia).⁶ Three provincial experiences are described in more detail below to illustrate the types of changes occurring in the funding of Canadian hospital operating costs.

Alberta

The Alberta Acute Care Funding Plan (ACFP) is designed to redistribute a component of the province's inpatient operating budget from less to more efficient institutions (1). It involves the estimation of a hospital performance measure (HPM) for each hospital equal to the number of case- and severity-weighted days treated per dollar of inpatient expense (see box 2-1).⁷ The higher the measure (i.e., the more adjusted inpatient days a hospital has been able to provide for each dollar

it spent), the more efficient the hospital. An individual hospital's budget adjustment is based on its HPM relative to all other hospitals' HPMs.

The Alberta system is a service-based approach for adjusting hospital funding that takes as a given (and therefore as implicitly acceptable) the "efficiency" of the average hospital. It rewards or penalizes institutions not on the basis of their designated roles, the patient populations they serve, or the technical efficiency with which they meet specific objectives, but rather on the basis of their prior care-providing experience (as reported by them) and the costs incurred as a result of that care provision. A hospital that aggressively pursues community-based partnerships that have the effect of keeping patients out of the hospital could easily end up being penalized under such a system, whereas a hospital that uses clever accounting practices to move inpatient costs out of the denominator of its HPM and creative patient classifications to increase the value of the numerator would end up being rewarded.⁸

Another major problem with the use of this type of funding system in a Canadian context is that case weights are based on U.S. cost or charge data.⁹ U.S. data are used because there are as yet no reliable patient-centered cost data systems in place in Canadian hospitals, but the provinces that have adopted case-mix adjustment of inpatient funding have chosen to use costs as a key component of their weight calculations. There are other approaches to estimating the relative complexity/severity of cases (see, for example, Barer (4), Evans and Walker (19)), but these have received much less development and, perhaps more im-

⁶As with so many other health and social policy initiatives, Québec was ahead of the other provinces in experimenting with peer group-based incentive reimbursement programs (21) but appears to be doing relatively little on this front at present.

⁷The exchange rate in January 1994 was approximately \$CAN1.00 to \$U.S.0.75.

⁸"Case mix creep" is no stranger to the United States, where such reimbursement systems have been in place for much longer. As Botz (9) notes, no case weight system, no matter how carefully constructed, will be devoid of case-shifting incentives. The extent to which such case shifting occurs depends on the degree of clinical flexibility in the patient classification system and how adept institutions become at ascertaining the differences between the marginal revenues and costs associated with each case mix/severity category.

⁹Whether or not the data are adjusted for the relationship between costs and charges in New York State seems moot as the New York patterns of care are likely to be more service-intensive for comparable patients than those in Canada. Only if care were uniformly more service-intensive across all types of cases would such an adjustment be appropriate for application in a Canadian setting, but this is not likely to be true.

BOX 2-1: Alberta's Hospital Budget Allocation Approach

A detailed description of the methodology underlying Alberta's approach to funding hospital inpatient services is beyond the scope of this chapter, but more details are available elsewhere (1, 23, 28).

The hospital performance measure (HPM) method begins by estimating inpatient costs for each hospital by netting out a variety of outpatient activities and a share of joint activities (e.g., diagnostic services, administration) from the hospital's total operating costs. (This process of inpatient cost estimation is a modified form of a methodology developed in the late 1970s to compare different hospitals inpatient costs [3, 5].) Second, each of the hospital's inpatient cases is assigned to one of 1,100 refined diagnosis-related groups (RDRGs) on the basis of the case's diagnostic group, diagnostic or procedure code, and level of co-morbidity or complications. Each RDRG is assigned a weight that measures the relative amount of resources used (i.e., the relative costs) to produce the services of that RDRG. The weights are constructed by marrying per diem cost or charge information from New York State with RDRG average length-of-stay information based on recent historical experience in Alberta (after trimming outliers). Minor case weight adjustments are made for outlier cases on the grounds that these are of extraordinary severity that would not be adequately reflected in the RDRG weight.

This patient classification system, together with the case weight calculations for the province, provides the means to calculate a measure of weighted cases for each hospital. The measure of weighted cases is then scaled up or down to take account of other factors alleged to influence inpatient costs per case--namely, the size of the institution (based on the number of inpatient beds) and the extent of its teaching role. This latter adjustment is motivated by evidence from Canadian hospital cost analyses (e.g., 4) indicating that even after extracting the costs of direct teaching-related activity in estimating inpatient costs, the teaching function continues to have indirect effects on those costs.

The adjusted weighted cases become the numerator of the HPM, and the denominator equals total estimated inpatient costs for the institution. The resulting HPM values for each hospital are converted to index values, and each hospital's index value determines its budget adjustment. For example, if a hospital has a value of 125, it would be eligible for a funding adjustment amounting to an increase of 25 percent over its previous year's approved budget. In practice, however, adjustments have been applied only to a small fraction (about 5 percent) of the previous year's budget. A 25-percent increase to the hospital's total budget might be substantial, but a 25 percent increase to 5 percent of the budget usually represents a relatively small increase in the amount of funds for the coming year. There are a number of serious problems with this system. Some of those flaws are being actively worked on; others are generic to any system of reimbursement tied to case/severity mix and case weights.

¹ In fact, the official and published literature on the Acute Care Funding Plan generates an aura of additional complexity that is unnecessary (1, 28). Specifically, it suggests that the measure of weight cases for each hospital is divided by actual cases to construct something mislabeled the "severity predicted cost per case" (SPCC) (which does not, in fact, have anything to do with cost per case; it is a measure of the average case weight). Then this SPCC, after adjustment for size and teaching activity, is divided by the actual cost per case. This amounts, of course, to dividing both the numerator and denominator by the unadjusted number of cases--a superfluous step that nevertheless makes the entire technical exercise seem more complex and less logical than it is.

portantly, much less marketing than the system based on diagnosis-related groups (DRGs) that was developed in the United States. (Much of the literature in this area simply assumes that cost data must be used to develop case weights; see, for instance, [31]).

The adjustment factors for hospital size and teaching status have also come under attack for being arbitrary and not particularly sensitive to the phenomena that they are supposed to capture. Efforts are presently under way to alleviate some of these problems, but they beg the larger question of

whether such adjustments are appropriate at all and, if so, whether there are other similar types of adjustments that ought to be considered as well. Inevitably, each hospital has an incentive to claim that the key factors that make it unique have not been captured within the adjustment process. Indeed, it could be argued that no hospital would be happy unless and until sufficient adjustments had been incorporated to ensure that some hospitals were better off and none worse off than at present.¹⁰

Ontario

The recent patient case-mix-based adjustments to hospital budgets in Ontario are similar in many respects to Alberta's methodology. The Ontario method also computes a measure of weighted cases using weights that measure resource intensity for different cases, constructed as a hybrid of New York State hospital cost and charge data and Canadian length of stay data, and then constructs a measure of relative inpatient cost per weighted case (the inverse of Alberta's weighted units per inpatient cost) using a method similar to Alberta's to estimate inpatient costs (31,32,35).

There are several differences, however, both in methodology and in the way that the resulting measure of relative efficiency is applied in the funding allocation process in Ontario as opposed to Alberta. For example, the Ontario process makes no additional direct adjustments for hospital size or teaching status, but instead creates hospital peer groups based on teaching status, size, and geographic location and makes allocation adjustments within the context of those groups. Furthermore, the province uses patient case-mix groups designed for Canadian use rather than the U.S.-based refined diagnosis-related groups.

The reallocation amounts for which a hospital is eligible are limited both by the fact that the funding adjustments are applied only to separately designated pools of "equity" or "growth" funds and by some predetermined percentage of the pre-

vious year's budget (currently a maximum of 2 percent for an individual hospital for the growth adjustment). "Equity" funding is intended to recognize inter-hospital inequities that may have been locked into place when global budgeting became effective in 1982. Because the original global budgets were based largely on previous funding levels, any such inequities that existed at the time became entrenched (and even exacerbated by the largely across-the-board funding increases during the 1980s). This sort of problem becomes more visible in times of financial restraints, which may explain the emergence of the equity funding concept in the early 1990s. "Growth" funding is intended to compensate hospitals for greater than anticipated patient volumes (35). The growth formula also incorporates weights for inpatient services and a variety of outpatient services (e.g., day surgery and outpatient clinics). By adjusting the "price" weights attached to these different services, the Ontario Ministry of Health attempts to create incentives for hospitals to shift services from inpatient to outpatient settings.

A number of equity fund pools have been allocated, most recently in the fall of 1992 (35,36). However, these sums represent well under 1 percent of total hospital operating expenses. Funds available for growth adjustments have also been limited to about 1 percent of aggregate hospital base budgets. In Ontario this process has not yet been used to reduce a hospital's budget below the previous year's budget. Instead, it has replaced the old formula of providing general increases to all hospitals for inflation, service increases, and new or expanded programs.

The method is plagued by all of the problems identified for Alberta plus some of its own (31,32). (For example, the problems with adjustments for bed size and teaching status in Alberta were noted. In Ontario, the construction of peer groups has to date been relatively unsophisticated—although it has been improved from the original seven groups—and so is equally subject

¹⁰Jacobs et al. (28) describe other problems with the Alberta system that are not noted here.

BOX 2-2: British Columbia's Hospital Budget Allocation Approach

Like the Ontario and Alberta methods, British Columbia's approach to allocating funds among hospitals relies heavily on the Hospital Medical Records Institute database, which contains detailed records on each patient discharged from a Canadian hospital. These data are used to compute provincial age- and sex-specific utilization rates for each of five types of care: acute or rehabilitation days; long-term (chronic) care provided in acute care hospitals; intensive care; inpatient surgery; and day surgery. Recent historical utilization rates are then applied to age- and sex-specific changes in the provincial population to estimate aggregate changes in service use for each level of care for the province as a whole (e.g., the 1993-94 model used data from 1991-92).

Changes in service "needs" are next allocated to hospitals on the basis of where the population changes have occurred and on existing referral patterns for each type of care. Thus, if historical utilization patterns suggest that a specific large urban hospital provided 20 percent of inpatient surgery for the residents of its own region plus 80 percent of inpatient surgery for residents of the rest of the province, then 20 percent of the population-based change in surgical utilization for that region plus 80 percent of the change for the rest of the province would be assigned to that hospital.

The result of this process is five separate measures of population-based utilization changes for each hospital. These are aggregated to a single volume-change figure for each hospital using relative resource weights developed by internal Ministry of Health staff. For example, a weight of 3.5 is assigned to an intensive care day, 1.65 to a day involving a surgical service (inpatient or outpatient), 1.0 to an acute/rehabilitation inpatient day, 0.45 for an extended or continuing care day, and 0.4 for a newborn patient day. Using these weights, new weighted patient days (NWPD) can be computed for each hospital.

The final technical step in the process is to compute a measure of cost per weighted patient day for each institution by dividing the hospital's most recent year's total operating costs by the total number of weighted patient days. The relative value of this measure for each hospital is then used to adjust that hospital's NWPD, on the assumption that higher costs per weighted patient day imply a more complex than average mix of patients within the five service categories. The result of this exercise is adjusted new weighted patient days (ANWPD) for each hospital. The available incremental funding is then allocated on the basis of each hospital's share of total provincial ANWPD.

to criticism by the hospitals themselves.) Additionally, the amounts reallocated through the budget adjustment process may not be sufficiently large to effect the sorts of equity and efficiency shifts sought by the province's Ministry of Health.

British Columbia¹¹

Like Ontario, British Columbia's recent budget allocation adjustments have been applied only to new or incremental budgetary allocations to the hospital sector as a whole. Unlike Ontario and Alberta, however, British Columbia does not allo-

cate this incremental funding solely on the basis of service volumes (although historical utilization rates do play a role in determining estimated population needs; see box 2-2). By adopting a population- rather than an institution-based focus, this province attempts to ensure that new funds follow prospective patients. The funding adjustments are sensitive to regional changes in population growth and age structure and to changes in patterns of care-seeking. The adjustments appear to be a serious attempt to begin aligning hospital funding more closely with underlying population

¹¹ Much of the information on which this section is based is taken from Haazen (24).

needs for institutional care, although to date they can only be regarded as a tentative step in that direction. British Columbia's approach is, however, complemented by local initiatives to plan future bed capacity on the basis of an overall provincial bed-to-population target of 2.75 beds per 1,000 population. Individual hospital capacity would be determined by the projected relative growth in population in the region and by estimated patterns of referral or care-seeking.

On first blush British Columbia's approach may seem more need driven than the approaches being applied in Alberta or Ontario because it is less dependent on historical service patterns. In fact, though, this may be no more than an illusion. To begin with, historical patterns of utilization are used to estimate expected population-based changes in future utilization. This procedure locks in whatever service patterns are used to compute the age-specific provincial utilization rates.¹²

Furthermore, the two-part approach to weighting patient days is questionable on several counts. The differentiation of types of care is not likely to be sufficiently discriminating to take account of the fact that different hospitals may treat quite different segments of the case distribution (in terms of resource intensity) within any type of care (e.g., only 10 different weights are used to distinguish among inpatient days [10].) One hospital may treat a higher proportion of severely ill patients within the intensive care category than another, but that would not be reflected by the former hospital's receiving a greater weight. The adjustment on the basis of cost per weighted patient day may simply make matters worse. For example, if a hospital has below-average-severity patients in all five levels of care but is an inefficient facility, its new weighted patient days (NWPD) value will be scaled up in computing the adjusted NWPD (ANWPD).

Thus, this approach draws on existing patterns of utilization and on the existing cost performance of each institution in its computation of the relative share of each hospital of new "population/demographic" funding. On the one hand, it is perhaps less subject to institutional manipulation than the systems employed in Ontario and Alberta. On the other, it seems far less sophisticated in distinguishing the resource intensity of different types of cases and currently offers little to compensate for that shortcoming in terms of population-based needs information.

Efforts are under way within the Ministry of Health to make some adjustments. First, factors other than age and sex that may contribute to or be correlated with individual variations in need are being incorporated within a more comprehensive model for computing NWPD. Second, efforts are being made to adjust each hospital's NWPD not by its own cost per WPD experience but rather by a composite average cost experience based on peer hospitals. Although still imperfect, these would both seem to be improvements.

Future Trends in Financing

In future years one might anticipate some convergence of case-mix-based and population-based approaches to budget allocation along with increases in the shares of hospital budgets that are subject to such reallocation criteria. A hybrid approach might, for example, draw on the richness of a case-mix groups (CMG)- or refined diagnosis-related groups (RDRG)- type patient classification system to distinguish the resource requirements of alternative types of patients, develop case weights based on real resource use in "efficient" Canadian hospitals, and use population-based methods and appropriateness evidence to estimate the expected volume of services within

¹²If the proportion of those rates that is inappropriate varies either by level of service or by age, then regions experiencing atypical changes in population age structure, and hospitals offering relatively more or less of particular types of services than average, may be differentially and inappropriately affected in terms of the attribution of new service "needs" to particular institutions.

each patient category. Such an integrated system is likely to be at least a decade away, however, in part because the Canadian hospital sector lacks the information systems necessary to support this type of approach. (On this point see, for instance, Auditor General of British Columbia [2].) In the meantime one can expect to see more technical adjustments to methods in the provinces that have been involved in these new initiatives, involvement of additional provinces in similar efforts, and increasing proportions of hospital budgets subjected to these types of reallocation procedures.

■ Sources of Funding

Hospital operating costs are funded largely from general tax revenues made up of general provincial taxes and transfers of federal tax revenues to the provinces.¹³ Yet funds available for annual operations are not restricted to the hospital allocations that come from the provincial ministries or departments of health. Hospitals are able (indeed, increasingly encouraged) to call on a variety of other potential sources of revenue to supplement ministry budgets. Charges to patients for “luxury” accommodations (e.g., semi-private or private rooms) when they are not medically necessary provide one such source of revenue for most institutions.¹⁴

An equally important revenue source is the provision of outpatient diagnostic services (e.g., laboratory tests, radiology and ultrasound exams, ECGs). If salaried medical staff provide the ser-

vice, the entire fee accrues to the hospital. Even when these services are supervised by private practitioners with no employment status at the hospital, the hospital may charge the provincial medical plan for the technical component of the fee.¹⁵ In British Columbia, for example, fees received from the provincial Medical Services Plan for outpatient diagnostic services accounted for just under 5 percent of total hospital revenues in 1993-94. This was the second-largest source of revenue, after the operating grants from the Ministry of Health, which accounted for 85 percent of hospital revenues. Private/semi-private room charges represented well under 1 percent of revenues. Some provinces, such as Ontario, restrict the range of ambulatory services provided by hospitals to avoid competition between publicly funded hospitals and “private” diagnostic practices (35). (“Private” diagnostic practices are also publicly funded through the provincially funded fees paid for these services.) Thus, hospitals in Ontario cannot charge the provincial medical plan (OHIP) for laboratory tests to outpatients unless such tests are available only within the hospital sector. They can, however, charge for a variety of other diagnostic services not available in the private sector (e.g., most scans and scopes).

Other sources of hospital funds include revenues from parking, cafeterias, gift shops, the provision of uninsured patient services or services to patients from other provinces or countries and the provision of specialized hospital consulting services (38). One particularly innovative and com-

¹³Although numerous provinces over the years have used premiums to raise a component of hospital funds, only Alberta does so now. Even when premiums were used, hospital care could not legally be denied to Canadian residents even if premium payments were in arrears, because of the universality provisions in the federal HIDS Act.

¹⁴Many provinces in the past imposed a variety of other small hospital user fees for such things as emergency department visits. With the passage of the Canada Health Act of 1984, federal transfers could be withheld on a dollar-for-dollar basis from any province continuing to allow user fees for medically necessary services. By 1986 such fees had virtually disappeared from the Canadian landscape.

¹⁵The technical component of the fee is that part intended to cover the overhead cost of the equipment (usually diagnostic) used to provide the service. For example, an x-ray provided in the hospital for an outpatient would generate two separate charges: a technical fee would be billed by the hospital and a professional fee for reading the x-ray would be charged by the radiologist. However, if the x-ray was provided to an inpatient of the hospital, the hospital would be expected to provide this service from its global operating budget (although the nonhospital-staff physician would still be entitled to bill a professional fee). For diagnostic services provided outside hospitals, the professional and technical component are billed together.

prehensive approach to revenue generation was the establishment of the St. Michael's Hospital Health Centre in Toronto, a remarkable example of product line expansion (37). This free-standing building was purchased by the hospital and attracted a variety of patient-service-related tenants (e.g., a family medical practice, a women's health clinic, a nutrition clinic).

■ Allocation of Operating Costs

The largest single component of hospital operating costs is salaries of hospital employees. For example, in Québec in 1991-92, employee salaries and benefits represented about 75 percent of total hospital operating costs (30). Hospital employees in most provinces are represented by a small number of trade unions, and province-wide wages are negotiated and often determined by arbitrators who do not feel bound by hospitals' ability to pay. Thus, for most Canadian hospitals, wage settlements are largely outside their control and must be dealt with in terms of staying within budget. Often, if a collective agreement runs over several years so that wage increases are known in advance, ministries of health will make allowance for at least part of this in their annual allotments to hospitals. For example, in a letter sent to all Manitoba hospitals by that province's responsible associate deputy minister in 1992 an explicit note was made that the ministry's allocations would fund salary increases in existing collective agreements (34). As discussed earlier, only hospital-based salaried physicians' incomes are included in hospital budgets.

Other major hospital cost items are pharmaceuticals and surgical supplies. In some provinces, bulk purchase arrangements are in place. Hospitals nationwide may enter into bulk purchasing arrangements and, in the past, have been able to take advantage of their purchasing power to negotiate reduced rates for pharmaceuticals. However, as a result of recent federal legislation introduced in

response to pressure from the U.S. government (stimulated by U.S.-based multinational pharmaceutical firms), the ability of such joint purchase arrangements to reduce pharmaceutical costs is likely to be severely undermined.

■ Operating Expenditures

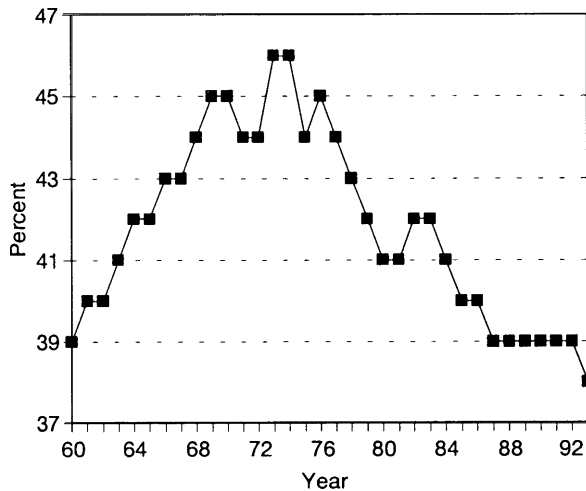
The statistical picture of hospital expenditure trends in Canada mirrors the general evolutionary story of hospital budgeting. In inflation-adjusted terms, hospital expenditures increased about 10 percent annually during the 1960s under open-ended budgets; the rate of increase declined sharply to just under 6 percent in the 1970s after the adoption of Canada's universal medical care insurance and the initiation of hospital global budgeting, and continued on down to an average of 4.6 percent annual growth in the more fiscally constrained 1980s.¹⁶

As figure 2-1 shows, the effect of Canada's increasingly constrained expenditure environment has been to stabilize and then reduce hospital outlays as a share of national health expenditures (NHE). Although NHE has increased considerably as a share of gross domestic product (GDP) since 1956, much of this increase came in the period prior to 1971, which was also characterized by rapid expansion in hospital capacity and generous line-by-line budgeting (6,18). Since then, however, NHE as a share of GDP stabilized during the 1970s and was stable again during the 1980s, following a sharp increase early in that decade that was in part recession-induced. Hospital expenditures as a share of GDP reflect this overall pattern (figure 2-2).

The worsening economic situation in Canada in the early 1990s has placed hospital financing under even greater strain. Although finalized national data beyond 1991 were not yet available at the time this chapter was written, they will almost certainly show additional reductions in the rate of hospital expenditure growth even while hospital

¹⁶ Hospital expenditure data for 1960 to 1970, 1970 to 1980, and 1980 to 1990 are from Health and Welfare Canada (25,26). The GDP implicit price indexes used to construct real growth rates are from Department of Finance (16).

FIGURE 2-1: Canadian Hospital Expenditures as a Share of NHE, 1960-93



SOURCE: Health and Welfare Canada, *National Health Expenditures in Canada* (Ottawa: HWC, 1979; n.d., 1984); Health Canada, Policy and Consultation Branch, Health Policy Division, *National Health Expenditures in Canada 1975-1993* (Ottawa: Health Canada, 1994).

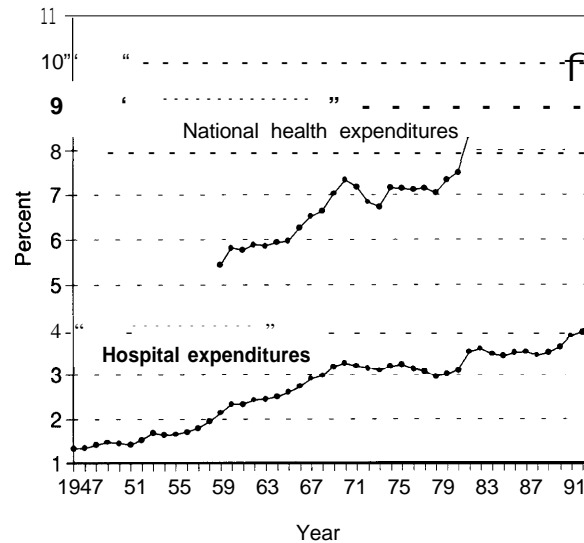
expenditures as a share of GDP will have increased because of the severe effect of the recession on Canada's GDP growth. For example, in fiscal year 1993-94, Ontario hospitals were told to expect no increase in funding—a far cry from the heady 4-to 10-percent increases during the mid-1980s.

CAPITAL EXPENDITURES

■ Relationship of Operating and Capital costs

In general, equipment depreciation is handled in an ad hoc and relatively unsatisfactory manner in Canadian hospital accounts. Published depreciation expense figures are not reliable indicators of the underlying value of equipment or of the extent of consumption of the useful life of equipment in any year, and practices vary markedly among provinces. In many provinces capital depreciation is reimbursed through the operating side of hospital accounts, but the actual funding that flows to hospitals for depreciation may have virtually

FIGURE 2-2: Canadian Health Expenditures as a Share of Gross Domestic Product, 1947-93



SOURCE: R.D. Fraser, 'Vital Statistics and Health,' *Historical Statistics of Canada*, F.H. Leacy (ed.) (Ottawa: Statistics Canada with the Social Science Federation of Canada, 1983),

nothing to do with either the useful life or the current replacement cost of the underlying equipment. For example, Manitoba "pays back" hospitals for equipment purchases over a 16-year period, and this amount appears in the hospital's operating budget. Yet the 16 years is an arbitrary payback period unrelated to the useful life or replacement cost of the equipment. No depreciation appears on the operating side of hospital accounts for building depreciation. In some instances, the impact of capital acquisitions on future operating costs is considered. For example, part of the equipment purchase approval process in Manitoba involves seeking information from the hospital on the predicted operating cost implications of new medical equipment. If the equipment is likely to involve significant additional operating requirements, such as additional staff or maintenance contracts, it may be treated as a new program proposal and require more extensive evaluation by Manitoba's Ministry of Health.

There is an obvious reason for this seeming lack of any relationship between capital expendi-

tures and operating costs. Because most capital costs and operating expenses are covered by the same provincial Ministry and the replacement of obsolete equipment is also largely covered by a separate pool of Ministry funds, there is no compelling reason on the hospital side to expend any significant energy in depreciation expense estimation, or on the Ministry side to earmark depreciation funds for hospitals. This leads rather naturally to a more detailed consideration of the manner in which provincial ministries of health control the process of allocating funds for medical equipment and buildings.

■ Financing Model and Determining Capital Requirements

As with hospital operating cost financing and funds allocation, the details of capital funding vary considerably across provinces (8,15,39). Yet even more so than on the operating side, where there are some relatively new approaches being developed in some provinces, provincial specifics concerning capital financing are probably less important than the general story.

The first and perhaps most important piece of the story is that the same provincial health ministry from which hospitals derive most of their operating funds is also the major source of funding and the control point for capital equipment purchases and building construction. Although in many provinces hospitals or their communities are responsible for some component (usually less than 50 percent) of the funding for new construction or major new equipment, the final decision as to whether to build (or, in the case of equipment, to buy) almost always rests with the ministry of health. (Exceptions to this rule tend to be purchases of major diagnostic equipment funded from private philanthropic sources, often without the approval of the provincial ministry and without any guarantee that associated operating costs will be covered in future years' budgets.)

Health ministries' control over approvals means that funding for hospital capital follows the same type of process described above for operating funds. The provincial ministry develops a capital funding budget that is scrutinized and usually modified by the provincial treasury board or department of finance before being returned to the ministry as part of its annual budget request. However, the process differs in two key respects from that associated with operating budgets. First, ministries of health generally do not come close to funding 100 percent of capital expenditures. Second, the determination of how the ministry's capital funds are allocated across competing hospital projects bears no relation to the process of allocating operating funds. In fact, because most ministries only partially fund capital projects, even projects formally approved by the ministry can be initiated only if the hospital or the community can raise the remaining funds. This generally means that:

... by design or default, ... capital equipment acquisition is based, not on objectively defined needs but on the success of fund raising campaigns. Not only the nature of the equipment being sought but numerous other factors such as hospital prominence, location, and overall program appeal can affect a hospital's ability to attract public funds (8).

As for replacement of existing capital, particularly hospital buildings, very few provinces have any long-range plans in place. Many of the country's hospitals were built during the health care construction boom of the 1950s and 1960s,¹⁷ and some of the key institutions are much older than that. Such facilities will eventually need at least to be upgraded. Because this represents the major component of future capital requirements, ministries of health are likely to become increasingly stingy with respect to new facilities or equipment as the need to upgrade or replace existing physical structures becomes more pressing (42). British

¹⁷Between 1951 and 1971, the bed capacity of Canada's hospitals doubled (6).

Columbia has recently attempted to ameliorate this situation by allowing hospitals with excess operating funds to apply to the Ministry of Health for authorization to use such funds to purchase equipment without invoking adjustments to their base operating budgets (24).

Most provinces have no formalized, long-term plan for the orderly replacement of capital, nor do they appear to have any detailed and accurate accounting of capital inventory. Several provinces have begun to move in this direction through the establishment of multiyear planning and funding approval processes and by requiring that hospitals report regularly on all equipment purchased. Funding sources and approval processes vary considerably among provinces.

■ Sources of Capital Funds

Funding shares from ministries of health commonly vary by the type of project (e.g., they are often different for medical equipment and capital construction) and by the type of hospital (e.g., rates of ministry financing participation tend to be higher for provincial tertiary/teaching facilities than for small community facilities). Yet although descriptions can be found of the formal decision-making processes used by most provinces in determining levels of co-funding, there is much less documentation on how decisions are reached as to which projects receive ministry approval and which do not. A common allegation is that such decisions often have more to do with a community's political persuasion or with the presence of an influential local politician or community member than with any provincial plan for capital replacement or expansion (see Smith [39]). Furthermore, the actual provincial level of cost sharing does not always match the publicized formula. (Again, see Smith [39], particularly for the description of the process in Ontario.)

Any equipment purchases in any province that proceed without ministry approval (i.e., funds are raised privately) are not guaranteed the necessary operating funds. Provincial ministries frown on such purchases and may even penalize hospitals that proceed with them; nevertheless, they contin-

ue to occur. For example, Ontario hospitals tend to purchase equipment as part of the process of developing claims for funding of new programs (31).

■ Capital Expenditures

Unfortunately, published Canadian data do not provide information on hospital capital expenditures. Although the official health expenditure statistics (25) report a "capital" line item, it cannot be used reliably to ascertain hospital capital expenditures. To begin with, the capital expenditure data are not restricted to hospitals. These figures include construction, renovation, and equipment costs for all health care facilities. Because hospital capacity has grown at quite different rates and times than, for example, long-term care facilities, one cannot infer hospital capital expenditure growth from aggregate capital expenditure increases. Furthermore, federal officials must estimate national hospital capital expenditures using provincial ministry expenditure data and the official provincial cost-sharing formulas. To the extent that such formulas understate actual practice, the Health and Welfare Canada data understate capital expenditures. Additionally, capital purchases made by hospitals without ministry approval may not be included at all.

A sense of the relative importance of capital and operating costs within provincial ministries' budgets can be gained by seeking such data directly from each province, although these do not generally distinguish between plant and equipment. For example, 1991-92 hospital capital expenditures by the British Columbia Ministry of Health amounted to just under 4 percent of operating costs (before depreciation) (29). The equivalent figure for Québec was slightly higher, between 5 and 6 percent (30).

In general, provincial ministry expenditures on capital are dwarfed by annual operating costs. Of course, this does not mean that such expenditures are unimportant. Decisions on expenditures for new capital create a stream of operating cost commitments that often last well beyond any accounting evidence of the original capital purchase (7).

Ministries are increasingly requiring that requests for approval of capital expenditures make an “economic case,” especially for new capital purchases. That is, a case must be made that the new capital will either reduce operating costs by improving technical efficiency or will lead to improvements in patient outcomes sufficient to justify the expenditures. Yet there are very few situations in which new capital is expected to reduce operating costs, and even in cases where such cost reductions can be identified, they rarely materialize in practice. As a result, ministries of health tend to be skeptical of such claims (2).

As for improving cost-effectiveness, hospital equipment requests are often for “life-saving” equipment that has not been sufficiently evaluated to make any such case (2). Provinces such as Québec and British Columbia have recently established formal technology assessment capabilities to assist them in evaluating such requests. Most provinces rely on ad hoc technical advisory committees to review the likely utilization of new equipment, the availability of clinical expertise, and where the most logical site(s) might be. The new technology assessment offices in Québec and British Columbia provide the means to bring external evidence on effectiveness and efficiency to such internal committee processes.

■ Provincial Experiences

A more accurate account of capital financing requires a focus on specific provinces, as there is considerable variation in the mix of sources of capital funding and in the detailed processes followed for bringing capital projects on line. Accordingly, the situations in British Columbia and Manitoba are described in greater detail below.¹⁸ They are examples, respectively, of provinces in which ministry capital funding falls well short of 100-percent financing, and provinces in which the

general rule is that capital projects (both equipment and capital construction or renovation) are fully funded by the provincial ministry of health.

*British Columbia*¹⁹

Hospital Construction

Hospital construction and renovation are guided by a five-year rolling capital plan that must be approved by the elected representatives responsible for the various provincial ministries (the Cabinet). This has several implications. It means that hospital capital funding is approved by the highest provincial government body, that capital expenditures are controlled by the same broad governmental process that dictates other budgetary allocations to the Health Ministry, and thus that provincial capital planning (such as it is) can be a victim of political influence.

A hospital must submit a proposal to the Health Ministry for consideration to have a project incorporated within the five-year plan. In principle, hospitals are also required to gain the support of their regional hospital district before their proposal can proceed. British Columbia is divided into 29 official regional hospital districts (RHD), which are geographic areas used for a variety of planning purposes. The operating funds for the RHDs derive from local property taxation. Approval of a project by a hospital’s RHD is particularly important in the largest urban district, where many institutions may concurrently be developing major capital projects. (See Greater Vancouver Regional Hospital District [22] for more details on the local approval process.) Regions complain, often bitterly, about the fact that they are expected to contribute to projects financially, often quite substantially, yet at the same time do not have commensurate influence or control over the project approval process, which is still dominated by

¹⁸Because decisions and sources of funds tend to vary at least with the value and type of equipment and the type of hospital, the interested reader is encouraged to consult representatives of the individual provincial ministries for more detail. (For a relatively comprehensive picture of the situation in each province in 1987, see Smith [39]. However, capital funding is a dynamic process, and the details are constantly changing.)

¹⁹The material in this section borrows heavily from Barer and Evans (7).

the Ministry of Health. The Ministry considers each request against competing priorities for hospital and other health care facility construction requests, bearing in mind projected regional needs for beds of various types. The current Ministry target is 2.75 beds per thousand population. Recent provincial planning initiatives are intended to bring beds closer to the population distribution in the province and to move beds away from tertiary care settings whenever possible (11).

A successful proposal is returned to the originating hospital with “approval in principle,” at which point funds are made available in the provincial hospitals’ capital budget for the planning phase of the project. Also, funds are tentatively earmarked for subsequent phases in the remaining years within the five-year plan. The hospital must then develop a more detailed functional program and various physical design proposals.

With Ministry approval comes a commitment of 60 percent of the costs of the project, including the cost of the land and servicing to the site.²⁰ The hospital must find the remaining funds from its RHD and/or from other private sources, increasingly including its own hospital foundation. (For example, all the major urban teaching hospitals in Vancouver have their own hospital foundations which are actively involved in soliciting funds from the business sector and from individual donors on a continuing basis. One enterprising hospital runs a local lottery twice a year, offering an upscale condominium apartment as the carrot; it raises in excess of \$500,000 from each lottery.) The exception to this rule is full ministry funding of provincial tertiary care facilities (e.g., the provincial Cancer Agency, parts of Children’s Hospital).

Capital Equipment

A similar process is in place for medical equipment requests. Hospitals must submit “annual rol-

ling five-year equipment plans, with fairly detailed specifications for the first year” (24). The plans consist of two parts, part one containing equipment associated with new programs or equipment costing in excess of \$100,000 and part two containing all remaining capital items. They are reviewed by the hospital’s RHD before being submitted to the Ministry. Items in part one must go through much the same sort of internal approval process as capital construction projects and 60 percent of approved purchases are funded by the Ministry.

Each hospital receives an approved funding level for items on the second part of the list; if the list is approved, it is approved in its entirety. Once a hospital receives approval, it is free to purchase any item on its part two list until it has exhausted part two funding. The funding level for each hospital is determined on the basis of the hospital’s size, role, and mix of beds, but again the Ministry funds only 60 percent of that level (including costs to replace equipment). Hospitals are thus forced to pare their own lists to stay within the available cost-shared funding limit. Although hospitals are free to make purchases from within their submitted lists, actual purchases are audited for consistency with the hospital’s rolling five-year equipment plans. Furthermore, hospitals may still require more detailed approval of specific items if they wish to receive RHD funds (e.g., see Greater Vancouver Regional Hospital District [22]).

If new equipment is associated with a new service or facility, the hospital must also submit a request for adjustment to its base operating budget to take account of the expanded services and associated operating costs. A hospital cannot expect to receive support for increased operating costs for an unapproved capital acquisition.

Thus, funding for hospital capital generally derives from British Columbia’s Ministry of Health (at least 60 percent of all approved pur-

²⁰In practice the RHD is responsible for raising 100 percent of the funds, usually through the issuing of debentures. The Ministry then covers its share by contributing 60 percent of the costs of carrying the debentures and by paying down 60 percent of the value of the debentures to retirement. This entire process is coordinated by the Ministry through the Regional Hospital District Financing Act.

chases), regional hospital districts, or hospitals' own charitable foundations. There are rare occasions in which hospitals raise the funds for a major equipment purchase and receive the required operating funds from the RHD. In an environment of continued financial restraint, such innovative funding arrangements may become more common, as appears to be the case in Ontario (38). Although the Ministry is under no operating cost obligation in such situations, it cannot prevent the provision of services using the capital equipment. (If the operating funds are found within the hospital's approved operating budget, however, the Ministry can certainly scrutinize and adjust the budget downward in future years.) Furthermore, private practitioners are allowed to bill the province's medical services plan for the professional component of any fees (i.e., the physician's portion of the charge) associated with the use of such equipment as long as there is an appropriate fee code in the physicians' fee schedule.

Manitoba

The capital financing processes in British Columbia and Manitoba are relatively similar, although the financial involvement of the province in Manitoba is far more substantial, and the dollar value of equipment funding requiring detailed scrutiny in Manitoba is lower than in British Columbia.

Hospital Construction

As with British Columbia, the Manitoba Department of Health maintains a five-year capital plan for major construction or renovation projects, and projects go through an approval process separate from the process of establishing annual operating budgets.²¹ In contrast to British Columbia, the province funds 100 percent of the costs of approved projects. (However, the funding does not include the cost of serviced land, unapproved embellishments, space, or changes occurring after project tendering has been completed.) All capital

requirements for renovations, expansions, maintenance, or fire and life safety upgrades are included in the five-year capital plan. The plan provides borrowing authority and sets out repayment requirements and operating budget implications for each capital project. Once a project is completed, the approved operating costs are rolled into the operating budget.

Each approved project receives separate funding for design and construction. Larger hospitals have planning departments that undertake the early design and planning work, and some projects receive some financial support from the Department of Health to support this early functional planning phase. The functional plan for each project arises from a "role statement" for the institution. This statement is intended to ensure that capital expenditure allocations are consistent with the overarching strategic policy direction of the province's health care system, which is currently attempting to align health care expenditures of all types more closely with health needs (33). The role statement phase concludes with a project definition that specifies the programs or services that will drive the remaining phases of the planning process for each capital project.

The phases of each approved project—functional planning, architectural design, and construction—each require approval, and the Department of Health is heavily involved in reviewing and approving the various stages within each of these phases. Once a functional program is approved by the Department, the hospital is able to proceed with the design phase. At that point the Department provides interim borrowing authority, which the hospital can take to its chosen financial institution. A "letter of comfort" can be provided to a financial institution on request; it essentially assures the lending institution that the province stands behind the project.

Approval of architectural plans allows the hospital to seek competitive site preparation and

²¹In addition, the province can provide funding of up to \$500,000 out of a contingency project fund. This fund is intended primarily for unanticipated major repairs or maintenance that the hospital is unable to cover from its operating funds.

construction bids (at least five are required). Bids are reviewed by the facility and Department of Health staff, the lowest appropriate bid is chosen, and a tender price is fixed. The hospital generally borrows the necessary funds up front; once a project is completed, the hospital converts the loan into some form of long-term debt that is paid back by the province through contributions of principal and interest included in the hospital's operating budget.

Capital Equipment

Major medical equipment purchases are also funded largely by the Department of Health. Hospitals can purchase equipment from depreciation accounts, other internal hospital funds (e.g., through donations or fundraising), or approved equipment loans. They are also allowed to purchase equipment that is an approved element of a capital project from project funds.

Hospitals periodically purchase unapproved equipment, but the Department not only feels no obligation to fund the operating costs associated with such equipment, it can actually reduce a hospital's operating budget if unapproved equipment is used.

Manitoba remains more involved than does British Columbia's Ministry of Health in approving relatively small equipment purchases. Small rural hospitals are free to proceed with purchases up to \$5,000 without prior approval. The equivalent amount for large urban hospitals is \$20,000. Any other proposed purchases must go through the Department's capital approval process. Once approved, a hospital may proceed to solicit competitive bids and, after final approval of one of them, to purchase the equipment. The Department covers the cost of the equipment by way of straight-line contributions to the hospital's depreciation fund for 16 years (regardless of the value of the equipment or its likely useful life).

Because many hospitals have insufficient funds in their depreciation accounts to cover necessary equipment replacement (in part because of slow payback for some types of equipment that quickly become obsolete, and in part because of

rapidly increasing prices for such equipment), Manitoba has established a separate "capital equipment approved borrowing fund." It equaled slightly more than \$9 million in fiscal year 1992-93 for a population of slightly over 1 million. This fund is intended to augment resources available from depreciation accounts and to support new program initiatives. All hospitals can submit wish lists that are reviewed and prioritized by Department staff. Some Manitoba hospitals are able to supplement their depreciation fund through private donations. Hospitals are also able to move up to 20 percent of revenues generated from non-Department sources (e.g., private room charges and parking fees) to their depreciation fund. Although hospitals are not supposed to dispose of equipment without Department approval, in practice this happens frequently, and these proceeds also find their way into the depreciation accounts. Nevertheless, all prospective purchases exceeding the levels noted above require Department of Health approval. The private sources of funding provide an important means for hospitals to cope with a funding mechanism that is insensitive to useful life, price changes, and other factors that may leave depreciation fund balances below necessary levels of funding for approved equipment purchases.

In the case of major new imaging equipment, the province has established a tiered structure of imaging advisory committees, one for each type of major equipment (e.g., CT, MRI, ultrasound). Each committee obtains input from representatives in each region and is responsible for making recommendations to the Department for equipment diffusion that will best meet the overall "needs" of the province's population. The recommendations of these committees play an important role in the process of evaluating and approving purchase requests from individual hospitals.

FUTURE DIRECTIONS

The major features of hospital financing in Canada have not changed appreciably in the past 20 years. During that time all provinces moved from prospective line-by-line budgeting of operating

costs to some form of prospective global budgeting. Although efforts to improve the efficiency of hospital operations and to make hospital capacity more responsive to population health needs are beginning to emerge, Canada has as yet seen only very timid moves in these directions. For the most part, the allocation of operating funds among institutions is dictated by historical happenstance, and more political energy is devoted to overall expenditure control than to attempts to realign the aggregate allocation of funds among provincial hospitals.

Hospital capital planning and funding still appears quite chaotic in most provinces, being driven in large part not by an overall assessment of needs or the cost-effectiveness of alternative capital configurations but rather by needs as defined by the staff and practitioners of institutions that stand to be major beneficiaries of new capital spending. Both British Columbia and Manitoba, however, are currently involved in major initiatives to circumvent these past problems. In both provinces capital planning is now beginning to be tied more closely to population movements, taking into consideration alternative approaches to delivering services. This is expected to become more widespread over the next few years.

Despite relatively ad hoc capital and operating cost financing, Canada has been fairly successful in containing hospital expenditures over the past 20 years, at least relative to the United States. Whether this relatively effective top-down budgetary control can continue to survive is a large question. The race appears to be on, with provinces attempting to stay one step ahead of the pressures for rapid adoption of new, predominantly cost-expanding (and provider income-increasing) technological innovations. Provincial ministries of health are developing new policies intended to result in more appropriate placement of large segments of traditional hospital populations. They show every intention of becoming more rather than less stingy with hospital funding, even as the hospital sector raises alarm bells about waiting lists for high-technology interventions, decaying facilities, and declining quality of care.

One outcome that seems relatively predictable is that private (and increasingly creative) sources of funding will become ever more important outlets for hospitals, at least as means to raise funds for capital projects. Just how hospitals will fund associated operating costs remains an interesting question. Yet human ingenuity knows no bounds when there are incomes at stake, and the temptation for ministries to cost-shift back to patients by giving hospitals more rope may be overwhelming. Canada's overall health care cost control record will stand or fall on the tenacity and perseverance of its provincial ministries of health in dealing with the issue of hospital financing.

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