HOSPITAL FINANCING IN CANADA

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HEALTH POLICY RESEARCH UNIT

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HOSPITAL FINANCING IN CANADA

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The simple story of Canadian hospital financing -- single-source (tax-based) public funding through provincial Ministries of Health to individual institutions through prospective global budgets -- offers a relatively accurate general picture which, nevertheless, masks both the provincial/territorial variations in the details, and the different ways in which capital and operating costs are funded and allocated.

The objective of this paper is to put some (but not all the) flesh on the bones of this story, with a particular focus on recent new funding initiatives (using a few selected provinces for details), and on the less well-understood capital funding process.

A. A Short Historical Preamble

Hospitals were brought into Canadian "Medicare" (that is, became publicly funded not-for-profit institutions) under the Hospital Insurance and Diagnostic Services Act of 1956 (Taylor, 1978). All provinces had met the terms and conditions for federal cost sharing by 1961. Since then, hospital care in Canada has been provided through largely publicly owned and funded not-for-profit institutions. There is virtually no private hospital sector in Canada, although there is a vibrant private long-term or continuing care sector which includes a variety of chronic care institutions (but significant parts of which are also publicly funded).

Funding of hospitals in the early years of the public program was characterized either by 'line-by-line' budgeting or per diem reimbursement. Under the former, individual institutions negotiated specific budgetary line items with provincial Ministries of Health, with the overall budgetary

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1 Here and throughout, references to "hospitals" are to acute and rehabilitation care facilities some of which also contain some extended care beds. For more detail on hospital classifications, see Canadian Hospital Association (1992), and Statistics Canada (various years).

2 While the Canadian Hospital Directory lists over 50 private hospitals, most of these are psychiatric, drug and alcohol rehabilitation and long term care facilities.
allocations being the aggregation of the line items. Reallocation of funds between different line items was severely restricted, and the effort entailed 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 according to patient loads, which left Ministries of Health with a large open-ended line in their budgets.\(^3\) Funding increases were relatively generous in the 1960s, with hospital expenditures per capita increasing 7.6\% per annum in real terms\(^4\) over the decade, in part because Ministries tended to pick up year-end deficits.

The old line-by-line budgeting approach has largely disappeared;\(^5\) the move away from this approach, to "global budgeting" began in the late 1960's in Ontario (Detsky, Stacey and Bombardier, 1983). Under this system the funding allocation for year \(t\) was based on a series of relatively mechanical adjustments to the year \(t-1\) actual expenditures. Special provisions were made for new programs, unanticipated and justifiable volume increases, or other unforeseen circumstances, but hospitals gained considerable flexibility in moving funds between operating lines, and the effort required of Ministry staff was significantly reduced. Retrospective line-by-line review was invoked in situations where hospitals over-ran their budgets, but for many years this change lacked 'teeth', with most over-runs being picked up by provincial Ministries of Health. Québec moved to close off year-end coverage of deficits, and a number of provinces, led by Québec, experimented with a variety of "incentive reimbursement schemes" intended to induce hospitals to use their funds more efficiently. But this movement had a rather chequered

\(^3\) For example, in British Columbia a special request for additional funding amounting to almost 25\% of the hospital sector expenditure estimates was required to cover actual per diem reimbursement in 1980/81 (Haazen, 1991).

\(^4\) This increase was over and above general inflation. Per capita hospital expenditure data are taken from Barer and Evans (1986) and deflated using a GDP implicit price index (Canada, Department of Finance (1992)).

\(^5\) In fact some 20\% of budgets in Québec continue to be determined on a line-by-line basis (Contandriopoulos, 1988), and Alberta only very recently moved away from this method of budget approval (Jacobs et al., 1992).
history (Glaser, 1987; Contandriopoulos, 1988), in part because of glaring failures to understand the motivations of the key hospital stakeholders.\textsuperscript{6}

Only in the more fiscally-constrained late 1980's (and now in spades in the early 1990's) have Ministries of Health become more forceful in developing institutional expectations that budgets are not a starting point, but a binding constraint.\textsuperscript{7} Concurrent with this recent more hard-nosed approach have come a number of attempts to refine the criteria used to allocate funds across institutions. The "global budgeting" picture described above remains a relatively accurate portrayal of the process today; in most provinces (Alberta being one exception; see below) the more recent funding innovations are being applied only to that component of year t funding which represents an increase over the total provincial hospital 'globe' for the previous year. In short, to a large extent, any relative inefficiencies and inequities that existed in each province when it went to global budgeting have been largely fossilized, and in many instances may have been exacerbated since that time by the relatively ad hoc process of allocating new funds and covering deficits (Pink, 1993).

The statistical picture mirrors this general evolutionary story. Hospital expenditures increased about 10\% per annum during the 1960s, declining sharply to just under 6\% in the 1970's, and continuing on down, to 4.6\% in the 1980's (all figures in real terms).\textsuperscript{8} As Figure 1 shows, the effect of this increasingly constrained expenditure environment has been to stabilize, and then reduce, hospital expenditures as a share of total health

\textsuperscript{6} For example, for a number of years in Ontario, hospitals could not run deficits, but could also not retain the full amount of any surpluses. Not surprisingly, actual expenditures clustered very tightly around approved budgets.

\textsuperscript{7} Of course there are practical limits to this process. In some provinces Ministries faced with hospital deficits may not, for a number of reasons, be able simply to let such hospitals shut down. The resulting political hue and cry makes this an impractical option.

FIGURE 1.

Hospital Costs over Total Health Costs
Canada, 1960 - 1991
care expenditures. While health care costs in Canada have increased considerably as a share of gross national product since 1956, much of this increase came in the early pre-medical care insurance period (up to 1971) which was also characterized by rapid expansion in hospital capacity and relatively generous line-by-line budgeting (Barer and Evans, 1986; Evans, 1984). Since then, health care costs as a share of GDP were stable during the 1970's and then again during the 1980's (after a sharp increase early in that decade that was, in part, recession-induced). The share of GDP consumed by hospital expenditures reflects this overall pattern (Figure 2).

With the worsening economic situation in Canada in the early 1990's, the financing of the hospital sector is coming under even greater strain. While the national data beyond 1991 are not yet available (and the 1991 data are preliminary estimates), they will almost certainly show additional reductions in the rate of expenditure growth, even while expenditures as a share of gross domestic product have increased (because the recession has had a severe impact on the denominator of this measure). For example, in the next fiscal year (1993/94), Ontario hospitals have been told to expect no increase in funding, a far cry from the heady 4% - 10% days during the mid-1980s.

Unfortunately Canadian published data sources do not provide information on hospital capital expenditures. Health and Welfare Canada includes a "Capital" line in its annual expenditure estimates, but of course these will include construction, renovation and equipment costs for all health care facilities. Since hospital capacity has grown at quite different rates and times than, for example, continuing care facilities, one cannot infer hospital capital expenditure growth rates from "Capital". One can gain a sense of current levels using provincial expenditure statistics, as described in section C. below.

B. The Current Situation - Operating Costs

As noted above, hospital operating costs are funded largely out of
FIGURE 2. Canada Hospital Cost over GDP 1947 - 1991
general tax revenues (provincial taxes and federal transfers). But funds available for annual operations are not restricted to the allocation for this purpose from the provincial Ministry/Department 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 (semi-private or private rooms) where these are not medically necessary provide a significant source of revenue for some institutions. An equally important revenue source is diagnostic services (laboratory tests, radiology and ultrasound exams, ECG’s etc.) provided to out-patients. Even where 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 (where relevant). If salaried medical staff provide the service, the whole fee would accrue to the hospital.

Some provinces, such as Ontario, restrict the range of such ambulatory services, so as to avoid competition between publicly-funded hospitals and 'private' diagnostic practices (which are, nevertheless, also publicly funded through medical fees-for-service) (Pink, 1993). 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. But they can charge for a variety of other diagnostic services not available in the 'private sector' (e.g. most scans and scopes).

While a number of provinces have, over the years, used a variety of premiums to raise a component of hospital funding, only Alberta does so now. Even when they were in effect, 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.

A number of provinces have 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 fiscal 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, because any province that allowed them to persist would be imposing 'double jeopardy' on its residents - out-of-pocket payment plus the withholding of an equivalent amount of federal tax dollars.
Other sources of funding include 'revenue centres' such as parking, cafeterias, gift shops, the provision of non-insured patient services or services to patients from other provinces or out-of-country, and even the provision of specialized hospital consulting services (Pink et al., 1991). Nevertheless, provincial and federal tax revenue continues to be the source of the lion’s share of funding for hospitals in Canada. But there are no tax revenues earmarked specifically for hospitals. While the federal transfers come to the provinces for health care programs governed by the Canada Health Act, these funds fall far short of the total cost of these programs. Therefore they are simply treated as part of general provincial tax and transfer revenues. Provincial Ministries of Health must then compete with other Ministries for a piece of the general revenue pie, and then must allocate that piece across hospitals, other health care institutions, agencies and programs, private health care providers (the majority of whom are physicians), and some research agencies and programs. Because hospital expenditures comprise the single largest expenditure item within provincial Ministry of Health budgets, they are subjected to special scrutiny. A minuscule reduction in hospital allocations will easily fund a variety of other programs, a fact that has escaped neither those programs nor Ministry of Health staff.

While the details of the budget development, approval and allocation

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11 One particularly innovative and comprehensive approach to revenue generation was the establishment of the St. Michael’s Hospital Health Centre in Toronto, a remarkable example of product line expansion (Pink et al., 1989). 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, etc.).

12 Indeed, many of the more fractious episodes in federal-provincial relations during the past two decades have arisen over disputes about the shrinking cash transfers from the federal government, or the uses to which federal funds were being put by individual provinces.

13 For example, in 1991/92 total grants to hospitals in British Columbia were $2.2 billion for a population of about 3 million. This represented over 40% of the total Ministry of Health budget in that year. Similarly, hospital expenditures represented about 42% of public health care expenditures in Ontario in 1992, down sharply from about 50% in 1983. This reflects the overall trend shown in Figure 1.
process vary across provinces, one can sketch out a general story without straying too far from the specifics of any province. Budgets are based largely on approved budgets from the previous year, with the allowable adjustments depending on province-specific factors such as new programs, patient volume increases, anticipated wage settlements, or other policies affecting the bed capacity of each hospital. Ministry staff generally develop estimates of each hospital's funding requirements based on the approved budget from the previous year, anticipated adjustments for increases in the costs of 'factors of production' (salaries, pharmaceutical, surgical and other supplies), and any new or expanded programs. This might be labelled a 'service-based' approach to budget estimation. The amount of interaction between Ministry staff and individual institutions during this phase of such a budget development process varies considerably across jurisdictions. These individual institutional estimates will be aggregated to an overall hospitals 'line' in the Ministry's "estimates" process.

An alternative approach, adopted recently in British Columbia for example, begins with overall hospital expenditures in the previous year, and develops a case for adjustments not so much on the basis of new hospital programs or increased hospital factor costs, but rather on the basis of changes in the characteristics (size and composition) of the population, and information on alternative means of providing services to that population -- a more 'population-based' approach, at least in philosophy.

The hospitals 'line' which emerges out of either of these approaches will be subject to modification as a result of internal negotiations over the overall size of the request that is to go forward from the Ministry. As noted above, the hospitals 'line' is far and away the largest item in the Ministry estimates, so that it comes under the microscope even in the best of times.

But two factors characterizing the current situation, one 'environmental', one the result of new policy directions,14 ensure that

14 Of course it would be naive to think that the emergence of these policy directions was unrelated to the 'environmental' crisis.
hospital funding is even more subject to scrutiny presently. First, and most obvious, is the fiscal crisis facing all provincial governments. As a result of declining federal transfers for health care, 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 manoeuvre, and hospital funding makes a very large target. Second, a number of new and major provincial restructuring initiatives involve attempts 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" (Manitoba Health, 1992a; B.C. Royal Commission on Health Care and Costs, 1991). With the reduction in bed capacity comes an expectation of reduced budgetary requirements.

At the conclusion of the internal Ministry estimates process, a global hospitals' line will go forward to the provincial Department of Finance, or Treasury Board, as part of the Ministry's request for funds. This request will be scrutinized by members of Treasury Board staff assigned to Health, as part of the process of determining allocations across competing sectors (education, social services, justice, health, housing, etc.). Out of this process will come recommendations that are taken forward to the provincial Cabinet (comprised of the elected Ministers for each sector) for approval.

The approved budget will then have to withstand debate in the provincial House of Commons, before it passes into law. At that point, Ministries will know what their allocations are to be for the fiscal year. In some provinces the approved budget comes with very specific directives as to the internal allocation across Ministry programs, allowable salary increases, and the like. Elsewhere, the approved global budget is returned to the Ministry, at which point decisions regarding the allocation of funds to individual program areas within the Ministry must take place if the approved amount is

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 for the early part of the fiscal year.
different than the budget request. In either case, the allocation to individual institutions is still a matter of internal Ministry responsibility. The estimates process itself will usually have generated the information necessary for this latter exercise. For example in Manitoba, where the hospitals budget line is developed by aggregating individual institutional estimates after adjustments for factor cost increases and new programs, the allocation of the available funding across institutions mirrors quite closely the relative size of the individual budgets developed during the estimates process. Whatever the detailed processes, hospital budget levels have been, and continue to be in most provinces, dominated by the levels in the immediately preceding year.16

New approaches for allocating hospital funding have been adopted in recent years in a number of provinces. It is important to note, however, that all of these initiatives (at least to date) 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 overall funding levels (i.e. new funds for year t are allocated on the basis of the 'new rules', while the base budgets remain relatively unchanged), while in one province (Alberta) the adjustments are limited to a small (5%) proportion of each hospital’s previous year’s budget.

Nevertheless, these approaches indicate an increased interest among Ministries of Health in making budgets more sensitive to the relative efficiency of different institutions given the mix of patients served (Alberta, Ontario), or to changes in population composition and patient flows (or the "needs" of a hospital’s catchment area) (British Columbia).17 These

16 In 1988, for example, the previous year’s funding accounted for 92% of the funding allocated to Ontario hospitals, the remainder being made up of a variety of adjustments for inflation, volume increases, and new/expanded programs (Lave, Jacobs and Markel, 1991).

17 As with so many other health and social policy initiatives, Québec was out ahead of the other provinces in experimenting with peer group-based incentive reimbursement programs (Glaser, 1987), but appears to be doing relatively little on this front presently.
three experiences are described in somewhat more detail below, as illustrative of the types of changes occurring presently in the funding of Canadian hospital operating costs.

**Alberta**

The Alberta Acute Care Funding Plan (ACFP) was designed to redistribute a component of inpatient operating costs from more, to less, efficient institutions (Alberta Health, 1991). It involves the estimation for each hospital of a hospital performance measure (HPM), the number of case- and severity-adjusted days treated per dollar of inpatient expense. The higher the measure, the more efficient the hospital; the funding adjustment is then based on the relative position of each hospital's HPM.

A detailed description of the methodology underlying the HPM is beyond the intent of this paper and is, anyway, available elsewhere (Jacobs et al., 1992; Greenaway-Coates, 1990; Alberta Health, 1991). In skeletal form, the method begins by estimating inpatient costs for each hospital by netting out a variety of non-inpatient activity centres and a share of joint activities (such as diagnostic services and administration) from the hospital's total operating costs. Each of the hospital's inpatient cases is then assigned to one of about 1100 refined diagnosis related groups (RDRG's), on the basis of its diagnostic group, diagnostic or procedure code, and level of co-morbidity or complications. Each RDRG has a resource intensity weight assigned to it. The weights are constructed by marrying per diem cost/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 (length of stay) cases on the grounds that these are of extraordinary severity which would not be adequately reflected in the RDRG weight.

This patient classification system, together with the case weight

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18 This process of inpatient cost estimation is a modified form of a methodology developed in the late 1970's for the purposes of hospital inpatient cost comparisons (Barer and Evans, 1980; Barer, 1981).
calculations for the province, provides the means to calculate a measure of weighted cases for each hospital. The measure of weighted cases (WC) 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 (number of inpatient beds) and the extent of its teaching role. ¹⁹

The adjusted weighted cases (AWC) then become the numerator of the (HPM), the denominator being total estimated inpatient costs for the institution. ²⁰ The resulting HPM values for each hospital are converted to index values (base=100), and each hospital's index value determines its budget adjustment. For example, if a hospital had a value of 125, it would be eligible for a funding adjustment amounting to 25% of its previous year's approved budget. In practice, however, the adjustments to date have been limited to 5% of the previous year's base.

There are a number of serious problems with this system, some of which are being actively worked on even as this paper is being written, others of which are flaws more generic to any system of reimbursement tied to case/severity mix and case weights. The system is a 'service-based' approach to adjusting hospital funding, which takes as given (and therefore implicitly 'alright') the "efficiency" of the average hospital. It rewards or penalizes institutions not on the basis of their designated roles, the patient population they serve, or the technical efficiency with which they meet

¹⁹ This latter adjustment is motivated by evidence from Canadian hospital cost analyses (e.g. Barer, 1982) indicating that, even after one extracts the costs of direct teaching-related activity in estimating inpatient costs, the teaching function continues to have indirect effects on those inpatient costs.

²⁰ In fact the official and published literature on the ACFP creates an aura of additional complexity that is simply not there (Jacobs et al., 1992; Alberta Health, 1991). Specifically, it suggests that the measure of WC for each hospital is divided by actual cases, to construct something mislabelled 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 whole technical exercise seem more complex and less logical than it is.
specific objectives, but 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 pursued community-based partnerships that had the effect of keeping patients out of hospital could easily end up being penalized under such a system, while a hospital that uses clever accounting practices to move inpatient costs out of the denominator of its HPM and creative patient classification to increase the value of the numerator, would end up being rewarded.21

A major problem with the use of this type of funding system in a Canadian context is that it bases its weights on American charge data.22 This results from two factors: first, there are as yet no reliable patient-centred cost data systems in place in Canadian hospitals, and second, the provinces which 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, e.g. Evans and Walker, 1972; Barer, 1982), but these have received much less development and, perhaps more importantly, much less marketing than the DRG-based system developed in the United States.23

The adjustment factors for hospital size and "teachingness" have also come under attack for being rather arbitrary and not particularly sensitive to

21 Of course "case mix creep" is no stranger to the United States, where such reimbursement systems have been in place for much longer. As Botz (1991) notes, no case weight system, no matter how carefully constructed, is going to be devoid of case-shifting incentives. The extent to which such case shifting occurs will depend 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.

22 Whether or not these 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 they were uniformly more service intensive across all types of cases would such an adjustment be appropriate for application in a Canadian setting. This seems to be asking for an extraordinary leap of faith.

23 Indeed, much of the literature in this area simply assumes that cost data must be used to develop case weights. See, e.g. Lave, Jacobs and Markel (1991). The potential circularity in such approaches seems to have been lost by their general acceptance in the United States. Pity.
the phenomena which they are supposed to capture. Efforts are presently underway to alleviate some of these problems, but these efforts 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 will claim that the key factors that make it unique have not been captured within the adjustment process. Indeed, it could be argued that all hospitals would not be happy unless and until sufficient adjustments had been incorporated to ensure that some hospitals were better off, and none were worse off, than at present.24

Ontario

The recent patient case mix-based adjustments to global budgeting in Ontario are similar in a number of respects to that described above for Alberta. Indeed, the Ontario system also computes a measure of weighted cases using resource intensity weights constructed as a hybrid of New York hospital cost/charge data and Canadian length of stay data, and then constructs a measure of relative cost per weighted case (the inverse of Alberta's weighted units per inpatient $) using a method similar to that described above to estimate inpatient costs (Lave, Jacobs and Markel, 1991, 1992; Pink, 1993).

But there are a number of differences as well, both in methodology, and in the way in which the resulting measure of relative efficiency is applied in the funding allocation process. For example, the Ontario process makes no additional size or teaching status adjustments, but instead attempts to create hospital peer groups (based on teaching status, size, and geographic location) and to make allocation adjustments within the context of those groups. Furthermore, it uses patient Case Mix Groups (CMG's) designed for Canadian use rather than the U.S.-based RDRG's. The 'reallocation' amounts for which a hospital is eligible are limited both by the fact that the funding adjustments are applied only to separate designated periodic pools of "equity" or "growth."
funding, and by some predetermined % of the previous year’s budget (for the growth adjustment, currently a maximum of 2% for any hospital). The "growth formula" incorporates (weighted) inpatient and a variety of non-inpatient services, and by adjusting the ‘price’ weights attached to these different services (e.g. day surgery, outpatient clinics), the Ministry of Health also attempts to create incentives to shift the mix of services.

Thus in Ontario this process has not (as yet) been used to reduce an institution’s previous year’s approved budget. Instead, it has replaced the old formula of providing general increases to all hospitals for inflation, unadjusted volume increases, and new or expanded programs. Furthermore, it is plagued by all of the problems identified above for Alberta, plus some of its own (Lave, Jacobs, and Markel, 1991, 1992). For example, the problems with the process of adjustment for bed size and teaching status in Alberta were noted above. In Ontario, the construction of the peer groups has, to date, been relatively unsophisticated (although it has been improved from the original seven groups) and so is equally subject to criticism from the hospitals themselves.

To date a number of pools of equity funds have been allocated, the most recent in the fall of 1992 (personal communication, G. Pink, March 1993; see also, Pink, 1993). These sums represent a very small proportion (well under 1%) of total hospital operating expenses. Funds available for "growth" adjustments have also been limited, to about 1% of total base budgets. Even in severely constrained fiscal environments such as that found in Ontario today, these amounts may not be sufficient to effect the sorts of equity and efficiency shifts sought by the provincial Ministry of Health.

British Columbia

Like Ontario, British Columbia’s recent budget allocation adjustments have been applied only to 'new' or incremental budgetary allocations to the

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25 Much of the information on which this section is based is taken from Haazen (1992). The critical analysis is, however, mine.
hospital sector as a whole. But unlike in Ontario and Alberta, this incremental funding is not allocated solely on the basis of 'weighted service volumes' (although historical utilization rates do play a role in determining estimated population "needs"; see below). By adopting a population- rather than institution-based focus, it attempts to ensure that new funds follow prospective patients, that is that the funding adjustments are sensitive to regional changes in population growth and age structure, and to changes in patterns of care-seeking. It appears to be a serious attempt to begin to align hospital funding more closely with underlying population needs for institutional care, although to date it can only be regarded as a tentative beginning in that direction. It is, however, being complemented by local initiatives to plan future bed capacity on the basis of an overall provincial beds/population target of 2.75 beds per 1000 population, with individual hospital capacity determined by projected relative growth in population, and by estimated patterns of referral or care-seeking.

Like the Ontario and Alberta systems, the British Columbia approach to funding allocation relies heavily on the HMRI (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. These (recent) historical utilization rates are 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.26

The changes in service "needs" are then allocated to hospitals on the basis of where the population changes have occurred, and the existing referral patterns for each level of care. Thus if historical utilization patterns suggested that a particular large urban hospital provided 20% of inpatient surgery for the residents of its own region, plus 80% of inpatient surgery for

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26 For example, the 1993/94 model will use data from 1991/92.
residents of the rest of the province, then 20% of the population-based change in such surgical utilization for that region, plus 80% 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 change for each hospital. These are then aggregated to a single volume-change figure for each hospital, using relative resource weights developed by internal Ministry staff. For example, a weight of 3.5 is assigned to an intensive care day, 1.65 to a day involving a surgical service (in- or out-patient), 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 most recent year’s total operating costs by total 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.

While on first blush this approach may seem more ‘need-driven’ than that being applied in Alberta or Ontario because it is less dependent on ‘service patterns’, in fact this may be no more than an illusion. First, historical patterns of utilization are used to estimate population-based expected changes in utilization. This procedure locks in whatever service patterns are used to compute the age-specific provincial rates. If 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.

Second, the two-part approach to weighting patient days is questionable on a number of 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 level of care.27 And 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 NWPD value will be scaled up in computing 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 call of each hospital on new "population/demographic" funding. It is, perhaps, less subject to institutional manipulation than the systems employed in Ontario and Alberta. On the other hand, it seems far less sophisticated in distinguishing the resource intensity of different types of cases, yet has very little (at least yet) to compensate in terms of population-based "needs" information.

There are efforts underway 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. While still imperfect, these would both seem to be improving changes.

Where To Next?

In the coming years, one might anticipate some convergence of case-mix-

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27 For example, only ten different weights are used to distinguish among inpatient days (personal communication, B.C. Ministry of Health, March 1993).
based and population-based approaches to budget allocation, and 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 CMG- or 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 volumes within each patient category. But such an integrated system is likely to be at least a decade away, in part because the Canadian hospital sector lacks the information systems necessary to support this type of approach (on this point, see, e.g., Auditor General of British Columbia, 1989). In the meantime, one can expect to see more technical 'fiddling' in the provinces that have been involved in these new initiatives, additional provinces becoming involved in similar efforts, and increasing proportions of total budgets being subject to these types of reallocation procedures.

**Payment for Factor Inputs**

The largest single component of hospital operating costs is salaries of hospital employees. For example, in Québec in 1991/92, salaries and benefits represented about 75% of total hospital operating costs (J.M. Lance, personal communication, January, 1993). The employees in most provinces are represented by a small number of different trade unions, and province-wide wages are negotiated, and often determined by arbitrators who do not feel in the least bound by hospitals' "ability to pay". Thus, for most Canadian hospitals, wage settlements are exogenous factors that must be dealt with in living within their budgets. Often if a collective agreement runs over a number of years, and the wage 'pushes' are known in advance, Ministries of Health will make explicit allowance for at least part of this in their annual allotments to hospitals. For example, in the letter sent to all Manitoba hospitals by that province's responsible Associate Deputy Minister in the late spring of 1992, explicit note was made that the Ministry allocations would
fund salary increases in existing collective agreements (Manitoba Health, 1992b).

Other major 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 American government (stimulated by the multinational pharmaceutical firms based there), the ability of such joint purchase arrangements to reduce pharmaceutical costs is likely to be severely undermined.

Services provided in hospitals by physicians are remunerated in a variety of ways. For the vast majority of physicians, hospitals serve as 'no cost' workshops. Physicians are paid fees-for-services provided to their hospitalized patients, but are responsible for none of the hospital costs incurred. General/family practitioners may admit patients directly to hospital, or may refer their patients to specialists who may then subsequently recommend hospitalization. In either case, the primary care practitioner can follow the patient, and can bill the provincial medical plan for hospital visits, or for any surgical procedures or assists.

Many specialists (particular tertiary care sub-specialists) are hospital-based. Indeed, some have their offices within the physical confines of the hospital (although whether they pay rent or share other overhead is often unclear). The vast majority of these are paid fees-for-services from provincial medical plans. There are also a sizable number of diagnostic physicians (radiologists and pathologists) in salaried hospital positions. Many of the services they provide are, nevertheless, paid on a fee-for-service basis to the hospital. A small (but growing) number of specialists are negotiating alternative payment arrangements with provincial medical plans. For example, a teaching hospital-based neonatology unit may negotiate with the Ministry for sessional (half-day) payments to its practitioners, or even for
block operating funding. These funds will generally flow to the hospital separately from its operating budget, coming from a different branch of the provincial Ministries of Health.

In general the only physician costs that will appear in a hospital’s operating budget will be for salaried medical staff, such as the heads of clinical departments or diagnostic salaried positions, post-graduate medical students (interns and residents), or physicians serving in administrative posts (e.g. CEO or vice-president, medicine). These costs represent only a very small fraction of the total cost of hospital-based physician services.

**Equipment Depreciation and the Interface between Operating and Capital Accounts**

In general, equipment depreciation is handled in an ad hoc, and relatively unsatisfactory, way 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 across provinces. In many provinces, capital depreciation is 'reimbursed' through the operating side of hospital accounts, but the actual funding which flows to hospitals for depreciation may have virtually nothing to do either with the useful life, or the current replacement cost, of the underlying equipment. No depreciation appears on the operating side for building depreciation.

For example, Manitoba 'pays back' hospitals for equipment purchases over a 16 year period, and this will appear in the hospital's operating budget. But the sixteen years is an arbitrary 'pay-back' period unrelated to the useful life, or replacement cost, of the equipment. Part of the equipment purchase approval process in Manitoba involves seeking information from the hospital on the likely operating cost implications of new equipment. If such equipment is going to involve significant additional operating requirements, such as additional staff or maintenance contracts, it may be treated as a "new program" proposal and require a more extensive vetting within the Ministry.

There is, of course, a quite obvious reason for this seeming lack of
relationship between capital and operating costs. Since the majority of capital costs are covered by the same provincial Ministries of Health, and since the replacement of equipment when it is obsolete will also be 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 in flowing earmarked depreciation funds to hospitals.

This leads us rather naturally to a more detailed consideration of the manner in which provincial Ministries of Health control the process of funding allocations for capital -- equipment and buildings.

C. The Current Situation - Capital Costs

As with the operating cost funding and allocation process, the details of capital funding vary considerably across provinces (Deber, Thompson and Leatt, 1988; Bayne and Walker, 1989; Smith, 1990). But here even moreso than on the operating side (where there are some relatively new approaches being developed in some provinces), the provincial specifics are probably less important than the general story.

The first, and perhaps most important piece of that story in terms of understanding Canadian hospital funding, is (as noted immediately above) that the same provincial Ministries of Health from which hospitals derive the vast majority of their operating funds, are also the major sources of funding and, perhaps more important, the control points, for capital equipment purchases and building construction. While in many provinces hospitals (or their communities) are responsible for some component (usually less than 50%) 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, nevertheless almost always rests with the Ministry of Health.28

28 The exceptions to this rule tend to be purchases of major diagnostic equipment which are funded from private (philanthropic) sources, often without the approval of the provincial Ministry of Health and without any guarantee that the implied operating costs will be covered in future years’ budgets.
This means that funding for hospital capital emerges from the same type of process described above for operating funds. Ministries of Health develop capital funding budgets, which will be scrutinized and usually modified by provincial Treasury Boards or Departments of Finance before being returned to those Ministries as part of their annual budget. But the process differs in two key respects from that associated with operating budget funding. First, despite the fact that Ministries retain effective control over what gets purchased because of their formal approval processes, their significant financial contributions to the capital purchases, and the fact that hospitals will be dependent on operating funding from them for any such purchases, those Ministries of Health, on average, do not come close to funding 100% of capital costs. Second, the determination of how the Ministry's capital funds will be allocated across competing projects bears no similarity to the process of allocating operating costs. In fact, because most Ministries only partially fund capital projects, even those projects approved by a provincial Ministry will only move forward if the hospital (or the community) can raise the remaining funds. This inevitably means, for example, 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" (Bayne and Walker, 1989).

The levels of funding from Ministries of Health commonly vary with the type of project (e.g. they will often be different for equipment than for capital construction) and with the type of hospital (e.g. rates of Ministry financing participation will tend to be higher for provincial tertiary/teaching facilities than for small community facilities). But while one can find descriptions of the formal decision processes used in most provinces in determining levels of co-funding, there is much less documentation of how decisions are reached as to which projects move forward and which are not approved. Indeed, 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 'grand provincial plan' for capital replacement or expansion (see, e.g., Smith, 1990). Furthermore, the actual provincial level of cost-sharing does not always match the 'advertised' formula (again, see Smith (1990), particularly the description of Ontario).

Most provinces lack any formal capital replacement plan. Indeed, very few appear to have any centralized source of information on the asset base out in the field, in terms of types of assets, age, cost-effectiveness and replacement cost. Hospitals report the cost of new capital stock in the Annual Returns which they file with Statistics Canada each year. But it is not clear how complete these reports are, or how consistently such data have been reported, both over time and across provinces, and they provide no picture of replacement costs (Thompson, Youmans and Letouzé (1984); Thompson and Letouzé (1984)). Without such fundamental information, it is no surprise that many provinces lack any capital funding strategy.

This is also reflected in the sorry state of Canadian capital expenditure data, as noted in section A. above. While the official health expenditure statistics (Health and Welfare Canada, various years) report a "Capital" line item, it cannot be used reliably to ascertain hospital capital expenditures. First, it is not restricted to hospitals. Second, federal officials must estimate hospital capital costs using provincial Ministry expenditures and the official provincial cost-sharing formulae. To the extent that such formulae understate actual practice, the Health and Welfare Canada data will understate capital expenditures. Third, capital purchases made by hospitals without Ministry approval may not be included at all.

Any equipment purchases in any province that proceed without Ministry approval (e.g. the funds for the equipment are raised privately) are not guaranteed the necessary operating funds. Indeed, provincial Ministries frown on such purchases, and may even penalize hospitals who proceed with such purchases. Nevertheless, they continue to occur. For example, Ontario
hospitals tend to purchase equipment as part of the process of developing claims for funding of new programs (Lave, Jacobs, and Markel, 1991).

One can gain a sense of the relative importance of capital and operating costs within provincial Ministry of Health budgets, by seeking such data directly from each province. But these do not generally distinguish between plant and equipment. For example, in 1991/92 hospital capital expenditures by the B.C. Ministry of Health amounted to just under 4% of operating costs (before depreciation) (personal communication, S.R. Kenny, Jan. 1993). The equivalent figure for Québec was slightly higher, between 5% and 6% (personal communication, J.M. Lance, Jan. 1993). But in general, provincial Ministry expenditures on capital are dwarfed by annual operating costs.

Of course this does not mean that such expenditures are unimportant. Indeed, decisions regarding expenditures for new capital create a stream of operating cost commitments that often last well beyond any accounting evidence of the original capital purchase (Barer and Evans, 1990). Ministries are increasingly requiring that requests for approval of (particularly new) capital expenditure include an 'economic case' (i.e. that the new capital will either save operating costs by improving technical efficiency, or that it will lead to improvements in patient outcomes sufficient to justify the expenditures). But there are very few situations where new capital will even potentially reduce costs and, even in those 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 (Auditor General of British Columbia, 1989). As for improving cost-effectiveness, oftentimes hospital equipment requests are for 'life-saving' equipment that has not been sufficiently evaluated to make any such case (ibid.). 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, whether the clinical expertise is available, and where the most logical site(s) might be. The new technology assessment
offices provide the means to bring external evidence on effectiveness and efficiency to such internal committee processes.

As for replacement of existing capital, particularly hospital buildings, very few provinces have any long range plan in place. Many of the country's hospitals were built during the health care construction boom of the 1950s and 1960s\(^\text{29}\) (although some of the key institutions are much older than that). Such capital will eventually need to be at least upgraded, and since this represents the major component of future capital requirements, Canadian hospitals are likely to see Ministries of Health become increasingly stingy with respect to new facilities or equipment as the need to upgrade or replace existing physical structures becomes more pressing (Thompson, 1988). British Columbia has recently attempted to ameliorate this situation by allowing hospitals with excess operating funds to apply to the Ministry for authorization to use such funds to purchase equipment, without invoking adjustments to their base operating budgets (Haazen, 1992).

Beyond these general descriptions, a more accurate account requires that one focus on a specific province, because there is considerable variation in the mix of sources of funding, and in the detailed processes followed for bringing capital projects on stream. Accordingly, we describe the situations in British Columbia and Manitoba in somewhat more detail below.\(^\text{30}\) They are examples, respectively, of provinces in which Ministry capital funding falls well short of 100%, and in which the general rule is that capital projects (both equipment and capital construction/renovation) are funded 100% by the provincial Ministry of Health.

\(^{29}\) Between 1951 and 1971, the bed capacity of Canada’s hospitals doubled (Barer and Evans, 1986).

\(^{30}\) Space precludes the level of detail that would furnish a comprehensive picture even for these provinces. Because decisions and sources of funds tend to vary at least with the value/type of equipment and the type of hospital, the interested reader is encouraged to consult representatives of the individual provincial Ministries of Health for more detail. For a relatively comprehensive picture of the situation in each province in 1987, see Smith (1990). But capital funding is a dynamic process, and the details are constantly undergoing change.
British Columbia 31

Hospital construction and renovation are guided by a five year rolling capital plan which must be approved by the elected representatives responsible for the various provincial Ministries (the "Cabinet").32 In order to have a project incorporated within this plan, a hospital must submit a proposal to the Ministry for consideration. But hospitals are, at least in principle, also required to gain the support of their regional hospital district, before their proposal goes forward.33 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 of Health target is 2.75 beds/1000 population, and just-announced provincial planning initiatives are intended to bring those beds closer to the population distribution in the province, and to move beds away from tertiary care settings wherever possible (British Columbia, 1993).

A successful proposal is returned to the originating hospital with "approval in principle", at which point funds are made available in the provincial hospital capital budget for the planning phase of the project, and funds are tentatively earmarked for subsequent phases in the remaining years

31 The material in this section borrows heavily from Barer and Evans (1990).

32 The significance of this should not be underestimated. It means that hospital capital funding is approved at the highest provincial government body. This means both that capital expenditures are controlled by the same broad governmental process that dictates other Ministry of Health budgetary allocations, and that provincial capital planning, such as it is, can be a victim of political influence.

33 The province is divided into twenty-nine official regional hospital districts (RHD), which are geographic areas employed 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 (1991) for more details on the local approval process). But regions complain, often bitterly, about the fact that they are expected to contribute to projects financially (often quite substantially; see below) yet at the same time they do not have commensurate ‘control’ over the project approval process (which is, in the final analysis, still dominated by the Ministry of Health).
within the five year plan. The hospital must then develop a more detailed 'functional program' and a number of 'physical design' proposals.

With Ministry approval comes a commitment of 60% of the costs of the project (including the cost of the land and providing servicing to the site).\(^{34}\) The hospital must find the remaining funding, from its RHD and/or from other private sources (increasingly including its own Foundation).\(^{35}\) The exception to this rule is the full Ministry funding of provincial tertiary care facilities (such as the provincial Cancer Agency and parts of the province's Children's Hospital).

A similar process is in place for requests for capital equipment. Hospitals must submit "annual rolling five-year equipment plans, with fairly detailed specifications for the first year" (Haazen, 1992, p. 82). The plans are composed of two parts, one containing equipment associated with new programs or costing in excess of $100,000, the other containing all remaining items. They are reviewed with 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; 60% of approved purchases are funded by the Ministry. But each hospital receives an approved funding level for items on the second part of the list and, if the list is approved, it is approved in toto. That is, once a hospital receives approval, it is free to purchase any items on its part two list, until it has exhausted its 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

\(^{34}\) In practice the RHD is responsible for raising 100% of the funds, usually through the issuing of debentures. The Ministry then covers its share by contributing 60% of the costs of carrying the debentures and by paying down 60% of the value of the debentures to retirement. This entire process is coordinated by the Ministry of Health through the Regional Hospital District Financing Act.

\(^{35}\) For example, all the major urban teaching hospitals in Vancouver (the province's largest city) have their own hospital foundations, which are actively involved in soliciting funds from the private business sector and from individual donors on an ongoing basis. One enterprising hospital runs a local lottery a couple of times a year, offering an upscale condominium apartment as the carrot, and raising in excess of half a million dollars from each lottery.
funds only 60% of that level. Hospitals are thus forced to pare their own 'wish lists' in order to stay within the available cost-shared funding. Although hospitals are free to make purchases from within their submitted lists, actual purchases are audited for consistency with the hospitals' rolling five year equipment plans. Furthermore, hospitals may still require more detailed approval of specific items if they wish to be able to call on RHD funds (see, e.g., Greater Vancouver Regional Hospital District (1991)).

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 functional role. A hospital cannot expect to receive support on operating account for an unapproved capital acquisition.

Thus, virtually all the funding for hospital capital derives from the provincial Ministry of Health (at least 60% of all approved purchases), the regional hospital districts, or hospitals' own charitable foundations. There are occasional instances of hospitals raising the funds necessary for a major equipment purchase, and even receiving the required operating funds from the RHD. These appear (to date) to be rare exceptions to the general rule, although in an environment of continued restraint, such innovative funding arrangements may become more common, as they appear to be doing in Ontario (Pink et al., 1991). While the Ministry is under no operating cost obligation in such situations, it can also not prevent the operation (although if the operating funds are found within the hospital's approved operating budget, it can certainly scrutinize, and adjust if necessary, the budget for future years). Furthermore, private practitioners are free to bill the province's Medical Services Plan for the professional component of any fees, associated with the use of the equipment, that are in the negotiated medical fee schedule.

**Manitoba**

As in British Columbia, the Manitoba Department of Health maintains a
five year capital plan for major construction/renovation projects, and such projects go through an approval process quite separate from the process of establishing annual operating budgets. Unlike in British Columbia, the province funds 100% of the costs of such projects, not including the cost of serviced land, unapproved ‘embellishments’ or space, or changes occurring after the project tendering process has been completed.

All capital requirements for renovations, expansions, maintenance, or fire and life safety upgrades are included in this five year capital program. The program 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 funding separately for two phases: design and construction. Larger facilities have planning departments that undertake the early design and planning work; some projects receive some financial support from the Department to support this early functional planning phase. The functional plan for each project must arise out of a ‘role statement’ for the institution. This is intended to ensure that capital expenditure allocations are consistent with the over-arching strategic policy directions of the province’s health care system which, in turn, are attempting to more closely align health care expenditures of all types with health needs (Manitoba, 1992a). The role statement phase concludes with a project definition which specifies the programs/services and volumes that will drive the remaining phases of the planning process for each capital project.

The subsequent 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 Ministry, the hospital is able to proceed with the design.

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36 In 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 which the hospital is unable to cover from its operating funding.
phase. At that point the Ministry will provide 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. Such a letter essentially assures the lending institution that the province stands behind the project.

Approval of architectural plans gives the hospital leave to seek competitive site preparation and construction bids (at least five are required). The 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 funds, then once a project is complete, converts the loan into some form of long term debt such as debentures, which are paid down by the province through contributions of principal and interest included in the hospital’s operating budget.

Major equipment purchases are also funded largely by the Department of Health. Hospitals do periodically purchase unapproved equipment, but the Ministry not only feels no obligation to fund the operating costs associated with such equipment, but can actually reduce a hospital’s operating budget if unapproved equipment is used. Hospitals can purchase equipment using their depreciation account, other funds provided by the hospital (e.g. donations, fund-raising), or approved borrowings for equipment. They are also able to purchase equipment that is an approved part of a capital project using project funds.

Manitoba remains more involved than does the British Columbia Ministry in approving relatively small equipment purchases. Small rural hospitals are free to proceed with purchases up to $5,000 without prior approval. For large urban hospitals the equivalent is $20,000. Any other proposed purchases must go through the Department’s capital approval process. Once approval has been received, a hospital may proceed to tender and, after final approval of one of the competitive bids, to purchase. The Department covers the cost of the equipment by way of straight-line contributions to the hospital’s depreciation fund for sixteen years (irrespective of the value of the equipment or its
Because many hospitals have insufficient funds in their depreciation accounts to cover necessary equipment replacement (in part due to the slow payback for equipment that becomes obsolete, in part due to rapidly increasing prices for such equipment), Manitoba has established a separate "Capital Equipment Approved Borrowing Fund" which amounted to slightly more than $9 million in 1992/93 (for a population of slightly over 1 million). This fund is intended to augment funds available through depreciation accounts and to support new program initiatives. All hospitals can submit 'wish lists', which 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% of revenues generated from non-Ministry sources (e.g. private room charges, parking, etc.) to their depreciation fund. While hospitals are not supposed to dispose of equipment without Ministry approval, in practice this happens frequently, and the proceeds also find their way into the depreciation funds. Nevertheless, all prospective purchases exceeding the levels noted above still 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. C.T., M.R.I., ultrasound). Each committee collects input from representatives in each region, and is responsible for making recommendations to the Ministry for equipment diffusion that will best meet the overall needs of the province’s population. The recommendations of these committees then play an important role in the process of vetting and approving purchase requests from individual hospitals.
Thus, the processes in British Columbia and Manitoba are relatively similar, although the financial involvement of the province in Manitoba is far more substantial, and the level of equipment funding requiring detailed scrutiny in Manitoba is far lower than in British Columbia.

Most provinces have no formalized long term plan for the orderly replacement of depreciated capital. Nor do they seem to have any detailed and accurate accounting of capital inventory. A number of provinces have begun to move in this direction through the establishment of multi-year planning and funding approval processes, and through requiring that hospitals report regularly on all equipment purchased. Funding sources and approval processes vary considerably across provinces.

**In Conclusion**

The major features of hospital financing in Canada have not changed appreciably in the past 20 years. During that time, all provinces have moved away from line-by-line budgeting of operating costs; all now practice some form of global budgeting. It seems fair to note that, while efforts to improve the efficiency of hospital operations and to make hospital capacity more responsive to population health needs, are beginning to emerge, this country has as yet seen only very timid moves in those directions. For the most part, the allocation of operating funds across institutions is dictated by historical happenstance, and more political energy is devoted to overall expenditure control than to attempts to realign the allocation of funds 'under the globe'.

Hospital capital planning and funding appears still quite chaotic in most provinces, being driven in large part not by any overall assessment of population 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 the major beneficiaries of new
Nevertheless, Canada has been relatively successful in containing hospital expenditures over the past 20 years, at least relative to its closest neighbour. Its relative success seems now unequivocally tied to its methods of finance and control -- single payors responsible in each province for both capital and operating costs -- which have the effect of keeping the resource intensity of each day of hospital care at levels well below those found in the United States (Evans, Barer and Hertzman, 1991).

Whether this rather effective top down budgetary control can continue to survive is the billion dollar 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- (and health care income-) expanding, technological innovations. Provincial Ministries of Health are developing new policies intended to result in more appropriate placement of significant 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 tech' interventions, decaying capital, 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 they will fund the operating costs remains the interesting question. But human ingenuity knows no bounds when there are incomes at stake, and the temptation for Ministries to cost-shift 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.

37 Both British Columbia and Manitoba are currently involved in major initiatives intended 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. One would expect this to become more widespread over the next few years.
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