

Population Health and Health System Reform: Needs-Based Funding for Health Services in Five Provinces

Tom McIntosh^a, Michael Ducie^b, Marcy Burka-Charles^c, John Church^d, John Lavis^e, Marie-Pascale Pomey^f, Neale Smith^g, Stephen Tomblin^h (^a University of Regina, ^b University of Regina, ^c Southern Alberta Child and Youth Health Network, ^d University of Alberta, ^e McMaster University, ^f Université de Montréal, ^g University of Alberta, ^h Memorial University) *

Abstract

This essay explores the introduction of population-needs-based funding (PNBF) formulae for the provision of health care services in five provinces (Newfoundland and Labrador, Quebec, Ontario, Saskatchewan and Alberta) as part of a larger project examining a range of health reform decisions in those provinces. Based on semi-structured key-informant interviews with civil servants, stakeholder representatives and political actors the paper examines why and how some provinces chose to move ahead with PNBF formulae while others did not. For two of the provinces (Alberta and Saskatchewan) the implementation of the formulae stemmed directly from the process of regionalization carried out shortly before, while Quebec's particular model of regionalization led to a slower and more gradual adoption of a PNBF formula. Although Newfoundland did implement a regionalized governance structure, it has not attempted to change how services have been traditionally funded, leaving much of the decision making in this area to bureaucratic and political actors. Ontario's decision to not pursue a full-scale form of regionalization meant that key stakeholders in the acute care sector could effectively block any significant discussion of changes to how health care dollars are allocated.

* The authors would like to thank the Canadian Institutes of Health Research (CIHR), Health Canada and the Saskatchewan Population Health and Evaluation Research Unit (SPHERU) for their financial support of the research initiative of which this paper is a part. The authors would also like to thank Courtney England and Melissa Irwin for their research assistance on earlier stages of this project. Tom McIntosh, Department of Political Science, University of Regina, thomas.mcintosh@uregina.ca

Introduction

This paper examines the experiences of five provinces with the consideration and, in some cases, the implementation of what can be termed ‘population-needs-based funding formulae’ (PNBF) for the provision of health services. Two of the three provinces implemented full-scale PNBF formulae as part of their respective regionalization processes. One province implemented a relatively narrowly focused needs-based funding formula for a limited range of services and did so over time as its regionalization structure itself evolved and the regions assumed greater levels of responsibility within the provincial system. A fourth province, which has not created a regionalized governance structure for health, considered making a change, but eventually stayed with the status quo. The fifth province has not adopted a PNBF funding formula at the provincial level, though it is employed by the regional health authorities in their own budgeting processes.

Despite the fact that three of the five provinces now employ PNBF formulae for allocating health dollars (one in a limited sense), there is little to suggest they have had any significant impact in reorienting the health systems away from hospital-centred acute care provision and toward a focus on health promotion, disease prevention and the determinants of health. The reasons for this lay not in the failure of the policy itself, but rather in the changing political and economic context of the health care reform debate in Canada in the years following their implementation.

The study itself is part of a larger research initiative that seeks to examine health policy decision-making in those provinces across a range of health service delivery issues¹. The initiative examined health policy decision-making in Newfoundland and Labrador, Quebec, Ontario, Saskatchewan and Alberta. The provinces were chosen to reflect a number of factors, including size, relative wealth within the federation, diversity of political culture and tradition of innovative health and social policy. The policy decisions examined, chosen as illustrative of some of the key elements of the health reform agenda identified in the academic and grey literature, included initiatives related to the:

1. Regionalization of provincial health systems;
2. Implementation of alternative payment plans for physicians;
3. Management of wait-lists to reduce wait-times;
4. Privatization of the delivery and payment for some health services;
5. Prescription drug policy; and,
6. Implementation of needs-based funding formulae for the delivery of health services.

In all, the initiative conducted 30 case studies (one for each policy decision in each province) that began with systematic reviews of the academic and grey literature surrounding each policy issue, detailed analyses of the policy landscape in each province relative to the issue under consideration (i.e. the ‘status quo’ before the policy change) and the details the policy change itself where applicable. This was supplemented by detailed semi-structured key-informant interviews with policy-makers, decision-makers, stakeholder organizations and other interested parties to examine the background, the motivations and the outcomes of the policy change. In total 56 people were interviewed (29 in Newfoundland, 8 in Ontario, 7 in Quebec, 8 in Saskatchewan and 4 in Alberta) using a common template that allowed the interviewer some flexibility to follow up on issues of interest that arose during the interview. The transcripts of the interviews were coded using NUD*IST software according to a basic coding framework

developed collaboratively by the researchers (and adaptable to the specificities in each province) and rooted in the conceptual framework described below.

It should be noted, though, that relative to some of the policy areas some provinces either had no significant discussion of policy or, having considered policy change opted not to implement change for a variety of reasons. As will be discussed below, this was certainly the case with two provinces relative to the idea of adopting population-needs-based funding allocation models. These decisions were classified as ‘no-go’ decisions, but the rationale for why no changes in a particular policy area were implemented is itself instructive and included in the analysis.

These 30 case studies were then rolled-up into eleven separate comparative analyses of two types. The first were five intraprovincial studies that examined the six policy decisions in each province looking for patterns in the approach, motivation, rationale, extent and overall direction of health reform decision-making in that province. The research team in each province, led by the provincial coordinator, conducted these comparative analyses. The second were six cross-provincial analyses of decisions relative to each of the health policy reform decisions looking for differences and similarities in the rationale, motivation, approach, extent and outcomes across the five provinces included in the study. These were done by teams led by case-study coordinators using summary reports of individual cases prepared by provincial coordinators (see note 3 below).

In terms of approach the research was conducted using a conceptual framework based on Kingdon’s three elements found in the policy arena – problems, solutions and politics. Policy change occurs when these elements are brought together through the intersection of the ‘ideas, interests and institutions.’ The intersection opens up an opportunity for change that links the problem with a politically acceptable or achievable solution that can garner sufficient support from the actors and institutions both inside and outside the formal policy-making process. (Kingdon. 2003)². Kingdon’s framework is part of a broader literature on policy networks and communities (cf. Coleman and Skogstad. 1990; Pross. 1992) that elucidates the roles of different policy actors within policy networks and the role they play in policy processes both formal and informal. Kingdon’s framework, originally adapted from the work of Cohen et al. (1972), allows one to make sense out of what he himself describes as the inherent ‘messiness’ of policy making that while structured also leaves room for “complexity, fluidity, uncertainty and residual randomness” (Kingdon. 2006: 97). Pal (2005) takes this notion even further in his discussion of the limitations placed on policy making by the rise of neo-liberal economics which certainly played itself out in some of the decisions examined as part of the larger project described above. It is exactly that complexity that the above project attempts to understand by examining the actions, motivations and rationales of the actors involved in some key health decisions in the provinces under consideration.

Thus, literature reviews and the key-informant interviews were structured in order to elicit information from respondents relative to:

- 1) *The Government Agenda*: How the policy issue came to the government’s attention
 - a. The role of research, the media, stakeholders and other actors;
- 2) *The Decision Agenda*: How the policy issue came to be on the government’s decision agenda
 - a. What led the government to consider policy change

- 3) *Policy Choice*: How the policy issue was dealt with once on the agenda of the government
 - a. What options were considered
 - b. How were stakeholders involved and how they responded to the policy debate on the issue
 - c. How and why a particular policy response was chosen and implemented, or,
 - d. Why no action was ultimately taken relative to the issue

One of the challenges of the analysis of the interviews stemmed from the manner in which the actors themselves viewed both their role and the roles of other actors in the policy processes discussed. The distinction between the three stages of the policy process above were sometimes difficult to distinguish for the key-informants who took a more 'holistic' view of the process that, itself, reflects Kingdon's assertion of the overall 'messiness' of policy making. It became necessary to use the coding framework then to capture the distinctions, in particular, between the issue (problem) coming on to the government agenda and the decision to which the government had to respond. Again, Kingdon's idea of how situations or conditions get framed and reframed as problems is important (2006: 100-101). It was important to look at the interviews to see how actors saw a condition (e.g. the fact that people were waiting for surgery) became a problem (e.g. the perception that people were waiting too long for some surgeries and this was both impairing their health and perhaps indicative of a failure of the health system).

What follows, then, is an analysis of the results of the research relative to the general research question around why provinces chose to implement (or not to either consider or implement) population-needs-based funding models for the allocation of funds for the delivery of health services. The paper begins with a brief discussion of the idea of such models taken from some of the key academic and grey literature on the subject relative to the time at which such models were under consideration in the five provinces. One of the challenges here is that the decision to implement population-needs-based funding models is that this decision itself is intimately linked with the decision to regionalize provincial health systems and, for many scholars and policy-makers, the two issues are inseparable.

From here the paper goes on to review the findings from each of the five provinces under consideration and, finally, to draw some lessons from the experience of these provinces relative to the future of such models as it relates both to the future of health reform, but, more specifically to the idea of integrating understandings of population-needs within a health system focused for the most part on the treatment of illness rather than the promotion of health.

Population Health, Needs-Based Funding & Regionalization

A consistent theme in the health care reform debate in Canada over the past two decades has been the desire to reorient the system away from its focus on the provision of services in hospitals and by physicians. Indeed, one can see this as a reformulation of the so-called 'medicare bargain' rooted in the extension of hospital insurance under the *Health Insurance and Diagnostic Services Act, 1956* (HIDSA) to include physician services outside of hospitals under the *Medical Care Act, 1968* and cemented under the *Canada Health Act, 1985* (CHA) which

articulated the governing principles of Canada's single-payer, publicly administered health care systems in each of the provinces.

Beginning with the publication of the ground-breaking Lalonde Report (Lalonde. [1974] 1981), much of the debate on Canada's health care system has increasingly focused on the perceived need to rethink the medicare bargain in terms of a greater emphasis on what was then termed 'public health' (disease prevention, health promotion and lifestyle choices). The idea of 'public health' has expanded to what we now call 'population health' with a focus on the social and economic determinants of health (Raphael. 2004).

This comes from an increased understanding that access to health care in the form of physician and hospital services is a relatively small, albeit important, component in the complex equation of what makes for a healthy population. Employment, income, education, housing, social capital, neighbourhood, early childhood development and a host of other non-health care related factors all play an important role in determining the overall health of populations. If health outcomes were to be improved and the health inequities between populations were to be reduced, then the health care system would need to be transformed into a health system that took seriously those social and economic determinants (Labonte et al. 2005; Johnson et al. 2008).

In the 1990s, one of the ways that provincial governments chose in attempt to facilitate this refocus of the system on so-called 'upstream' factors that emphasized health promotion, disease prevention and the integration of services aimed at least at ameliorating the negative impact of some of the social and economic determinants of health was through a profound restructuring of the overall governance of the health care system. Provinces would no longer fund health care institutions (e.g. hospitals) but would instead fund geographically bounded health regions which would be governed by boards charged with the allocation of funds across the region with a mandate to begin a process of focusing that allocation towards upstream investments.

This new system should be understood to set up an either/or proposition between acute and community-based care. No one who is arguing for an increased focus on population health determinants would argue that the acute system is unimportant. Rather, the point is that the acute care system should not be seen as the be all and end all of the health system. It is instead an insistence that the acute care system needs to be conceptualized as one, but not the only, important part of a system designed to insure better population health outcomes. When the health system is conceptualized as almost entirely about acute care then an opportunity is lost to put resources into non-acute care programs and interventions that could themselves reduce future acute care needs of the population.

In all, nine provinces would create new regionalized structures for health system governance or, in the case of Quebec, reform an existing regional structure to invest it with more authority. Only Ontario would choose not to go down this path, though its recent creation of what it calls Local Integrated Health Networks (LIHNs) is a (contested) kind of regionalization. Some provinces, like Saskatchewan, would go through more than one round of regionalization, consolidating into a smaller number of regions. Prince Edward Island abandoned health regions and returned to a system of direct administration from the provincial health department early in

2000. Alberta announced in 2008 that it would create a single 'super-region' for the entire province that would operate at arms-length from the government.

Closely linked to the decision to regionalize the governance of the health care system in a province, was the decision to move away from traditional funding models centred on funding health care institutions towards one that would, in some way, account for the health needs of the population within the region. As Table 1 demonstrates, funding allocations can take many forms but as McKillop, Pink and Johnson (2001) have noted, it has traditionally allocated resources on the basis of a calculation of the historical use of services (taken to be a proxy for need) and allocated directly to institutions or for specific services.

However, the historical utilization funding method seems to be flawed insofar as it fails to account for various population differences (e.g., age, gender, socio-economic status (SES), etc.) and does not correspond with the values expressed in much of the literature around health care reform. Empirical assessments would be more desirable; however, hard data (both qualitative and quantitative) is too general (i.e., masking disabilities; misinterpreting the cause and effect of ill health) making it impossible to interpret a population's true needs as well as inform proper interventions. Although this is a shortcoming, capitation models generally use age and gender adjusted population counts rather than raw population counts in order to distribute the health resources where they are needed most (Bedard et al., 2000).

Few funding models have the capacity to recognize broad environmental factors known to affect a population's "need" for health services (i.e., the number of chronic versus acutely ill citizens, the number of accidents, or the number chronic diseases like heart disease and cancer). A population-based funding approach attempts to assess these broad factors; however, at the time the reforms were implemented in the provinces in the early 1990s this was a relatively new practice that was more a theoretical construct than a tested idea or one backed by significant years of experience, adjustment or refinement. At the same time that Canadian provinces began to implement needs-based allocation models, similar experiments were going on in other countries (United Kingdom, Portugal, Finland, Norway, Netherlands, Australia, and New Zealand) with some apparent success (Saskatchewan Health. 1994; BCMA. 2002).

The theoretical basis for a population needs-based funding (PNBF) model is that the characteristics of a population drive its relative need for health care services (British Columbia Medical Association (BCMA), 2002). Populations of equal size do not necessarily have equal health needs. In other words, health care resources are essentially allocated on the basis of population characteristics (i.e., age, gender, and socio-economic status of the residents should result in different utilization needs) (Birch et al. 1993, 1996; BCMA. 2002; Eyles et al. 1991, 1993; Saskatchewan Health. 1994; Bethany Care Society, 1997). Therefore, this funding approach attempts to resolve funding inequities that generally occur amongst regions within a province when the characteristics of the population are not considered.

Table 1: Methods used for health care funding in Canada

<i>Method</i>	<i>Description</i>
1. Population-based	Uses demographic or other characteristics of the population (such as age, gender, socio-economic status, etc.) to determine the relative propensity of different population groups to seek health services.
2. Facility-based	Uses characteristics of the organization providing care (such as size of the organization, type of the organization, geographic isolation, occupancy rate) to estimate the cost to sustain a specified profile of cases and/or service volumes in the future.
3. Case Mix-based	Uses a profile of cases and/or service volumes previously provided (such as a number of knee replacements, number of dialysis procedures) to estimate the cost to sustain a specified profile of cases and/or service volumes in the future.
4. Global	Applies a factor to a previous spending figure (or to a forecasted cost) to derive a predicted spending level for an upcoming period.
5. Line-by-line	Applies factors on an individual basis to previous cost experiences (or to forecasted costs) to derive a proposed funding level for each line item (such as housekeeping, inpatient nursing, etc.) for an upcoming period.
6. Policy-based	Directs spending to address specific policy initiatives of the Department or Ministry of Health. These policy initiatives affect the operation of multiple organizations within the jurisdiction.
7. Project-based	Flows funds to a single health service organization in response to evaluating a proposal from that organization for one-time funding, often for a major expenditure.
8. Ministerial discretion	The Minister of Health decides on the specific dollar amounts to flow to health service organizations

Source: McKillop, I., Pink, G.H., and Johnson, L.M. (2001). *The financial management of acute care in Canada: A review of funding, performance monitoring and reporting practices*. Ottawa: Canadian Institute for Health Information.

The term “needs-based” in a funding model title is somewhat misleading for it is simply a tool or measure used to allocate a fixed budget amount to a specific population or across a defined number of regions/populations. Allocations amongst regions are based on the relative (not absolute) needs of their residents. To the extent that the level of the fixed budget is inadequate, so too will be the regional allocations.

At the time of implementation of these models, the rising costs of hospitals, physician services, and non-physician services, along with the overall concern with provincial deficits and debts and signals of decreasing transfers from Ottawa, suggested greater attention had to be paid to the allocation of health care dollars and to the quality of health services. Population needs-based funding models provide an alternative approach to the historical utilization model that is primarily user-based and patient oriented. Population needs-based models are much more consistent with the stated goals of Canadian health-care policy as compared to the existing, historical systems of resource allocation used in Canada (Eyles & Birch. 1993).

The decision by provincial governments as to whether they should adopt a needs-based funding formula for all or some of their provincial health care budget has resulted in a mixed message for future development in this form of health care budgeting. Two provinces in the study, Ontario and Newfoundland, decided against a needs-based approach. Three others, Saskatchewan, Alberta and Quebec have adopted a needs-based funding formula for the principal allocation of health care spending, though in a very limited manner in Quebec. While there are many benefits to a needs-based funding formula what these studies have shown is that the political decision to adopt such a formula is not an obvious one.

In Canada all the provinces that have adopted a needs-based funding model in this study have done so in conjunction with the regionalization of their health care systems. This is not to say that regionalization requires a needs-based funding model or vice versa. In the three cases where provinces have adopted a needs-based formula it has occurred as part of a basket of reform initiatives. The two provinces which did not adopt a needs-based funding model were not at the time under going a systemic level of reform to their health care system. The five case studies are addressed in the chronological order in which needs-based funding was either under consideration or adopted.

Needs-based Funding in Five Provinces³

Ontario

In 1992, Ontario considered but made the decision not to adopt a needs-based funding formula but rather to continue to fund hospitals based on a mixed global budget and/or a case-based method (see Table 1). This decision was made over a relatively short period in 1991 – 1992. The process began with the Ministry of Health commissioning a study into the nature of changes that would result in hospital budgets if a needs-based funding model was adopted in Ontario. The decision to study needs-based funding was made based on the experience of the District Health Council and their inability to provide the Ministry of Health with a financial framework and advice on the allocation of funding to the districts. This failure influenced the government agenda towards a study of the need- based approach and the requirement for up-to-date population and program data needed for such a funding approach.

Two factors are viewed as having the greatest impact surrounding funding reform and towards a focus on cost containment. First, the provincial auditor released a report highlighting “questionable practices by hospitals” and “loose procedures” at the Ministry of Health. This report resulted in the Health Minister’s attention being focused on hospital accountability. Second, an economic downturn changed the focus towards cost containment rather than reallocations based on need.

Needs-based funding never moved beyond the study phase to the decision phase even though the District Health Council’s lack of a financial framework continued to be a problem. The needs-based funding formula outline created by Stephan Birch of McMaster University on behalf of the Ministry of Health would have resulted in substantial re-allocation of funding between regions; this at a time of high budget deficits and provincial economic problems. As a result needs-based funding had no strong advocates outside of government. Most stakeholders, including the Ontario Hospital Association, were committed to retaining the autonomy of hospitals and their direct access to government officials.

Ontario faced a number of problems in attempting to implement a needs-based funding approach; timing was important, the economic climate in the province was not conducive to such a dramatic reform. Opposition outside of government was due, in no small part, to the lack of locally sensitive planning and community involvement in decision-making. Further barriers were also created as a result of opposition from stakeholders with vested interests. The issue of needs-based funding came to the government agenda but the lack of policy entrepreneurs to champion a viable policy left the issue to fall to the wayside. Select District Health Council members endorsed a move towards needs-based funding but a new focus by the government on hospital accountability and cost containment meant that the Ontario government never fully embraced the idea of budgetary reform.

Saskatchewan

Saskatchewan made extensive changes to its health system in the early 1990s. Included in the reforms was a restructuring of the way health services were delivered, and in conjunction how those services were funded. The new funding system took into account the characteristics of each of the newly formed health districts in terms of population size and demographics. The new funding formula ultimately grew out of a need for a formula that fit with the newly restructured health care system. The combination of the need for a new funding system and resourcefulness of the civil service created the population needs-based funding system as it came to exist in 1994.

Prior to the changes “individual health facilities were line item funded. Funding was based mainly on approved volumes of service, derived largely from past levels of use” (McKillop, Pink and Johnson. 2001:230). While using historical usage patterns to project expenses is a generally accepted method of budgeting, with individual institutions jockeying for their budget allocation this proved to be less than effective. One key informant offered that with the former methods of budgeting there tended to be institutions that were constant winners and losers in budget wrangling (SK Regionalization Interview 9. 2002).

The population needs-based funding approach as implemented in 1994 first included funding for non-primary acute care but in the 1995/96 fiscal year was modified to include both non-primary and primary acute care. This amounts to “approximately 90% of acute-care services funding provided to health districts” (McKillop, Pink and Johnson. 2001:229). The remaining ten per cent is directed funding toward a targeted and historically based funding pool. These include special initiatives and programs such as renal dialysis, cardiac catheterization, and medical imaging services (McKillop, Pink and Johnson. 2001:233).

The reason why government decided to go with this specific formula cannot be understood correctly without an understanding of the context surrounding its implementation. The decision to use a population needs-based funding system came about as a part of the 1992 health reform package. The impetus for health care reform was two-fold; since the late 1980s health care related costs reached thirty per cent of government program costs contributing to the fiscal crisis in 1992. Also during the 1991 election campaign the New Democratic Party (NDP) had been addressing a need for health care reform. The convergence of the need and desire for health care reform and the fiscal imperative made health care reform an immediate policy goal of the government. With the structural reforms surrounding regionalization there was a necessity for reform of the funding mechanisms. One civil servant explains: “there was a

direction to identify a fair funding allocation to districts that wasn't facility based...that changed people's focus to a population-based health model, more that determinant of health model" (SK PNBF Interview 3. 2003).

The driving interests behind funding reform were the civil service and the technical advisory committee that created the actual formula. The civil service was the principal agent in determining the type of needs-based funding formula and then creating the formula. The civil service brought together both internal and external experts to create the funding formula based on the priorities set by the government. The result was to be a politically neutral formula which avoided the controversies of the other reforms making it a relatively easy reform to implement.

Government researchers became aware of a model put forward by Birch and Chambers which took into account the needs of the population to be served. This led to the creation of a panel of academic experts from across the country, along with a small number of people from the new health districts, to provide advice on the construction of the eventual model employed.

After the decision was made to move to the needs-based formula, some health stakeholder groups did weigh in on the issue. But because creating the new funding formula was a part of a much larger group of reforms, it seems that this was not an issue to which there was much opposition.

Rather, these groups focussed their opposition on those reforms that had a more direct impact on their membership and which were more visible to the public such as layoffs due to regionalization and hospital closures. Another of our participants, a civil servant heavily involved in the creation of the needs-based funding formula, concurs that the formula was only part of the larger changes and thus did not receive the same kind of attention: "The model just fit the overall change. And in terms of what I've done since making change in the system that model was an easier thing than many things I've done since".

A Saskatchewan Vision for Health: A Framework for Change published in 1992 presented a comprehensive reform program; the opposition to the first stage of reform, regionalization which became synonymous with hospital closures did not result in a reversal of reforms but it did get the government to reconsider going forward with future reforms. The second stage of reforms, the primary care initiative was delayed until 2002 and even then it did not have as great an impact as was initially desired. But even with these changes to policy the needs-based funding formula remained the principal form for the allocation of health care spending in Saskatchewan. In recent years, though, there have been significant adjustments to the formula resulting from pressure from some major institutions in the province and in relation to reinvestments made in the provision of acute care services (e.g. the purchase and operation of increased numbers of advanced diagnostic machines).

Alberta⁴

In 1993 following the post-election Roundtables on Health and the decision to create the regional health authorities (RHA), the Alberta Health Planning Secretariat (an arms-length committee composed of Members of the Legislative Assembly (MLA) stated:

The Minister of Health must establish a fair and equitable formula for allocation of funds to regions based on certain criteria (e.g., population, consumer age,

size of territory, etc.). The resulting funding formula must be structured with the understanding that consumers have the right to access health services in the region of their choice. Consequently, funding must be transferable to the region selected by the consumer (Alberta Health Planning Secretariat. 1993: 18)

The province created the Health Plan Coordination Project with assistance from the Department of Health to make recommendations regarding the form of regionalization to be adopted in the province. The question of what the funding model would look like was left out of the recommendations; regional funding would be based on the historical model until a new funding model was created.

The Health Services Funding Advisory Committee was appointed in January 1995 to address the question of a funding model. The report released in June 1996 rejected the status quo on the basis that:

The current health funding methodology in Alberta was developed for institutions and agencies in a governance model that no longer exists. It focused on health care and placed emphasis on institutional care: rewarding utilization. These characteristics are not suited to the objectives of Alberta's Health Restructuring and Reform (Auditor General of Alberta. 1996:5)

The Report indicates the Committee decided early on in favour of a needs-based funding model and that much of the time was spent deciding on the specifics of the formula including looking at the experiences of other jurisdictions; especially Saskatchewan and Britain (Alberta. 1996:11). Also consultations were made with various stakeholder groups and in particular the rural health authorities.

In creating the formula certain key principles were necessary; the model must be verifiable with Alberta data, non-gameable, simple and regionally equitable. There were four key concepts that were important to the needs-based funding formula; first, the formula begins with per capita allocations to the RHAs. Second, the per capita amounts are adjusted to account for levels of "need". Third, additional adjustments are made to take into account special requirements for remote areas. Finally, the formula requires RHAs to reimburse other regions when their residents seek care in those regions. The needs-based funding formula for each RHA begins with calculation of the total population. Using data from the Alberta Health Care Insurance Plan registry adjustments are made based on age, gender, aboriginal and low-income populations. Other factors such as mortality, while included in the Saskatchewan model were rejected. Also included in some regional allocations, but outside the needs-based funding model, is additional resources for remote populations and the northern most RHAs. This formula was first implemented for the 1997/98 fiscal year including a temporary proviso that RHAs would not see a decrease in funding, a "no-loss" provision.

Following the first year of implementation the Auditor General reviewed the funding formula and made a number of recommendations to improve the quality of the data and predictability of the formula (Auditor General of Alberta. 1999). The Auditor General was also critical of the "no-loss" provision which was intended to assist RHAs in the transition to population-needs-based funding by insuring their funding did not decrease during the transition period. However, in so doing, the equity objective of population-needs-based funding is compromised.

The key informant interviews indicate that there was little to no sustained opposition to the new funding model for two reasons. First, there was general agreement that the existing system was flawed and a new system was required. Second, the Department of Health was successful in engaging stakeholders in the process, though the Alberta Medical Association remained outside the process to avoid the perception of a physician conflict of interest due to their position as administrators in the hospital system. The “no-loss” provision, while not popular with the Auditor General, also blunted any objection to the change insofar as it preserved traditional funding levels through the transition – an approach that would also be taken by the province of Quebec.

Within government, civil servants were in large part the proponents of the needs-based funding model. Once the politicians endorsed the principle, the bureaucracy with external support created the funding formula and presented it when completed to the politicians for discussion. In the past MLAs had been some of the biggest lobbyists for health care funding to their ridings and it was hoped that the needs-based formula would aid in depoliticizing the budget process by limiting the ability of individual MLAs or Ministers to request special considerations for institutions or initiatives in their respective ridings (Church and Smith.2008).

The development of the needs-based funding model was intimately linked to the development of regionalization, paralleling what had occurred in Saskatchewan. Like Saskatchewan, Alberta had recognized the innate flaws in the previous system and in conjunction with the process of regionalization developed a new funding model. The needs-based model was developed by the civil service with outside support and input from other jurisdictions with no significant opposition from stakeholder groups, leading to a fairly seamless introduction.

Newfoundland and Labrador

Newfoundland and Labrador does not use a needs-based funding model for its health care spending. Funding of the individual regional integrated health boards is performed by the Department of Health and Community Services based on its budgetary request to the Treasury Board and Department of Finance. Some of the individual health boards do use a needs-based formula to fund medical services within their jurisdictions, but there remains no single model across the regions. Since 2001 the Newfoundland and Labrador Health Boards Association (NLHBA) has lobbied the provincial government to develop a set of funding principles for the health boards.

The NLHBA has proposed a funding model, which used the previous annual budgets for the boards as a baseline with the addition of allowances for adjustments to be made, based on current data. Further, they proposed that over a period of three to five years the budgets would be adjusted based on a set of funding principles until an equitable funding model was created (NLHBA. 2001: 2). This was based on an Alberta model where a minimum guarantee over the previous year’s budget is used to create budget stability.

The NLHBA proposed to allocate the total basket of health care funds on the basis of a needs-based funding formula and delivered by the boards, in addition to fiscal allocations based on non-needs-based funding. It was suggested that the needs-based funding be divided into pools which would be based on the various baskets of services funded in proportion to the most

recent data (NLHBA. 2001:3) reflecting the spending by the combined boards. The NLHBA recommended the following funding pools for needs-based funding

- acute inpatient;
- ambulatory care including both salaried and fee-for-service physicians operating clinics;
- long-term care;
- protection, prevention, promotion and Cancer Control Program;
- community living and various support services;
- children, youth and family services and
- mental health and addictions (NLHBA 2001:3).

The funding to be divided between the boards based on the health needs of each region's population.

The socio-economic data available in Newfoundland and Labrador through what are called Community Accounts contained information on employment, income, social assistance levels, and education levels across all health regions. The Community Accounts also included information on health status, preventative behaviours, emotional status, health practice and health care assessment. These data would provide decision and policy makers the information required to calculate per capita rates for the allocation of resources to specific funding pools for each board. A procedure was also built into the system to allow for the funding of patients who required treatment outside of their region, funding would follow the patient and boards would lose or gain based on patient in and out flows.

The two aspects of non-needs-based funding were: assured access and provincial services. Assured access consisted of special funding to rural and sparsely populated areas to guarantee levels of service where there were higher delivery costs. The provincial services funding included services provided by the Health Care Corporation of St. John's, separate from the needs-based funding provided to the region.

The NLHBA had been trying to convince the provincial government since 2001 as to the need to create a stable budgeting system for the health system. The NLHBA has been using a needs-based system to allocate its resources but the overall system is still based on the government's ministerial envelope system. The NLHBA has tried to convince the government of the need for multi-year budgeting so that administrators would be able to plan expenditure over a greater period but this has met with little success. The focus of the government in health care reform has been the reduction of the number of health regions from 14 to four. The needs-based funding model has not been implemented for two main reasons; the government sees the model as too expensive and there is a lack of policy capacity and resources to develop the accurate data bases necessary for a needs-based funding system.

Quebec

The idea of a needs-based funding model for Quebec first came up in 1987 with the Rochon report (SSSQ. 1987). The Rochon report proposed a way to more evenly and equitably distribute health care resources between regions and aspects of the health care system. A needs-based funding model would also clarify the costs of treatment and services, which under the global

allocation system were unknown. Quebec has a history of regionalization of health care service to varying degrees since the early 1970s.

In 1994-95 the Regional Health boards were given primary responsibility for the allocation of health care resources within their region based on an historical funding model. This funding model failed to take into account qualitative and quantitative evolution of services and demographics, nor did it take into account any form of equity in the distribution of resources between regions.

In 2000 the government passed a piece of legislation, which required balanced budgets from the health regions and required increased equality in the public health and social services network. While the legislation prohibited budget deficits institutions continued run deficits when they felt it necessary. The Bedard committee was created to examine health care budgeting methods and released the first of two reports in December 2001 (SSSQ, 2001). The Report recommended that the budgeting process reflect three levels; at the ministerial level the volume of consumption would be estimated for each program across the province then multiplied by the average cost. The budget for each program would then be distributed to the regions using a needs-based approach adjusted for regional factors and for the net effect of service exchanges between regions. The Regional boards were then to distribute resources among the health care establishments based on the same normative approach adjusted for factors affecting different establishments.

The Report made three arguments in defense of its recommendations; first, budgeting would be objectively based on data including beneficiary profiles, services and costs, making it easier to predict future financial need. Second, a needs-based approach would insure an equitable distribution of resources. Finally, standardized costs would lead to improved efficiency and performance.

The decision to move to a needs-based funding model was based on the development of regionalization in the province; as regionalization progressed there grew an understanding that a new funding method was needed. As with Saskatchewan and Alberta the process of regionalization and the adoption of a needs-based funding model in Quebec are strongly linked. The budget reform process of 2004 began with the Ministry of Health calculating both what the region would receive under the new formula and what it would have received under the historical funding model. In cases where the difference was dramatic the budget was adjusted over time. Other regions, which showed a surplus such as Montreal, kept the higher figure but had development funds reduced and distributed to other regions. By 2005-06 the differences between the old budgets and the new model had been reduce to about 10%. The physical health program was not included in the needs-based model but regional disparities were calculated and based on the differences between the historical budget and what the budget should be based on the level of activity. The difference would then be either redistributed or compensated through the use of development funds.

The policy process, which led to the adoption of a needs-based funding model, was a fairly simple one as no other proposals were considered. The regions were not in a position to oppose the funding model. Although the new allocation of resources did result in some resources being redirected, the model did not affect operating resources only development funds. Also the new model was presented in terms of addressing inequalities between regions, something that was

required by law. The role of interest groups was extremely limited, stakeholder groups showed no resistance to a project that had been in discussion for a while. Also unlike regionalization there was no public debate concerning budgetary reform.

The election of the Liberal Party in 2003 played an important role as they had made budgetary reform part of their election platform and were therefore only carrying out their own proposals. The new funding model also required a higher degree of accounting, which provided the government with the ability to assess services on both a quantitative and qualitative basis. The adoption of the new funding model accomplished two important goals; to measure funding gaps and to allocate development funds. While the seven year time frame for full implementation allows the regions to make any necessary budget readjustments gradually rather than through dramatic cuts. The reduction of regional inequality was the central theme to the creation of the needs-based funding model but the reform also enabled a method of cost control. The rhetoric of reducing inequality made this politically palatable.

Understanding the Decisions and Non-Decisions

The key challenge in understanding why provinces chose to adopt population-needs-based funding formulae for the allocation of funds lies in the fact that in the three provinces examined that implemented needs-based formulae they all did so as part of a larger health reform process tied to the creation of a regionalized health system (Saskatchewan and Alberta) or the expansion of the mandate of a pre-existing regionalized structure (Quebec). Thus, the new funding arrangements were implemented as a direct out-growth of regionalization decisions and were contingent on those decisions being successfully implemented.

Of the five provinces examined as part of the larger initiative described at the paper's outset, only Ontario chose to not follow the others along the path of creating a regionalized health system. This speaks to the very powerful interests and institutions outside of the Ministry of Health and Long-Term Care in that province. A powerful coalition of large medical institutions, backed by key stakeholder organizations like the Ontario Medical Association (OMA), has successfully forestalled any serious discussion of regionalization in the province (Lazar. Forthcoming). Thus, neither regionalization nor needs-based funding allocations came to be identified as the solution to a problem around how to reconceptualize the relationship between acute and community-based, population health focused care. The independence of Kingdon's three streams of 'problems, solutions and politics' is highlighted here as Ontario health officials clearly investigated both regionalization and PNBF as ideas and potential solutions, but the politics of health in the province (and the powerful interests articulated by the medical and hospital establishment) were able to forestall any move to put regionalization and PNBF on to the decision agenda.

And even the recently created Local Integrated Health Networks (LIHNs) are structured so as to not inhibit the direct relationship that existing health care institutions have with the provincial government on whom they rely for funding. In this context, then, what is surprising is not that Ontario has not moved toward a needs-based funding model, but that it even considered such a move in the absence of any serious consideration of what could be considered a precondition for such a move – the creation of new governance structure that removes the direct relationship between hospital boards and the provincial government.

Newfoundland and Labrador is also a curious case insofar as it is the government itself that has resisted the change in funding model, while the regional authorities have independently adopted their own needs-based formulae in determining their budget asks on an annual basis. What is not clear from the case-study, though, is the rationale for this resistance on the part of the government. It appears to come down to the unwillingness of the government to submit to the kind of technocratic decision-making that needs-based formulae demand – removing to some extent the ability of the Minister, the Premier or individual legislators to allocate funds (or lobby for their allocation) on bases other than the results of the formula (Tomblin. Forthcoming). Whereas Alberta explicitly attempted to remove personal and political preferences from influencing the allocation of health care dollars, the government of Newfoundland and Labrador (both Liberal and Conservative) has resisted ceding this prerogative of office to the dictates of a funding formula.

That leaves the three remaining provinces, Quebec, Saskatchewan and Alberta, as the ones who significantly changed the allocation of funds as part of the broader reforms of regionalization in each of those provinces. In all three cases it is difficult to separate the rationale for the change from that broader reform process. And, indeed, to some extent that may account for the relatively uncontroversial nature of the decision to change the formula in each of those provinces – the lack of resistance from institutions and interests outside of the government, the turning over of the creation of the actual formulae to ‘experts’ and the more or less seamless manner in which the change was implemented (with the possible exception of Alberta’s ‘no loss’ provision).

Of course, the key point of resistance in Ontario (the network of large and powerful hospitals, especially) was absent by the time the formulae were introduced in Saskatchewan and Alberta. Those provinces had removed the hospital boards as part of the regionalization process and replaced them by regional boards appointed by the provincial government – boards presumably supportive of the general goals of regionalization (health promotion, prevention, upstream investments, etc.). The condition of an inefficient and over-extended acute care system (especially the presence of a large number of small hospitals that stretched scarce resources) got framed as a need to reconceptualize acute care as one part of a larger more holistic approach to health and wellness of the population. The solution then became both the creation of regional governance structures and new formulae for allocating resources.

Thus, the one sector that could have been expected to resist the change had been removed from the equation. The fact that Quebec has not removed hospital boards as part of its regionalization model is key to understanding the complicated ‘transition’ process implemented as part of the needs-based formula in that province – it was crucial to keeping major institutions on-side with the change by removing the possibility that some institutions might see reduced levels of funding. As the regional authorities within Quebec assumed greater levels of responsibility for the management and organization of services so did their role in the allocation of funds grow, moving towards the fuller realization of needs-based funding.

And it is important to note that nothing in the creation of population-needs-based funding formulae altered the other key funding allocation for health care in the provinces, namely the manner in which doctors were paid. Needs-based formulae did not impinge on the traditional fee-for-service payments on which the majority of the medical profession still relies for their

income and, thus, the medical lobby was essentially either silent or supportive of the change in the way institutions were funded.

But what, if anything, can we say was accomplished by the change in how health care funds were allocated by provinces? In the end, probably not much, at least not relative to the purported goals of regionalization and needs-based funding models. If regionalization, and by extension the changes to the funding allocation model, were in part driven by a strong desire on the part of health policy analysts and policy-makers to reshape the 'medicare bargain' then not much has changed.

We remain a very long way away from a model of health services less focused on acute hospital-based care and more focused on community-based care, health promotion, disease prevention and more closely integrated with social services aimed at the determinants of health. Interdisciplinary, multi-professional, primary health care teams are still the exception, not the rule. Public health, with the possible exception of pandemic planning in the aftermath of SARS (and even this is debatable), remains under-funded and at the margins of 'health care' proper. And there is little appreciable integration of health and social services along a kind of continuum that would make consideration of the real determinants of health a policy priority for governments. To its credit, the report of the Standing Senate Committee on Social Affairs, Science and Technology (the Kirby Report) is the only national review of the health care system to engage the idea of regionalization and the further devolution of authority to regionalized structures (Kirby. 2002: 25-75), but in this respect at least the report's recommendations have been mostly ignored.

To perhaps understand why the changes that were implemented so 'seamlessly' and with so little resistance, one needs to look at the broader political and policy environment at the time of their implementation and how that environment changed in the subsequent years. First, the process of regionalization was a controversial one in most jurisdictions and required the expenditure of significant political capital to implement. Significant resistance from both inside and outside of government had to be overcome (Lazar. Forthcoming). Second, the implementation of needs-based funding allocations, although not controversial or as public as regionalization itself, required a significant effort on the parts of bureaucratic actors to design and implement which may have, ironically, reduced the capacity of governments to continue to move forward on the broader agenda of refocusing the system itself towards 'health needs' and away from the treatment of disease.

More importantly, though, the context for health reform changed in the years immediately following the restructuring of both the governance and the funding of the system in most provinces. The regionalization and funding changes occurred at the same time, and were in part driven by, the overall sense of a fiscal crisis (Marchildon. 2006; McIntosh and Marchildon. 2009). The early 1990s were an era of both the federal and provincial states reordering public finances in an effort to eliminate budgetary deficits and pay down accumulated debt. Provinces cut spending and the federal government cut transfers for health (McIntosh. 2004; Romanow. 2002: 311-319). The reforms to the governance, structure and allocation of funds within provincial health care systems were facilitated by the consensus that, in the absence of the capacity to simply 'pay more' for the system, the system had to be fundamentally restructured. The regionalization and needs-based funding reforms provided a basis for that restructuring insofar as the focus on 'prevention, promotion and upstream investments' could be articulated as

reducing future acute care costs by improving the health of the population (McIntosh and Ducie. Forthcoming).

By the late 1990s, the crisis in health care was no longer a fiscal one. Overall, the Canadian economy was growing, provincial and federal deficits had been eliminated and governments had the capacity to restore social spending. And in the aftermath of the Romanow and Kirby Reports, billions of dollars were pumped back into the provincial health systems with few or nominal conditions (McIntosh. 2004). While this could have facilitated the further advancement of the health reform agenda, it ran up against public perceptions that the crisis in health care was now one of a crisis in the acute care system. Wait times, access to advanced technology, shortages of physicians, nurses and other health care professionals became the focus of much of the health reform initiatives (Torgerson, McIntosh and Wortsman. 2005; McIntosh. 2007).

The new dollars into the system did not, as some had hoped, “buy change” (Romanow. 2002:44), but rather was absorbed into the existing hospital and physician-centric system that had been the hallmark of Canadian medicare since the 1960s. The constellation of forces that opened the policy window for the governance and funding allocation decisions in the 1990s had dissipated. They reconfigured around issues such as wait time management and health human resource planning, issues that remain at the centre of the health policy reform debate to this day. One is left to wonder if the current financial crisis will provide an opportunity to further a policy agenda designed to tackle head-on the idea that ‘health’ is less about ‘health care’ and more about things like employment, housing, disease prevention and healthy communities. Population health researchers and advocates can only hope.

References

- Alberta Health Planning Secretariat. (1993). *Starting points: Recommendations for creating a more accountable and affordable health system*. Edmonton, AB: Government of Alberta
- Health Services Funding Advisory Committee. (1996). *Funding regional health services in Alberta: A report by the Health Services Funding Advisory Committee*. Edmonton: Government of Alberta.
- Auditor General of Alberta (1998). *Annual Report of the Auditor General of Alberta, 1997-98*. Edmonton, AB: Government of Alberta.
- Auditor General of Alberta (2000). *Annual Report of the Auditor General of Alberta, 1999-2000*. Edmonton, AB: Government of Alberta.
- Bedard, K., Gregory, A.W., Dorland, J., Roberts, J. (2000). “Needs-based health care funding: Implications for resource distribution in Ontario”, *Canadian Journal of Economics* 33(4): 981-1008.
- Bethany Care Society (1997). *A Framework for Health Policy*. Toronto: Bethany Care Society. www.bethanycare.com/docs/Framework_for_Health_Policy.PDF. [2003, March 27].
- Birch, S., and Chambers, S. (1993). "To each according to need: A community-based approach to allocating health care resources." *Canadian Medical Association Journal* 149(5): 607-612.
- Birch, S., Eyles, J., and Newbold, K.B. (1996). "Proxies for healthcare need among populations: Validation of alternatives - a study in Quebec." *Journal of Epidemiology and Community Health* 50: 564-569.
- BCMA (British Columbia Medical Association). (2002). *Regionalized Health Care Budgets in BC: The Population Needs-based Funding Model*. Vancouver: BCMA.
- Church, J. and Smith, N. (2008) “Health reform in Alberta: The introduction of health regions”, *Canadian Public Administration* 51(2):217-238.

- Cohen, M., March, J. and Olson, J. (1972). A garbage can model of organizational choice, *Administrative Science Quarterly* 17:1-25.
- Coleman, W.D. and Skgostad, G.D. (1990) *Policy communities and public policy in Canada: A structural approach*. Mississauga, ON: Copp Clark Pittman.
- Eyles, J., Birch, S., Chambers, J. Hurley, and Hutchinson, B. (1991). "A needs-based methodology for allocating health care resources in Ontario, Canada: Development and an application." *Social Science and Medicine* 33(4): 489-500.
- Eyles, J., and Birch, S. (1993). "A population needs-based approach to health-care resource allocation and planning in Ontario: A link between policy goals and practice?" *Canadian Journal of Public Health* 84(2): 112-117.
- Johnson, S., Abonyi, S., Jeffery, B., Hackett, P., Hampton, M., McIntosh, T., Martz, D., Muhajarine, N., Petrucka, P., Sari, N. (2008). "Recommendations for action on the social determinants of health – A Canadian perspective" *The Lancet* (UK), Vol. 372:1690-93.
- Kingdon J.W. (2003). *Agendas, Alternatives, and Public Policies (2nd edition)*. New York: Addison-Wesley Educational Publishers Inc.
- Kingdon, J.W. (2006). "The reality of public policy making". In *Ethical Dimension of Health Policy*. M. Danis, C.M. Clancy and L.R. Churchill, eds. Oxford: Oxford University Press, 97-116.
- Labonte, R., Polanyi, M., Muhajarine, N., McIntosh, T. & Williams, A. (2005). "Beyond the divides: towards critical population health research", in *Critical Public Health* 15 (1): 1-13.
- Lalonde, Marc. ([1974] 1981). *A new perspective on the health of Canadians*. Ottawa: Supply and Services.
- Lazar, Harvey. (2008: unpublished). *Assessing the extent of health care reform in five provinces*. Kingston: Institute of Intergovernmental Relations.
- Lavis, John and Pasic, Diana (2007: unpublished) *A Cross-Provincial Comparison of Healthcare Policy Reform in Canada: Ontario Case Study 4 - Deciding to Allocate Hospitals Beds (Not Dollars) on the Basis of Population Size (Not Need)*. Kingston: Institute of Intergovernmental Relations.
- Marchildon, Greg. (2006). *Health Systems in Transition: Canada*. Edited by Sarah Allin and Elias Mossialos. Toronto: University of Toronto Press.
- McIntosh, T. (2004). "Intergovernmental relations, social policy and federal transfers after Romanow". In *Canadian Public Administration* 47:1 (Spring), pp. 27-51.
- McIntosh, T. (2007). *Wait times without rhetoric: Lessons from the Taming of the Queue*. Ottawa, ON: Canadian Policy Research Networks.
- McIntosh, T. and Ducie, M. (Forthcoming). "Health reform in the Romanow era: Restraint, restructuring and regionalization". In Lazar, H., Lavis, J. and Forest, P-G (eds.). *Health Reform in Five Provinces*. Montreal/Kingston: McGill-Queen's University Press.
- McIntosh, T., Ducie, M. and England, C. (2007: unpublished). *Needs-based funding in Saskatchewan*. Kingston: Institute of Intergovernmental Relations.
- McIntosh, T. and Marchildon, G. (2009). "The Fyke in the road: Health reform in Saskatchewan from Romanow to Calvert and beyond". In H. Leeson (ed.), *Saskatchewan Politics: Into the Twenty-First Century, 2nd Ed*. Regina: Canadian Plains Research Centre.
- McKillop, I., Pink, G.H., and Johnson, L.M. (2001). *The financial management of acute care in Canada: A review of funding, performance monitoring and reporting practices*. Ottawa, Canadian Institute for Health Information.
- NLHBA (Newfoundland and Labrador Health Boards Association). (2001). *Funding Model for the Health System of Newfoundland and Labrador*. St. John's, NL: NLHBA.
- Pal, Leslie A. (2005) *Beyond policy analysis: Public issue management in turbulent times*, 3rd ed. Toronto: Nelson.

- Pomey, Marie-Pascale, Martin, Elisabeth and Forest, Pierre-Gerlier. (2006: unpublished). *Budget allocation reform in Quebec: Using a population-based approach to allocate resources for medical and social services*. (Kingston: Institute of Intergovernmental Relations).
- Pross, A.P. (1992). *Group Politics and Public Policy*, 2nd Edition. Toronto: Oxford University Press.
- Raphael, Dennis, ed. (2004). *The Social Determinants of Health: Canadian Perspectives*. Toronto: Canadian Scholars Press.
- Romanow, Roy J. (Commissioner). (2002). *Building on values: The future of health care in Canada – Final report*. Ottawa: Commission on the Future of Health Care in Canada.
- SSSQ (Santé et des services sociaux Québec). (1987). *Direction générale de la planification et de l'évaluation. Modifications suggérées aux critères d'allocation des ressources consenties par le ministère de la santé et des services sociaux au réseau des affaires sociales*. Québec: Gouvernement du Québec.
- SSSQ (Santé et services sociaux Québec). (2005). *La budgétisation et la performance financière des centres hospitaliers*. Québec: Gouvernement du Québec.
- Saskatchewan Health (1994). *Introduction of Needs-based Allocation of Resources to Saskatchewan District Health Boards for 1994-95*. Regina: Government of Saskatchewan.
- Smith, Neale and Church, John. (2008) Shifting the lens: The introduction of population-based funding in Alberta, *Health Care Management Forum*, Summer: 36-47.
- Smith, Neale and Church, John. (2006: unpublished). *Health reform and needs-based funding in Alberta*. Kingston: Institute of Intergovernmental Relations.
- Tomblin, Stephen and Braun-Jackson, *Health budget models and the experience of Newfoundland and Labrador: Why we haven't moved to a needs-based model*. (2005: unpublished). Kingston: Institute of Intergovernmental Relations
- Torgerson, R., Wortsman, A. & McIntosh, T. (2006). *Nursing skills and mobility: facilitating the transfer and tracking of nurses in Canada*. Ottawa, ON: Canadian Policy Research Networks.

Endnotes

¹ The Principal Investigator for the initiative is Dr. Harvey Lazar (Queen's/Victoria). The co-investigators are Dr. John Church (Alberta), Dr. Pierre-Gerlier Forest (Trudeau Foundation), Dr. Alina Gildner (McMaster), Dr. John Lavis (McMaster), Dr. Elisabeth Martin (Laval), Dr. Tom McIntosh (Regina), Dr. Marie-Pascale Pomey (Montreal), Dr. Claudia Sanmartin (Statistics Canada) and Dr. Stephen Tomblin (Memorial).

² The conceptual framework for the larger research initiative was developed by Harvey Lazar, John Lavis and Pierre-Gerlier Forest and used across all thirty case studies.

³ The material in this section is a condensation of the case study reports prepared in each of the five provinces as it relates to the population-needs-based funding decision in that province that were part of the larger initiative described above (Lavis and Pasic. 2007; Tomblin and Braun-Jackson. 2005; McIntosh, Ducie and England. 2007; Pomey, Martin and Forest. 2006; Smith and Church. 2006). These case study reports were written under the direction of the five provincial coordinators for the project: Stephen Tomblin (Newfoundland), Marie-Pascale Pomey (Quebec), John Lavis (Ontario), Tom McIntosh (Saskatchewan) and John Church (Alberta).

⁴ A fuller description of what happened in Alberta can be found in Smith and Church (2008).