

Regionalization and the Allocation of Healthcare Resources to Meet Population Health Needs



COMMENTARY

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ABSTRACT

This brief commentary examines why regionalization can improve the extent to which resources are allocated in line with need; highlights the challenges associated with the two stages of resource allocation within regionalized systems (allocation from the ministry to the regions and allocation within a region); and assesses the experience with needs-based funding in Canada under regionalized governance.

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As LEWIS AND KOURI emphasize, regionalization is supposed to have facilitated a better alignment between the allocation of healthcare resources and population health needs. The development of new, population needs-based funding has been central to pursuing this objective. In this brief commentary, I want to expand on three points raised by Lewis and Kouri: (1) why regionalized governance might facilitate a better alignment of resources and needs; (2) the challenge of allocating resources from the province to the regional authorities; and (3) the challenge of allocating resources within a region.

How Can Regionalization Better Align Resources and Needs?

Both pragmatic and conceptual considerations suggest that regionalization might foster a better alignment between resources and needs than would the prior decentralized funding system in which funds flowed directly from the central ministry to providers and programs based in care-seeking behaviours in the population. Pragmatically, regionalized governance forces policy-makers to think in population terms and to adopt, at least in the first-stage allocation from the ministry to the regions, a more active, engaged approach to funding. This, of course, does not guarantee a sensible response, but it provides a context in which it is easier to ask difficult questions about the basis for allocating resources.

From a conceptual perspective, the use of explicit regional funding envelopes has the potential to overcome a series of problems that can bedevil more decentralized approaches, including: (a) insufficient aggregate demand to attract providers in some regions; (b) informational problems,

which often make it difficult for individuals to judge their need and which confer considerable market power on providers (potentially generating a distribution of healthcare providers that does not correspond well to the distribution of healthcare needs); and (c) the fact that much healthcare infrastructure was developed when private financing played a dominant role in healthcare finance, so that the distribution of facilities and providers reflects systematic geographic variation in ability to pay as well as in need. Furthermore, a large literature in economics, political science and public administration argues that given the highly dispersed distribution of information regarding needs and how best to respond to them, allocation through regional and local authorities can improve both efficiency and equity.

Whether a regionalized system of governance and the associated funding flows realize these potential advantages, of course, rests on the empirical funding models implemented. Developing needs-based funding models is not easy. Recent evidence suggests that some approaches used in the past can actually do worse than more decentralized approaches that predate regionalization (Hutchison et al. 2003). The one-way funding valves implemented in a number of provinces, which prohibit regional boards from directing funds from community-based programs and programs addressing non-healthcare determinants of health to acute care, also speak to this risk. Let's briefly consider each stage in the two-stage funding process in which the provincial ministry first allocates funds to the regional authorities, and the regional authorities then allocate funds to programs and services within the regions.

Allocation from Ministry to Regions

Regionalization has created a tremendous opportunity to develop new methods for funding that better align the distributions of healthcare resources and population need. A number of provinces have devoted considerable time, energy and intellectual resources to the development of new funding methods. But in general, as Lewis and Kouri note, the rhetoric and valence surrounding “needs-based funding” has exceeded the reality, and it is fair to say that innovation has lagged behind potential.

A majority of provinces fund regions through what is essentially a historical global budget. Each year a region submits a plan that documents how it plans to meet the health needs of the residents, the resource requirements associated with those programs and services, performance measures by which to evaluate programs, and other planning-related information. Undoubtedly this has frequently prompted serious analysis of needs and how best to meet them. Regardless of the official process, however, funding *de facto* becomes historical funding with minor annual updates: in most cases this year’s plan is last year’s plan slightly twigged to reflect updated information (though never in a direction that would reduce funding). Because needs evolve slowly in most cases, this is not a problem *per se*; it is a problem, however, if the process starts with prior base budgets, so that inequities and inefficiencies present before regionalization perpetuate. Such negotiation-based processes also expose allocations to two types of non-need-related biases. Variation across regions in expertise required to make effective arguments for resource needs within the dictates of the formal

planning documents can generate inequity over time as certain regions systematically capture a disproportionate share of the budget. In addition, there is the political nature of negotiations, in which behind-the-scenes phone calls and related strategies result in deals favouring better-connected regions. These kinds of dynamics are one reason why governments increasingly use an explicit population, needs-based funding formula (Smith et al. 2001).

Almost all provinces have declared the intent to develop needs-based funding formulae for allocating the budget to regional health authorities. To date, however, only three provinces – British Columbia, Alberta and Saskatchewan – have adopted such formulae for a broad basket of services. A fourth, Ontario, uses such a formula for its home care and community-support services. Developing needs-based formulae poses formidable challenges, but methods of formula development have been progressing steadily in the last two decades (Hutchison et al. 1999; Smith et al. 2001).

Needs-based funding formulae in these provinces (as in nearly all jurisdictions) begin with the relative-need principle. The relative-need principle states that the central budget should be allocated among regional health authorities in accord with the relative need for health-care among the regional populations. That is, a region whose population has 10% more need should get a 10% larger share of the central budget, whatever the size of the budget. The principle has the pragmatic advantage that it allows one to determine separately the size of the budget and how that budget (whatever its size) is divided among regions. In addition, some experimental evidence indicates that when

members of the general public are asked to allocate limited health resources among individuals of differing needs, the majority choose the relative-need allocation rule (Yaari and Bar-Hillel 1984; Kahneman and Varey 1991).

The fundamental empirical challenge is to characterize relative need across regions. This universally begins with age-sex adjustment. Beyond this, however, one encounters both a wide variety of needs-related adjusters and methods for integrating them into a formula. Three points stand out in the recent literature on formula development. The first is the importance of explicitly controlling for non-need drivers of utilization (Hurley et al. 2004; Gravelle et al. 2003). The second is the value of basing the formula on individual-level data (Smith et al. 2001; Hurley et al. 2004). Only individual-level data, for instance, allow the formula to reflect the interactions among needs-adjusters. In our work on home-care funding, for example, while need for services in a region is directly related to both the proportion of the population that is elderly and the proportion that is living alone (information available in regional-level data), need is particularly high among the elderly who live alone (easily captured with individual-level data) (Hurley et al. 2004). Information from the regularly conducted National Population Health Survey and the Canadian Community Health Survey can be especially valuable in developing such a formula. This is particularly true when the survey obtains permission to link survey data to healthcare utilization data and when a province buys additional sample size to allow inference at sub-provincial levels. These national surveys represent

under-exploited platforms by which provinces can collect a wealth of data that can support the development of better funding formulae. The third key message of recent literature is the importance (and difficulty) of validation. It is essential that new formulae be validated to ensure that, in fact, the resulting allocations do correspond in a measurable way with needs.

The increasing sophistication of the methods that underlie such funding formulae can create a tension with the desire for simpler, more “transparent” methods that can be understood easily by all the stakeholders. One of the challenges, therefore, is to develop ways to present and explain the methods to key policy-maker and stakeholder audiences. Perhaps the best approach is to involve them at all stages of formula development. Finally, it must be acknowledged that even the most sophisticated formulae cannot capture all the factors that bear on a region’s need for healthcare resources. Hence, funding through such formulae must be placed within an overall funding policy that, where appropriate, includes additional funding streams.

Resource Allocation within Regional Health Authorities

Once a region receives its budget from the ministry, the region faces the challenge of allocating those funds to programs and providers in a manner that responds to the health needs of its population. In many respects, this within-region allocation problem has been neglected relative to that associated with funding the regions themselves. The importance of this intraregional allocation, however, has grown in recent years as provinces have reduced the number of regions (e.g., from

33 to 16 in Saskatchewan, 17 to nine in Alberta). Fewer, larger regions reduce the extent of reallocation that can be achieved through stage-one formulae, and increase the within-region heterogeneity of both the level and mix of needs.

Within-region allocation raises more difficult challenges than does the allocation to regions. Surveys of health district board members in Saskatchewan in the mid-1990s revealed that resource allocation was the activity for which they most wanted support and tools to assist them (Lewis et al. 2001). Allocations to regions, which cover a broad basket of services, must reflect only relatively undifferentiated needs; allocations within regions require assessing and responding to highly specific and differentiated needs. This, of course, demands high-quality, population-based data on the health problems of residents. But perhaps more important, it makes considerable demands on human resources available within a region. Regional staff must not only assess health needs using health and epidemiological data; they must also assess how best to respond to identified needs given available evidence, the specific resources available in the region and the unique aspects of a region, such as geographic and other particularities that impinge on the ability to deliver services. The regions have been gradually building the required infrastructure over the last decade, and the recent consolidation of regions should help create stronger support staff in the now-larger regions.

Regionalization was born amid great optimism that it would induce substantial reallocation. This optimism was based on a diagnosis that the fundamental barrier to reallocating funds from acute care to

community-based programs and non-healthcare determinants of health was funding silos. Regionalization, with its associated integrated budgets, would remove this barrier. Some reallocations have occurred, but they have fallen far short of expectations. A full analysis of the challenges of such reallocations is well beyond this brief commentary (see, for example, Eyles et al. 2000 for a case study of Prince Edward Island), but in retrospect this optimism was unfounded, as perhaps should have been obvious when one reflects how difficult reallocation is within fully integrated, hierarchical organizations, much less a regional health authority with far more muted power.

Attempts to implement such reallocations highlight the fact that there is no way to de-politicize within-region allocation processes through funding formulae, algorithms or other seemingly objective (or at least impersonal) processes. Such decisions can be made only through deliberative, political processes in which it is more than likely board members in many regions know the people and the programs being helped or hurt by their decisions. Within-region allocations therefore often demand creative, nuanced political analysis that can help navigate the treacherous waters.

Conclusion

In summary, the broad conclusions Lewis and Kouri reach regarding regionalization as a whole apply to funding. Real change has perhaps fallen short of expectations, but regionalization was at best a necessary though not sufficient condition for achieving the stated goals. Much positive change has occurred as a result of regionalization; and it is still early in the game.

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