Funding Healthcare in Manitoba: A New Way to Slice the Pie

MANITOBA CENTRE FOR HEALTH POLICY

Summary of the report:
Allocating Funds for Healthcare in Manitoba Regional Health Authorities: A First Step—Population-Based Funding
by Gregory Finlayson, Evelyn Forget, Okechukwu Ekuma, Shelley Derksen, Ruth Bond, Patricia Martens, and Carolyn De Coster

Summary written by RJ Currie and Greg Finlayson

KEY POINTS

Population-Based Funding:

• Is a starting point for overall healthcare funding

• Uses a variety of characteristics of people living in Regional Health Authorities

• Allocates funding for hospitals, nursing homes and home care

• Adjusts for where people receive their hospital care

• Describes how to divide the population-based healthcare budget, not how big the budget should be

Imagine you are put in charge of Manitoba's annual healthcare budget. You are told that most of that money goes to our province's Regional Health Authorities (RHAs) for specific services—namely hospitals, nursing homes and home care. Your job is not to decide how much money each gets. Rather, you must think of that budget as a pie, and decide how big a piece each RHA gets compared to the others. How do you go about it?

You might decide a head count is the way to go. The more people that live in the RHA, the larger the slice of pie. That seems fair. But wait a minute. You read somewhere that women use more healthcare services than men. And what about older people; aren't they heavy users of these services? So now you're thinking that, to be fair, the age and sex distribution of different regions should be factored in.

There, that sounds like it will work. Except now we tell you that even after we allow for things like age and sex, people in some regions are less healthy than others. So you have to factor that in somehow. Throw in the fact that certain regions historically have been given X number of dollars for special things like, say, a lab that services several surrounding RHAs, and . . . .

Suddenly, figuring out how to slice that healthcare budget pie is more complicated than you ever imagined.

In essence, that's the task the Manitoba Centre for Health Policy (MCHP) was faced with. We were asked by Manitoba Health to develop a *funding allocation methodology* for RHAs that:

❑ Involves key decision-makers in its development
❑ Takes into account factors that influence the need for healthcare specific to each RHA's residents
❑ Describes what proportion—how big a slice—each RHA would receive for hospital inpatient and day surgery care, nursing homes (a.k.a. personal care homes or PCHs), and home care

Step one was putting together a Working Group. It was composed largely of executives from Manitoba RHAs and representatives from Manitoba Health. Although working groups are not new to MCHP, this working group was new in that it was far more hands-on than usual. The group was involved in almost every step of the process, and was instrumental in developing what we feel is truly a "made-in-Manitoba" method.

We began by reviewing funding approaches used elsewhere in Canada and the world. From there, we identified what factors or characteristics would influence one's need for healthcare services and which could best be used to predict hospital, personal care home (PCH) and home care costs.

Here again our made-in-Manitoba method breaks new ground. Funding models in provinces like Alberta and B.C. use only three individual characteristics: age, sex and socioeconomic status.

UNIVERSITY OF MANITOBA

And unlike those other provinces, we developed a model that includes multiple characteristics of both individuals and communities. Our model uses ten characteristics for hospital care, six for PCH, and eight for home care (see Table 1). We actually had more characteristics; but for some, like body mass index and smoking—important indicators of the need for health care—data just weren't available.

Five characteristics are common to all three areas of health care: age, sex, having co-morbidities (more than one illness at a time), socioeconomic status and dying during the year. Other factors are:

❑ Hospital inpatient and day surgery: distance from home to a major hospital, born during the year, born during the year with a low or a high birthweight, chronic disease, being hospitalized during the year for injury.
❑ PCH: marital status.
❑ Home Care: marital status, chronic disease, and a hospital stay during the year.

One of the most important findings to come out of this report is that of all the community characteristics we looked at—things like aboriginal population, older population, density, infant mortality—one of the best community-level predictors of use of health care services is socioeconomic status.

Almost all our information comes from the population health database at MCHP which we call the *Repository*. We also use census data from Statistics Canada. All our data are anonymized before we receive it.

We want to emphasize that this report is *not* about saying how many dollars go to which RHA for which services. What we are describing here is an approach to dividing the pie proportionately, whatever size that pie might be. It must also be mentioned that some

funding—like for ambulance services or community mental health—falls outside of this method. Our model would be only one component of the overall funding process.

Ways of Slicing the Pie

There are two ways we could slice the pie. One is a *population-based* approach; the other is a *user-based* approach. Both look at people's characteristics and past usage patterns, but apply them in different ways.

We know that some individuals, based on their characteristics, use more health care services than would be expected. We also know that some use less health care services than their characteristics suggest they should. There are many possible reasons for this. Maybe for some, their doctors like to keep patients in hospital longer than necessary. Maybe because the hospital is so far from home, others chose not to go. We'd only be guessing. Conceivably then, some RHAs might use more hospital services than expected, others less; likewise for PCH and home care.

Now let's assume there are, say, 100 Manitoba men aged 60 whose illnesses and other characteristics match. These common characteristics suggest they would likely be hospitalized sometime in this budget year. Let's also assume that over the last three years, the average cost of hospitalizing individuals with these

Table 1. Variables Included in Models		
Hospital	**Personal Care Homes**	**Home Care**
Age	Age	Age
Sex	Sex	Sex
Co-morbidity	Co-morbidity	Co-morbidity
Socioeconomic status	Socioeconomic status	Socioeconomic status
Death	Death	Death
Hospital proximity	Marital status	Marital status
Newborn		Chronic disease
Low or high birthweight		Hospital days
Chronic disease		
Injury hospitalization		

characteristics was X dollars, and that last year 90 such men were hospitalized.

The population-based approach takes the average cost from the last three years and multiplies it by the 100 individuals expected to be hospitalized. That total is then divided between RHAs based on how many such individuals live in each. So an RHA with 10 of them gets 10% of that specific money; an RHA with 5, 5%; and so on.

The user-based approach also looks at the average cost from the last three years. But since only 90 individuals with these characteristics were hospitalized last year, it assumes the same 90 will be hospitalized this year. It takes the average, multiplies it by 90, and divides the total between RHAs based on how many of those same 90 individuals live in each RHA. So in an extreme example, say an RHA has 3 of these people that we expect will need hospitalization, but for some reason they weren't hospitalized last year, that RHA will get 0% of the money.

In short, the population-based method slices based on what we expect, the user-based approach slices based on what has been.

With both these perspectives, we also need to think about the realities of how healthcare is delivered in this province. Residents do not receive all services in their home RHA. It just isn't feasible—nor in some cases desirable— for every region to be able to provide all services to its residents. This is especially true for surgery and other in-patient hospital care. Highly specialized procedures like organ transplants are only done in Winnipeg because there are too few specialists to go around; the work must come to them.

That's one reason why, for example, 46% of the healthcare costs for people living in Assiniboine occur outside the RHA. To account for this, we made adjustments to the user-based and population-based results to reflect not just the characteristics of the people living in each RHA, but also where they are likely to receive their care.

When we take all things into consideration, the population-based approach, with some services received outside the region, makes the most sense to us. However, since it could be quite different from how funds historically have been distributed, we consider it a target to work towards, with the user-based approach adopted as an intermediate step.

For Instance

Now some of you are probably wondering, How might Manitoba Health take all these population-based proportions we've developed and turn them into dollars and cents? Since we've been clear from the beginning that population-based funding is only part of overall health care funding, and that we are only describing how to slice the healthcare spending pie fairly, not how many actual dollars each RHA should get, we present a completely hypothetical example.

In this "for instance," we'll use one of the 11 RHAs, Assiniboine, only because it comes first alphabetically. We consider all the factors discussed earlier: its number of residents combined with its population's characteristics in the areas of hospital, PCH and home care. Then using the population-based approach, we'll allow for the fact that people receive some services outside the home RHA. What it all works out to is that Assiniboine RHA's share of the pie is 4.88%.[1]

Now let's assume that the total healthcare budget for RHAs is a round number of, say, $3 billion. Let's also assume that 10%—or $300 million—is already earmarked by the Province for what we call *geographic/policy-based funding*. An example of this is funding for the Westman Lab in Brandon, which also services the surrounding RHAs. We'll consider this deduction "A."

Next, we'll subtract another $300 million for hospital-based ambulatory care, mental health services, and emergency response and transportation. We call this group *unmodelled* services because, put simply, no individual-level data exists to include it in our proposed funding model. Spending for these services is arrived at by historical and/or other means negotiated between RHAs and Manitoba Health. We'll consider this deduction "B."

---

[1] The share for other regions is: Brandon 4.4%, Burntwood 1.3%, Central 5.8%, Churchill 0.2%, Interlake 3.2%, Nor-Man 1.1%, North Eastman 1.8%, Parkland 3.4%, South Eastman 2.5%, Winnipeg 71.4%

Figure 1. Allocation of Funding to Regional Health Authorities
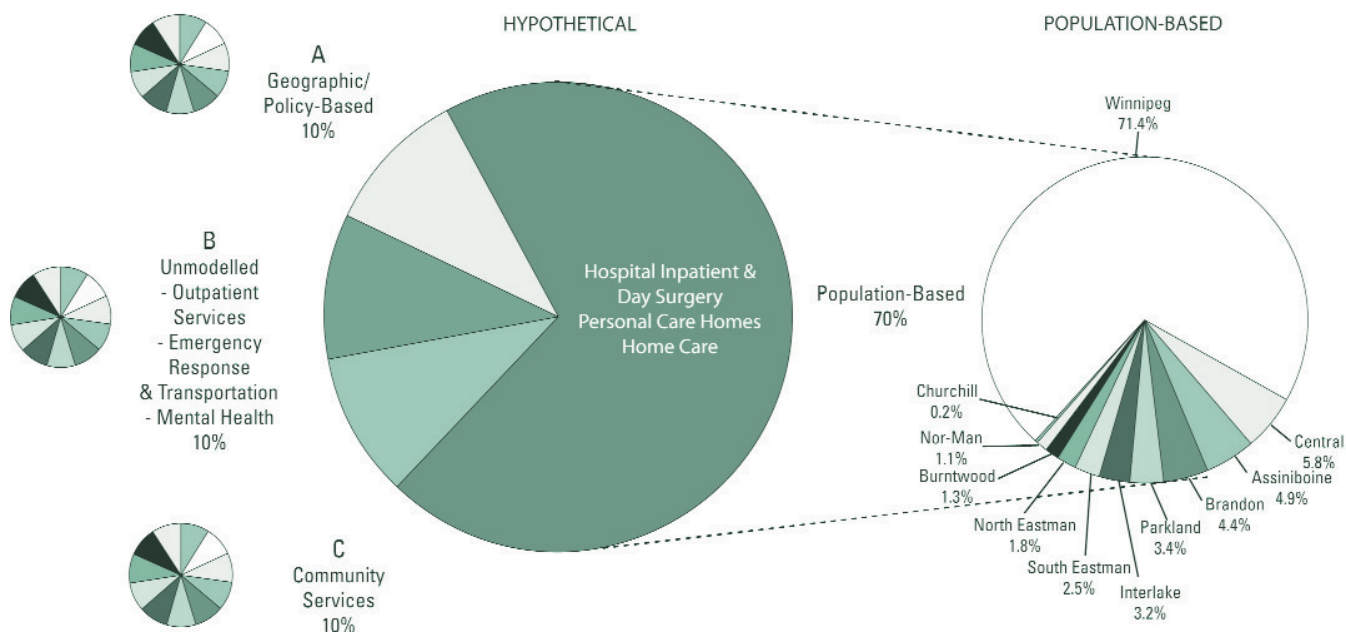
And finally, we'll deduct a hypothetical $300 million for *community services,* which includes things like initiatives to promote good health and prevent poor health. We'll consider this deducation "C." In reality, the allocation of these funds will be largely influenced by the health status of each RHA's population (Community Health Assessments and other MCHP reports will help this process).

That leaves us with $2.1 billion to spend. We multiply that by Assiniboine RHA's proposed 4.88%, and we come up with $102,480,000. So in this hypothetical scenario, that's the population-based portion that Assiniboine RHA would receive using our proposed formula. To that would be added whatever their share is of A, B and C from the remaining $900 million.

The figure above provides a hypothetical graphic example of the four funding components. In the left pie, you see the amount of health spending consumed by the population-based portion, along with those that are not population-based. How the latter three are divided up would have to be ironed out at the RHA and Provincial level if the approach described here is accepted. The right pie shows only the population-based component divided

proportionately by the characteristics of people living in each RHA.

As with any funding model, it will be important to keep in mind that "things change." We stand now at the starting point, with a methodology based on recent demographic and usage patterns. Over time, the make-up of RHAs will change. Technology and new ways of doing things will change how we use health services. It will be necessary, always, to keep the data current.

It is also important to recognize that healthcare is only one of the factors that influence the health of a population. Our methodology proposes a way of allocating funds that considers the characteristics of the population. But MCHP has done considerable work in describing what makes people healthy, work that can be used to further inform the healthcare decision-making process.

That being said, we think we have a funding model that can work, and work well. Our made-in-Manitoba, population-based method will help the Province "slice the pie" more judiciously than has ever been possible. It places emphasis on what is important with most pies: it's not so much about how big one's slice is, it's about getting one's fair share.