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Ontario's Health-Based Allocation Model through an equity lens

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Commissioned Research

Commissioned research at the Wellesley Institute targets important new and emerging health issues within the Institute's priority research areas. The projects commissioned may speak to current policy issues, or they may seek to inform and help shape deliberation on policy issues just over the horizon. Wellesley's commissioned research reflects community voices, interests, and understandings, and includes the community fully in the research wherever possible.

Wellesley Institute Community Roundtables on Health Equity

Health equity is high on the agenda of the Province and LHINs. Wellesley initiated a series of forums with community-based health and social service providers, researchers, advocates and others to flesh out what a community-based framework for addressing health disparities would look like. We also commissioned research and backgrounders to facilitate these discussions and move a community-based health equity agenda forward.

About the Authors

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Introduction

The Ontario Ministry of Health and Long Term Care is implementing the Health Based Allocation Model (HBAM) to fund the province's new Local Health Integration Networks (LHINs). HBAM will determine distribution of funds to the fourteen LHINs and will, in turn, be a decision-making tool the LHINs can use in allocating funds among service providers. It represents an important shift. In the past, allocations were based upon what hospitals and other sectors and service providers could negotiate out of the Ministry. This moves towards a more systematic evidence-based assessment of a region's health needs.

However, HBAM is based on historical hospital service utilization patterns and this comes with fundamental problems. Key questions include:

- while adjusting for socio-economic status to some degree, can the model fully capture the complexity of needs that arise out of pervasive health disparities and an increasingly diverse population?
- can it account for the particularly complex and challenging health needs of disadvantaged populations?
- it may entrench or reward inappropriate utilization patterns, at worst, acting as a brake on innovation.

Background

Funding systems can be roughly categorized into two types, utilization-based and needs-based. Utilization-based funding is built upon historic use of services. Needs-based models are based on some notion of need, generally some combination of population stratified by age and sex, health status, and socio-economic factors.

In the last two decades, some Canadian provinces and a number of other countries have developed regional models for health care governance and population-based formulae for funding them.

Alberta and British Columbia use population-based funding for their health regions adjusted for age and sex and socio-economic status. Quebec uses a "deprivation index" composed of 6 socio-economic variables to adjust the population-based funding for their regions. England uses socio-economic indices to adjust its age/sex factored capitation payments to its Primary Care Trusts (PCTs). The NHS uses different health status and socio-economic factors for calculating the different components (e.g. acute and maternity, mental health, etc.) of the PCT capitation formulae.

HBAM is fundamentally a utilization based model because it is mainly constructed from the previous three years of utilization by individual LHIN residents summed over the LHIN.

How HBAM Works

Historically, Ontario provided public funding to different health care providers according to sector-specific rules, e.g. global budgets for hospitals, OHIP fee for service payments to doctors, per diem rates for long-term care, etc.

HBAM is applied to specific sectors, e.g. acute care, long-term care to calculate sector specific funding allocations. These are then totalled for the LHIN allocation. Using the hospital sector as an example, the first step is to identify each LHIN resident and their hospital utilization for the previous three years. If the person has been admitted to hospital at least once during that time, they are assigned to a clinical group on the basis of their highest severity of illness – RIW or Resource Intensity Weighting category. Then the RIW is adjusted for rurality of service provider and the income quintile of the dissemination area¹. If there is no hospital utilization by that individual during the previous three years, the person is assigned to another category to provide some recognition that services did need to be available to them even if they didn't use them. This process is repeated for every LHIN resident and then the figures are summed to create the Ministry allocation for a particular LHIN's acute care funding. Finally, the Ministry will sum the separate sectors' funding allocation to create the LHIN budget. The Ministry has so far developed the formulae for hospital and CCAC funding.

The province aims to implement HBAM in a phased manner according to its different envelopes of spending: e.g. acute care, long-term care, etc.

Equity Analysis of HBAM

In developing public policy it is crucial to be aware of the potential risks of policy options and directions. HBAM is going to be implemented. But identifying potential risks and challenges with

¹ According to Statistics Canada, "A dissemination area (DA) is a small, relatively stable geographic unit composed of one or more adjacent dissemination blocks. It is the smallest standard geographic area for which all census data are disaggregated. DAs cover all the territory of Canada.

Canada. <http://www.statcan.ca/english/research/92F0138MIE/2007001/glossary.htm>

There were 19,177 dissemination areas in Ontario in the 2006 census.

<http://geodepot.statcan.ca/Diss2006/Reference/Freepub/92-145-GIE2006001.pdf>

the model can help ameliorate the impact of these problems, allow fuller testing and refinement, and contribute to future improvements in the model.

Key potential problems have been identified with utilization-based models.

Recognizing Unmet Needs

Unfortunately, utilization-based formulae under compensate for unmet need. There are significant variations between different parts of Ontario in utilization of a wide variety of services, including angioplastyⁱ and radiation therapy.ⁱⁱ A worst-case scenario is that if HBAM funds mainly on the basis of current utilization, it will not provide resources to deal with unmet needs, and LHINs and MOHLTC may not be able to address such regional accessibility disparities.

Differences in utilization may be caused by a range of factors and increasing utilization everywhere to some particular high level may not be the appropriate policy goal. But differences caused by inequitable availability of services or by inequitable access by social and economic circumstances are unfair. Toronto Central LHIN data on far higher rates of hip replacements in high than low income neighbourhoods, when the demand appears to be higher in low income areas, indicates that differences can be systemic and inequitable. A local policy goal may be to reduce this differential: will the funding allocations recognize this need to address inequitable access?

HBAM could investigate further whether its model can analyze regional variations in service use and incorporate estimates of unmet needs.

Building Equity In

Income quintile of the resident's dissemination area is the only socio-economic status indicator used in HBAM. Other jurisdictions include a range of other factors such as education, income, proportion of the population living alone, social assistance rates, housing adequacy, proportion of adults who have not graduated from high school, unemployment rates, proportion of adults separated, widowed, or divorced, children under 5 years, retired persons living alone, recent immigrants, and the proportion of single parent families.

There is a strong correlation between different social determinants of health, e.g. income, housing, gender, race, time of residence in Canada, etc. By just using income quintile, the Ministry may have adjusted for a lot of these other determinants of health as well. A key factor is the population of the community from which socio-economic indicators are drawn. The smaller the community, the greater the homogeneity of the area, the higher correlations between socio-economic disparities and health, and the more consistent funding over time.ⁱⁱⁱ The average population of an Ontario dissemination area is 670 which might well be small enough to showcase local community inequality.

HBAM could run simulations to assess the impact of including other social determinant-type factors. If they do not add much more predictability and clarity to income quintile, then there may be no need for further adjustment.

But one area of particular concern in Ontario would be the impact of not including factors related to immigration. It is not immediately clear how well income quintile as used in HBAM would correlate with time in Canada or lack of English proficiency, which have important cost implications for the delivery of high quality health care services. LHINs with high proportions of recent immigrants may not be properly compensated to manage the complex health service needs of these populations. Can the model take enough account of these specific and diverse needs?

It is clear that what is needed is not simply more of existing services. Culturally competent care has to become the norm, and a great deal more training, interpretation and other services will be increasingly crucial to provide adequate care to diverse populations. Can HBAM recognize these additional costs?

Disadvantaged populations along intersecting lines of income, race, gender, immigration status and other lines of inequity tend to be concentrated in particular neighbourhoods. This has been recognized by provincial and municipal emphasis on service and infrastructure investment in 'high-risk' neighbourhoods. Will HBAM facilitate or hinder LHINs in making investment decisions to concentrate resources in particular disadvantaged communities or populations, when it is not likely that their service utilization trends alone would signal high needs?

Appropriate Service Use

A recent University of Manitoba paper^{iv} concluded that the reliance on historical utilization data to calculate regional funding allocations, "...introduces a perverse incentive to maintain high levels of utilization, regardless of the need for services."

Linking funding with utilization risks perpetuating inappropriate utilization patterns. For example, there is great potential in Ontario to better manage diabetes in primary health care, thereby reducing complications such as heart attack and kidney failure, and acute care and long term care institutional costs.^v However, if a LHIN developed better chronic disease management services, this might reduce their overall HBAM allocation because of the consequent decreased utilization of hospitals and long-term care facilities.

At the starkest, could HBAM act as a disincentive to investing up-stream in health promotion and preventative services (if successful, they would reduce hospital use and expenditures, and potentially lessen future regional allocations)?

Other implications of HBAM

HBAM does not yet have components for community health centre (CHC) funding. Funding for CHCs has to be approached with different methods because no LHINs have complete networks of CHCs and some have very few centres. To further complicate matters, the LHINs do not fund other models of primary health care such as the family health teams. CHCs are explicitly funded to provide more comprehensive multi-disciplinary care to the most disadvantaged populations. As noted recently by the Ontario Health Quality Council, CHCs receive specific funding and use it to provide better chronic disease management services than other primary health care models even though they are providing services to those with the most challenging needs.^{vi} CHC funding decisions are clearly intertwined with those relating to unmet needs and appropriate care. CHCs appear to be providing more appropriate care, meeting unmet needs, and likely reducing institutional use. How will the provincial government develop funding for such new innovative models of care when HBAM is built upon current utilization patterns?

The HBAM model could theoretically lead to a destabilization of specialty services. If local LHINs attempted to repatriate patients receiving certain specialty services outside of their area - e.g. general paediatric services -- this could lead to destabilizing funding for centres for specialty services such as children's hospitals.

Conclusion

HBAM relies upon historical service utilization to create its funding formula. A number of potential risks with such a model have been identified.

This formula alone would provide inadequate resources to deal with unmet need. And in terms of equity implications, it is very likely that unmet needs are over-concentrated in the most vulnerable and disadvantaged populations.

HBAM includes only one socio-economic indicator, income quintile of dissemination area of LHIN residents. This may not provide adequate adjustment for other key socio-economic factors. In particular, it is unlikely to provide adequate adjustment for the extra costs associated with providing services to those from non-western cultures or who do not speak English.

Utilization-based formulae provide perverse incentives for LHINs to maintain inappropriate institutional utilization. One of the key challenges of overall health reform is to invest 'up-stream' in health promotion and preventative services. Will a utilization-based model discourage such a transformation?

HBAM is going to be implemented. But this paper has flagged significant risks and potential problems that can be considered in elaborating and refining the model. This is intended as practical advice on how to take a wider range of equity and diversity factors into account in

future planning and adjustments. Areas where HBAM could run simulations to assess these problems have been indicated. Health equity advocates are well placed to work with MOHLTC and LHINs to ensure such challenges as unmet needs and the extra costs of servicing diverse populations can be addressed.

References

ⁱ Canadian Cardiovascular Outcomes Research Team. Canadian Cardiovascular Atlas. Provincial and Health Region Data Table. 2006. Source: http://www.ccort.ca/Portals/0/atlas/PDF/CCORT_table.pdf. Accessed June 5, 2008.

ⁱⁱ Bardell, T. Belliveau, P. Kong, W. Mackillop, W J. Waiting times for cancer surgery in Ontario: 1984-2000. *Clinical Oncology (R Coll Radiol)*. 2006;18(5):401-9.

ⁱⁱⁱ Pampalon R, Raymond G. A deprivation index for health and welfare planning in Quebec. *Chronic Diseases in Canada*. 2000;21:104-113.

^{iv} Gregory Finlayson, Evelyn Forget, Okechukwu Ekuma, Shelley Derksen, Ruth Bond, Patricia Martens, and Carolyn DeCoster. Allocating Funds for Healthcare in Manitoba Regional Health Authorities: A First Step—Population-Based Funding. Manitoba Centre for Health Policy and Evaluation. Found at: http://www.umanitoba.ca/centres/mchp/reports/pdfs/2005-2008/pop_fdg.pdf . Accessed February 20, 2008.

^v 2007 Report on Ontario's Health Care System. Ontario Health quality Council Second Annual Report. April 2007. Found at: www.ohqc.ca.

^{vi} Ontario Health Quality Council. 2008 annual Report. May 2008. Page 96. Toronto.



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