

HEALTHCARE

POLICY

Politiques de Santé

*Health Services, Management and Policy Research
Services de santé, gestion et recherche de politique*

Volume 5 ♦ Number 3

Pharaoh and the Prospects for Productivity in HHR

ROBERT G. EVANS, MORRIS L. BARER AND DAVID G. SCHNEIDER

**The Continuing Saga of Emergency Room Overcrowding:
Are We Aiming at the Right Target?**

DANIÈLE ROBERGE, RAYNALD PINEAULT, DANIELLE LAROUCHE
AND LÉO-ROCK POIRIER

**Development of a Support Tool for Complex Decision-Making
in the Provision of Rural Maternity Care**

GLEN HEARNS ET AL.

**Cost Shifting and Timeliness of Drug Formulary
Decisions in Atlantic Canada**

ANDREA C. SCOBIE AND NEIL J. MACKINNON

*Data Matters ♦ Discussion and Debate ♦ Research Papers
Knowledge Translation, Linkage and Exchange*

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POLICY

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Health Services, Management and Policy Research
Services de santé, gestion et recherche de politique

VOLUME 5 NUMBER 3 • FEBRUARY 2010

Healthcare Policy/Politiques de Santé seeks to bridge the worlds of research and decision-making by presenting research, analysis and information that speak to both audiences. Accordingly, our manuscript review and editorial processes include researchers and decision-makers.

We publish original scholarly and research papers that support health policy development and decision-making in spheres ranging from governance, organization and service delivery to financing, funding and resource allocation. The journal welcomes submissions from researchers across a broad spectrum of disciplines in health sciences, social sciences, management and the humanities and from interdisciplinary research teams. We encourage submissions from decision-makers or researcher–decision-maker collaborations that address knowledge application and exchange.

While *Healthcare Policy/Politiques de Santé* encourages submissions that are theoretically grounded and methodologically innovative, we emphasize applied research rather than theoretical work and methods development. The journal maintains a distinctly Canadian flavour by focusing on Canadian health services and policy issues. We also publish research and analysis involving international comparisons or set in other jurisdictions that are relevant to the Canadian context.

Healthcare Policy/Politiques de Santé cherche à rapprocher le monde de la recherche et celui des décideurs en présentant des travaux de recherche, des analyses et des renseignements qui s'adressent aux deux auditoires. Ainsi donc, nos processus rédactionnel et d'examen des manuscrits font intervenir à la fois des chercheurs et des décideurs.

Nous publions des articles savants et des rapports de recherche qui appuient l'élaboration de politiques et le processus décisionnel dans le domaine de la santé et qui abordent des aspects aussi variés que la gouvernance, l'organisation et la prestation des services, le financement et la répartition des ressources. La revue accueille favorablement les articles rédigés par des chercheurs provenant d'un large éventail de disciplines dans les sciences de la santé, les sciences sociales et la gestion, et par des équipes de recherche interdisciplinaires. Nous invitons également les décideurs ou les membres d'équipes formées de chercheurs et de décideurs à nous envoyer des articles qui traitent de l'échange et de l'application des connaissances.

Bien que *Healthcare Policy/Politiques de Santé* encourage l'envoi d'articles ayant un solide fondement théorique et innovateurs sur le plan méthodologique, nous privilégions la recherche appliquée plutôt que les travaux théoriques et l'élaboration de méthodes. La revue veut maintenir une saveur distinctement canadienne en mettant l'accent sur les questions liées aux services et aux politiques de santé au Canada. Nous publions aussi des travaux de recherche et des analyses présentant des comparaisons internationales qui sont pertinentes pour le contexte canadien.



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DANIÈLE ROBERGE, RAYNALD PINEAULT, DANIELLE LAROCHE AND LÉO-ROCK POIRIER
Today's overcrowded ERs are the result of past decisions that modified hospitals' original mission and weakened primary care services. This look at the ER system in Quebec and Canada suggests that the situation won't be resolved until these historical residues are addressed.
- 40  Canada's Access to Medicines Regime: Promise or Failure of Humanitarian Effort?
JILLIAN CLARE KOHLER, JOEL LEXCHIN, VICTORIA KUEK AND JAMES ORBINSKI
In the three years since it was implemented, CAMR has failed to improve access to medicines by the world's neediest. Among other measures, the federal government should establish policies to transfer the technology for generic drug production to countries that need it.

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JEREMY VEILLARD, TAI HUYNH, STEN ARDAL, SOWMYA KADANDALE, NIEK S. KLAZINGA AND ADALSTEINN D. BROWN
A health system strategy map and a strategy-based scorecard helped the Ontario Ministry of Health and Long-Term Care enhance its stewardship and performance management role in relation to the province's Local Health Integration Networks.

- 66  **Wait Time Management Strategies for Scheduled Care: What Makes Them Succeed?**
MARIE-PASCALE POMEY, PIERRE-GERLIER FOREST, CLAUDIA SANMARTIN, CAROLYN DE COSTER AND MADELEINE DREW
Physician participation and leadership are key to promoting implementation of wait time management strategies – together with support from senior management and the right tools for designing, monitoring and evaluating effective systems.
- 82  **Development of a Support Tool for Complex Decision-Making in the Provision of Rural Maternity Care**
GLEN HEARNS, MICHAEL C. KLEIN, WILLIAM TROUSDALE, CATHERINE ULRICH, DAVID BUTCHER, CHRISTIANA MIEWALD, RONALD LINDSTROM, SAHBA EFTEKHARY, JESSICA ROSINSKI, ORALIA GÓMEZ-RAMÍREZ AND ANDREA PROCYK
Faced with the variable resources of rural and remote communities and the complex decisions required to make the best use of them, the authors devised a Decision Support Manual to assist with assessing community needs and values in maternity care. The method can be adapted to other medical contexts fraught with conflicting objectives, values and opinions.
- 97 **Commentary on Development of a Support Tool for Complex Decision-Making**
ANGELA BOWEN
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- 100  **Cost Shifting and Timeliness of Drug Formulary Decisions in Atlantic Canada**
ANDREA C. SCOBIE AND NEIL J. MACKINNON
Significant variation exists among the four Atlantic provinces in the timing of drug formulary listings and the uptake of recommendations by the Common Drug Review (CDR). These governments should support the CDR's mandate by aiming for more timely consideration of its recommendations.

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Research Papers

- e125  **Factors Associated with End-of-Life Health Service Use in Patients Dying of Cancer**
LISA BARBERA, JONATHAN SUSSMAN, RAYMOND VIOLA, AMNA HUSAIN, DORIS HOWELL, S. LAWRENCE LIBRACH, HUGH WALKER, RINKU SUTRADHAR, CAROLE CHARTIER AND LAWRENCE PASZAT
Increased use of supportive care services at the end of life can decrease the need for acute care. These findings support the introduction of recent policies in Ontario directed at end-of-life care.
- e144  **Child and Youth Mental Health Service Referrals: Physicians' Knowledge of Mental Health Services and Perceptions of a Centralized Intake Model**
PAULA CLOUTIER, MARIO CAPPELLI, J. ELIZABETH GLENNIE, GILLES CHARRON AND SMITA THATTE
A survey of family physicians in Canada's National Capital Region revealed varying levels of confidence in providing mental health counselling. While doctors favoured a centralized intake for mental health services, satisfaction depended largely on variables beyond the control of CI, such as wait times and feedback from mental health providers.
- e162  **Public Perspectives on Health Human Resources in Primary Healthcare: Context, Choices and Change**
SANDRA REGAN, SABRINA T. WONG AND DIANE E. WATSON
Focus groups of patients from across British Columbia identified three major themes in HHR planning for primary healthcare: the importance of geographic context, change management at the practice level and the need for choices in care delivery. These recommendations align with strategic directions set by government.
- e173  **Increasing Access to Cognitive-Behavioural Therapy (CBT) for the Treatment of Mental Illness in Canada: A Research Framework and Call for Action**
KRISTA A. PAYNE AND GAIL MYHR
Although it has been shown to result in improved clinical and health economic outcomes, publicly funded CBT is scarce in Canada. The authors propose a research framework to evaluate the impact of increasing Canadians' access to CBT.



Peer Reviewed


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DANIÈLE ROBERGE, RAYNALD PINEAULT, DANIELLE LAROUCHE ET LÉO-ROCK POIRIER

L'engorgement des salles d'urgences que l'on connaît de nos jours est le fruit de décisions antérieures qui ont modifié la mission initiale des hôpitaux et ont affaibli les services de soins de santé primaires. Ce regard sur les systèmes d'urgences au Québec et au Canada fait voir qu'il n'y aura pas de solution tant que ces résidus historiques ne seront pas traités.

- 40  **Le Régime canadien d'accès aux médicaments : promesse ou échec d'un geste humanitaire?**
JILLIAN CLARE KOHLER, JOEL LEXCHIN, VICTORIA KUEK ET JAMES ORBINSKI
- Depuis la mise en place du RCAM, il y a trois ans, les efforts pour améliorer l'accès aux médicaments par les plus nécessiteux semblent se traduire par un échec. Parmi les mesures à adopter, le gouvernement fédéral devrait mettre en place des politiques de transfert de technologie pour permettre la production de médicaments génériques dans les pays qui en ont besoin.*






RAPPORTS DE RECHERCHE

- 49  **Pour des mesures du rendement du système de santé utiles aux responsables de politiques : harmonisation des stratégies, des mesures et de la responsabilité du système de santé local en Ontario**
JEREMY VEILLARD, TAI HUYNH, STEN ARDAL, SOWMYA KADANDALE, NIEK S. KLAZINGA ET ADALSTEINN D. BROWN
- Un schéma stratégique et une carte de pointage pour le système de santé ont aidé le ministère ontarien de la Santé et des Soins de longue durée à renforcer les rôles liés à la gestion du rendement dans les réseaux locaux d'intégration des services de santé de la province.*

- 66  **Les stratégies contre les temps d'attente pour les soins électifs : qu'est-ce qui fait leur succès?**
MARIE-PASCALE POMEY, PIERRE-GERLIER FOREST, CLAUDIA SANMARTIN, CAROLYN DE COSTER ET MADELEINE DREW
La participation et le leadership des médecins sont des facteurs clés pour la mise en œuvre de stratégies contre les temps d'attente – de même que le sont le soutien des gestionnaires ainsi que les outils adéquats pour redessiner, suivre et évaluer des systèmes qui soient efficaces.
- 82  **Mise au point d'un outil d'appui à la prise de décisions complexes dans la prestation de soins de maternité en milieu rural**
GLEN HEARNS, MICHAEL C. KLEIN, WILLIAM TROUSDALE, CATHERINE ULRICH, DAVID BUTCHER, CHRISTIANA MIEWALD, RONALD LINDSTROM, SAHBA EFTEKHARY, JESSICA ROSINSKI, ORALIA GÓMEZ-RAMÍREZ ET ANDREA PROCYK
Devant la variabilité des ressources disponibles dans les collectivités rurales et éloignées, et face aux décisions complexes qui doivent être prises pour en faire le meilleur usage, les auteurs ont mis au point un manuel d'appui aux décisions pour aider à évaluer les besoins et les valeurs qui entrent en jeu dans les soins de maternité. La méthode peut s'adapter à d'autres contextes où il y a des objectifs conflictuels ainsi que des enjeux liés aux valeurs et aux opinions.
- 97 **Commentaire sur la mise au point d'un outil d'appui à la prise de décisions complexes (Hearns et al.)**
ANGELA BOWEN
Dans le contexte des contraintes liées à la rationalisation des ressources, le principal atout de cette approche est l'inclusion des contributions provenant de multiples intervenants, au niveau même de la prise de décisions.
- 100  **Transferts de coûts et délais dans les décisions touchant au formulaire pharmaceutique dans le Canada atlantique**
ANDREA C. SCOBIE ET NEIL J. MACKINNON
Il existe une variation significative, entre les quatre provinces du Canada atlantique, dans les délais d'inscription au formulaire pharmaceutique et dans l'adoption des recommandations du Programme commun d'évaluation des médicaments (PCEM). Les gouvernements de ces provinces devraient appuyer le mandat du PCEM en visant des délais plus opportuns pour la prise en compte des recommandations.

EXCLUSIVITÉS EN LIGNE

Rapports de recherche

- e125  **Facteurs associés à l'utilisation des soins en fin de vie pour les patients mourant du cancer**
LISA BARBERA, JONATHAN SUSSMAN, RAYMOND VIOLA, AMNA HUSAIN, DORIS HOWELL, S. LAWRENCE LIBRACH, HUGH WALKER, RINKU SUTRADHAR, CAROLE CHARTIER ET LAWRENCE PASZAT
Un accroissement de l'utilisation des soins de soutien en fin de vie peut aider à diminuer l'utilisation des soins de courte durée. Ces résultats appuient la mise en place récente, en Ontario, de politiques visant les soins en fin de vie.
- e144  **Aiguillage vers les services de santé mentale pour les enfants et les jeunes : connaissance des services de santé mentale de la part des médecins et perceptions face à un modèle d'accueil central**
PAULA CLOUTIER, MARIO CAPPELLI, J. ELIZABETH GLENNIE, GILLES CHARRON ET SMITA THATTE
Un sondage effectué auprès des médecins de famille dans la région de la capitale nationale du Canada montre qu'il existe divers degrés de confiance, chez ces médecins, dans leurs possibilités d'offrir des services de counseling en matière de santé mentale. Bien que les médecins soient en faveur d'un service d'accueil centralisé, le degré de satisfaction dépend fortement de variables hors du contrôle dudit service, telles que les temps d'attente et la rétroaction provenant des fournisseurs de services de santé mentale.
- e162  **Point de vue du public sur les ressources humaines en santé dans les soins de santé primaires : contexte, choix et changement**
SANDRA REGAN, SABRINA T. WONG ET DIANE E. WATSON
En Colombie-Britannique, des groupes de discussion réunissant des patients ont permis de dégager trois thèmes principaux en matière de planification des ressources humaines en santé pour les soins primaires : l'importance du contexte géographique, la gestion du changement au niveau de la pratique et la nécessité de permettre des choix dans la prestation des services. Ces recommandations coïncident avec les stratégies mises en place par le gouvernement.
- e173  **Accroître l'accès à la thérapie cognitivo-comportementale (TCC) pour le traitement de la maladie mentale au Canada : cadre de recherche et appel à l'action**
KRISTA A. PAYNE ET GAIL MYHR
Bien qu'il soit démontré qu'elle améliore les résultats cliniques et économiques, la TCC subventionnée par les fonds publics est plutôt rare au Canada. Les auteures proposent un cadre de recherche afin d'évaluer l'impact d'un plus grand accès à la TCC, au Canada.
-  **Examen par les pairs**

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For deliveries to our studio: 54 Berkeley St., Suite 305, Toronto, Ontario M5A 2W4, Canada.

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Individual subscription rates for one year are [C] \$108 for online only and [C] \$160 for print + online. For individual subscriptions contact Barbara Marshall at telephone 416-864-9667, ext. 100 or by e-mail at bmarshall@longwoods.com.

Institutional subscription rates are [C] \$473 for online only and [C] \$579 for print + online. For institutional subscriptions, please contact Rebecca Hart at telephone 416-864-9667, ext. 114 or by e-mail at rhart@longwoods.com.

Subscriptions must be paid in advance. An additional 5% Goods and Services Tax (GST) is payable on all Canadian transactions. Rates outside of Canada are in US dollars. Our GST number is R138513668.

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Healthcare Policy/Politiques de Santé is published four times per year by Longwoods Publishing Corp., 260 Adelaide St. East, No. 8, Toronto, ON M5A 1N1, Canada. The journal is published with support from the Canadian Institutes of Health Research's Institute of Health Services and Policy Research. Manuscripts are reviewed by the editors and a panel of peers appointed by the editors. Information contained in this publication has been compiled from sources believed to be reliable. While every effort has been made to ensure accuracy and completeness, these are not guaranteed. The views and opinions expressed are those of the individual contributors and do not necessarily represent an official opinion of *Healthcare Policy* or Longwoods Publishing Corporation. Readers are urged to consult their professional advisers prior to acting on the basis of material in this journal.

Healthcare Policy/Politiques de Santé is indexed in the following: PubMed Central, CINAHL, CSA (Cambridge), Ulrich's, Embase, IndexCopernicus, Scopus and is a partner of HINARI

No liability for this journal's content shall be incurred by Longwoods Publishing Corporation, the editors, the editorial advisory board or any contributors. ISSN No. 1715-6572

Publications Mail Agreement No. 40069375

Printed by Harmony Printing

© February 2010

Revels, Reviews and Renewal: Looking Back, Looking Ahead

TEN YEARS ON, Y2K SEEMS A DISTANT MEMORY. THIS YEAR, COMPUTER glitches were far from the minds of most revellers as they marked the beginning of 2010 with the blast and blaze of fireworks. Instead, 2009 was the year of H1N1. It led health news coverage in the global media (Madison 2009; Branswell 2010) and was also one of the most common topics of general conversation, as reflected in posts to social networking sites (Backstrom 2009; @Abdur 2009).

In most countries, Google search volumes for H1N1 peaked in the early stages of the outbreak.¹ Canada, though, saw a second spike in October/November. I was not surprised to see the data. From chats with taxi drivers to exchanges with health experts, conversations during a trip to Toronto last fall all seemed to turn to H1N1. The balance was noticeably different at home in Denmark, in London where I was the week before and in Colombia where I travelled the following week. Ironically, the same trip also brought to my attention differences in public communications strategies regarding the pandemic. Before I left, I scoured a large number of government travel advisories. At the time, both Australia and the United Kingdom started their advice for travellers to Colombia with bold-font announcements about H1N1. They then went on to highlight the risk of violent attacks, kidnapping and other crime. Canada, the United States and Denmark reversed this order or did not mention H1N1 at all in their country-specific travel advice. (In the end, I received a warm welcome and my trip was entirely trouble-free.)

In this and much more serious ways, H1N1 tested existing communications protocols; stretched the boundaries of what we know about influenza, pandemics and how best to prepare and respond; and led to many new questions. While experience and the evidence base are growing, challenges existed at all levels, from GPs who cared for worried patients to the corridors of the World Health Organization's headquarters in Geneva.

The differences that I saw in my travels piqued my interest in how various jurisdictions were managing their H1N1 response. My colleagues and I at the International Health Terminology Standards Development Organisation in Copenhagen conducted an informal scan of vaccination policies and programs in mid-November 2009. We looked at government websites from European countries to identify when H1N1 immunization began, how vaccination was being done (e.g., through physician offices

or public vaccination clinics) and which groups were being offered the vaccine. We also reviewed news stories posted on the websites of the country's largest-circulation newspaper and the national broadcaster in the first two weeks after vaccination began in the country. The approach was necessarily a convenience sample, albeit a fairly large one; it was limited to countries that had information in a language that at least one of us could read well enough to interpret short articles (Danish, English, French, German, Greek, Italian, Norwegian, Spanish or Swedish).

A key question that policy makers had to answer was whether or not to target priority groups for vaccination, and if so, which groups. Answers varied widely and often changed as immunization campaigns progressed. Technical data informed decisions, but other factors also swayed minds in many nations. Most, but not all, countries chose to target specific priority groups, at least initially. Healthcare providers were on the list almost everywhere. Children of different ages were sometimes in and sometimes out, as were pregnant women. There were also variations in which chronic conditions were included on priority lists. Decisions affected how much vaccine needed to be acquired, roll-out plans and much more.

Choices also needed to be made about how to distribute vaccines. Countries chose a range of approaches, including providing services through physician offices, mass vaccination clinics and targeted immunization programs. In Canada, while vaccines were distributed in a variety of ways, many jurisdictions used mass immunization clinics. Queues at these clinics became big news in several parts of the country. Friends who waited in line for shots also shared their experiences with me. (The winning war story: hours queuing with four young kids at a vaccination clinic that had no available toilet facilities.) "Is it the same elsewhere?" they asked.

Answer: yes and no. Our scan did find media reports of queues for vaccination clinics in other countries, but they were by no means universal. One reason may be differences in the uptake of immunization, including spikes in interest that took place during campaigns. Another is that some countries placed much less emphasis on open, mass vaccination clinics. Instead, several regions were able to identify and schedule appointments for patients who qualified for the vaccine. In the United Kingdom, for instance, the H1N1 vaccination program for high-risk patients was run within primary care. National protocols could be used to identify eligible patients in a general practice, incorporating information about a patient's medical history and past health problems that had been captured using standardized terminology. Many practices in Denmark were able to employ similar approaches.² The result at a personal level: rather than going to a clinic, a friend with a qualifying chronic disease was contacted by her general practitioner's office prior to the start of the vaccination program to schedule an appointment for her shot. Similar strategies were reported in Sault Ste. Marie in Canada, where the Group Health Centre has been an early adopter of electronic health records (Purvis 2009).

“N=1” personal experiences like those described above can help to trigger questions and new lines of inquiry, but broad data on comparative vaccination rates, the distribution of who received shots, their effectiveness, costs and benefits continue to emerge. Clearly, there are pros and cons to different approaches, some or all of which may depend on the context in which they are applied. Public health officials and epidemiologists, among others, have many important questions to address in the coming months and years. I hope that interesting results from their in-depth, thoughtful analyses of what went right and what went wrong in the pandemic preparations and response will appear in this journal’s pages. And I hope that those analyses will help us to improve health and healthcare in the future.

To help steer the discussion and debate in *Healthcare Policy/Politiques de santé*, we are welcoming two new editors to the journal. Patricia Martens from the Manitoba Centre for Health Policy, University of Manitoba will be taking over from Rick Rogers in leading the journal’s Data Matters column. Likewise, Mark Dobrow (based at the University of Toronto and Cancer Care Ontario) will be joining the editorial team as John Horne steps down. Please join me in thanking Rick and John for their stellar service over the past five years and in welcoming Patricia and Mark to the team.

JENNIFER ZELMER, BSC, MA, PHD

Editor-in-chief

NOTES

1. Technically, this refers to searches for “H1N1” and “swine flu.” Although public health authorities in many countries encouraged a switch in language, the early terminology persisted for some time. Google Trends data show that news references to H1N1 outpaced those to swine flu as early as May, but terminology used by the public changed more slowly (<http://www.google.com/trends?q=h1n1%2C+swine+flu&ctab=0&geo=all&date=ytd&sort=0>). H1N1 became a more popular search term for the first time in September, about the same time as Facebook reported a shift in language on its site.
2. See, for example, the sample report, “Risk Patients for H1N1 Vaccination” at <http://www.dak-it.dk/demo.html>. (Retrieved January 14, 2010.)

REFERENCES

- @Abdur. 2009 (December 15). Twitter Blog: Top Twitter Trends of 2009. Retrieved January 14, 2010. <<http://blog.twitter.com/2009/12/top-twitter-trends-of-2009.html>>.
- Backstrom, L. 2009 (December 21). Facebook Memology: Top Status Trends of 2009. Retrieved January 14, 2010. <<http://blog.facebook.com/blog.php?post=215076352130>>.

Branswell, H. 2010. "H1N1 Flu Virus Voted Top News Story of 2009 in Canadian Press Survey." Retrieved January 14, 2010. <<http://www.thecanadianpress.com/english/online/OnlineFullStory.aspx?filename=n122737A&newsitemid=22143321&languageid=1>>.

Madison, P. 2009. "H1N1 and Health Reform Dominated 2009 Medical News." Retrieved January 14, 2010. <<http://edition.cnn.com/2009/HEALTH/12/30/top.health.stories/index.html>>.

Purvis, M. 2009. "Sault H1N1 Response Envy of the Nation." Retrieved January 14, 2010. <<http://www.thesudburystar.com/ArticleDisplay.aspx?e=2155965>>.

Nouvel An, révision et renouvellement : retour sur le passé, regard vers l'avenir

APRÈS DIX ANS, LE BOGUE DE L'AN 2000 SEMBLE UN SOUVENIR LOINTAIN. Cette année, la perturbation informatique était loin de l'esprit des convives alors qu'ils célébraient la venue de 2010. L'an 2009 a plutôt été l'année du virus H1N1. L'événement a fait la une des nouvelles dans les médias du monde (Madison 2009; Branswell 2010) et a été l'un des sujets de l'heure dans presque toutes les conversations, tel que le démontrent les sites de réseaux sociaux en ligne (Backstrom 2009; @Abdur 2009).

Dans la plupart des pays, le volume des recherches sur Google pour le H1N1 était à son plus fort au début de l'écllosion.¹ Au Canada, cependant, on a observé une deuxième pointe en octobre et novembre. Je n'étais pas surprise par ces données. Que ce soit au cours d'un bref échange avec les chauffeurs de taxi ou dans un entretien avec les experts de la santé, toutes les conversations pendant mon voyage à Toronto, l'automne dernier, semblaient tourner autour du H1N1. La situation était bien différente chez moi au Danemark, à Londres où je me trouvais la semaine précédente et en Colombie où j'avais voyagé la semaine suivante. Ce voyage m'a aussi permis de constater des différences dans les stratégies de communication publique au sujet de la pandémie. Avant de m'envoler, j'avais passé en revue un grand nombre d'avis aux voyageurs publiés par les gouvernements. À ce moment, les avis de l'Australie et du Royaume-Uni sur la Colombie commençaient tous deux par un message en caractères gras sur le virus H1N1; puis venaient les risques liés aux attaques violentes, aux enlèvements et aux autres crimes. Les avis du Canada, des États-Unis et du Danemark présentaient un ordre inverse ou ne faisaient pas mention au H1N1. (Finalement, j'ai été accueillie chaleureusement et mon voyage s'est déroulé sans encombre.)

De façon plus sérieuse, la présence du H1N1 a permis de tester les protocoles de communication et de repousser les limites des connaissances sur la grippe, sur les pandémies et sur la façon d'y répondre; elle a aussi soulevé plusieurs nouvelles questions.

Bien que l'expérience et le fonds de données s'accroissent, les défis sont présents à tous les niveaux, que ce soit pour le médecin généraliste qui prend soin de patients inquiets ou dans les corridors du siège social de l'Organisation mondiale de la Santé, à Genève.

Les différences que j'ai observées au cours de mes voyages ont piqué ma curiosité et j'ai voulu savoir comment les différents gouvernements ont géré leur réponse au H1N1. Avec mes collègues de l'Organisation internationale pour le développement de normes terminologiques de santé (IHTSDO), à Copenhague, nous avons procédé à une étude officieuse sur les politiques et programmes de vaccination, à la mi-novembre 2009. Nous avons consulté les sites Web des pays européens pour déterminer le moment où la vaccination contre le H1N1 avait commencé, pour savoir comment on y procédait (par exemple, dans les cabinets médicaux ou dans des cliniques publiques de vaccination) et pour connaître les groupes visés. Nous avons également consulté les nouvelles affichées sur les sites Web des principaux journaux ainsi que les nouvelles nationales diffusées pendant les deux premières semaines suivant le début de la vaccination, pour un pays donné. Il s'agissait évidemment d'un échantillon de commodité, quoique notable; c'est-à-dire les pays qui offraient de courts articles informatifs dans une langue qu'au moins l'un de nous pouvait lire et interpréter (anglais, allemand, danois, espagnol, français, italien, norvégien, ou suédois).

Une des questions clés pour les responsables de politiques était de savoir si oui ou non la vaccination devait cibler des groupes prioritaires et, le cas échéant, déterminer lesquels. Les stratégies employées étaient très variées et se modifiaient souvent au fur et à mesure que les campagnes de vaccination se déroulaient. Les décisions s'appuyaient sur des données techniques, mais dans plusieurs nations d'autres facteurs entraient aussi en compte. La plupart des pays, mais pas tous, ont choisi de cibler des groupes précis, du moins au début. Presque partout, les prestataires de services de santé figuraient sur la liste. Les enfants de divers âges y étaient inscrits ou non, de même que les femmes enceintes. Il y avait également des variations sur les états chroniques à inclure dans la liste prioritaire. Ces décisions déterminaient la quantité de vaccins à acquérir, les plans de mise en place et plusieurs autres aspects.

Il fallait aussi faire des choix quant à la façon de distribuer les vaccins. Les pays ont optés pour un éventail d'approches, par exemple, par le biais des cabinets médicaux, dans des cliniques de vaccination de masse ou encore par des programmes de vaccination ciblée. Au Canada, bien que les vaccins aient été distribués de nombreuses façons, plusieurs autorités ont choisi la vaccination de masse. Les files d'attente qui se sont formées à ces cliniques ont fait la une des nouvelles dans plusieurs régions du pays. Certains amis qui ont dû faire la queue pour recevoir le vaccin m'ont raconté leur expérience. (L'anecdote la plus déconcertante étant celle d'une amie qui a attendu pendant des heures avec quatre jeunes enfants dans une clinique où il n'y avait pas de toilettes.) « Est-ce que c'est partout pareil? », me demandait-on.

La réponse est oui et non. Notre étude nous a permis de répertorier, dans d'autres

pays, certaines manchettes faisant état de files d'attente pour la vaccination, mais la situation n'était pas partout la même. Cela peut s'expliquer par les différences dans la demande pour recevoir le vaccin, notamment les pointes d'affluence qui ont eu lieu au cours des campagnes. Une autre des raisons peut être que certains pays ont mis beaucoup moins d'accent sur les cliniques de vaccination de masse. Plusieurs régions ont plutôt opté pour cibler les patients, puis leur donner rendez-vous. Au Royaume-Uni, par exemple, le programme de vaccination contre le H1N1 destiné aux patients à haut risque était offert par le secteur des soins primaires. Les protocoles nationaux servaient à cibler les patients dans une clinique de médecine générale, en tenant compte de l'historial et des dossiers médicaux grâce à des données saisies au moyen d'une terminologie normalisée. Plusieurs cliniques au Danemark ont été en mesure d'utiliser une approche similaire.² Le résultat, au niveau personnel : plutôt que de se rendre à une clinique, une amie souffrant d'une maladie chronique ciblée a reçu un appel du cabinet de son omnipraticien pour prendre rendez-vous et recevoir le vaccin, et ce, avant le début du programme de vaccination. Des stratégies similaires ont été employées à Sault Ste. Marie, au Canada, où le Group Health Centre a été l'un des premiers à adopter le système de dossiers médicaux informatisés (Purvis 2009).

Les expériences personnelles comme celles décrites ci-dessus soulèvent des questions et laissent entrevoir de nouveaux champs de recherche. Cependant, on continue d'amasser des données générales sur les taux comparatifs de vaccination, sur la distribution des vaccins, sur leur efficacité ou sur les coûts et les avantages. Les diverses approches présentent clairement des avantages et des inconvénients, lesquels dépendent sans doute du contexte. Les épidémiologistes et les officiels de la santé, entre autres, devront aborder nombre de questions dans les mois et les années à venir. J'espère que les résultats des analyses approfondies, visant à connaître ce qui a fonctionné ou non dans le cadre de la pandémie, apparaîtront dans les pages de cette revue. Et j'espère que ces analyses nous aideront à améliorer la santé et les services de santé, pour l'avenir.

Afin de stimuler les discussions et les débats dans *Politiques de Santé/Healthcare Policy*, nous accueillons deux nouveaux éditeurs. Patricia Martens, du Centre manitobain des politiques en matière de santé, prendra la place de Rick Rogers pour diriger la chronique Questions de données. D'autre part, Mark Dobrow (de l'Université de Toronto et d'Action Cancer Ontario) se joindra à l'équipe de rédaction, alors que John Horne la quittera. Veuillez vous joindre à moi pour dire merci à Rick et à John pour l'excellent travail qu'ils ont accompli au cours des cinq dernières années, et pour souhaiter la bienvenue à Patricia et à Mark.

JENNIFER ZELMER, BSC, MA, PHD

Rédactrice en chef

NOTES

1. Techniquement, il s'agit d'une recherche pour les termes « H1N1 » et « swine flu (grippe porcine). » Bien que, dans plusieurs pays, les autorités de santé publique aient favorisé un changement de termes, la terminologie initiale s'est maintenue pendant quelque temps. Les données de Google Trends montrent que, dans les bulletins d'informations, les références au terme « H1N1 » ont dépassé celles du terme « swine flu » dès le mois de mai. Cependant, la terminologie utilisée par le grand public a changé plus lentement (<http://www.google.com/trends?q=h1n1%2C+swine+flu&crab=0&geo=all&date=ytd&sort=0>). Le terme « H1N1 » est devenu plus populaire, pour la première fois, en septembre, à peu près en même temps que l'on observait un changement de terminologie sur le site de Facebook.
2. Voir, par exemple, le rapport "Risk Patients for H1N1 Vaccination" à <http://www.dak-it.dk/demo.html>. (Consulté le 14 janvier 2010.)

RÉFÉRENCES

- @Abdur. 2009 (15 décembre). Twitter Blog: Top Twitter Trends of 2009. Consulté le 14 janvier 2010. <<http://blog.twitter.com/2009/12/top-twitter-trends-of-2009.html>>.
- Backstrom, L. 2009 (21 décembre). Facebook Memology: Top Status Trends of 2009. Consulté le 14 janvier 2010. <<http://blog.facebook.com/blog.php?post=215076352130>>.
- Branswell, H. 2010. "H1N1 Flu Virus Voted Top News Story of 2009 in Canadian Press Survey." Consulté le 14 janvier 2010. <<http://www.thecanadianpress.com/english/online/OnlineFullStory.aspx?filename=n122737A&newsitemid=22143321&languageid=1>>.
- Madison, P. 2009. "H1N1 and Health Reform Dominated 2009 Medical News." Consulté le 14 janvier 2010. <<http://edition.cnn.com/2009/HEALTH/12/30/top.health.stories/index.html>>.
- Purvis, M. 2009. "Sault H1N1 Response Envy of the Nation." Consulté le 14 janvier 2010. <<http://www.thesudburystar.com/ArticleDisplay.aspx?e=2155965>>.

Pharaoh and the Prospects for Productivity in HHR

Le pharaon et le potentiel de productivité dans les RHS

by ROBERT G. EVANS, MORRIS L. BARER AND DAVID G. SCHNEIDER

Abstract

When Pharaoh refused to supply straw, productivity plummeted in the Egyptian brick industry. But Pharaoh had other concerns. Anyway, the costs fell on Israelites, not Egyptians. Productivity improvement in the health sector is similarly constrained by competing objectives, and by the distribution of resulting gains and losses. Furthermore, health services have value only insofar as they improve health outcomes. Increased output of ineffective services is not productivity in any meaningful sense. Yet most of the literature on health human resources productivity focuses on outputs, not outcomes, ignoring serious questions about effectiveness. Proposals to refine the treatment of the health sector within the national accounts are similarly flawed. Proliferation of beneficial, harmful or simply unnecessary services would all be recorded as “productivity growth.”

Résumé

Lorsque le pharaon refusa de fournir de la paille, la productivité dans l'industrie égyptienne de la brique connut un déclin. Le pharaon avait d'autres préoccupations. Néanmoins, ce sont les Israéliens qui en ont payé les frais, pas les Égyptiens. L'amélioration de la productivité dans le secteur de la santé est semblablement contrainte par des objectifs concurrentiels, ainsi que par la distribution des pertes et des gains qui en découlent. De plus, ce n'est que par l'amélioration des résultats pour la santé que les services de santé acquièrent leur pleine valeur. Accroître les extrants pour des services inefficaces n'est d'aucune façon un signe de productivité. Cependant, la

plupart de la littérature sur la productivité des ressources humaines en santé met l'accent sur les extrants, pas sur les résultats, faisant ainsi fi des questions importantes au sujet de l'efficacité. Les propositions visant à mettre au point le traitement du secteur de la santé dans les comptes nationaux sont également sans fondements. Toute prolifération de services, qu'ils soient avantageux, nuisibles ou simplement inutiles, serait donc considérée comme une « croissance de la productivité. »

Ye shall no more give the people straw to make brick, as heretofore;
let them go and gather straw for themselves.
And the tale of the bricks, which they did make heretofore, ye shall lay upon
them; ye shall not diminish ought thereof; for they be idle, therefore they cry,
saying Let us go and sacrifice to our God.
Let there be more work laid upon the men, that they may labour therein;
and let them not regard vain words.

– Exodus 5: 7–9

Productivity and Politics: Competing Objectives

There are implications for health human resources productivity (HHRP) in the biblical story. Pharaoh had a serious political problem on his hands; his country was economically dependent on a growing number of increasingly restive and troublesome *gästarbeiter*. This edict deliberately *lowered* HRP in the Egyptian brick industry – more Israelite-hours used per brick produced – in order to work the Israelites harder.¹ Economic efficiency was sacrificed to other objectives, in the much larger context of political, ethnic and religious conflicts. And anyway, the sacrifice was all borne by the Israelites.

The overriding importance of diverse and conflicting interests is the principal message for contemporary discussions of HHRP. Improvements in labour productivity are incontestably the fundamental basis for all improvements in human material well-being. It may therefore be tempting to imagine that because health services are a labour-intensive industry – i.e., a high proportion of costs are direct payments to various types of workers – the pressures of escalating costs could be mitigated by raising the productivity of those workers – getting more care for less money.

Such hopes will be disappointed, however, insofar as they run counter to the interests of the major “stakeholders” in the health services sector. The connection between labour productivity and material well-being holds only for *averages*, and gains in labour productivity are rarely if ever shared equally. Some gain, others lose; and those

who become more productive are not necessarily the gainers, as the Luddites clearly understood. Whether or not potential productivity gains are actually achieved will therefore depend upon the distribution of power among gainers and losers.

Producing Health – Don't Just Do Something

The analysis of HHRP adds a second layer of complexity. A good health system must, among other things, both *do the right thing* and *do things right*. Productivity measurement in the general economy is typically focused on “doing things right”; improvement consists in reducing the inputs required per unit of output – Israelite-hours of work per brick – thus generating an increased flow of goods and services from a given labour force. Requiring brick-makers to glean their own straw when other sources are available is not “doing things right.” The right thing to do, however, is determined by Pharaoh or in other contexts the market.

Health is different. Here, “doing the right thing” is as important as “doing things right.” Failure to do things right wastes time, effort and other resources; failure to do the right thing – and especially doing the wrong thing – may result in injury or death. Even if no harm is done directly, the patient’s condition may worsen for lack of effective care. But “the right thing” can be defined only in terms of health outcomes achieved and depends critically upon the patient’s circumstances. It would obviously be nonsense to record as “improved productivity in the health sector” increased services that were, on the whole, ineffective or harmful to patients’ health.

By far the world’s most egregious example of “doing things wrong” in health is provided by the American private health insurance industry.² It generates enormous extra costs for administrative overheads – somewhere between \$300- and \$400-billion USD in 2009, or well over \$1,000 for every person in the country.³ In return for this vast extra expenditure, non-elderly Americans collectively receive insurance coverage that is not only incomplete and unstable but also potentially subject to *retroactive* cancellation (rescission) in response to large claims. A switch to a universal medicare system as in Canada could, as many Americans have observed, yield productivity gains (greater security, lower cost) large enough to show up as several percentage points of national income (gross domestic product, or GDP).⁴ These gains would be sufficient to cover all of the currently uninsured, with money left over. Covering the uninsured would significantly reduce mortality rates (Wilper et al. 2009).

Why, then, is private health insurance not suppressed as a threat to public health and morals? Most obviously, because it is sustained by a huge, wealthy and politically powerful industry that is able to mobilize deep and irrational ideological responses – ask President Obama (or his secretary of state!). More fundamentally, every dollar spent on administrative waste, however useless or harmful, is a dollar of someone’s income.⁵ In a more rational system, those incomes would vanish. So, private insurers

have mobilized congressional support to block any “public option” with which they could not hope to compete on cost. If Americans want to extend coverage for the under- and uninsured, they must permit this grotesquely inefficient private industry to siphon off a great deal more public money.

Known Unknowns – and Known Knowns

Similar issues of cost without benefit arise within the provision of health services themselves, regardless of the form of financing, though they emerge more often as doing the wrong thing rather than as doing things wrong. Efforts to promote “evidence-based medicine” reflect a widespread presumption that much of the care provided in modern health systems is not evidence-based. Insofar as it is not, it follows that some proportion of the services provided are likely to be not only useless but actively harmful to health – doing the wrong things, however efficiently. It would obviously be misleading – silly – to report increases in such ineffective services, at whatever cost, as improvements in HHR “productivity.”

Medicine is a complex endeavour, a (partially) science-based art rather than a science. The increasing power of medical interventions inevitably increases the associated risks. The best one can hope for is that, on the basis of the best existing evidence, interventions are likely to do more good than harm for those to whom they are offered.

There are at least three classes of research indicating that this assumption does not always hold. Most obvious is the current concern with “medical error,” which focuses on the harm done to patients by errors of commission or omission that could and should have been avoided given current knowledge. Second is the whole field of clinical epidemiology, the continuing effort to evaluate, often through randomized trials, the effectiveness of the ever-growing and changing array of potential interventions. These two lines of inquiry, while sometimes raising embarrassing observations, nevertheless fit within the standard medical program – improving the performance of individual clinicians, and refining the knowledge base. The third – the widespread and long-standing observations of large-scale geographic and institutional variation in clinical practice, noted in a previous column (Evans 2009) – is a more “inconvenient truth,” indicating as it does that a great deal of clinical activity may be ineffective at best.

These fields are far too extensive to permit even a cursory review here. Ideally, though, their findings would translate into changes in clinical practice that would improve productivity – expanding the scope of effective care and weeding out the ineffective or harmful. But the world is more complicated; we can offer a few leading examples of trends in clinical practice in Canada that illustrate the difficulties encountered by efforts to improve HHRP.

Productivity Gains in Hospitals Get No Respect

During the budgetary reductions of the mid-1990s, hospital in-patient use in Canada fell dramatically (Barer et al. 2003). Lengths of stay were cut, and many procedures were shifted from in-patient to day care. Nursing and other staff were correspondingly reduced. That in-patient care was previously often used unnecessarily had been known for years; budget cuts finally overcame a quarter-century of inertia. There were many claims of harm to patients, but no convincing evidence ever materialized.

Clearly, if health outcomes did not suffer, and fewer resources – primarily labour – were required, then HHRP must have increased. Simply counting hospital outputs, however, could easily lead to a different conclusion. Days of in-patient care fell sharply, while the average service intensity and cost of the remaining days increased. If in-patient days are “outputs,” then productivity also fell because more resources were required per unit of “output.” A better index of output might be the number of cases treated, each weighted according to its relative cost. But even this measure can generate erroneous results. If in-patient and day surgery are defined as different products, and the latter are assigned lower weights, then the shift of procedures from in-patient to day care would appear as a reduction in “output” rather than as an increase in productivity.

These reductions in in-patient use have not been widely recognized and celebrated as improvements in HHRP. Rather, they were bitterly attacked, particularly by nurses’ organizations, as threats to the health and safety of patients. (“Some Cuts Don’t Heal” was a brilliant slogan.) Public confidence in the Canadian health system was undermined and has never fully recovered, despite large subsequent infusions of additional money. In-patient utilization has remained down, raising the obvious question of where all the new money is going.

Wherever it is going, however, every additional dollar is going to *someone* as income. On the other hand, “saved resources” are also known as lost jobs and lost incomes.⁶ The productivity improvement of the 1990s may have yielded better health at lower cost – hospitals can be dangerous places – but certainly no benefits to staff.

Pictures of Health?

Diagnostic imaging offers another example of confusion between outputs and outcomes. HHRP appears to have improved dramatically in recent years (CIHI 2008). Newer, better machines, many more procedures per technician – a standard industrial measure – and much more expenditure on imaging. But has the accuracy of diagnoses improved? If so, have therapeutic trajectories been changed? Finally, has all this increased imaging activity improved patient outcomes? No one knows.

What is known is that the availability of diagnostic imaging varies among comparable countries by a factor of about 10, from Japan (92.6 CT scanners and 40.1 MRI

machines per million population) to the Netherlands (5.8 and 5.6). But there are no reports of improved health outcomes associated with higher rates of imaging availability. Increasingly efficient production of images (doing things right) with no identifiable impact on health outcomes (doing questionable things) represents falling, not rising, productivity.

Further, evidence is emerging to indicate that CT scans in particular can be dangerous. The radiation exposure is sufficient to generate a small but measurable increase in the risk of subsequent cancers (Berrington de González et al. 2009), and the dose of radiation varies widely among scans for unknown reasons (Smith-Bindman et al. 2009). Increases over time in CT scanning rates may thus be expected to contribute to increases in cancer rates; this outcome should increase the importance of identifying and quantifying offsetting therapeutic benefits.

Diagnostic ultrasound procedures have also increased dramatically; You and colleagues (2010) report a 58.8% increase between 1996 and 2006 in frequency of ultrasound for singleton pregnancies in Ontario among both high- and low-risk patients. The authors conclude:

Substantial increases in the use of prenatal ultrasonography over the past decade do not appear to reflect changes in maternal risk. ... Efforts to promote more appropriate use of prenatal ultrasonography for singleton pregnancies appear warranted.

Put another way, this is a case of large increases in resource inputs for no improvements in health outcomes – falling productivity – even if no evidence of harm has yet been reported. But “promoting more appropriate use” will be confronted by the fact that providers were paid for all these procedures. And behind them are all those who draw incomes from the corporations that make, market and maintain the machines.

Second Death of a Good Idea

In the physicians' services sector, discussions of HHRP have for 40 years focused intermittently on the extensive evidence that many of the tasks performed by primary care physicians could be performed equally well and less expensively by nurse practitioners or other intermediate-level personnel – same output, less expensive inputs. Some transfer of tasks has occurred, but the potential savings have never materialized. Primary care remains dominated by physicians.

There are two reasons for this failure to “do things right.” One is that potential savings are easily dissipated through overtraining, credentializing and time-intensive styles of practice – team meetings, long educational consultations – that can make the services of the less highly paid personnel more expensive, in actual practice, than those

of the highly paid. This approach understandably undermines any support for change from governments as payers for care.

The second reason is perhaps more fundamental. Cost savings from increased productivity require substitution of the less for the more costly inputs – e.g., more nurse practitioners but fewer doctors. This has not happened in the past, and will not happen in the future. “More of everybody” is a recipe for lower productivity and higher overall costs.⁷

Much of the best analysis of nurse practitioners as substitutes for physicians was done in the early 1970s, simultaneously with large expansions in medical schools enrolments. The subsequent large rise in doctor-to-population ratios eliminated the principal *raison d'être* for alternatives. Interest revived briefly in the 1990s after the doctor-to-population ratio finally stabilized. Once again, however, a major ramping up of medical school capacity has generated a coming surge of new doctors – just now beginning to arrive.⁸ Canada’s medical schools, and the governments that supported them, have doomed for another generation any prospects for input substitution, and associated productivity improvement, in this sector.

Historical patterns of physician activity, primarily reflected in billings, also raise questions about “doing the right thing.” Activity levels per physician rose during the decades in which supply was expanding; over the past decade they appear to have risen even faster, despite falling average hours of work.⁹ This finding suggests (quite large) increases in productivity per physician – measured by service outputs. But how has this increased activity contributed to health outcomes? Again no one knows, and the question will become more pointed as physician supply rises over the next two decades.

Health Services Research Literature – A Failure to Communicate

The health services research literature on HHRP, if one includes everything bearing on the subject, is vast. Yet it is almost entirely focused on measuring outputs rather than outcomes. Much focuses on “doing things right” – producing either more output with less input, or often simply more with more. Very little addresses “doing the right things.” In this literature “more is better” is taken, typically implicitly, as self-evident; HHRP studies rarely concern themselves with explicit evidence of health benefits. A standard keyword search for literature on HHRP yields an unmanageably large list of references, yet despite their obvious relevance will not bring up any of the literature on clinical variations, or health technology assessment, or the results of clinical trials.¹⁰

In fairness, the linkage with the variations literature would be difficult. There is powerful evidence not only that, overall, more is not better, but also that geographical and institutional variation is concentrated among services that are at the physi-

cian's discretion. Services that are unambiguously needed, or alternatively can be left at the patient's choice, do not show such variation. But the observation of variations in aggregate is still not specific as to which services, for which patients, are unnecessary or harmful, and clinical decisions must be made at the individual patient level. The disconnect may also, however, reflect the fact that a focus on outputs tends to be input-using, while that on outcomes has more potential to be input-saving, and thus threaten incomes and jobs.¹¹

More Precisely Wrong? Health Services in the GDP

Output-based measures of productivity all embody the implicit assumption that "more is better." The GDP as traditionally interpreted in the public discourse celebrates this explicitly – "more" is growth, and growth is good.¹² Health services are different. More is definitely not better per se. In many very specific and concrete situations it can be worse, and we all know this. What we want is better health, and this requires just enough – no more – of the *right kinds of care*. In many circumstances, less is more.

Recent proposals by statistical agencies and other analysts to revise the treatment of health services in the national accounts (see the discussion in Sharpe and Bradley 2008) are thus entering onto dangerous ground. Sharpe and Bradley observe that the growth of productivity in the health services sector may be seriously underestimated because the measurement of health sector output in Canada is primarily based on the volume of inputs. Their report for "stakeholders" (more specifically, the Canadian Medical Association) encourages the development of "better measures of health sector output and productivity" that would presumably show that sector in a more favourable light.

But the national accounts, and the GDP estimated from them, explicitly measure activity, economic capacity, *not* well-being.¹³ All the administrative waste in private insurance is counted in the GDP, and Canada's GDP shrank when hospitals became more efficient. Expanded and refined measures of health sector outputs consistent with the principles of national income accounting will, when built into the GDP, yield estimates of health sector "productivity" that are completely detached from actual health outcomes and are consequently irrelevant, when not actively misleading.

When the report of the Sarkozy commission was released in September 2009 (Stiglitz et al. 2009), Joseph Stiglitz warned:

In an increasingly performance-oriented society, metrics matter. What we measure affects what we do. If we have the wrong metrics, we will strive for the wrong things. In the quest to increase GDP, we may end up with a society in which citizens are worse off. (quoted in Osberg and Sharpe 2009)

However statistical agencies may mangle the concept of productivity in health

services, the notion that the escalation of health expenditures can be mitigated through improvements in HHRP is either charmingly naïve or deliberately disingenuous. “Human resources” – aka people – account for a high proportion of health spending, and there is an evidence base on which to draw for examples of improvements in HHRP. But this fact is unlikely to mitigate rising health expenditure. If productivity is measured, wrongly, in terms of outputs, increased “productivity” will take the form of more output and higher costs. If it is defined, correctly, in terms of health outcomes, improved productivity threatens jobs and incomes. Better health for less money is in everyone’s collective interest – and no one’s individual interest.

In the end, the Lord sorted out Pharaoh. Perhaps we should pray.

NOTES

1. Proverbially, “You cannot make bricks without straw” – they break. Mud brick is a composite material like fibreglass, in which the straw prevents the propagation of cracks in the brittle matrix. Pharaoh might have been better advised just to “let my people go,” but the Lord had hardened his heart. He was being set up for a demonstration to Israel that the God of their fathers was the One True God. Pharaoh was being led, as if by an “invisible hand,” to encompass an end that was no part of his intention.
2. Private health insurance generates similar excess administrative expense in other countries, including Canada; the costs are on a much smaller scale only because the scope of the private insurance industry is more restricted.
3. These estimates combine both the extra administrative costs incurred by private insurers relative to a public system, and those incurred by hospitals, physicians and other providers in dealing with the complexities of a private system (though not those incurred by the insured in negotiating their claims).
4. Administrative waste amounts to nearly 20% of American health expenditures, which in turn amount to over 16% of GDP, so the waste is over 3% of GDP.
5. Private insurance also provides an alternative to the egalitarian bias of public programs – offering better coverage and access for those with higher incomes, without the cost of providing similar benefits for the unhealthy and unwealthy.
6. Pharaoh, on the other hand, was providing increased employment. This outcome might have been less unpopular if he had paid a decent hourly wage.
7. Managed care organizations in the United States are able to achieve productivity gains from personnel substitution because they can control their own input numbers and mix. Yet “partial strength produces general weakness” – their productivity gains are achieved at the cost of the unmanaged system in which they are embedded.
8. This result was anticipated nearly a decade ago (Barer 2002).
9. The picture is considerably muddled, however, by the spread of alternative payment programs, various forms of service contracts in which it is difficult to resolve expenditure increases into price and quantity changes.
10. A more comprehensive review is provided in Evans and colleagues (2010).

11. That said, however, we believe that few if any of the participants in the health system sector (or any other) set out deliberately to reduce productivity. Like Pharaoh, they are pursuing other objectives that seem to them reasonable, unaware of any side effects of forgone productivity.
12. The fact that growth may be killing the planet has not yet reached the business pages.
13. The original architects of the national accounts were very explicit on this point. For a recent example of an effort to measure economic well-being in Canada, see Osberg and Sharpe (2009).

REFERENCES

- Barer, M.L. 2002. "New Opportunities for Old Mistakes." *Health Affairs* 21(1): 169–71. Retrieved January 14, 2010. <<http://content.healthaffairs.org/cgi/content/full/21/1/169>>.
- Barer, M.L., S.G. Morgan and R.G. Evans. 2003. "Strangulation or Rationalization? Costs and Access in Canadian Hospitals." *Longwoods Review* 1(4): 10–19. Retrieved January 14, 2010. <<http://www.longwoods.com/product.php?productid=17241&cat=366>>.
- Berrington de González, A., M. Mahesh, K.-P. Kim, M. Bhargavan, R. Lewis, F. Mettler and C. Land. 2009. "Projected Cancer Risks from Computed Tomography Scans Performed in the United States in 2007." *Archives of Internal Medicine* 169(22): 2071–77.
- Canadian Institute for Health Information (CIHI). 2008. *Medical Imaging in Canada, 2007*. Ottawa: Author. Retrieved January 14, 2010. <http://secure.cihi.ca/cihiweb/disPage.jsp?cw_page=AR_1043_E>.
- Evans, R.G. 2009. "There's No Reason for It, It's Just Our Policy." *Healthcare Policy* 5(2): 14-24.
- Evans, R.G., D.G. Schneider and M.L. Barer. 2010. *Health Human Resources Productivity: What It Is, How It's Measured, Why (How You Measure) It Matters, and Who's Thinking about It*. Ottawa: Canadian Health Services Research Foundation.
- Osberg, L. and A. Sharpe. 2009 (December). *New Estimates of the Index of Economic Well-being for Canada and the Provinces, 1981–2008*. CSLS Research Report 2009-10. Ottawa: Centre for the Study of Living Standards. Retrieved January 14, 2010. <<http://www.csls.ca/iwb/prov.asp>>.
- Sharpe, A. and C. Bradley. 2008. *The Measurement of Output and Productivity in the Health Care Sector in Canada: An Overview*. Ottawa: Centre for the Study of Living Standards.
- Smith-Bindman, R., J. Lipson, R. Marcus, K.P. Kim, M. Mahesh, R. Gould, A. Berrington de González and D.L. Miglioretti. 2009. "Radiation Dose Associated with Common Computed Tomography Examinations and the Associated Lifetime Attributable Risk of Cancer." *Archives of Internal Medicine* 169(22): 2078–86.
- Stiglitz, J.E., A. Sen and J.-P. Fitoussi. 2009. Report by the Commission on the Measurement of Economic Performance and Social Progress. Retrieved January 14, 2010. <<http://media.ft.com/cms/f3b4c24a-a141-11de-a88d-00144feabdc0.pdf>>.
- Wilper, A.P., S. Woolhandler, K.E. Lasser, D. McCormick, D.H. Bor and D.U. Himmelstein. 2009. "Health Insurance and Mortality in US Adults." *American Journal of Public Health* 99(12): 1–7.
- You, J.J., D.A. Alter, T.A. Stuckel, S.D. McDonald, A. Laupacis, Y. Liu and J.G. Ray. 2010. "Proliferation of Prenatal Ultrasonography." *Canadian Medical Association Journal* 182(1): 1–9.

The Continuing Saga of Emergency Room Overcrowding: Are We Aiming at the Right Target?

L'interminable saga de l'engorgement des
salles d'urgences : vise-t-on la bonne cible?



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Abstract

Emergency room utilization in Canada is considerably higher than in other industrialized countries. Despite significant investments, recurrent emergency room crises persist. Focusing particularly on the situation in Quebec, this paper examines the evolution of Canada's and Quebec's healthcare systems over the past 40 years and identifies the key developments that resulted in today's problems and the challenges that must be addressed. In this historical overview, we argue that emergency room problems arise from past decisions that gave hospitals a predominant role in the healthcare system and partly modified their original mission, as well as from counterproductive funding modalities. Other decisions have also weakened primary care services, which are strongly focused on acute health problems and are poorly coordinated with the rest of the system. Symptomatic remedies have only eased the pressure on emergency rooms, but the real solution is more complex and must address the historical residues that are paralyzing our healthcare system.

Résumé

L'utilisation des salles d'urgences au Canada est considérablement plus élevée que dans les autres pays industrialisés. Malgré d'importants investissements, les crises récurrentes dans les salles d'urgence continuent d'avoir lieu. Mettant l'accent sur la situation au Québec, cet article examine l'évolution des systèmes de santé québécois et canadien au cours des 40 dernières années et dégage les principaux éléments qui ont mené aux problèmes actuels ainsi que les défis auxquels il faudrait s'attaquer. Dans cet aperçu historique, nous alléguons que les problèmes liés aux salles d'urgences proviennent de décisions antérieures, lesquelles ont donné aux hôpitaux un rôle prédominant dans le système de santé et ont partiellement modifié leur mission initiale. Les problèmes viennent également de modes de paiement contre performants. D'autres décisions ont également affaibli les services de soins de santé primaires, lesquels sont fortement centrés sur la réponse aux problèmes de santé aigus et restent peu coordonnés avec le reste du système de santé. Les sparadraps auxquels on a eu recours n'ont fait que soulager la pression sur les salles d'urgence. Le traitement indiqué est plus complexe et doit s'attaquer aux achasmes qui paralysent le système de santé.

AMONG INDUSTRIALIZED COUNTRIES, CANADA HAS THE HIGHEST RATE of emergency room (ER) utilization, both in the population at large and among persons with chronic conditions (Schoen et al. 2004, 2005, 2008). It is also Canadians who, in the highest proportions, report using the ER for services that could be provided by their regular doctor, and waiting the longest in emergency

rooms before being seen by a physician (Schoen et al. 2004, 2005, 2008). There is very little systematic information on ER utilization in Canada, and interprovincial comparisons are constrained by differences in the types of data collected (Rowe et al. 2006). Nevertheless, for the past several years, emergency room overcrowding has been seen as a frequent and significant problem in many provinces (Rowe et al. 2006; "Emergency Ward on Lawn Approved" 1987; "ER Crowding Getting Worse" 1999; "ER Overcrowding Delays" 2004). There have been reports of ambulances being turned away, patients on stretchers in corridors and occupation rates exceeding capacity. In Quebec, since the 1970s, studies have shown an increase in ER utilization and have reported the emergence of problems with overcrowding (MASQ 1974; CSSSMM 1977; Steinmetz and Hoey 1978). Temporal analyses show that overcrowding results from a constant increase in patient volumes and longer stays in the ER (Boyle et al. 1992; Breton and Camirand 1995; Groupe de travail sur l'analyse de la situation dans les urgences 1999; CCNU 2008). The use of emergency rooms by patients with less serious conditions strains the human resources and technologies of both the emergency department and the hospital (Pineault et al. 1989). In Quebec, the average ER stay reached 16 hours in 2008 (CCNU 2008). Annual mean occupation rates for stretchers were at 110%, with yearly peaks as high as 130% in recent years. Thus, overcrowding can be defined as a situation where the demand for emergency services exceeds the ability to provide care in a reasonable amount of time (CAEPNENA 2001).

Quebec has endured recurrent emergency room crises for nearly 40 years and yet, despite significant investments, still has not managed to resolve these seemingly intractable problems. Could it be that the real, fundamental problem has not been touched? Could it be that corrective measures have aimed at the wrong target?

Our Approach

Emergency room overcrowding is a challenge to health systems in many parts of the world. There are a number of strong review articles on the various factors involved. Approaching the problem from a systemic perspective, this paper presents instead our views and analysis of the historical context and of the potential solutions to the current situation in Quebec. The paper is organized in the following way. First, we review the history of the healthcare system over the past 40 years, identifying the major orientations that have led to problematic situations in ERs today. We then look at the main solutions that have been tried over time to correct these problems. Finally, we discuss the main challenges that, from our point of view, must be addressed if we are to prevent these problems from constantly recurring. We believe that the Quebec experience can be useful to other provinces that have more recently been faced with such problems.

Our approach is adapted from that of Springate-Baginski and Soussan (2001).

It is based largely on a review of policy documents, related papers and grey literature and on verification of facts with key informants who have in-depth knowledge of health policies and emergency rooms. The reconstruction of the history was validated by independent analysts and by a workshop with decision-makers, clinicians and researchers interested in the issue of emergency room access and use (Roberge 2008).

The Hospital's Key Role in the Healthcare System

Several policy decisions taken since the end of the 1950s have placed the hospital at the heart of the Canadian healthcare system and have made the ER the main entry point into the system. This predominant role arises out of the federal government's decision to adopt a policy of incremental public funding of healthcare that began with hospitals (Desrosiers 1999). Canada's Hospital Insurance and Diagnostic Services Act of 1957 provided free care in hospitals and outpatient clinics, including complementary laboratory and radiology services, but this free access did not extend to private medical clinics. This led to a public perception of hospitals as a first recourse, because they were the only place where services were "free" (Desrosiers 1999).

In Quebec, this perception was reinforced by the decision to develop hospital-based outpatient services, to the detriment of services provided outside hospitals. Notably, one of the dispositions of Quebec's 1971 framework legislation on health and social services found in no other province or territory in Canada stipulates that hospitals must recruit general practitioners and place them in charge of emergency services (Desrosiers 1999). With this legislation, a front-line emergency service was created in hospitals, and general practitioners no longer had any incentive to develop an extended and integrated network of services outside them, especially since, at that time, massive investments were being made in facilities and equipment for hospitals' outpatient services (Desrosiers and Gaumer 1987).

Following the establishment of hospital insurance, the resource planning undertaken in Quebec significantly modified the missions of acute care hospitals. These changes had a definite impact on the internal organization of these hospitals and of their emergency services. As the system underwent a process of deinstitutionalizing psychiatric patients, hospitals found themselves, in the early 1970s, entrusted with the responsibility of caring for mental health problems. A new clientele, coming out of the "asylums," would henceforth turn to the emergency rooms. Then, in 1976, the Ministry of Health and Social Services (MSSS) required all hospitals with 200 or more beds to reserve 10% of their beds for long-term care. Very soon thereafter, in most hospitals, the proportion of long-term beds greatly surpassed this initial standard. Faced with this situation, hospitals were given priority for admissions into the long-term care network. Thus, the hospitals, via their emergency rooms, rapidly became the point of entry for the elderly into this network (CSSSMM 1977). In addi-

tion, hospitals became an important safety net for the elderly population seeking home care, because the government invested very little in such services at that time (Pineault et al. 1989). Finally, the hospital also gradually became the preferred location for end-of-life care, whereas before, most people died in their homes.

Further, when hospitals became public establishments, they received global budgets that were partly based on their past activities. This approach to budget-setting, which is also predominant elsewhere in Canada, although with some variations, is one of the factors that has most debilitated the healthcare network (Ouellette 2007). Because it is not directly linked to either the quantity or the quality of services provided, it does not encourage efficiency, nor does it provide any productivity incentives. Hospitals' budgets remain the same regardless of their activities. Thus, hospital administrations adopted management strategies that had an impact on the availability of acute care beds and on the capacity to admit patients via the ER. For example, for the past several years, hospitals have elected to close beds temporarily at the end of the fiscal year to avoid incurring a budget deficit.

Finally, in recent decades, many factors have affected the availability of beds. In the overall movement of re-thinking massive investments in hospital-based services (Evans et al. 1994; Angus et al. 1995), and following upon the Rochon Commission's recommendations (1988), hospitals in the early 1990s had to make the shift towards ambulatory care. In this same period, under pressure from the need to balance budgets, the federal and provincial governments undertook policies of reducing expenses that resulted in massive cutbacks to hospitals. These severe cuts led to closures not only of beds, but of entire hospitals, and drastic reductions in qualified medical and

nursing staff ("La Prochaine réforme" 2000). The result was a reduction in the availability of short-term care beds, a movement that was, in fact, observed throughout Canada and all the OECD countries (OECD 2007). Still, it is difficult to draw conclusions about the adequacy of resources in terms of beds. The existing standards for these resources are neither shared nor stable, particularly because of

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the rapidity and scope of changes in diagnostic and therapeutic procedures and in the locations of service delivery to patients (Christensen et al. 2000; Institute of Medicine 2001; Contandriopoulos et al. 2005). Nevertheless, hospital administrators have noted an insufficiency of beds (Contandriopoulos et al. 2005) and consider the lack of beds

to be a factor in ER overcrowding (Rowe et al. 2006). The appearance of overflow units in many ERs is possibly symptomatic of a reduced capacity in hospitals to admit patients (“La Prochaine réforme” 2000).

A Weak Primary Healthcare Network Poorly Coordinated with the Rest of the System

Various decisions taken over the years regarding the organization and funding of primary healthcare services had important consequences for ER utilization. In Quebec, the 1971 health and social services legislative framework was based on a vision of primary care services anchored in the community that would integrate the health and social services sectors. This idea found its application in the creation of local health and social services centres (CLSCs). Physicians expressed considerable opposition to the CLSCs and to salaried remuneration (Lesemann 1981). This opposition led to the development of a large network of private clinics (Levesque and Bergeron 2003), which has become the prevalent model for primary care services, as in the rest of Canada (Hutchison et al. 2001). These two networks, public and private, have evolved in parallel; today there are around 800 private clinics and 147 CLSCs (Levesque et al. 2007). The CLSCs were implemented in successive waves, without their mission ever being clearly defined. Not only have the CLSCs not become the main door into the system, as envisioned, but in fact they remain poorly integrated into the rest of the system, particularly in urban areas, and they are considered to be rather unproductive (Bozzini 1988; Desrosiers 1982a,b; Lesemann 1981; Pineault et al. 2008).

Until quite recently, healthcare reforms paid little attention to the network of private clinics. Even in the shift towards ambulatory care in the 1990s, savings generated in hospitals were only partially redirected towards the primary care network, and this network has not been reorganized (Clair 2000). In addition, the Canada Health Act of 1984 maintained the obligation for hospitals to provide diagnostic services at no charge, without extending this free access to the same services provided in medical clinics. Thus, to some extent, the law contributed to the rationing of resources in the primary care network (Lamarche et al. 2007). In fact, physician remuneration constituted the primary source of funding for medical clinics. For the most part, these clinics were formed as small entities supported by minimal diagnostic, therapeutic and informational infrastructures, which rendered the primary network that much more precarious (Hamel et al. 2007). Moreover, the absence of any financial or clinical integration means that the medical clinics remain poorly coordinated with the other components of the healthcare network, such that physicians and administrators see little advantage in working together (Lamarche et al. 2007; Levesque et al. 2007). Finally, the primary healthcare network that has sprung up is mainly focused on drop-in services

to the detriment of any practice oriented towards the management of chronic illnesses (Hamel et al. 2007). In fact, Quebec is the province with the fewest family physicians per capita. It is also among the provinces with the poorest accessibility to primary care services (Lamarche et al. 2007). Recent studies from the patients' perspective show that patients who experience poorer accessibility to and continuity of primary care are more

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likely to use the ER (Ionescu-Ittu et al. 2007; Roberge et al. 2007; Haggerty et al. 2007).

All in all, the role assigned to hospitals, and the decisions taken regarding the organization and funding of the hospital network, added to the parallel development of a weak primary healthcare network. Together, these factors have led to the problems now being experienced in ERs. It is not

surprising that the ER has become the substitute location for primary care, providing access to diagnostic services and to generalist and specialist physicians who have become otherwise difficult to access. Nor is it surprising that the ER has become a substitute for hospitalization, to the point where many hospitals have set up short-stay units in proximity to the emergency room.

Symptomatic Treatment for Emergency Room Problems

For more than 40 years, efforts have been made to resolve the ER crisis by working either upstream or downstream, or on emergency room functioning. The nature of the solutions that have been tried is particularly consistent with the role assigned to hospitals over the years, to the detriment of primary care services. The solutions have also been greatly influenced by the results of an empirical cross-sectional study carried out in the mid-1980s (Spitzer and Sicotte 1985), which concluded that ER overcrowding was essentially due to the excessively long stays of patients on stretchers, particularly those waiting to be admitted. As mentioned, later studies revealed the extent to which steady growth in patient volume contributes to the congestion. More recently, the measures implemented have generally tried to correct only one aspect of the problem, i.e., stretcher patients, while little attention has been paid to the utilization of emergency services by ambulatory patients.

The MSSS has thus established a system for monitoring ER activities that is based almost exclusively on indicators related to stretcher patients and has developed standards for their length of stay. Inexplicably, these far exceed standards promoted

elsewhere in Canada and in the world (Vadeboncoeur et al. 1999). For example, one standard relates to the proportion of patients staying longer than 48 hours in the ER, which should not exceed 4%.

Among the classic solutions implemented in the past 30 years was the establishment of new places for the elderly in long-term care facilities to free acute care hospital beds and stretchers occupied by patients waiting for admission to long-term care. Another was the occasional injection of funds into hospitals to re-open beds that had been closed to balance budgets. Such measures had only a moderate impact on ER overcrowding (Boyle et al. 1992).

Government authorities also adopted performance improvement measures that were sometimes motivating or, at other times, coercive. For example, the Tactical Intervention Group implemented in the early 1990s – a sort of “emergency room police” – had the power to recommend sanctions (e.g., budget cuts) against hospitals that did not manage to respect the standard of a maximum 48-hour stay (Groupe tactique d’intervention 1991). Other approaches included the organization of public forums on the issue (MSSS 1999) and, at the beginning of this decade, the implementation of legislative and incentive measures aimed at constraining the loss of qualified manpower in the ER (“Pour pallier la crise” 2007; “Infirmières” 2007). All these measures constituted symptomatic treatments in times of crisis. They helped to defuse the crises of the moment, but without actually resolving the fundamental problems of emergency rooms conclusively.

Finally, as is well known, emergency rooms have long been the focus of extensive media coverage. To some extent the media attention, and consequently the attention from politicians, probably provided significant leverage for managers and professionals in hospitals and emergency rooms (“La Prochaine réforme” 2000; “Guérir les urgences” 2002). History has shown that media visibility over the years has been a source of pressure on decision-makers, who have had to react to dramatic revelations and horror stories (“Une réforme urgente” 2000).

Conclusions

A historical overview of the broad orientations of the healthcare system reveals that the recurrent ER crisis is symptomatic of a much deeper problem. It results from directions set many years ago that gave hospitals a predominant role at the expense of primary care, while leaving both networks to evolve in parallel. It is also a reflection of Quebec’s healthcare system performance, which falls within the average in Canada but is far from being among the best in the world (Lamarche et al. 2007). One of the system’s main weaknesses is in the organization of primary care, which is strongly focused on acute health problems, to the neglect of long-term management of chronic diseases.

A major component of the solution to ER problems is therefore to be found in strengthening and reorganizing primary care services. It has been amply demonstrated that the most efficient healthcare systems are those in which service provision is based on a well-organized primary care network (Starfield 1998; Macinko et al. 2003; Shi and Starfield 2001). There is, moreover, consensus in Quebec and in Canada around the need to consolidate primary care services (Clair 2000; Kirby 2002; Romanow 2002). On this subject, the recent work of Quebec's Study Group on Health Care System Funding (Castonguay et al. 2008) recommended developing primary care services in organizations that will assume responsibility for health status, access and coordination of services for individuals and communities, in ways that extend beyond their contact with the healthcare system and the provision of walk-in services. Developing such organizations involves group practice, multidisciplinary teamwork, technologies for diagnosis and treatment that support the responsibilities assumed, and mechanisms to coordinate services. It also requires proper funding of primary care services and physician remuneration systems based on scope of responsibilities (e.g., capitation) (Lamarche et al. 2007).

Another fundamental issue in resolving the ER situation is the need to reinforce integration among the levels of service. Making health organizations' funding interdependent and tied to productivity will motivate them to define one another's roles and promote integration among the different network partners. The experience of Kaiser Permanente and the Veterans Administration in the United States are illustrative examples of systems that combine these characteristics. The results are striking: thanks to a payment-for-performance system, and by shifting resources from the hospital to the ambulatory care level, these systems have achieved better health outcomes with lower hospital and ER utilization (Feachem et al. 2002; Armstrong et al. 2006).

Finally, strengthening primary care and promoting the integration of service levels requires changing the Canada Health Act, which in fact limits coverage of services to those supplied by hospitals and physicians. Such a modification would broaden coverage to include services provided by primary care organizations, and the federal government's contribution would not be linked with service location (Lamarche et al. 2007).

If we do not deal with the historical residues that are paralyzing our healthcare system, we will have to keep managing increasingly severe crises in our emergency rooms. We know that symptomatic remedies provide only temporary relief. The treatment required is more complex and long-term.

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REFERENCES

- Angus, A.E., A. Ludwig, J.E. Cloutier and T. Albert. 1995. *Sustainable Health Care for Canada. Synthesis Report*. Ottawa/Kingston: Queen's University of Ottawa Economic Projects.
- Armstrong, B., O. Levesque, J.B. Perlin, C. Rick, G. Schectman and P.M. Zalucki. 2006. "Reinventing Veterans Health Administration: Focus on Primary Care." *Healthcare Quarterly* 2: 80–85.
- Boyle, P., R. Pineault and D. Roberge. 1992. "Assessing Quebec's Multi-Component Program to Reduce Emergency Room Overcrowding." *Canadian Public Policy* 18(2): 189–202.
- Bozzini, L. 1988. "Local Community Services Centres (CLSCs) in Quebec: Description, Evaluation, Perspectives." *Journal of Public Health Policy* 9(4): 346–75.
- Breton, M. and F. Camirand. 1995. *État de situation dans les salles d'urgences 1991–1995*. Quebec: Ministry of Health and Social Services, Government of Quebec.
- Canadian Association of Emergency Physicians and National Emergency Nurses Affiliation (CAEPNENA). 2001. "Joint Position Statement on Emergency Department Overcrowding." *Canadian Journal of Emergency Medicine* 3(2): 82–84.
- Castonguay, C., J. Marcotte and M. Venne. 2008. *En avoir pour notre argent. Rapport du Groupe de travail sur le financement du système de santé*. Quebec: Government of Quebec.
- Christensen, C.M., R. Bohmer and J. Kenagy. 2000 (September–October). "Will Disruptive Innovations Cure Health Care?" *Harvard Business Review* 78(5): 102–11.
- Clair, M. 2000. *Les Solutions émergentes : rapport et recommandations*. Quebec: Commission d'étude sur les services de santé et les services sociaux.
- Comité de coordination nationale des urgences (CCNU). 2008 (March). *Données évolutives régionales des taux d'occupation des civières et des durées de séjour dans les services d'urgence au Québec, 1998–2008*. Unpublished work.
- Conseil de la santé et des services sociaux de Montréal métropolitain (CSSSMM). 1977 (January). *Rapport de l'étude sur les politiques d'admission des malades dans 25 centres hospitaliers de courte durée opérant un service d'urgence de la région de Montréal*. Montreal: Author.
- Contandriopoulos, D., A.-P. Contrandriopoulos, J.-L. Denis and A. Valette. 2005. *L'Hôpital en restructuration. Regards croisés sur la France et le Québec*. Montreal: Les Presses de l'Université de Montréal.
- Desrosiers, G. 1982a (January 30). "Les Centres locaux de services communautaires au Québec." *Le Concours médical*: 649–53.
- Desrosiers, G. 1982b (February 6). "Les Centres locaux de services communautaires au Québec." *Le Concours médical*: 847–50.
- Desrosiers, G. 1999. "Le Système de santé au Québec bilan historique et perspective d'avenir : conférence inaugurale du 51e congrès de l'Institut d'histoire de l'Amérique française, octobre 1998." *Revue d'histoire de l'Amérique française* 53(1): 3–18.
- Desrosiers, G. and B. Gaumer. 1987. *L'Occupation d'une partie du champ des soins de première ligne par l'hôpital général : faits, conséquences, alternatives*. Rapport présenté à la Commission d'enquête sur les services de santé et les services sociaux. Quebec: Les Publications du Québec.
- "Emergency Ward on Lawn Approved." 1987 (June 1). *Toronto Star*: A7.
- "ER Crowding Getting Worse: Hospitals Turning Ambulances Away More Often." 1999 (November 22). *Hamilton Spectator*: A2.

The Continuing Saga of Emergency Room Overcrowding: Are We Aiming at the Right Target?

- “ER Overcrowding Delays Crucial Clot Busters for Heart Attack Patients.” 2004 (November 26). *Edmonton Journal*: A18.
- Evans, R., M.L. Barrer and T. Marmor. 1994. *Why Are Some People Healthy and Others Not? The Determinants of Health of Populations*. New York: Aldine de Guyer.
- Feachem, R.G.A., N.K. Sekhri and K.L. White. 2002. “Getting More for Their Dollar: A Comparison of the NHS with California’s Kaiser Permanente.” *British Medical Journal* 324: 135–43.
- Groupe de travail sur l’analyse de la situation dans les urgences. 1999. *Plan d’action : la situation dans les urgences en 1999. Un défi majeur pour le réseau*. Quebec: Ministry of Health and Social Services.
- Groupe tactique d’intervention. 1991. *Rapport de la première année d’activité*. Quebec: Ministry of Health and Social Services.
- “Guérir les urgences. Québec : à quand la décongestion ?” 2002 (September 15). *La Presse*: A8.
- Haggerty, J.L., D. Roberge, R. Pineault, D. Larouche and N. Touati. 2007. “Features of Primary Healthcare Clinics Associated with Patients’ Utilization of Emergency Rooms: Urban–Rural Differences.” *Healthcare Policy* 3(2): 72–85.
- Hamel, M., R. Pineault, J.F. Levesque, D. Roberge, A. Lozier-Sergerie, A. Prud’homme and B. Simard. 2007. *L’Organisation des services de santé de première ligne : portrait des services médicaux de première ligne à Montréal et en Montérégie. Rapport et résumé*. Montreal: Institut national de santé publique du Québec, Agence de la santé et des services sociaux de Montréal and the Research Centre of Charles LeMoyné Hospital.
- Hutchison, B., J. Abelson and J. Lavis. 2001 (May–June). “Primary Care in Canada: So Much Innovation, So Little Change.” *Health Affairs* 20(3): 116–31.
- “Infirmières : Couillard maintient les primes. Une mesure temporaire en attendant une solution permanente.” 2007 (November 13). *Le Devoir*: A1.
- Institute of Medicine. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press.
- Ionescu-Ittu, R., J. McCusker, A. Ciampi, A.-M. Vadeboncoeur, D. Roberge, D. Larouche, J. Verdon and R. Pineault. 2007. “Continuity of Primary Care and Emergency Department Utilization among Elderly People.” *Canadian Medical Association Journal* 177(11): 1362–68.
- Kirby, M.J.L. 2002. *The Health of Canadians – The Federal Role. Final Report. Volume Six: Recommendations for Reform*. Ottawa: The Standing Senate Committee on Social Affairs, Science and Technology.
- Lamarche, P.A., R. Pineault and Y. Brunelle. 2007 (October 31). *Modes d’organisation des services prometteurs pour le Québec. Rapport déposé au Groupe de travail sur le financement des services de santé*.
- “La Prochaine réforme de la santé doit inciter à la productivité : notre système actuel vise principalement à rationner les ressources au lieu d’être bâti pour viser l’amélioration des services et la satisfaction des ‘clients.’” 2000 (November 3). *Le Devoir*: A9.
- Lesemann, F. 1981. *Du pain et des services : la réforme de la santé et des services sociaux au Québec* (pp. 159–63, 193–95). Montreal: Éditions Coopératives Albert Saint-Martin.
- Levesque, J.F. and P. Bergeron. 2003. “Quebec’s Health Care System: Origins, Organization and Future.” In C.P. Shah, ed., *Public Health and Preventive Medicine in Canada*, 5th ed. (pp. 517–29). Toronto: W.B. Saunders Canada.

- Levesque, J.F., D. Roberge and R. Pineault. 2007. "La Première ligne de soins : un témoin distant des réformes institutionnelles et hospitalières au Québec?" In M.J. Fleury, M. Tremblay, H. Nguyen and L. Bordeleau, eds., *Le Système sociosanitaire au Québec : gouvernance, régulation et participation* (pp. 63–78). Montreal: Gaëtan Morin éditeur, Chenelière Éducation.
- Macinko, J., B. Starfield and L. Shi. 2003. "The Contribution of Primary Care Systems to Health Outcomes within Organization for Economic Co-operation and Development (OECD) Countries, 1970–1998." *Health Services Research* 38(3): 831–65.
- Ministère de la santé et des services sociaux (MSSS). 1999. *Relever ensemble le défi des urgences. Plan d'action issu du forum sur la situation des urgences tenu à Montréal les 4 et 5 octobre*. Quebec: Author.
- Ministère des affaires sociales du Québec (MASQ). 1974. *Rapport du comité « Système de services d'urgences »*. Quebec: Author.
- Organization for Economic Co-operation and Development (OECD). 2007. *Health at a Glance: OECD Indicators*. Copenhagen: Author.
- Ouellette, P. 2007. *Efficienc e et budgétisation des hôpitaux et autres institutions de santé au Québec. Rapport de recherche remis au Groupe de travail sur le financement du système de santé*. Montreal: University of Montreal.
- Pineault, R., J.-F. Levesque, M. Breton, M. Hamel and D. Roberge. 2008. "Réalisations et potentiel des organisations publiques et privées de première ligne dans deux régions du Québec." In F. Béland, A.-P. Contandriopoulos, A. Quesnel-Vallée and L. Robert, eds., *Le Privé dans la santé : un débat sans fin ?* Montreal: University of Montreal.
- Pineault, R., D. Roberge, P. Boyle, Y. Pelchat and C. Sicotte. 1989. *Évaluation de l'efficacité et de l'efficience des mesures gouvernementales visant à réduire l'engorgement des salles d'urgence. Rapport final*. No. R89-04. Montreal: Groupe de recherche interdisciplinaire en santé, University of Montreal.
- "Pour pallier la crise attendue cet été dans les hôpitaux. Une prime aux infirmières des salles d'urgence." 2007 (June 10). *La Presse*: A10.
- Roberge, D. 2008 (April 17). "La Petite histoire des urgences au Québec de 1960 à ce jour." Allocution présentée dans le cadre du colloque « Pour en finir avec les urgences », Montreal.
- Roberge, D., D. Larouche, R. Pineault, J.-F. Levesque, M. Hamel and B. Simard. 2007. "L'Urgence des hôpitaux : un filet de sécurité pour la première ligne ?" *Première ligne* 21(3): 16–23.
- Rochon, J. 1988. *Rapport de la Commission d'enquête sur les services de santé et les services sociaux*. Quebec: Les Publications du Québec.
- Romanow, R.J. 2002. *Building on Values: The Future of Health Care in Canada – Final Report*. Saskatoon: Commission on the Future of Health Care in Canada.
- Rowe, B.H., K. Bond, M.B. Ospina, S. Blitz, M. Schull, G. Innes, M. Afilalo, M. Bullard, S.G. Campbell, G. Curry, B. Holroyd, P. Toon and D. Sinclair. 2006. *Emergency Department Overcrowding in Canada: What Are the Issues and What Can Be Done?* Technology Overview No. 21. Ottawa: Canadian Agency for Drugs and Technologies in Health.
- Schoen, C., R. Osborn, P.T. Huynh, M. Doty, K. Davis, K. Zapert and J. Peugh. 2004. "Primary Care and Health System Performance: Adults' Experiences in Five Countries." *Health Affairs Web Exclusive*: W4-487–W4-503. Retrieved January 7, 2010. <<http://content.healthaffairs.org/cgi/reprint/hlthaff.w4.487v1>>.

The Continuing Saga of Emergency Room Overcrowding: Are We Aiming at the Right Target?

Schoen, C., R. Osborn, S. How, M. Doty and J. Peugh. 2008. "In Chronic Condition: Experiences of Patients with Complex Health Care Needs, in Eight Countries, 2008." *Health Affairs Web Exclusive*: W1–W16.

Schoen, C., R. Osborn, P.T. Huynh, M. Doty, K. Zapert, J. Peugh and K. Davis. 2005. "Taking the Pulse of Health Care Systems: Experiences of Patients with Health Problems in Six Countries." *Health Affairs Web Exclusive*: W5-509–W5-525. Retrieved January 7, 2010. <<http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.509v3>>.

Shi, L. and B. Starfield. 2001. "The Effect of Primary Care Physician Supply and Income Inequality on Mortality among Blacks and Whites in US Metropolitan Areas." *American Journal of Public Health* 91(8): 1246–50.

Spitzer, W.O. and C. Sicotte. 1985. *Analyse statistique, opérationnelle et clinique du phénomène de l'engorgement des salles d'urgence des centres hospitaliers de courte durée de la région montréalaise (06A)*. Montreal: McGill University.

Springate-Baginski, O. and J. Soussan. 2001. *A Methodology for Policy Process Analysis: Livelihood–Policy Relationships in South Asia*. London: UK Department for International Development.

Starfield, B. 1998. *Primary Care: Balancing Health Needs, Services and Technology*, rev. ed. London: Oxford University Press.

Steinmetz, N. and J.R. Hoey. 1978. "Hospital Emergency Room Utilisation in Montréal Before and After Medicare. The Quebec Experience." *Medical Care* 16(2): 133–39.

"Une réforme urgente et nécessaire." 2000 (June 3). *La Presse*: B2.

Vadeboncoeur, A., P. Beaudet, K. Pecko and D. Somerville. 1999. *Projet urgence 2000 : de paratonnerre à plaque tournante*. Quebec: Ministry of Health and Social Services.

Canada's Access to Medicines Regime: Promise or Failure of Humanitarian Effort?

Le Régime canadien d'accès aux médicaments :
promesse ou échec d'un geste humanitaire?



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Abstract

There is often a gap between promises made politically and the will to implement these promises meaningfully. One example is Canada's Access to Medicines Regime (CAMR). CAMR was enacted following a WTO decision that changed global intellectual property rules, allowing countries to issue compulsory licences for the production and export of domestically patented medicines to countries without pharmaceutical manufacturing capacity. Ideally, CAMR would be a vital part of Canada's international assistance. However, in the three years since CAMR was implemented, this attempt to improve medicines access by the world's neediest appears instead to be largely a failure of Canadian humanitarian efforts.

Résumé

Il y a souvent un écart entre les promesses politiques et la volonté de les concrétiser. Le Régime canadien d'accès aux médicaments (RCAM) en est un exemple. Le RCAM a été décrété suite à une décision de l'OMC qui modifiait la réglementation mondiale quant à la propriété intellectuelle, afin de permettre aux pays d'émettre des licences obligatoires pour la fabrication et l'exportation de médicaments brevetés localement vers les pays qui ne sont pas dotés d'une industrie pharmaceutique. Idéalement, le RCAM serait un élément contribuant à l'aide internationale offerte par le Canada. Cependant, depuis la mise en place du RCAM, il y a trois ans, les efforts pour améliorer l'accès aux médicaments par les plus nécessiteux semblent plutôt se traduire par un échec du geste humanitaire du Canada.

AS A CONDITION OF MEMBERSHIP IN THE WORLD TRADE ORGANIZATION (WTO), member countries agreed to implement common standards for all intellectual property, including pharmaceutical patents and products under the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). Pharmaceutical patents create market monopolies for a limited time for companies that hold patents and thus limit the availability of cheap generic drugs. Even though TRIPS restricts generic drug production until patents expire, it also contains public health provisions that allow countries to override patents. For example, a country can issue a compulsory licence for public health reasons. This licence permits a country the discretion to allow generic production of a patented drug by a third party without the patent holder's consent, while the licensee pays the patent holder a reasonable royalty. Because this provision was originally permitted only for predominantly domestic use, a poor country without manufacturing capabilities was unable to benefit from it.

The WTO's (2003) Decision on the Implementation of Paragraph 6 of the Doha

Declaration on TRIPS and Public Health clarified the issue of how compulsory licences could be used to provide countries without a domestic manufacturing capacity access to medicines. The “Paragraph 6 decision” allows countries with manufacturing capacity to produce and export generic versions of domestically patented products under a compulsory licence to those countries without.

With much fanfare, Canada amended both its patent law and the Food and Drugs Act in May 2004 to take advantage of this new provision so that it could issue compulsory licences and export generic versions of patented medicines to countries in need. Royal assent was granted in May 2005 and the implementing regulations were published on June 1, 2005. The legislation adds a section to the Canada Patent Act entitled “Use of Patents for International Humanitarian Purposes to Address Public Health Problems” and is now known as CAMR.

In discussing CAMR and its implementation, we focus on access to medicines for HIV/AIDS for two reasons. First, millions of people in developing countries still do not have access to treatment. Second, while generic versions of first-line therapies are now available at low cost, in the range of USD\$120 per person per year, the same situation does not apply for second-line therapies. There is significant need to generate generic competition for these medicines to bring prices down from current levels of USD\$700 to \$1,700 per person (Flynn and Palmedo 2007). We note, though, that the situation is equally desperate for the treatment of many other diseases.

The Problems

Because CAMR’s failure to improve access to medicines has already been analyzed by many (Attaran 2007; Cohen and Esmail 2007; Elliott 2006; Canadian HIV/AIDS Legal Network 2007), here we highlight provisions of the legislation that particularly affect the likelihood that Canadian generic medications will be exported in a timely way. Some of the difficulties arise from the original Paragraph 6 decision because it itself is administratively demanding. However, CAMR adds extra layers of complication.

A Canadian generic company has to attempt to negotiate a voluntary licence from the patent holder for 30 days. Only if these negotiations fail to produce an agreement on “reasonable terms and conditions” can the company apply for a compulsory licence (Patent Act 1985). The legislation does not specify what constitutes “reasonable” terms and conditions and thus can potentially lead to unnecessary delays and, from a company’s perspective, high costs such as legal fees. Moreover, CAMR stipulates that the time window starts only once a generic company has identified a would-be importer. This stipulation creates a 30-day period during which the patent holder and others, such as the United States Trade Representative, could try to pressure the importing country not to use the compulsory licence route. Equally important, even if a generic company is granted a compulsory licence, and then enters into a contract to export,

CAMR allows the compulsory licence to last for only two years. Further, the contract must specify the volume of drugs to be shipped during the two years. The compulsory licence is renewable only if the contract is not fulfilled within the period, that is, if the agreed-upon volume has not been supplied. Otherwise, should generic companies want to continue to supply the original purchaser or to supply new customers with the same product, they are then required to undertake the entire contractual process again (Patent Act 1985).

Additionally, one of the strongest criticisms levelled at CAMR by those who believe that patents and the availability of generics are not significant factors in the lack of access to HIV/AIDS medications in developing countries is that it ignores the realities of the global generic industry. Critics claim that Canadian generic producers come from a price point that is typically not competitive (Attaran 2007), meaning that production and shipping costs can make the cost of most Canadian contracts unattractive. Claims about Canadian-made generics being uncompetitive have been shown to be inaccurate because international non-governmental organizations, such as the Clinton Foundation, have been able to reach agreements to reduce prices with the companies that supply the active ingredients for generic medications; these lower prices are passed on to companies such as Apotex (personal communication, generic company representative 2008). Still, what holds is that the effective use of CAMR is limited by bureaucratic constraints and transaction costs for both developing countries and generic companies. We illuminate this point below.

Despite Apotex's receiving Health Canada approval for Apo-TriAvir[®], a fixed-dose combination antiviral medication, in August 2006, it could not enter into the voluntary licensing procedure, much less apply for a compulsory licence, because no country had requested the product (Apotex Group 2007). Once Rwanda notified the WTO in July 2007 of its intent to import 260,000 packs of Apo-TriAvir[®] (WTO 2007a,b), Apotex responded that it would work towards meeting this order (Talaga 2007). After Apotex's negotiations for voluntary licences with the patent holders failed, a compulsory licence was granted on September 20, 2007, and Canada notified the WTO of this authorization on October 4, 2007 (WTO 2007b), at the same time that Rwanda started an international tender process to supply its needs. On May 7, 2008 Apotex announced that it had won the tender to provide Rwanda with Apo-TriAvir[®] under CAMR with the winning bid price of 19.5 cents per tablet (priced at cost) (Apotex Group 2008). Apotex sent the first shipment of medicines to Rwanda on September 24, 2008 (CBC News 2008). Seven months of the 25-month delay between Apotex receiving its approval from Health Canada and the shipment of the first batch of drugs can be accounted for by Rwanda's tendering process, which has nothing to do with CAMR. A much longer period, 13 months, was due to a combination of waiting for a country to apply to the WTO and negotiations between Apotex and the patent holders. (The remaining five months were a function of the time it took to manufac-

ture and arrange to ship the drug.)

This is the first test case for CAMR, which has come at no small price, so far, to Apotex. Apotex estimates that it has invested CAD\$3 million to develop this product (Kay 2007), with most of the costs going towards acquiring the active ingredients for the medication and legal fees related to licence negotiations costs with patent holders. One of the most significant obstacles exposed by this process has been CAMR's requirement that a country be named in order for the licensing process to proceed, rather than allowing interested generic producers to commence the licensing process prior to negotiations with a recipient country having been concluded and the recipient country named. Jack Kay, President and Chief Operating Officer of Apotex, points out: "If other critical medicines are to go to Africa in a reasonable timeframe, the federal government must change the CAMR legislation significantly. CAMR is unworkable as it now stands" (Apotex Group 2008).

Shortly after CAMR was passed, Médecins sans Frontières (MSF) started working on its practical implementation, but it has taken almost four and a half years from that point and nearly three and a half years since Apotex first indicated a willingness to use the legislation to get to where a single drug has actually been exported. Although we now have an example of CAMR's use, its implementation has been a practical failure and risks damaging Canada's reputation for humanitarian action. Between 2004 and 2007, before CAMR produced any results, an estimated 8.3 million children and adults in Sub-Saharan Africa alone died from AIDS-related illness (Joint UN Programme on HIV/AIDS and WHO 2007).

The New Focus of the Canadian Government

Many activists have suggested changes to CAMR, such as accepting alternatives to Health Canada approval of a generic product (e.g., pre-qualification by the World Health Organization), as a precondition to exporting the product and eliminating the requirement to first attempt negotiating for a voluntary licence from a patent holder (Canadian HIV/AIDS Legal Network 2007). But the political will to reform the legislation is lacking. In 2007, the minister of industry tabled a report on the findings of the regulatory review of CAMR carried out by Industry Canada and Health Canada. It recommended a focus on non-legislative measures to improve access to medicines to the developing world "until a more definitive assessment can be made" (Government of Canada 2007). The conclusions are essentially a commitment to do nothing with respect to CAMR. Interest groups, like the Canadian HIV/AIDS Legal Network, have pressured the government effectively to make CAMR work better. Most recently, this push to reform CAMR resulted in Bills S-232 and C-393, which were introduced on March 31, 2009 and May 25, 2009, respectively, and which aim to significantly streamline the requirements in the legislation.

The current Canadian government is focusing its contributions on other global health initiatives. Some are laudable, such as the 2008 commitment of a further CAD\$450 million to the Global Fund to Fight AIDS, Tuberculosis and Malaria (Department of Finance Canada 2008). Other measures, while potentially helpful, seem to place more emphasis on ensuring that the interests of the research-based pharmaceutical companies are not upset than on improving access to medicines in countries without manufacturing capacity. For example, in its 2007 budget, the government created an additional tax incentive for drug donations (Department of Finance Canada 2007). It offers pharmaceutical companies a tax write-off as long as donations are in line with WHO best practices and are administered by registered Canadian charities. Most recently, this push to reform CAMR resulted in private member Bills S-232 and C-393, which were introduced on March 31, 2009 and May 25, 2009, respectively, and which aim to significantly streamline the requirements in the legislation. Bill C-393 received Second Reading on December 2 2009 and is promisingly proceeding through Parliament.

The Way Forward

It took almost three and a half years, after publication of CAMR's implementing regulations, to reach the point where a single life-saving medicine was exported to a single country, and that contract will last for only two years. When the legislation was first introduced into the Canadian Parliament, the minister of international trade was quoted as saying, "It is a priority for us to implement the WTO agreement that will ensure that poor countries have access to medicine to combat pandemics such as AIDS, malaria and tuberculosis" (Scofield 2003). In rhetorical terms, CAMR promised an elephant, but so far the legislation has delivered little more than a mouse.

The recent shipment of drugs to Rwanda seems to show that Canadian generic manufacturers can compete on price with companies from low-cost countries such as India. Further, there is the issue of competition: the more generic companies that are able to compete, the lower the prices (Campaign for Access to Essential Medicines 2008). Adding Canadian generic companies potentially increases the level of competition, especially in the case of second- and third-line therapies that currently have no generic versions. If Canadian generic versions of these drugs are available, they may stimulate competition from generic companies in other countries and ultimately lead to lower prices. Finally, even if in some cases Canadian prices are higher than others, the quality of Canadian generics may be superior (Scofield and Chase 2003).

There are two approaches that should simultaneously be undertaken by the Canadian government to improve access to medications in developing countries: legislative reform of CAMR and non-legislative initiatives. Competition and quality support the argument that, in principle, CAMR is worth keeping. However, even correcting its

deficiencies that we highlighted earlier will not be sufficient to fulfill Canada's stated intention of helping to address the lack of access to essential medicines. Norway, the Netherlands, India, China and the European Union have also taken the same route as Canada and have amended their legislation to allow the export of medicines under compulsory licences. These initiatives have all, to date, led to no exports. In the face of these failures, it may be that the use of national legislation and legal provisions, such as compulsory licensing, while potentially helpful, are not enough on their own, and that other measures must be undertaken to increase global access to medicines.

Beyond legislative remedies, industrialized countries need to play to their strengths in moving forward to improve access. Canada has a highly developed generic industry that is in the forefront of innovative manufacturing processes. The government should be investigating economically viable policies that would transfer the technology to formulate generic drugs to countries that need it. Canada also has a significant research and development capacity in both the generic and patent-protected pharmaceutical sectors. The government could adopt initiatives, perhaps through the tax system, to encourage research in and production of paediatric formulations of medications and formulations that would be better able to withstand the severe climatic conditions in many developing countries.

Intentions are only as good as their results. If Canada is truly interested in improving access to essential medicines, then a reformed CAMR may be of value. Even so, it still needs to be combined with larger, more sustainable measures that move beyond rhetoric to achieve meaningful results, as measured by the speed and volume of medicines that move from Canada to populations in need.

ACKNOWLEDGEMENTS

We acknowledge the contributions of Michael Reich, Andrea Perez Cosio and Kinsley Wilson in the preparation of this manuscript.

This paper was written under the auspices of the Initiative for Drug Equity and Access, which is funded by the Canadian Institutes of Health Research (CIHR). Other than providing funding, the CIHR had no other role in the conduct of the research or preparation of the manuscript.

Joel Lexchin has been retained by a law firm working for Apotex Inc. The authors otherwise have no competing interests to declare.

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REFERENCES

Apotex Group. 2007 (September 20). "Life Saving AIDS Drug for Africa Gets Final Clearance." Retrieved January 7, 2010. <<http://www.apotex.com/PressReleases/20070920-01.asp?flash=Yes>>.

Apotex Group. 2008 (May 7). "Canadian Company Receives Final Tender Approval from Rwanda for Vital AIDS Drug." Retrieved January 7, 2010. <<http://www.apotex.com/PressReleases/20080507-01.asp>>.

Attaran, A. 2007. "A Tragically Naïve Canadian Law for Tragically Neglected Global Health." *Canadian Medical Association Journal* 176: 1726–27.

Campaign for Access to Essential Medicines. 2008. *Untangling the Web of Antiretroviral Price Reductions*, 11th ed. Geneva: Médecins sans Frontières. Retrieved January 7, 2010. <<http://www.msaccess.org/main/hiv-aids/untangling-the-web-of-antiretroviral-price-reductions-11th-edition>>.

Canadian HIV/AIDS Legal Network. 2007. *Getting the Regime Right: Compulsory Licensing of Pharmaceuticals for Export*. Brief to the House of Commons Standing Committee on Industry, Science and Technology regarding Canada's Access to Medicines Regime. Ottawa: Author.

CBC News. 2008 (September 24). "Canadian HIV Drugs En Route to Africa After Years of Delay." Retrieved January 7, 2010. <<http://www.cbc.ca/health/story/2008/09/24/hiv-apotex.html>>.

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- Cohen, J. and L. Esmail. 2007 (January 31). "Does Canada Have the Guts to Honour Its Drug Pledge to the World's Poor?" *Globe and Mail*.
- Department of Finance Canada. 2007. *The Budget Plan 2007: Aspire to a Stronger, Safer, Better Canada*. Ottawa: Author. Retrieved January 7, 2010. <<http://www.budget.gc.ca/2007/pdf/bp2007e.pdf>>.
- Department of Finance Canada. 2008. *The Budget Plan 2008: Responsible Leadership*. Ottawa: Author. Retrieved January 7, 2010. <<http://www.budget.gc.ca/2008/pdf/plan-eng.pdf>>.
- Elliott, R. 2006. "Pledges and Pitfalls: Canada's Legislation on Compulsory Licensing of Pharmaceuticals for Export." *International Journal of Intellectual Property Management* 1: 94–112.
- Flynn, S. and M. Palmedo. 2007. "Promoting Global Access to Second Generation Treatment in the Second Decade after TRIPS." Poster presentation, 3rd South African AIDS Conference, Durban, June 5.
- Government of Canada. 2007. *Report on the Statutory Review of Sections 21.01 to 21.19 of the Patent Act*. Ottawa: Industry Canada.
- Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO). 2007. 07 AIDS Epidemic Update. Geneva: Author. Retrieved January 7, 2010. <http://data.unaids.org/pub/EPISlides/2007/2007_epiupdate_en.pdf>.
- Kay, J. 2007. "Canada, Drug Licensing and Life-Saving AIDS Medications for Africa." In *Forty Million and Counting: Cutting-Edge Challenges in HIV Prevention: A One-Day Conference Exploring Challenges in International HIV Prevention and AIDS Education*. University of Toronto.
- Patent Act RS, 1985, c. P-4.
- Pinheiro, C.P. 2008. "Drug Donations: What Lies Beneath." *Bulletin of the World Health Organization* 86: 577–656. Retrieved January 7, 2010. <<http://www.who.int/bulletin/volumes/86/8/07-048546/en/index.html#R3>>.
- Scofield, H. 2003 (October 3). "AIDS Plan Could Take 2 Years, Firms Say." *Globe and Mail*: A16.
- Scofield, H. and S. Chase. 2003 (September 26). "Ottawa Heeds Call on AIDS; Ministers Respond to Lewis with Pledge to Relax Generic-Drug Laws in a Hurry." *Globe and Mail*: A1.
- Talaga, T. 2007 (July 26). "Rwanda Taps Canada for Drugs." *Toronto Star*: A23.
- World Trade Organization (WTO). 2003. *Decision on the Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health: Decision of the General Council of 30 August 2003*. Retrieved January 7, 2010. <http://www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm>.
- World Trade Organization (WTO). 2007a (July 19). *Council for Trade-Related Aspects of Intellectual Property Rights. Notification Under Paragraph 2(A) of the Decision of 30 August 2003 on the Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health*. Retrieved January 7, 2010. <[http://www.policybytes.org/blog/PolicyBytes.nsf/dx/9RWA1.doc/\\$file/9RWA1.doc](http://www.policybytes.org/blog/PolicyBytes.nsf/dx/9RWA1.doc/$file/9RWA1.doc)>.
- World Trade Organization (WTO). 2007b (October 4). *Canada Is First to Notify Compulsory Licence to Export Generic Drug*. Retrieved January 7, 2010. <http://www.wto.org/english/news_e/news07_e/trips_health_notif_oct07_e.htm>.

Making Health System Performance Measurement Useful to Policy Makers: Aligning Strategies, Measurement and Local Health System Accountability in Ontario

Pour des mesures du rendement du système
de santé utiles aux responsables de politiques :
harmonisation des stratégies, des mesures et de la
responsabilité du système de santé local en Ontario



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Abstract

This study examined the experience of the Ontario Ministry of Health and Long-Term Care in enhancing its stewardship and performance management role by developing a health system strategy map and a strategy-based scorecard through a process of policy reviews and expert consultations, and linking them to accountability agreements. An evaluation of the implementation and of the effects of the policy intervention has been carried out through direct policy observation over three years, document analysis, interviews with decision-makers and systematic discussion of findings with other authors and external reviewers. Cascading strategies at health and local health system levels were identified, and a core set of health system and local health system performance indicators was selected and incorporated into accountability agreements with the Local Health Integration Networks. Despite the persistence of such challenges as measurement limitations and lack of systematic linkage to decision-making processes, these activities helped to strengthen substantially the ministry's performance management function.

Résumé

Cette étude se penche sur l'expérience du ministère ontarien de la Santé et des Soins de longue durée visant à améliorer son rôle dans la gestion du rendement en développant un schéma stratégique et une carte de pointage pour le système de santé, par le biais d'un processus de révision des politiques et de consultations auprès d'experts, puis en établissant des liens avec les ententes de responsabilité. Une évaluation de la mise en œuvre et des effets de l'intervention a été effectuée par une observation directe des politiques sur une période de trois ans, par l'analyse de documents, par des entrevues auprès de décideurs et par des discussions systématiques sur les résultats avec d'autres auteurs et des réviseurs externes. Des stratégies successives au niveau des systèmes de santé général et local ont été identifiées et un ensemble central d'indicateurs du rendement pour ces systèmes de santé a été choisi puis intégré aux ententes de responsabilité avec les réseaux locaux d'intégration des services de santé. Malgré la persistance des problèmes liés aux limites et au manque de liens systématiques avec le processus de décision, ces activités ont aidé à renforcer de façon appréciable les rôles liés à la gestion du rendement, au Ministère.

CANADA'S PROVINCES FACE CHALLENGES WITH REGARD TO COSTS, EFFICIENCY, access and the quality and safety of their healthcare services (Health Council of Canada 2007). In Ontario, healthcare expenditures have been steadily growing, accounting for 46% of the total provincial budget and reaching CAD\$40.4 billion in 2008/09 (Ontario Ministry of Finance 2008). At the same time, the expectations of Ontarians have risen with respect to timely access to high-priority services such as cancer treatments and primary healthcare services. Policy makers in Ontario are seeking to balance these expectations with available resources while promoting performance, and have attempted various strategies over recent years such as strengthening primary healthcare and setting up Local Health Integration Networks (LHINs) to enhance health system performance and improve system integration (MoHLTC 2004). Ontario's 14 LHINs oversee over 150 hospital corporations operating on over 200 sites, over 600 long-term care homes, home care programs and thousands of community agencies, while management of drug programs and funding for the province's 23,000 physicians remain provincial responsibilities.

Over the past decade, a growing body of research has suggested that the use of strategy-based performance management tools in the public sector can result in substantial improvements in both health outcomes and cost-effectiveness gains (Jha et al. 2003; Kaplan and Norton 2005, 2006; Porter and Teisberg 2004). For example, the Veterans Health Administration in the United States achieved significant improvements in targeted health outcomes between 1995 and 2000 by linking its strategy, a

core set of performance indicators, and a vigorous performance management system built on strengthened information management (Kizer 1999; Asch et al. 2004; Jha et al. 2003; Perlin et al. 2004; Perlin 2006). In the meantime, the strategic use of performance measurement through implementation of the balanced scorecard model (Kaplan and Norton 1992, 1996) at the Cleveland Clinic, the Mayo Clinic and Duke University Children's Hospital (Inamdar et al. 2002) has been associated with improvements in clinical and financial performance. Other examples demonstrate that focusing on clear linkages among strategy, performance measurement and accountability through performance measurement is a key feature in performance improvement efforts and can lead to increased value for health systems (Bevan and Hood 2006; Lomas 2003; Porter and Teisberg 2004).

Before 2004, Ontario had experimented with a limited number of strategy-based performance management elements. The province had developed extensive analytic capabilities through research institutes focused on the health system; developed a substantial hospital report card process that linked into common health system strategies (Brown et al. 2005, 2006); and had created a strategy-based scorecard for its cancer system that was used for both public reporting and performance management of regional cancer systems (Greenberg et al. 2005). Starting in 2004, the focus on the performance of the healthcare system changed in a number of ways: the government implemented a core strategy that focused on targeted initiatives to reduce wait times and strengthen primary healthcare; it created Local Health Integration Networks (LHINs) to devolve large amounts of managerial authority to the local level in order to improve integration and efficiency across the health system; it created a vehicle for public reporting of performance by establishing the Ontario Health Quality Council; and finally, it created several reform teams called Health Results Teams to drive performance improvement (MoHLTC 2004).

As planning and funding for the system shifted to the local level, these reforms had major implications for the Ministry of Health and Long-Term Care (MoHLTC). The ministry had to move away from hands-on management of the health system towards a stewardship model (Pfeffer and Sutton 2006) through which it established and communicated goals, held partners accountable for these goals and established policies for the health system.

The size, complexity and lack of clearly articulated strategies for the health system as a whole meant that the existing reform strategies had to be reviewed and synthesized to build a strategy map covering the health system in its entirety. This paper explores the Ontario experience since 2005 in developing and using a health system strategy map and strategy-based scorecard to enhance the stewardship role of government, and discusses how the information garnered from this approach has been used to strengthen the health system by aligning strategies, performance measurement and accountability.

The paper attempts to answer two key questions: How can strategy-based per-

formance measurement be developed in the absence of an explicit and comprehensive strategy for the whole health system? And more broadly, how can this information be used by health ministries to target specific performance improvements for its agents? A retrospective evaluation of the implementation and effects of the policy intervention (Contandriopoulos et al. 2000) has been carried out through direct policy observation over three years, document analysis, interviews of decision-makers and systematic discussion of findings with other authors and external reviewers. Four of the authors of this paper (JV, TH, SA, AB) were privileged observers when the other two authors (SK, NK) were not involved in the policy intervention. The authors documented the findings with data as much as possible, grounded them into theory and referenced them with the relevant scientific literature. Furthermore, all policy papers and documents quoted are referenced and publicly available. Overall, this paper presents the methods and results of the policy intervention and discusses the valuable lessons and the applicability of this approach to other contexts.

Methods: Linking Strategy-Based Performance Measurement and Accountability

Developing the health system strategy map

The MoHLTC applied the strategy mapping approach to healthcare (Greenberg et al. 2005; Persaud and Nestman 2006), in which (a) government priorities and objectives are identified, (b) these aims are grouped into a logical set of strategic goals and (c) the goals are mapped in relation to one another. The methodological steps in formulating strategy maps have been previously defined by Kaplan and Norton (2004). However, as there was no single overarching strategic document in the system, the strategy would have to be derived from public statements of government intent and existing documents that detailed often silo-based planning efforts.

The Ontario health system strategy map was developed through six consecutive steps, which took place between November 2004 and March 2005:

- Step 1: Common themes in health system policies, investments and public statements were identified, grouped by strategic themes and mapped in a logical sequence through a comprehensive policy review of different information sources, such as the MoHLTC budget submission and policies.
- Step 2: Intersectoral cabinet submissions and related policies affecting health system strategies were reviewed and mapped within the health system strategic themes.
- Step 3: External experts were consulted to validate the groupings of strategic themes and develop a draft health system strategy map outlining cause-and-effect relationships.

- Step 4: The draft health system strategy map was shared with other ministries and stakeholder groups.
- Step 5: Relevant inputs from the consultation process were incorporated in the draft health system strategy map, which was then internally validated by different committees and ultimately by the Executive Management Committee of the MoHLTC.
- Step 6: The first iteration of the scorecard was distributed to 13 international experts in health system performance assessment, who appraised the model.

Once the framework was established, the next task was to identify how performance in Ontario could be measured against this foundation.

Developing a strategy-based health system performance scorecard

Despite the absence of a single performance measurement framework for the health system, there was an abundance of available performance information on health system performance (Hamilton 2006; Health Canada 2002, 2004, 2006; Health Council of Canada 2007). Although the review team identified over 2,000 performance and volume measures, few indicators were aligned to the strategic themes identified. A pre-screen of this inventory of measures was carried out by the MoHLTC in order to pre-select a set of indicators for review by a technical expert panel. The criteria used for pre-selection were validity and alignment with strategic themes; data quality issues; calculation feasibility and timeliness; and possibly the feasibility of reporting at multiple levels of the health system.

The review of inventoried indicators revealed that only 156 initially met these criteria and of these, only 54 could be cascaded to reflect different levels within the healthcare system. These indicators were submitted to an 18-member health system performance expert panel chosen based on technical knowledge of health system performance indicators. Members evaluated each indicator based on available evidence summarized in descriptive sheets detailing the rationale and the supporting evidence for inclusion in the scorecard. Different selection criteria were reviewed to identify those most appropriate to this exercise, detailed in Table 1.

TABLE 1. Criteria used for indicator selection by expert panel

Criteria	Description
Importance	Reflects critical aspects of health system functioning and the strategic dimension
Relevance	Provides information that can be used to monitor and measure health system performance over an extended period of time
Feasibility	The needed data required are readily available or obtainable with reasonable effort
Reliability	The indicator produces consistent results
Validity	The indicator is an accurate reflection of the dimension it is supposed to assess

Members used the descriptive sheets, gathering related evidence to rate the indicators against each criterion using a five-point Likert scale (a psychometric scale in which respondents specify their level of agreement with a statement). The results were collated in a report and used as the basis for a modified Delphi workshop (a systematic forecasting process that utilizes independent experts). Although an attempt was made to distribute indicators across the system goals articulated in the strategy map, a small number of performance dimensions ended up without accepted indicators. Consequently, several additional indicators were proposed by the expert panel, and descriptive sheets were commissioned for use in a second meeting in which panelists made their final recommendations for a set of 26 system performance measures. In accordance with the feasibility criteria, all 26 measures selected by the experts could be calculated by ministry analysts using readily available administrative and survey data.

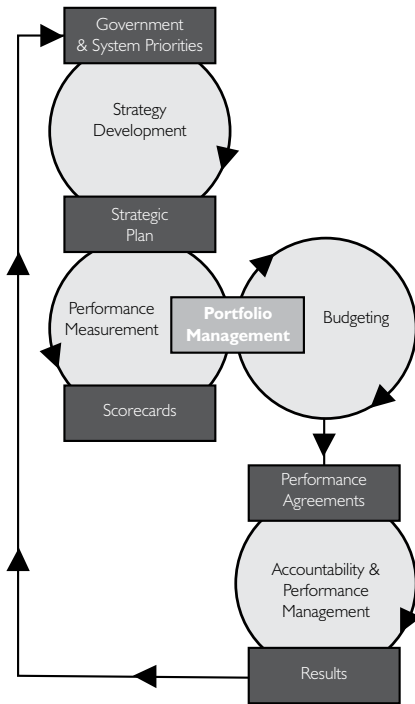
Linking strategy, measurement and accountability

Performance improvement requires aligning strategy, performance information, resource allocation, incentives and accountability (Jha et al. 2003). The MoHLTC conceptualized its performance management cycle, in which the ministry (a) sets its strategic priorities, (b) selects key performance indicators related to strategy to gauge progress, (c) uses these indicators to support resource allocation processes, (d) holds those receiving resources accountable for results and (e) assesses whether performance improvements have the desired impact on the performance of the health system in order to adjust strategies accordingly (Figure 1).

It is important to emphasize that the development of this process did not start at the top with the intentional development of a single strategy. Rather, the process of developing the performance management structure led to a reverse engineering of the strategy and stimulated the development of other tools to help align activities to it.

In order to link strategy, performance measurement and accountability, the MoHLTC undertook with its LHINs the joint exercise of incorporating performance indicators aligned with the health system strategy map and scorecard into accountability agreements, following a process similar to the one used for the development of the health system scorecard. The ability of LHINs to influence specific performance indicators was an additional criterion that was included in the selection of performance indicators.

FIGURE 1. A strategy-based performance management framework for the Ontario MoHLTC



Results

The 2005 Ontario health system strategy map

All health system–related strategies identified within the MoHLTC and across the government of Ontario were mapped, grouped within strategic themes and broken down into subdimensions of performance (Table 2).

TABLE 2. Ontario health system strategy map performance dimensions and subdimensions

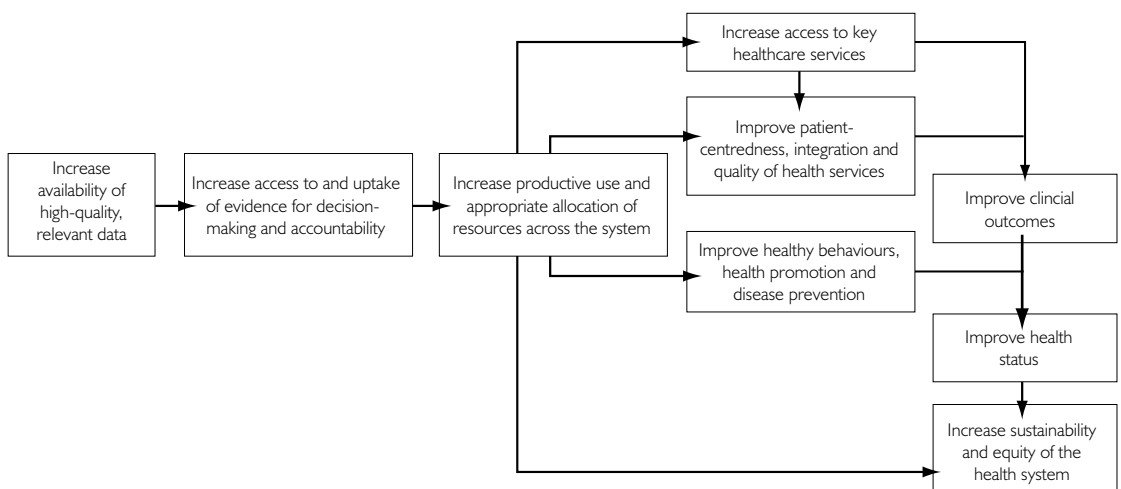
Performance dimensions	Performance subdimensions
Increase availability of high-quality, relevant evidence	Appropriateness of allocation of resources Availability of evidence High-quality evidence
Increase access to and uptake of evidence for decision-making and accountability	Increased access to evidence Increased uptake of evidence
Increase productive use and appropriate allocation of resources across the system	Appropriateness of resource allocation to achieve health system outcomes Productive use of resources to achieve financial efficiency
Increase access to key healthcare services	Availability of programs and services

TABLE 2. Continued

Improve patient-centredness, integration and quality of health services	Appropriateness Acceptability Responsiveness Competence Safety Continuity of care
Improve healthy behaviours through health promotion and disease prevention	Health promotion Disease prevention
Improve clinical outcomes	Clinical effectiveness
Improve health status	Health conditions Human function Well-being Mortality
Increase sustainability and equity of the health system	Financing Technology/capital infrastructure Human resources Confidence

These strategic themes were articulated in a way that linked the intermediate objectives and ultimate goals of the Ontario health system (WHO 2000). The strategy map shows that the value of other intermediate objectives and their associated actions is measured in terms of their effect on health system ultimate goals, such as improving health status, equity and health system sustainability (Figure 2).

FIGURE 2. The Ontario health system strategy map, 2005



Core set of performance indicators

The 26 performance indicators selected covered all dimensions of the framework except for the first dimension, which lacked a quantitative measure meeting the pre-defined criteria. Therefore, a qualitative assessment was undertaken by experts and reviewed by the initial panel. Table 3 outlines the final set of indicators selected for inclusion. Each indicator is linked to a strategy map goal and subdimension of performance.

TABLE 3. Core set of performance indicators for the Ontario health system scorecard

Performance dimension	Performance indicators
Increase availability of high-quality, relevant evidence	Qualitative assessment of the availability of high-quality, relevant evidence for decision-making
Increase access to and uptake of evidence for decision-making and accountability	Percentage of clinical cases being treated according to clinical practice guidelines
Increase productive use and appropriate allocation of resources across the system	Percentage of alternate level of care (ALC) days
	Emergency department visits that could be managed elsewhere
	Hospitalization rate for ambulatory care-sensitive conditions
Increase access to key healthcare services	Median wait times in priority areas: cancer surgery, cardiac procedures, cataract surgery, joint replacement, MRI/CT scan, long-term care placement
	Population aged 12 and over who report having a regular medical doctor
	Regular provider of diabetes care
	Percentage of population who report unmet need
Improve patient-centredness, integration and quality of health services	Percentage of patients with cancer who died in acute care beds
	Perceptions of availability and quality of healthcare services
	Inpatient readmission rates for acute myocardial infarction, psychiatric conditions, neonatal care
	Percentage of people accommodated in their first choice of long-term care home
	Percentage of adverse events (in-hospital fractures, new stage 2+ skin ulcers in chronic-stay patients)
Improve healthy behaviours through health promotion and disease prevention	Risk factors for chronic disease
	Flu vaccination
	Preventive screening

TABLE 3. Continued

Improve clinical outcomes	30-day post-hospital acute myocardial infarction (AMI) survival rate
	5-year survival rate for prostate, breast, colorectal and lung cancer
	Measure of functional improvement for rehabilitation patients
Improve health status	Teenage pregnancy rates
	Sexually transmitted disease (STD) rates
	Potential years of life lost (PYLL)
	Health-adjusted life expectancy (HALE) for overall population
Increase sustainability and equity of the health system	Healthcare spending
	Change in productivity
	Change in health human resources supply

Finally, all 26 performance indicators were calculated using historical data with five-year trends where available by the MoLTC and a number of partner organizations including the Canadian Institute for Health Information, the Institute for Clinical Evaluative Sciences and Cancer Care Ontario. Results were interpreted in continuous collaboration with the members of the technical expert panel involved in the selection of the set of performance indicators and those organizations involved in data calculation.

Local health system accountability agreements

Prior to the creation of the LHINs, performance management between the payer (MoHLTC) and the providers was largely focused on financial sustainability and in some cases, volumetric measures. The set of performance indicators included in the health system scorecard was a relevant performance management tool to ensure strategic alignment between the health system and local health system strategies.

In 2007, the first generation of accountability agreements were developed between the MoHLTC and the newly created LHINs, which receive about half of the MoHLTC's budget (Bhasin and Williams 2007). Accountability agreements comprising 10 performance indicators aligned with the health system scorecard were developed (Table 4). Five developmental (pilot) performance indicators covering additional performance dimensions were included in the agreement for monitoring by the LHINs and inclusion in accountability agreements in the mid term. These agreements were in turn cascaded to other levels of the health system, such as hospitals or long-term care facilities. A ministry team calculates quarterly results for all performance indicators and posts them in a dashboard that flags performance occurring outside negotiated corridors. LHINs must report quarterly on action plans related to their performance and are accountable for attaining specific annual performance goals. It is

anticipated that LHINs will be accountable for an integrated and balanced set of outcome-based performance indicators, with consequences for low-performing LHINs.

TABLE 4. Core set of performance indicators for accountability agreements between the MoHLTC and the LHINs

Performance dimension	Accountability indicators	Developmental indicators
Improve coordination and integration of services within local health system	Percentage of alternate level of care (ALC) days	N/A
	Rate of emergency department visits that could be managed elsewhere	
	Hospitalization rate for ambulatory care-sensitive conditions (ACSC)	
	Median wait time to long-term care home placement	
Increase access to key healthcare services	90th percentile wait times for cancer surgery	N/A
	90th percentile wait times for diagnostic (MRI/CT) scan	
	90th percentile wait times for cardiac bypass procedures	
	90th percentile wait times for cataract surgery	
	90th percentile wait times for hip and knee replacement	
Improve patient-centredness, patient safety and quality of healthcare services	Readmission rates for acute myocardial infarction (AMI)	Perception of change in quality of care
		Percentage of chronic-stay patients in complex continuing care with new stage 2 or greater skin ulcers
		Percentage of in-hospital cancer deaths as a proportion of all cancer deaths
		Psychiatric readmission rates in hospitals
Increase sustainability and equity of the health system	N/A	Change in hospital productivity

Discussion

Lessons from the Ontario experience: Achievements and areas for improvement

While many of the principles articulated by Kaplan and Norton (1992, 1996, 2004) in their work on balanced scorecards and strategy maps have been adopted through

this experience, significant modifications were made to the way in which these tools were applied for the following reasons:

- ✦ Context of strategy. While the strategies related to specific reform, efforts were clearly defined by the government of Ontario (e.g., wait time reduction strategy), the absence of an overarching strategy for the health system as a whole meant that the strategy map had to be built based on a review and synthesis of the existing collection of disparate strategies. Therefore, the resulting strategy map can be interpreted only as an articulation of the system's emergent, rather than deliberate, strategy (Mintzberg 1994). Owing to the dynamic nature of the policy environment, constructing a strategy map for the health system on the basis of explicit intent was not possible. The resultant scorecard should therefore be viewed only as a snapshot of system performance in areas of strategic importance, which may change from year to year, rather than as a true evaluation of the effectiveness of a particular strategy.
- ✦ Unit of analysis. As opposed to the traditional application of the balanced scorecard, the unit of analysis is the entire health system. Therefore, measures chosen are focused largely on system outcomes.
- ✦ Role of the ministry. While there is a parallel between the stewardship role of the MoHLTC and that of a traditional corporate headquarters, the former does not have the same degree of control over its "business units" (e.g., provider organizations) as do typical corporations. This makes the job of creating strategic alignment across the system much more difficult.

Several lessons can be drawn from this policy intervention.

First, it illustrated the value of using strategy-based performance information for decision-making. The regular monitoring of a core set of strategy-based performance indicators by the ministry's decision-makers helped refocus the role of the MoHLTC on health system outcomes and its overall stewardship function (WHO Regional Office for Europe 2008).

Second, the process for developing the health system scorecard was important in building credibility for health system performance assessment and improvement. Separating the process of strategy mapping (by policy makers), selecting performance indicators (by experts) and negotiating local health system performance improvement targets (by MoHLTC and LHIN executives) are strong assets in building a culture of trust, accountability and performance improvement.

Finally, if the development of accountability agreements between the MoHLTC and the LHINs served as a powerful tool to steer local health system performance, it is important to ensure that local management can respond to local needs while still meeting system-level priorities. If the scorecard provides any support for ensuring this

balance, it is by articulating a set of goals – the desired outcomes and their indicators for the system – that can help shift attention away from more restrictive process requirements that would reduce responsiveness to local needs. As the performance measurement system develops, it will be important to ensure that the overall number of indicators is limited so that local management has the ability to introduce additional, local indicators.

However, several challenges arose from this experience.

First, there were difficulties in defining, measuring and regularly monitoring the performance of the health system. In 2006, the strategy map was redeveloped to broaden the scope of health system performance dimensions covered, and a few initial indicators were excluded from the core set and replaced owing to reliability and validity issues.

A strategy-based approach offers an innovative way to make health system performance information measurement relevant to the policy environment: establishing the strategic context, selecting indicators to setting performance targets at the local health system level and incorporating them into performance agreements.

The second set of challenges relates to the need to provide concise and synthetic information to policy makers about complex systems such as a health system. These efforts have been frustrated by a dearth of effective tools such as visually representative aids (Spiegelhalter 2005). The work has also been limited by difficulties in summarizing overall performance into composite measures.

Third, the strategy map was set through consultative techniques, which require different contributors to take on the interests of the health system. However, performance

management in the Canadian context is typically implemented through a negotiated process whereby groups represent their own interests. This approach can lead to a gap between intended strategy and negotiated levels of performance. This challenge may be addressed by allowing LHINs and other partners to determine how best to maximize overall performance in a way that adjusts for local needs.

Finally, the process of systematically linking performance information to the decision-making cycle of the MoHLTC has also proven to be challenging. Even if the links among strategy, performance measurement and accountability have been clearly established, the link to the resource allocation process has to be further developed (Sharpe and Keelin 1998). In addition, the performance improvement phase of the cycle has to be further strengthened through benchmarking and continuous performance improvement activities (Schoen et al. 2006; Kaplan and Norton 2005).

Conclusion

A strategy-based approach offers an innovative way to make health system performance information measurement relevant to the policy environment: establishing the strategic context, selecting indicators to setting performance targets at the local health system level and incorporating them into performance agreements. The Ontario experience suggests that the development and use of strategy-based scorecards can be useful to policy makers if clear principles are respected: performance information has to be relevant, credible and intuitive. However, the main challenge remains in systematically embedding performance information in the decision-making processes of health ministries, and implies a strong corporate discipline as well as investing in priority-setting capacities in order to allocate resources more strategically. Overall, aligning strategies, measurement and local health system accountability proved feasible in Ontario and is, in our opinion, a promising approach to be taken up by other constituencies to improve health system performance.

ACKNOWLEDGEMENTS

We thank the following staff from the Ontario Ministry of Health and Long-Term Care (Health Results Team for Information Management) for their contribution to this paper: Karen Born, Christine Brown, Erin Gilbert, Anjali Misra, Sanober Motiwala, Anmar Salman, Emily Simmonds, Emily Siu, Angus Steele and Brenda Tipper. We would also like to thank Dr. Govin Permanand from the World Health Organization Regional Office for Europe for his detailed review and comments on this paper.

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REFERENCES

- Asch, S.M., E.A. McGlynn, M.M. Hogan, R.A. Hayward, P. Shekelle, L. Rubenstein, J. Keesey, J. Adams and E.A. Kerr. 2004. "Comparison of Care for Patients in the Veterans Health Administration and Patients in a National Sample." *Annals of Internal Medicine* 141(12): 938–45.
- Bevan, G. and C. Hood. 2006. "Have Targets Improved Performance in the English NHS?" *British Medical Journal* 332(7538): 419–22.
- Bhasin K. and A.P. Williams. 2007. "Understanding LHINs: A Review of the Health System Integration Act and the Integrated Health Services." Retrieved January 6, 2010. <<http://www.ryerson.ca/crncc/download/UnderstandingLHINs-FinalJuly5th.pdf>>.

- Brown, A.D., L.M. Alikhan, G.A. Sandoval, N.L. Seeman, G.R. Baker and G.H. Pink. 2005. "Acute Care Hospital Strategic Priorities: Perceptions of Challenges, Control, Competition and Collaboration in Ontario's Evolving Healthcare System." *Healthcare Quarterly* 8(3): 34–45.
- Brown, A.D., L.M. Alikhan and N.L. Seeman. 2006. "Crossing the Strategic Synapse: Aligning Hospital Strategy with Shared System Priorities in Ontario, Canada." *Healthcare Management Review* 31(1): 34–44.
- Contandriopoulos, A.P., F. Champagne, J.L. Denis and M.C. Avargues. 2000. "L'Évaluation dans le domaine de la santé : concepts et méthodes." *Revue Épidémiologie et santé publique* 48: 517–39.
- Greenberg, A., H. Angus, T. Sullivan and A.D. Brown. 2005. "Development of a Set of Strategy-Based, System-Level Cancer Care Performance Indicators in Ontario, Canada." *International Journal for Quality in Healthcare* 17: 107–14.
- Hamilton, C. 2006. *Healthy Provinces, Healthy Canadians: A Provincial Benchmarking Report*. Ottawa: Conference Board of Canada.
- Health Canada. 2002. *Healthy Canadians: A Federal Report on Comparable Indicators*. Ottawa: Author.
- Health Canada. 2004. *Healthy Canadians: A Federal Report on Comparable Indicators*. Ottawa: Author.
- Health Canada. 2006. *Healthy Canadians: A Federal Report on Comparable Indicators*. Ottawa: Author.
- Health Council of Canada. 2007. *Healthcare Renewal in Canada: Measuring Up?* Ottawa: Author.
- Inamdar, N., R. Kaplan, M. Bower and K. Reynolds. 2002 (May/June). "Applying the Balanced Scorecard in Healthcare Provider Organizations." *Journal of Healthcare Management* 47: 179–96.
- Jha, A.K., J.B. Perlin, K.W. Kizer and R.A. Dudley. 2003. "Effect of the Transformation of the Veterans Affairs Healthcare System on the Quality of Care." *New England Journal of Medicine* 348(22): 2218–27.
- Kaplan, R.S. and D.P. Norton. 1992 (January/February). "The Balanced Scorecard: Measures That Drive Performance." *Harvard Business Review* 70(1): 71-8.
- Kaplan, R.S. and D.P. Norton. 1996 (January/February). "Using the Balanced Scorecard as a Strategic Management System." *Harvard Business Review* 74(1): 75-85.
- Kaplan, R.S. and D.P. Norton. 2004. *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Boston: Harvard Business School Press.
- Kaplan, R.S. and D.P. Norton. 2005 (October 1). "The Office of Strategy Management." *Harvard Business Review* 73(10): 72-80.
- Kaplan, R.S. and D.P. Norton. 2006. "How to Implement a New Strategy without Disrupting Your Organization." *Harvard Business Review* 84(3): 100–9.
- Kizer, K.W. 1999. "The 'New VA': A National Laboratory for Health Care Quality Management." *American Journal of Medical Quality* 14(1): 3–20.
- Lomas, J. 2003. "Health Services Research: More Lessons from Kaiser Permanente and Veterans Affairs Healthcare System." *British Medical Journal* 327(7427): 1301–2.
- Ministry of Health and Long-Term Care (MoHLTC). 2004. "Ontario's Health Transformation Plan: Purpose and Progress." Transcript of speech by George Smitherman, Minister of Health. Retrieved January 4, 2010. <http://www.health.gov.on.ca/english/media/speeches/archives/sp_04/sp_090904.pdf>.
- Mintzberg, P. 1994. *The Rise and Fall of Strategic Planning: Reconceiving Roles for Planning, Plans, Planners*. New York: The Free Press.

- Ontario Ministry of Finance. 2008. "Strengthening Ontario's Future by Investing in Health Care." Press release. Retrieved January 4, 2010. <<http://www.fin.gov.on.ca/english/budget/ontariobudgets/2008/bk3.html>>.
- Perlin, J.B. 2006. "Transformation of the US Veterans Health Administration." *Health Economy, Policy and Law* 1(Pt. 2): 99–105.
- Perlin, J.B., R.M. Kolodner and R.H. Roswell. 2004. "Veterans Health Affairs: Quality, Value, Accountability and Information as Transformation Strategies for Patient-Centred Care." *American Journal of Managed Care* 10(11): 828–36.
- Persaud, D.D. and L. Nestman. 2006. "The Utilization of Systematic Outcome Mapping to Improve Performance Management in Health Care." *Health Services Management Research* 19(4): 264–76.
- Pfeffer, J. and R.I. Sutton. 2006. "Evidence-Based Management." *Harvard Business Review* 84(1): 62–74, 133.
- Porter, M.E. and E.O. Teisberg. 2004. "Redefining Competition in Health Care." *Harvard Business Review* 82(6): 64–76, 136.
- Schoen, C., K. Davis, S.K.H. How and S.C. Schoenbaum. 2006. "US Health System Performance: A National Scorecard." *Health Affairs* 25(6): w457–w475.
- Sharpe, P. and T. Keelin. 1998. "How SmithKline Beecham Makes Better Resource-Allocation Decisions." *Harvard Business Review* 76(2): 45–46.
- Spiegelhalter, D.J. 2005. "Funnel Plots for Comparing Institutional Performance." *Statistics in Medicine* 24(8): 1185–202.
- World Health Organization (WHO). 2000. *The World Health Report 2000. Health Systems: Improving Performance*. Geneva: Author.
- World Health Organization (WHO) Regional Office for Europe. 2008. "Stewardship/Governance of Health Systems." Background document to the 2008 Regional Committee. Retrieved January 4, 2010. <http://www.euro.who.int/Document/RC58/RC58_edoc09.pdf>.

Wait Time Management Strategies for Scheduled Care: What Makes Them Succeed?

Les stratégies contre les temps d'attente pour
les soins électifs : qu'est ce qui fait leur succès?



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Abstract

Objectives: To assess experts' perceptions of the contextual and local factors that promote or inhibit the implementation of waiting time management strategies (WTMS) in Canadian healthcare organizations.

Methods: We conducted 16 semi-structured interviews and one focus group with individuals involved in WTMS at the federal, provincial or organizational level.

Results: The most frequently cited local factor was physicians' participation. Physicians' leadership made the greatest difference in bringing resistant physicians on board. To be effective, however, local leadership had to be supported by senior management.

Alignment of financial incentives between the contextual and local levels was also frequently cited, and interviewees stressed the importance of tools used to design, monitor, evaluate and prioritize WTMS.

Conclusions: Finding the right balance between supportive resources and tools and an effective management system is a tough challenge. But achieving this balance will help reconcile contradictions between top-down and bottom-up WTMS.

Résumé

Contexte : Cette étude porte sur la perception d'experts sur les facteurs, au niveau local ou contextuel, qui favorisent ou empêchent l'implantation de stratégies contre les temps d'attente dans les établissements de santé au Canada.

Méthodes : Nous avons réalisé 16 entretiens semi-structurés et un groupe de discussion avec des personnes sélectionnées par leur implication aux niveaux fédéral et provincial, ou au niveau des établissements de santé (ES), dans la mise en œuvre de stratégies contre les temps d'attente.

Résultats : Le facteur le plus souvent cité a été celui de la participation des médecins au niveau des ES. Nous avons trouvé qu'un fort leadership médical dans un ES permettait de faire participer les autres médecins à la mise en œuvre d'une stratégie. Cependant pour être efficace, ce leadership doit être aidé par les gestionnaires. La congruence des incitatifs financiers aux niveaux local et contextuel est aussi un autre facteur souvent cité. Les interviewés ont aussi mis en évidence l'importance des out-

ils qui aident à redessiner, suivre, évaluer et prioriser les stratégies contre les temps d'attente.

Conclusions : Ces résultats permettent de mettre en tension la nécessité non seulement d'avoir des ressources et des outils mais aussi d'avoir une culture et une gestion adéquate, ce qui est souvent difficile à réaliser. La capacité d'arriver à cet équilibre permet de réconcilier des initiatives qui peuvent être locales ou contextuelles.

FOR OVER A DECADE, INDUSTRIALIZED COUNTRIES AROUND THE WORLD HAVE struggled to solve the problem of long wait times for scheduled medical care (Siciliani and Hurst 2003). Canada's recent history in the matter is a study in paradoxes. On the one hand, Canadian decision-makers appear to have agreed that the answer to the problem of waiting lists and wait times lies at the federal and provincial levels, and recent Canadian wait time initiatives have consistently looked to centralized programs as their solution (Health Council of Canada 2007; Health Canada 2004; SCC 2005; Prime Minister of Canada 2007). On the other hand, recent findings suggest that the success or failure of a given wait time management strategy (WTMS) depends less on federal or provincial policy than on how the strategy is implemented in healthcare organizations (HCOs) themselves. The results of Ontario's Wait Times Strategy initiative, for example, reveal that HCOs were the key players in the program's success, and it was only after a significant investment of time, attention and resources that organizations adopted an accountability framework that allowed them to execute the program and meet the provincial government's objectives (Trypuc, Hudson et al. 2006; Trypuc, Hudson et al. 2007). It seems clear, then, that we must pay closer attention to the factors that facilitate or impede the implementation of WTMS in HCO (Ferlie and Shortell 2001). For that reason, this paper describes what WTM experts from different levels of Canada's healthcare system perceive as factors in the success or failure of WTMS, and how they feel these factors interact to facilitate or impede the implementation of WTM programs within HCOs.

Methods

We conducted 16 one- to two-hour interviews and one focus group with prominent thinkers and managers in the field of wait time management. The focus group was conducted at the request of a person whom we had contacted for an interview: this person felt that it would be useful for us to meet the entire wait time management team. The interviews took place between October 2005 and August 2006, and the focus group took place in October 2005. All interviews and the focus group were taped and transcribed. In order to solicit a variety of insights, we interviewed two

groups of respondents. The first group comprised individuals who had been involved in wait time strategies at the federal or provincial level within the prior few years (“federal/provincial respondents”). These select individuals were among the most frequently consulted experts on WTM in Canada, and their views reflected decades of experience (Table 1). The second group of respondents (Table 2) consisted of senior leaders from eight healthcare organizations (HCOs). This latter group included respondents who

- represented provinces from different regions of the country (BC, AB, SK, MB, ON, QC, NS);
- represented a range of professions (physicians, surgeons and managers);
- addressed different domains of WTMS (cancer care, cardiac surgery, general surgery, broad initiatives, eye care, joint replacement and medical imaging);
- were familiar with different types of WTMS (active management strategies, benchmarks, information technology and wait list management, central booking systems, clinical assessment [prioritization] tools and clinical appropriateness guidelines); and
- had been active in WTMS in an HCO (a regional health authority or a hospital) over the past three years.

TABLE 1. Federal/provincial respondents

Province	Organization
Manitoba	Winnipeg Regional Health Authority, Federal Advisor on Waiting Times
British Columbia	Provincial Health Services Authority (PHSA)
Quebec	Montreal Regional Health Authority
Ontario	Institute for Clinical Evaluative Sciences
Ontario	Ontario Wait Times Strategy
Saskatchewan	Saskatchewan Health
Ontario	Canadian Association of Radiologists
Saskatchewan and Ontario	Saskatchewan Surgical Care Network and Ontario Wait Times Strategy
Ontario	Ontario provincial wait time information system

To elicit diverse aspects of respondents’ experiences with WTMS, we selected a semi-structured interview approach that allowed us to explore trends in the implementation of WTMS within and across organizations, discuss respondents’ views of the factors that facilitated or inhibited WTMS at the organizational level, and probe

respondents' impressions of the influence of external elements.

This study was not intended as a comprehensive evaluation of WTMS in HCOs. Although our sample of individuals and organizations is broad-based, we made no attempt to represent all perspectives on this issue. Nor did we intend to collect rigorous and unbiased data. Rather, we sought qualitative data that would illuminate the situation as it now stands. Furthermore, given the exploratory nature of our study and the expertise of our respondents, it was not our intent to reach saturation. Nonetheless, certain themes in our respondents' perspectives emerged after the first 10 or so interviews. Insofar as the accuracy of our conclusions is concerned, the great experience of our expert respondents provides an excellent basis. Finally, to validate our findings, we presented them at several venues, including Taming of the Queue (CPRN 2009).

TABLE 2. Healthcare organization respondents

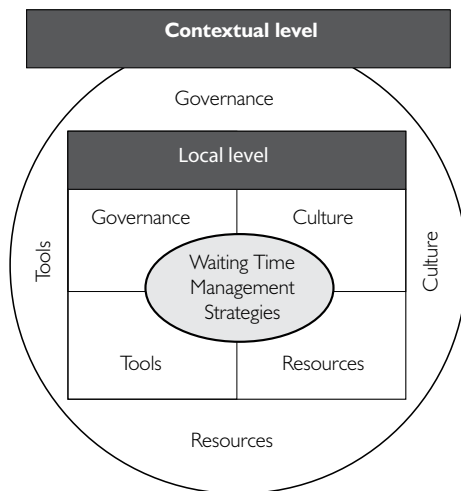
Organization	Interviewee's title	Waiting time strategy
Alberta Bone & Joint Health Institute, AB	Surgeon, Vice Chair of the Alberta Bone & Joint Health Institute	Joint replacement Pathway design, new coordinating entities
Calgary Health Region, AB	Physician, Medical Director	Joint replacement Pathway design; new coordinating entities
CSSS Alma, QC	Physician President of the Doctors', Dentists' and Pharmacists' Committee	General surgery Pathway design, collection system, centralized booking system
Kingston General Hospital, ON	Manager, President and CEO	General surgery and cancer care Software, registries
QEII Health Sciences Centre (HI Site), NS	Surgeon, Head of Department of Surgery	General surgery and joint replacement Software, operations research, prioritization tool, increased capacity
St. Boniface General Hospital, MB	Surgeon, Department of Surgery	General surgery Registry, prioritization tool, website, increased capacity, pathway, operations research
Total Joint Network, ON	Manager, Project Manager	Joint replacement Pathway, prioritization tool
Vancouver Coastal Health Authority, BC	Managers, Focus group with five managers from the Services Planning Project	General surgery Prioritization tool, registry, performance target

Framework

We used Parsons' (1977) social system action theory to evaluate how different factors interact and affect outcomes at the local and contextual levels. The Parsonian perspective corresponds to a structuro-functionalist view of organizations and focuses on the four functions required by organizations to survive: goal attainment, environmental adaptation, production and culture. We transposed these functions into four categories of factors relevant to the implementation of WTMS (Figure 1):

- governance factors (goal attainment and environmental adaptation), defined as “the conduct of collective action from a position of authority” (Hatchuel 2000);
- cultural factors (culture), defined as “underlying beliefs, values, norms and behaviors” (Shortell et al. 1995);
- resource factors (production), whether human, financial, infrastructural or informational; and
- tools (production), i.e., the instruments or procedures seen as helpful for implementing a strategy. An example is industrial engineering techniques such as queue management and patient flow processes.

FIGURE 1. Framework



We chose this framework because of its robust nature. Over the course of the past 50 years, the framework has been used in disciplines as diverse as sociology, administration and management and in organizational contexts of all kinds (industry, health and more). In our case, it allowed us to consider not only such factors as resources and tools that are commonly taken into account, but also political and cultural factors that are often overlooked.

We constructed an interview guide that organized questions according to our

four categories (Table 3). More specifically, we asked how contextual-level and local-level factors in each category promoted or inhibited the implementation of a given WTMS. By contextual-level factors, we referred to factors that were present in the organization's environment, such as provincial and national legislation and policies (a governance factor) and economic conditions or provincial/national human resources shortages (resource factors). We defined local-level factors as factors that form part of a HCO: for example, the organization's ethical norms (a cultural factor), its protocols for the attraction and retention of staff (a tool), its human, financial and infrastructure resources (a resource factor) and its self-care process (a governance factor). The study was approved by the Ethics Committee of the University of Ottawa. To respect confidentiality respondents' quotations are identified only by institutional affiliation: federal/provincial respondents (FPR) or healthcare organization respondents (HOR).

TABLE 3. Interview questions

<p>Case studies Can you share with us one or two initiatives with which you have been involved and which had an impact at the organizational level?</p> <p>Factors</p> <ol style="list-style-type: none">1. What were some of the cultural factors present in the implementation of the initiative(s)?2. What were some of the governance factors present in the implementation of the initiative(s)?3. What were some of the resource factors?4. What tools were used?5. Was an evaluation conducted (formal or informal)?6. From your point of view, was this initiative successful or unsuccessful? Why? Was it a short-term or a long-term solution?7. Do you think that this initiative could act as a model for policy making or wait time management? <p>Documents Do you know of any unpublished studies, reports or position papers that relate to the determinants of wait time or waiting list management or policy introduction at the organizational level?</p>

Findings: Success Factors and Failure Factors in the Implementation of Wait Time Management Strategies

Research on organizational innovation has shown that specific factors promote or encourage innovation ("success factors"), while other factors inhibit it ("failure factors") (Greenhalgh et al. 2004). In this section, we explore respondents' perceptions of success and failure factors in the implementation of WTMS.

Local-level factors

GOVERNANCE FACTORS

Effective organizational leadership was mentioned by eight of 17 respondents, all of whom felt it to be key. Some respondents expressed this by identifying the lack of internal leadership as an impediment, while others emphasized the importance of a leader with credibility and vision. Still others stated that local-level wait time projects could not move forward without the support of senior management: “You need obvious organizational commitment. You need support from the senior leadership and the CEO for WTM” (FPR).

Local-level partnerships were another factor felt to be important, particularly in the field of orthopaedic surgery, where partnerships manifest as collaboration among various segments of the continuum of care (acute, rehabilitation and home care), collaboration between hospitals or collaboration among surgeons (some of whom had coordinated an orthopaedic “blitz”). For example, one respondent explained, “To prevent bed cuts, the physicians’ leaders started to develop partnerships between the various stakeholders, to work on change before the government cut any beds” (HOR).

CULTURAL FACTORS

All respondents spoke of how pivotal physicians were to the success of WTMS. Seven of 10 organizational-level interviewees brought up physicians’ support: “It’s crucial to get the surgeons on side. The person implementing the initiative has to have the respect and trust of the surgeons” (HOR). In many cases, surgeons’ leadership was cited as decisive. In Ontario and Nova Scotia, for example, surgeons confident about a computerized tracking system were central in bringing the other doctors on board: “At the beginning I had to convince my colleagues but when they understood how this could help their clinical practice with patients, they trusted me” (HOR).

Most organizational-level respondents also emphasized that involving doctors in the planning process from the outset was central to securing their support for federal and provincial strategies; they even suggested that general practitioners should take part in deciding the overall direction of the strategy. Respondents stressed, however, that local physician leadership was ineffective without the support of senior management. It was also clear that while certain strategies benefited from the dedication of a number of doctors, most physicians resisted change, and many actually hindered the implementation of wait time strategies. Respondents in three provinces (QC, MB and NS) attributed this phenomenon to the professional autonomy to which surgeons are accustomed, an autonomy that can act as a hurdle to the implementation of centralized lists.

Another cultural factor identified by our respondents consisted of the existence of subcultures within an organization. In most cases, subcultures were seen as an

obstacle to the introduction of WTMS. Organizational-level respondents pointed out that the most successful initiatives took place in organizations dominated by a culture of innovation, one with opportunities to create team identity and a climate that promoted success. Among other cultural factors, one interviewee attributed his hospital's efficiency to its culture of data collection, on the grounds that better information allows for better decisions. In his view, however, the success of better data-collection initiatives depended on a non-punitive approach: "Originally there were some concerns about whether this would be used to measure performance and individuals and so on. But as time went on, people have found it useful to be able to know what exactly has been going on. And so trust was earned" (HOR). Contrary to this position, another interviewee expressed scepticism of the evidence-based culture, saying that "physicians and nurses are not data-driven. They pretend they are but they are not" (FPR). This opinion notwithstanding, several respondents felt that better data allowed more thorough evaluations, which solicited the interest and collaboration of organizations, in turn. This occurred in the case of Greater Toronto's Total Joint Network.

RESOURCE FACTORS

All four kinds of resources (financial, human, infrastructural and informational) were identified as factors at the organizational level. Insofar as financial resources were concerned, "seed money" or "kick start" funds for wait time projects were mentioned as a factor in three successful initiatives, while in two other projects, insufficient funds had detrimental impacts. Transparency in the allocation of funds was also cited. Five participants explained how strategies at the local level were helped by financial incentives, such as extra compensation for physicians who provided the strategy with specified information. Few resources were mobilized for the implementation of initiatives undertaken by HCOs: "We didn't need a lot of money to launch our strategy" (HOR). Instead, local initiatives tended to deploy existing resources in new ways.

Among other types of resources mentioned, several respondents cited dedicated human resources as a beneficial factor and two identified personnel shortages as a barrier. Infrastructure resources were sometimes but not always an issue. General surgery in Winnipeg, for example, had adequate capacity, but patient distribution was not maximized as two surgeons had too many patients and other surgeons were under-used. One of the orthopaedic surgeons interviewed, however, cited the availability of operating room space and hours as a major factor inhibiting the reduction of wait times. Information resources such as data collection and improved analysis were also mentioned by interviewees, who felt that these were critical if actors were to publicize the status of wait times and evaluate the implementation of WTMS.

TOOL FACTORS

Our respondents identified a number of local-level tools: patient care tools (such as referral criteria using a referral template); prioritization tools, often developed at the provincial level; clinical guidelines; patient pathways with target lengths of stay; and protocols for operating room use or postoperative treatment. Information technology was also cited as allowing better information sharing among clinical parties. One of the four respondents who touched on this point explained that the development of demand forecast modelling and the publication of comparative data on the Internet helped to “hold administration accountable” (FPR). Another stressed the importance of offering simple and relevant information technology solutions to secure buy-in from physicians. Leaving information technology aside, one interviewee felt that evaluation tools such as patient satisfaction surveys, staff satisfaction surveys and case-cost comparisons were useful.

It is revealing that federal/provincial respondents exhibited complete ignorance of the tools used by HCOs. Only one federal/provincial respondent mentioned those tools at all: “For example, the Kingston General Hospital has a database that captures all surgery” (FPR). In contrast, all organizational-level respondents spoke of tools as essential.

Contextual-level factors

GOVERNANCE FACTORS

While governance-related issues were identified as an important contextual factor in 10 of 17 interviews, the importance that respondents accorded governance in the implementation of WTMS depended on whether the respondent hailed from the federal/provincial level or from the organizational level (HCOs). Only four of nine organizational-level respondents felt that contextual-level governance (i.e., the governance of Canada’s healthcare system overall) was a significant factor. These respondents cited provincial health ministries’ creation of a committee (BC) and of a network (ON) as the element that brought stakeholders together: “The provincial spotlight on wait times gave credibility to the project” (HOR). Similarly, an organizational-level respondent described how the centralization of general surgery referrals in Manitoba was temporarily abandoned after higher-level authorities failed to make it a priority. In contrast to this weak showing among organizational-level respondents, all federal/provincial respondents regarded contextual-level governance as essential. Successful initiatives, they claimed, had two characteristics: (1) they had been prioritized by political and administrative stakeholders (i.e., government, physicians’ representatives and organizations’ top management) and (2) they had experienced strong collaboration among all parties: “You need allies in all the different groups, at all the different levels” (FPR).

In Ontario, for example, one initiative succeeded after its implementation strategy had been made a priority for stakeholders from both federal/provincial and organizational levels, and organizational proactivity had been encouraged by Ontario's Innovation Fund. Conversely, local initiatives faced challenges when unsupported by provincial policy (see MB example, above). Four federal/provincial-level respondents also felt that a neutral committee (AB) or a neutral and respectful person in a leadership position (ON, SK) enhanced collaboration: "They are outside players that help the process" (FPR); "I see myself as a broker" (HOR). In a number of top-down initiatives, the credibility of the leader or that of the structure established to launch the strategy was another key factor. For example, Ontario respondents systematically acknowledged the role of the leader of the Ontario Wait Times Strategy, whose clinical and administrative experience gave him credibility at the same time that his independence from government and hospitals caused him to appear objective.

CULTURAL FACTORS

Eight interviewees cited the culture of Canada's healthcare system as a key contextual-level factor. One physician suggested that "a fee-for-service model is a major cultural impediment to moving forward. Every action affects physicians' income" (HOR). With respect to provincial initiatives, participants hailing mainly from the federal/provincial level emphasized the benefits of a participative approach and the development of a culture of evaluation, communication or rapid decision-making about WTMS in order to publicize progress made. All Ontario interviewees esteemed a culture of accountability, and one mentioned sustainability: "If many ... initiatives fail, it is because they don't build a sustainability culture" (FPR). Participants talking about provincial initiatives also emphasized the benefits of communicating with the public about wait time durations (to increase accountability) and about wait time strategies (to publicize progress made). In terms of negative cultural factors, three organizational-level interviewees mentioned a history of adversity among stakeholders and a context of mistrust between hospitals and the ministry of health: "The most important obstacle to change is culture, the culture of opposition within the healthcare system" (FPR).

RESOURCE FACTORS

Eight participants pointed out that financial resources were a necessary success factor, but that financial incentives had to be carefully planned, aligned and linked to efficiencies – for example, "special funds were dedicated to help physicians field the data" (FPR). Respondents also highlighted disincentives such as global budgets and the unavailability of overtime salary, and mentioned that national- and provincial-level strategies implemented at the local level required significant financial resources in

order to secure stakeholder participation. Two federal/provincial-level participants also referred to human resources shortages in Canada, and six organizational-level participants spoke of operating capacity: “There are real limitations with operating room space and the hours available for operations” (HOR).

TOOL FACTORS

The tools cited by our respondents were mainly used to collect data and follow or rank patients. For example, one respondent mentioned Quebec’s System to Manage Access to Care, which helps Quebec organizations rank the weight and urgency of cases in tertiary cardiology and radio-oncology.

Discussion: Balancing Governance, Culture, Resources and Tools

Achieving a balance between supportive resources and tools and an effective management system is a challenge for any WTMS and a key to the strategy’s success. The findings of this study point to several key lessons whose importance is underlined by the fact that they are echoed in the evidence from the literature. Looking at organizational-level factors, we can say that where cultural factors are concerned, involving physicians from the outset is key. Using clinical leaders to get other doctors on board is an essential cultural success factor. Physicians’ attention needs to be drawn to how the WTMS will improve their practice and help them provide better care. Studies have systematically found that involving physicians early facilitates the implementation and diffusion of WTMS down the road (Appleby et al. 2004; Glynn 2006; Frank et al. 2006). But at the same time, physicians need managers to help them redesign the patient pathway. Mobilizing a clinical governance model (Pomey et al. 2008) that shares responsibility between physicians and managers allows the parties to align their objectives. However, the relationship between the world of management and the world of practice is often characterized by conflict (Appleby et al. 2004). Furthermore, physicians are often active participants in access management strategies but are excluded from the decision-making process (Glynn 2006). In addition, an organizational culture open to innovation and teamwork (Frank et al. 2006) is more inclined to implement successful WTMS. Such strategies require that problems be met with collaborative solutions and not blame, and can achieve their full potential only when there is collaboration between HCOs and higher levels, as noted in the reports of Appleby and colleagues (2004).

A WTMS can be seen as a quality management process and in consequence needs to mobilize quality methods and professional expertise (McNulty and Ferlie

2002; Ham et al. 2003; Rachlis 2005). Different strategies have been implemented and can mobilize operations research (Patrick and Puterman 2008; Walley et al. 2006), priority scoring systems (Noseworthy et al. 2003) and guidelines (McGurran et al. 2002; WCWL 2008). Managers play an important role in helping evaluate the impacts and in adopting an open management style that develops staff and engages them in quality enhancement activities (Walley et al. 2006; McLeod et al. 2003; ACAHO 2006). The ability to monitor the impact of the strategies requires an investment in an information management system (Vanostenberg 2006). Data collection keeps actors accountable, and has to be considered as a normal part of doing business. Data collection also results in transparency, which facilitates discussion and improves collaboration among stakeholders both upstream and downstream from HCOs (Federal Advisor on Wait Times 2006; Collins-Nakai et al. 2006). As part of the quality enhancement process, an evaluation of the impact of WTMS on other initiatives and procedures has to be taken into account (Carruthers 2006).

In addition, we saw in our interviews that it is difficult to launch a WTMS without earmarked funds (Bellan 2004). Seed money helps to smooth the introduction of sometimes difficult changes (Greenhalgh et al. 2004; Baker and Schwartz 2005; Pearson and Meyer 1996). Finally, the alignment between high-level policies and local strategies is essential and rarely discussed in the literature. It is in the top-down initiative's interests to take organizational constraints into account (Frank et al. 2006); a third party—an independent organization, for example—can work with the organization to alleviate or address obstacles and facilitate implementation.

This exercise has allowed us to discern the synergy between different levels of decision-making and to grasp the importance of considering those levels simultaneously.

Conclusion

These reflections are the fruit of the experience of expert Canadians working at different levels of the healthcare system. They constitute the strength of this study, the first to plumb seasoned viewpoints of the factors that promote or inhibit the implementation of WTMS. Furthermore, this is the first time that these factors have been grouped in a landscape that includes not only federal/provincial strategies but also, critically, organizational strategies, and considers how these strategies interact. This exercise has allowed us to discern the synergy between different levels of decision-making and to grasp the importance of considering those levels simultaneously. It also

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makes our analytical model of great use to those involved in WTMS: for the first time, managers and policy makers have at their disposal a tool that includes all principal factors and demonstrates their interdependence. As complex as this may seem, improving patients' access to appropriate and timely care is "worth the wait."

ACKNOWLEDGEMENTS

This research was supported by the Canadian Institutes of Health Research grant #KSY-73928. Marie-Pascale Pomey is supported in part by career awards from the Canadian Institutes of Health Research. We would like to thank the interview participants for having contributed their experience and insights. We would also like to thank Jennifer Petrela for her editorial contribution.

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REFERENCES

- Appleby J., S. Boyle, N. Devlin, M. Harley, A. Harrison, L. Locock and R. Thorlby. 2004. *Sustaining Reductions in Waiting Times: Identifying Successful Strategies. Final report to the Department of Health*. London: King's Fund. Retrieved January 5, 2010. <<http://www.library.nhs.uk/HealthManagement/ViewResource.aspx?resID=70785>>.
- Association of Canadian Academic Healthcare Organizations (ACAHO). 2006 (March). *Wait Watchers II: Measuring Progress of Wait Time Management Strategies across ACAHO Members*. An ACAHO Member Survey. Ottawa: Author. Retrieved January 5, 2010. <http://www.achao.org/docs/pdf_2006_wait_watchers_II_final_report.pdf>
- Baker, G.R. and F. Schwartz. 2005. "Innovation and Access to Cancer Care Services in Ontario." *Healthcare Quarterly* 8(2 Suppl.): 2–12.
- Bellan, L. 2004. "The Impact of Allocation of Additional Resources on the Waiting Time for Cataract Surgery." *Healthcare Quarterly* 7(4): 54–56.
- Canadian Policy Research Network (CPRN). 2009. *Waiting List Management (Taming of the Queue)*. Retrieved January 5, 2010. <<http://www.cprn.org/theme.cfm?theme=43&l=en>>.
- Carruthers, C. 2006. "Sustaining the Wait Time Strategy." *HealthcarePapers* 7(1): 51–54.
- Collins-Nakai, R., O. Adams and M. Saulnier. 2006. "A Prescription for Ontario's Wait Time Strategy." *HealthcarePapers* 7(1): 46–50.
- Federal Advisor on Wait Times. 2006. *Final Report of the Federal Advisor on Wait Times*. Ottawa: Health Canada.

- Ferlie, E.B. and S.M. Shortell. 2001. "Improving the Quality of Health Care in the United Kingdom and the United States: A Framework for Change." *Milbank Quarterly* 7(2): 281–315.
- Frank, C., D. Dick, D. Smith, T. Wasylak, K. Gooch and R. Zernicke. 2006. "The Alberta Bone and Joint Health Institute: Creating Sustainable Accountability through Collaboration, Relevant Measurement and Timely Feedback." *HealthcarePapers* 7(1): 34–39.
- Glynn, P.A. 2006. "Sustaining Change: The Imperative for Patient Access Strategies." *HealthcarePapers* 7(1): 55–57.
- Greenhalgh, T., G. Robert, F. Macfarlane, P. Bate and O. Kyriakidou. 2004. "Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations." *Milbank Quarterly* 82(4): 581–629.
- Ham, C., R. Kipping and H. McLeod. 2003. "Redesigning Work Processes in Health Care: Lessons from the National Health Service." *Milbank Quarterly* 81(3): 415–39.
- Hatchuel, A. 2000. Prospective et gouvernance : quelle théorie de l'action collective ? In E. Heurgon and J. Landrieu, eds., *Prospective pour une gouvernance démocratique* (pp. 29–42). La Tour d'Aigues, France: Éditions de l'Aube.
- Health Canada. 2004. *First Ministers' Meeting on the Future of Health Care. A 10-Year Plan to Strengthen Health Care*. Retrieved January 5, 2010. <http://www.hc-sc.gc.ca/hcs-sss/delivery-prestation/fptcollab/2004-fmm-rpm/index_e.html>.
- Health Council of Canada. 2007. *Wading through Wait Times: What Do Meaningful Reductions and Guarantees Mean?* Retrieved January 5, 2010. <http://healthcouncilcanada.ca/en/index.php?option=com_content&task=view&id=202&Itemid=10>.
- McGurran, J., T. Noseworthy and the Steering Committee of the Western Canada Waiting List Project. 2002 (Spring). "Improving the Management of Waiting Lists for Elective Healthcare Services: Public Perspectives on Proposed Solutions." *Hospital Quarterly* 5(3): 28–32. Retrieved January 5, 2010. <http://www.wcwl.org/media/pdf/library/published_papers.5.pdf>.
- McLeod, H., C. Ham and R. Kipping. 2003. "Booking Patients for Hospital Admissions: Evaluation of a Pilot Programme for Day Cases." *British Medical Journal* 327: 1147–50.
- McNulty, T. and E. Ferlie. 2002. *Reengineering Health Care. The Complexities of Organizational Transformation*. Oxford: Oxford University Press.
- Noseworthy, T.W., J.J. McGurran, D.C. Hadorn and the Steering Committee of the Western Canada Waiting List Project. 2003. "Waiting for Scheduled Services in Canada; Development of Priority-Setting Scoring Systems." *Journal of Evaluative Clinical Practice* 9: 23–31.
- Parsons, T. 1977. *Social Systems and the Evolution of Action Theory*. New York: Free Press.
- Patrick, J. and M.L. Puterman. 2008. "Reducing Wait Times through Operations Research: Optimizing the Use of Surge Capacity." *Healthcare Policy* 3(3): 75–88.
- Pearson, K. and H. Meyer. 1996. "Wait Times: The Search for Equitable Solutions." *Australian Health Review* 9(4): 93–99.
- Pomey, M.-P., J.-L. Denis and A.-P. Contandriopoulos. 2008. "Un cadre conceptuel d'analyse de la gouvernance clinique dans les établissements de santé." *Pratiques et Organisations des Soins* 39(3): 183–94. Retrieved January 5, 2010. <<http://www.ameli.fr/l-assurance-maladie/statistiques-et-publications/la-revue-pratiques-et-organisation-des-soins/les-articles-de-la-revue/pratiques-et-organisation-des-soins-2008-n-3/sommaire-du-numero-3-2008.php>>.

Wait Time Management Strategies for Scheduled Care: What Makes Them Succeed?

- Prime Minister of Canada. 2007 (April 4). "Canada's New Government Announces Patient Wait Times Guarantees." Retrieved January 5, 2010. <<http://pm.gc.ca/eng/media.asp?id=1611>>.
- Rachlis, M. 2005. "Public Solutions to Health Care Wait Lists." Ottawa: Canadian Centre for Policy Alternatives. Retrieved January 5, 2010. <<http://www.policyalternatives.ca/publications/commentary/public-solutions-health-care-wait-lists>>.
- Shortell, S.M., J.L. Levin, J.L. O'Brien and E.F. Hughes. 1995. "Assessing the Evidence of CQI: Is the Glass Half Empty or Half Full?" *Hospital & Health Services Administration* 40(1): 4–24.
- Siciliani, L. and J. Hurst. 2003. "Tackling Excessive Wait Times for Elective Surgery: A Comparative Analysis of Policies in 12 OECD Countries." *Health Policy* 572(2): 201–15.
- Supreme Court of Canada (SCC). 2005 (June 9). *Chaoulli v. Quebec (Attorney General)*, 2005 SCC 35, [2005] 1 SCR 791. Retrieved January 5, 2010. <<http://scc.lexum.umontreal.ca/en/2005/2005scc35/2005scc35.html>>.
- Trypuc, J., A. Hudson and H. Macleod. 2006. "Ontario's Wait Time Strategy: Part 1." *Healthcare Quarterly* 9(2): 44–51.
- Trypuc, J., H. MacLeod and A. Hudson. 2006. "Developing a Culture to Sustain Ontario's Wait Time Strategy." *HealthcarePapers* 7(1): 8–24.
- Vanostenberg, P. 2006. "Quality Measurement across Borders: Need and Options." *World Hospital Health Services* 42(1): 19–22.
- Walley, P., K. Silvester and R. Steyn. 2006. "Knowledge and Behaviour for a Sustainable Improvement Culture." *Healthcare Quarterly* 7(1): 26–33.
- Western Canada Waiting List (WCWL) Project*. 2008. List of Published Papers. Retrieved January 5, 2010. <http://www.wcwl.org/library/published_papers/?id=published_papers.5>.

Development of a Support Tool for Complex Decision-Making in the Provision of Rural Maternity Care

Mise au point d'un outil d'appui à la prise
de décisions complexes dans la prestation de soins
de maternité en milieu rural



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Abstract

Context: Decisions in the organization of safe and effective rural maternity care are complex, difficult, value laden and fraught with uncertainty, and must often be based on imperfect information. Decision analysis offers tools for addressing these complexities in order to help decision-makers determine the best use of resources and to appreciate the downstream effects of their decisions.

Objective: To develop a maternity care decision-making tool for the British Columbia Northern Health Authority (NH) for use in low birth volume settings.

Design: Based on interviews with community members, providers, recipients and

decision-makers, and employing a formal decision analysis approach, we sought to clarify the influences affecting rural maternity care and develop a process to generate a set of value-focused objectives for use in designing and evaluating rural maternity care alternatives.

Setting: Four low-volume communities with variable resources (with and without on-site births, with or without caesarean section capability) were chosen.

Participants: Physicians (20), nurses (18), midwives and maternity support service providers (4), local business leaders, economic development officials and elected officials (12), First Nations (women [pregnant and non-pregnant], chiefs and band members) (40), social workers (3), pregnant women (2) and NH decision-makers/administrators (17).

Results: We developed a Decision Support Manual to assist with assessing community needs and values, context for decision-making, capacity of the health authority or healthcare providers, identification of key objectives for decision-making, developing alternatives for care, and a process for making trade-offs and balancing multiple objectives. The manual was deemed an effective tool for the purpose by the client, NH.

Conclusions: Beyond assisting the decision-making process itself, the methodology provides a transparent communication tool to assist in making difficult decisions. While the manual was specifically intended to deal with rural maternity issues, the NH decision-makers feel the method can be easily adapted to assist decision-making in other contexts in medicine where there are conflicting objectives, values and opinions. Decisions on the location of new facilities or infrastructure, or enhancing or altering services such as surgical or palliative care, would be examples of complex decisions that might benefit from this methodology.

Résumé

Contexte : Les décisions touchant l'organisation de soins de maternité sécuritaires et efficaces en milieu rural sont complexes, difficiles, empreintes de valeurs et marquées d'incertitudes; de plus, elles doivent souvent se fonder sur une information incomplète. L'analyse décisionnelle offre des outils pour faire face à cette complexité, afin d'aider les décideurs à déterminer le meilleur usage des ressources et à considérer les effets découlant de leurs décisions.

Objectif : Mettre au point un outil d'appui à la prise de décisions pour les soins de maternité dans la Région sanitaire du nord de la Colombie-Britannique (British Columbia Northern Health Authority), pour les collectivités à faible volume de naissances.

Conception : À l'aide d'entrevues avec des membres de la collectivité, des prestataires de soins, des bénéficiaires et des décideurs – ainsi qu'à l'aide d'une méthode d'analyse des décisions officielles – nous avons tenté de clarifier les influences qui entrent en

jeu dans les soins de maternité en milieu rural et de mettre au point un processus visant à dégager des objectifs centrés sur les valeurs pour la conception et l'évaluation des choix qui s'offrent pour les soins de maternité en milieu rural.

Collectivités : Nous avons choisi quatre collectivités à faible volume de naissances et dotées de ressources variables (avec ou sans naissances sur les lieux, avec ou sans capacité pour les césariennes).

Participants : Médecins (20), infirmières (18), sages-femmes et fournisseurs de services de soutien en maternité (4), entrepreneurs locaux, responsables du développement économique et élus (12), Autochtones (femmes [enceintes ou non], chefs et membres de bande) (40), travailleurs sociaux (3), femmes enceintes (2) et décideurs ou administrateurs de la Région sanitaire (17).

Résultats : Nous avons mis au point un manuel d'appui aux décisions afin de permettre l'évaluation des besoins et des valeurs de la collectivité, définir le contexte de prise de décisions, évaluer la capacité de la région sanitaire ou des prestataires de services de santé, déterminer des objectifs clés pour la prise de décisions, mettre en place d'autres choix pour les services de soins et mettre au point un processus pour les compromis et pour équilibrer les multiples objectifs. Le manuel a été jugé un outil efficace pour les besoins du client, soit la Région sanitaire.

Conclusions : Au-delà de l'appui à la prise de décisions, la méthodologie offre un outil de communication transparent qui facilite la prise de décisions difficiles. Bien que le manuel ait été conçu spécialement pour les enjeux liés à la maternité en milieu rural, les décideurs de la Région sanitaire estiment que la méthode peut facilement s'adapter à d'autres contextes où il y a des objectifs conflictuels ainsi que des enjeux liés aux valeurs et aux opinions. Les décisions liées à l'emplacement de nouvelles installations ou infrastructures, ou liées à l'amélioration de services tels que la chirurgie ou les soins palliatifs, constituent des exemples de décisions complexes qui peuvent tirer avantage de cette méthodologie.

THIS PAPER PROVIDES A BACKGROUND AND SUMMARY OF THE WORK associated with the development of an evidence-based manual and toolkit to assist decision-makers in making optimal decisions for the provision of maternity care in low birth volume settings in rural northern British Columbia (Hearns et al. 2008). *The full manual can be downloaded on request as a PDF file from the authors.*

Across much of rural British Columbia, decision-makers are faced with very difficult choices when addressing issues of rural maternity care. In the province, between 1997 and 2005, roughly a quarter of facilities serving over 500 births per year were closed. Such healthcare decisions have profound impacts in rural areas, and improving and aiding in the quality of these decisions is therefore of great consequence and

associated with high impact. When maternity services close, women and families must travel to receive care. As a result, they lose personal and family supports and often incur significant financial costs. First Nations communities lose important cultural and community context. Moreover, despite ultimately receiving competent care, when women travel large distances to deliver, the rate of premature births and neonatal asphyxia increases, as do other maternal and newborn complications (Samuels et al. 1991; Black and Fyfe 1984; Chamberlain and Barclay 2000; Frankenberg and Thomas 2001; Grzybowski et al. 1991; Nesbitt et al. 1997).

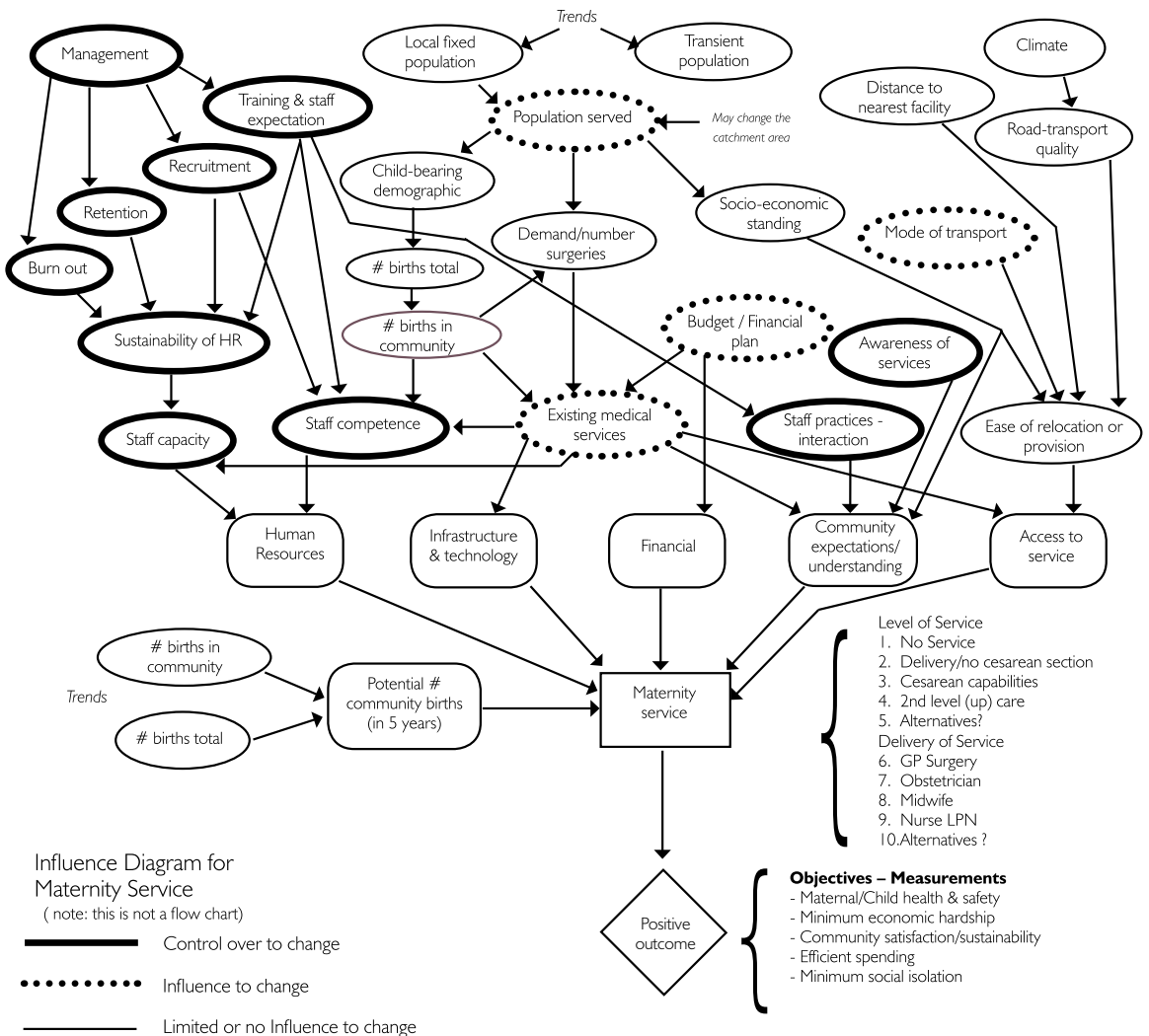
It is not clear why prematurity rates rise when women need to leave their communities to receive care, but we presume that it relates to increased stress and reduced family and other supports in the distant location where they eventually give birth. While outcomes for premature infants are improved by centralization of services, outcomes for babies of average size/weight are not (Reynolds and Klein 2000; Larimore and Davis 1995; Nesbitt et al. 1990). Although the effects of centralization in some settings may not have detrimental impacts on the health of women and their babies, we suggest that this change in the way in which maternity care is provided to small rural communities has wide-ranging effects for community sustainability. Ireland and colleagues (2007) have noted that centralization “has created particular difficulties, such as reduced patient choice, quality of care, safety and sustainability of maternity services, lack of trained staff, and professional development.”

One consequence of reducing maternity care includes reduced availability of physicians, nurses and other maternity support staff in the affected site and community, leading to further difficulties in recruitment and retention. The loss of medical facilities also affects economic capital, as businesses find it difficult to recruit employees, thereby reducing community economic viability (Klein et al. 2002). This relationship between healthcare and sustainable communities is seldom given adequate consideration when making decisions about maternity care services.

In balancing fiscal constraints and limited resources with community interests and maintaining health standards, the decision-maker may be faced with a large number of competing and often conflicting forces. Figure 1 shows an influence diagram of the issues affecting the choice of maternity services. The diagram was constructed from a series of interviews with decision-makers in four different northern rural communities in British Columbia and in the central offices of Northern Health (NH). It is not meant to be a comprehensive analysis of all potential situations, but rather a general snapshot of the complexity of major influences. While the decision-makers have no control over the climate or the socio-economic standing of the clients served, they may, however, have some influence over budgets or financial planning, and generally have a good deal of control over such factors as management of human resources and community awareness of services. It is in the areas of “greatest control” that the most effective actions are likely to be found.

Development of a Support Tool for Complex Decision-Making in the Provision of Rural Maternity Care

FIGURE 1. Issues affecting decision-making for rural maternity services



Usually, the decision-making process focuses on administration, fiscal and safety issues. Solutions often follow previously made decisions, with little debate or dialogue around options (Hammond et al. 1999). In bureaucracies, this approach is less time-consuming, simpler and safer. Involving local communities is often perceived to be time-consuming and awkward. In Alberta, during a survey of key decision-makers in rural health authorities, the respondents indicated that while the majority of them relied on utilization data and information, few looked to public input to help set priorities for service delivery. Yet, they overwhelmingly believed that more frequent dialogue with the public was required (Mitton and Donaldson 2002). In response to findings

that local communities were not being adequately consulted, numerous commissions and reports in Canada in the late 1980s and early 1990s strongly advocated for increased citizen participation in healthcare¹ (Charles and DeMaio 1993). Since then the major question is not whether, but rather, how best to engage local communities and the public in complex deliberations associated with healthcare issues (Abelson et al. 2003; Litva et al. 2002). In general, people have difficulty making complex decisions (McDaniels et al. 1999). This is particularly true with respect to health, where perceptions can greatly influence choice (Litva et al. 2002). Moreover, the method for public engagement must meet the local community's capacity to participate (Abelson 2001). This point is particularly important in rural British Columbia, where there are varying levels of socio-economic standing between and among communities.

We propose that through a structured process of identifying and evaluating alternatives, creative and defensible choices can be made in difficult decisional contexts that accommodate different capacities within communities. If these choices are done well, the stakeholders, communities and healthcare workers are more likely to be sympathetic, or at least understanding of decisions made. Moreover, the process helps ensure that creative alternatives are produced and evaluated in a transparent and unbiased manner. Good solutions have their foundation in effective and creative alternatives from which to choose. Most importantly, even a reduction in services does not mean that the decision-makers can avoid caring for populations in their area of responsibility, but it does mean that services will have to be organized differently.

The decision-support framework developed during this project was created in order to aid the regional health authority, Northern Health, in making optimal decisions about how to maintain low-volume maternity care services. Understanding that both time and resources are limited, these processes and guides are not meant to be onerous or complicated. Rather, they are intended to ensure that the interests of those affected by the decisions are adequately and efficiently taken into account, and that the final results of the process may be communicated in an effective manner. The methodology can be adapted to fit the needs of the decision-makers in terms of scope, timing and budget.

Methodology

NH serves a population of 300,000 people thinly distributed across a large geographic area encompassing two-thirds of British Columbia. Most communities are small and rural or remote, with significant First Nations populations. To reflect the diversity of situations, the communities of Quesnel, Vanderhoof, Fraser Lake, Fort St. James and surrounding First Nations were selected for assessment based on number of births, variety and level of services provided, socio-economic conditions and ethnic diversity. The case studies that provided the basis for the model that we present are subject to the main driving forces affecting many rural areas, such as declining populations and

birth rates, weakening economies, difficulties in attracting and maintaining healthcare workers, pressure to centralize services and cultural diversity. The lower birth rates are also found in First Nations communities, but they continue to have the highest birth rates in the province.

Between autumn 2005 and winter 2007, established qualitative and decision-analysis techniques were applied to assess the four community case studies. The complexity of providing local maternity care was detailed through 51 interviews and 12 focus groups with key stakeholder groups: healthcare administrators, women, First Nations, community leaders, elected officials, business leaders, and physicians, nurses and other care providers (e.g., doulas, community health workers).² Based on an analysis of the influences affecting decisions related to rural maternity care, the needs of administrators and decision-makers were clarified and became the framework for developing decision-making support tools. A process, founded on value-focused decision-analysis theory (Keeney 1992; Kirkwood 1997; Clemen and Reilly 2000), was developed to help identify key objectives and to generate and evaluate strategic alternatives. The process and guide were refined and field-tested in an additional community under stress, in parallel with a traditional process of decision-making. The result was that many of the recommendations emerging from the field test were incorporated into the report and the manual itself, from the traditional process.

The decision-making framework

The decision-making framework helps to identify and evaluate creative alternatives and to make defensible and easily communicated choices in complex situations. It aims to develop insight and understanding among decision-makers regarding how well their objectives can be achieved by different courses of action (or alternatives), the most likely core trade-offs and the relative risk associated with each. For example, some actions may be seen as “must-do,” with relatively little risk associated with their implementation. They may be inexpensive, easy to accomplish administratively and in a short period of time, and have a high impact on the objectives at hand. An example might be the creation and distribution of information pamphlets for building community awareness. Others may have greater associated risks, such as depending upon a regional community outreach program to educate your local community. Linking actions that depend upon the success of previous actions also compounds the risks associated with a particular strategy. These and other considerations are discussed in greater detail in the manual.

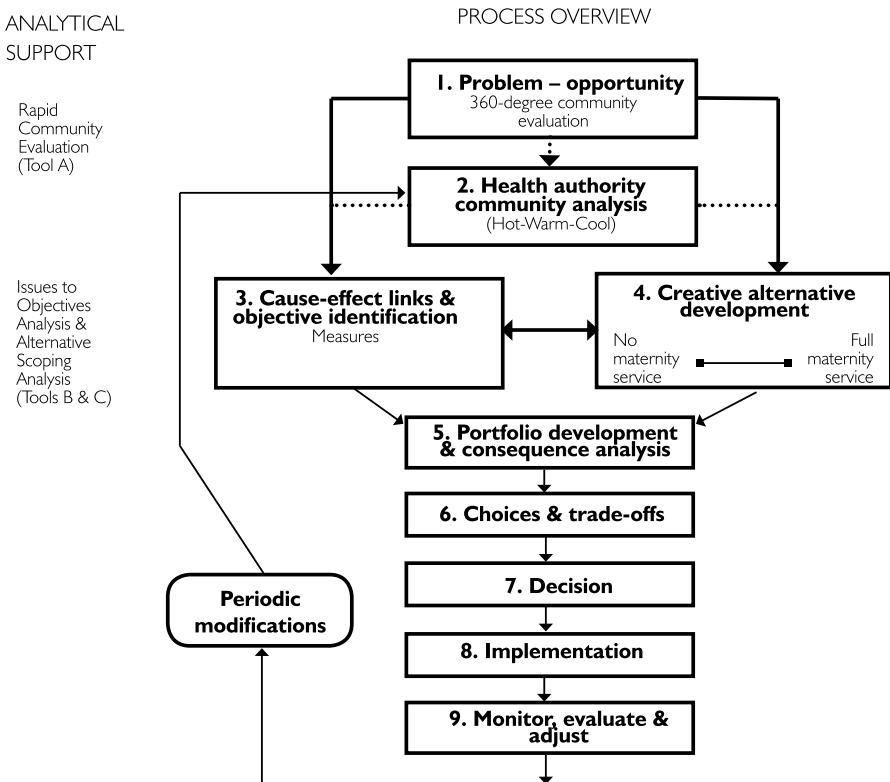
The process is specifically designed to engage various stakeholders including technical experts, community members, First Nations, caregivers and administrators, among others. The methodology assumes that the ultimate decision-making power rests in the hands of the decision-makers. It is not meant to be a drawn-out or complicated process, though the

required time and resources will depend upon the context of the decision to be made.

The process has been modelled on value-focused decision analysis and is based on several fundamental principles. It is a value-based process that clarifies what matters to those principally affected by the decision. “What matters” is developed into evaluation criteria (objectives) as a means of choosing between various options for action. The process is informed through insight and understanding based on facts derived from interviews, expert judgments, research or statistics and other available perspectives. The process is collaborative and transparent, focused on mutual learning about objectives and alternatives, and what is important to various stakeholders. It is conducted through a structured and defined series of steps to ensure understanding at each stage and understanding of how decisions have ultimately been made. The structure guarantees that facts and values are used appropriately and in an easily communicated way. Finally, the process is adaptive and designed to be reviewed, modified and updated in an iterative fashion. Clearly, the location of a new facility does not lend itself to being “modified” by changing its location, but it can be modified through other means such as a change in its vocation or range of services provided.

The basic steps of the process are laid out in Figure 2, which shows the decision tools that have been developed for various stages of the process.

FIGURE 2. Decision tools



Public policy decisions are often taken in a reactive atmosphere where the need for action may appear to outweigh the need to take a step back and clarify the complexity of the decision and its context (Clemen and Reilly 2000; Beierle and Cayford 2002). The need for clarity and the choice of organized methods for dealing with public perceptions can be difficult, particularly in the area of public health policy (Anand 2002). Consequently, when it is feasible to do so, it is generally simpler to do what has previously been done, often maintaining the status quo, without going through the route of determining whether it really is the best course of action in the specific context. Through the course of our research and interviews, it was evident that prompted by an undesirable situation, such as stress among nurses on a maternity ward, the desire for a quick solution overwhelmed other potentially more effective solutions. In such a situation, the option put forward may have been to increase the number of nurses on a maternity ward. This is what had been done before; it was simple (provided that nurses were available) and principally required money, as opposed to genuine institutional change. But a rapid decision may or may not address the underlying issue. Taking the issue as an opportunity to effect change, the real decisional context is how to improve maternity services, where hiring more nurses may be only one course of action. Other potential actions may include altering the practice of physicians, reducing dependence on certain interventions, developing greater community awareness of issues related to childbirth, hiring local community support staff for administrative tasks to free up nursing time, and better planning of schedules, among others. Long-term planning might reveal the need for increased cross-over nurses and training, among other possibilities. The combined effect of several alternatives, or a new strategy, may mitigate the need for simply “more nurses.”

Method

1. Problem – opportunity

Approaching a problem provides an opportunity to review and assess the issue from a wider perspective. An appropriate understanding of the issues and values is key to providing a caregiving service that considers the views of all stakeholders. This is called a 360-degree community evaluation. It includes local communities, First Nations, caregivers and administrators, among others. The survey should involve interviews or focus groups or other appropriate means of soliciting input. It does not have to be a laborious process, but it is important to let those engaged understand how their information will be used.

2. Health authority community analysis

Information gained must be analyzed, and the decisional context reviewed to ensure that the appropriate discussions and deliberations are carried out. Areas of major concern should be identified. These could be either specific locations or areas of management, such as lack of infrastructure or relations with the community. Revisiting some key interviews may be necessary.

3. Cause–effect links and objective identification

It is very important that clear, concise objectives and evaluation criteria are developed that reflect the values that really matter. These include criteria that address economic, social, cultural and safety considerations that may be affected by the management alternatives under consideration. A cause–effects linkage tool helps define the actual objective versus a mere “issue” or “concern.”

4. Creative alternative development

This step involves developing a suite or range of alternatives to be considered for objective evaluation. It is important that they not be prejudged, as this is one of the keys to transparency and meaningful stakeholder input. Alternatives that clearly do not meet the objectives will likely be discarded in step 5.

5. Portfolio development and consequence analysis

This step involves technical analysis to address how the alternatives may achieve the identified goals. It may involve available information, estimates and judgments from technical experts and local holders of knowledge. In general, the findings are summarized in a consequence table tool to explicitly show relative effects of different actions. Suites of actions, termed portfolios, can be developed for evaluation against one another. In this way, actions with little impact will fall away, while those with greater impact will be expanded and further developed.

6. Choices and trade-offs

This step is the basis for balancing the different values incorporated in complex situations such as deciding about the delivery of maternity care services. Although win–win solutions are always sought, difficult choices will usually result in having to emphasize certain objectives and issues over others. While tools and consequence tables will help inform the discussion, they do not make the choices. What is desired

is an acceptable balance, across the objectives, such that stakeholders can accept the decisions taken – even difficult ones. If time and resources permit, it is useful to include all key stakeholders in this process to ensure better buy-in of a final strategy.

7. Decision

The decision will ultimately be made by those responsible.

8. Implementation

It is important to consider implementation issues up front as part of the community survey. Ideally when this step is reached, the selected decision can be implemented – because such considerations as finance, political will and other factors have already been addressed in choosing the strategy. It is therefore important to address all these components early on as part of the initial objectives or evaluation criteria.

9. Monitor, evaluate and adjust

Funds should be made available for monitoring and evaluating the implementation of the activities chosen.

Conclusions

Decisions regarding the provision of services for rural maternity care are complex and often difficult. As with many healthcare decisions, they tend to be value laden and sensitive. For good decisions to be made, there is a need to undertake processes that address the underlying stakeholder interests in a transparent and defensible way. While a desire by many decision-makers to be more inclusive and transparent must be acknowledged, this desire is also frequently associated with decision-makers' concerns that the process will become too complex and onerous, thereby consuming time and more resources – and exposing the decision-makers to undue community influences. But by focusing on the objectives that matter, in terms of society and local communities as well as care providers and administrators, and through engaging all the key stakeholders, many problems can be avoided.

A structured process has the advantage of addressing complex issues in a systematic manner in order to arrive at defensible and easily communicated decisions. While this manual and toolkit have been designed for decision-making in the provision of rural maternity care, decision-makers in Northern Health feel that it can be adapted to a number of different healthcare situations or applications, especially when conflicting values and objectives are at play in the face of limited resources. This methodology

has been applied to the location of emergency response facilities, and could be easily extended to decisions about the location or upgrading of new infrastructure (such as upgrading surgical units) or establishing cancer treatment facilities. The methodology also lends itself to decisions on enhancing existing services, similar to how it has been designed for maternity services. Enhancing palliative care and surgical services would also clearly benefit from such a methodology, particularly in light of the contentious community interaction usually associated with such decisions. Northern Health has already applied the manual or the principles therein to two communities under stress, and it is actively planning to apply the method to other low-volume situations in the North well beyond maternity care.

ACKNOWLEDGEMENTS

This study was supported by grants from the Vancouver and Michael Smith foundations.

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NOTES

- 1 Premier's Commission on Future Health Care for Albertans 1989; Nova Scotia Royal Commission on Health Care 1989; Ontario Health Review Panel 1987; Ontario Ministry of Health 1989; Premier's Council on Health Strategy 1991; Saskatchewan Commission on Directions in Health Care 1990; Saskatchewan Health 1992.
2. This included the following populations: physicians (20), nurses (18), midwives and other maternity support service providers (e.g., doulas, childbirth educators, breastfeeding counsellors and outreach workers – many in dual or multiple roles) (4), local business leaders and economic development officials, local elected officials (e.g., mayor, city and band councillors) (12), First Nations (women [pregnant and non-pregnant], chiefs and band members) (40), social workers (3), pregnant women and women who have given birth within the past 12 months (2) and 17 decision-makers from Northern Health.

REFERENCES

- Abelson, J. 2001. "Understanding the Role of Contextual Influences on Local Health-Care Decision Making: Case Study from Ontario, Canada." *Social Science & Medicine* 53(6): 777–93.
- Abelson, J., P. Forest, J. Eyles, P. Smith, E. Martin and F. Gauvin. 2003. "Deliberations about Deliberative Methods: Issues in the Design and Evaluation of Public Participation Processes." *Social Science & Medicine* 57(2): 239–51.
- Anand, P. 2002. "Decision-Making When Science Is Ambiguous." *Science* 295(5561): 1839.

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Provision of Rural Maternity Care

Beierle, T. and J. Cayford. 2002. *Democracy in Practice: Public Participation in Environmental Decisions*. Washington, DC: RFF Press.

Black, D. and I. Fyfe. 1984. "The Safety of Obstetric Services in Small Communities in Northern Ontario." *Canadian Medical Association Journal* 130 (5): 571–76.

Chamberlain, M. and K. Barclay. 2000. "Psychosocial Costs of Transferring Indigenous Women from Their Community for Birth." *Midwifery* 16 (2): 116–22.

Charles, M. and S. DeMaio. 1993. "Lay Participation in Health Care Decision-Making: A Conceptual Framework." *Journal of Health Politics, Policy and Law* 18(4): 881–904.

Clemen, R.T. and T. Reilly. 2000. *Making Hard Decisions*. Pacific Grove, CA: Duxbury Press.

Frankenberg, E. and D. Thomas. 2001. "Women's Health and Pregnancy Outcomes: Do Services Make a Difference?" *Demography* 38(2): 253–65.

Grzybowski, S., A. Cadesky and W. Hogg. 1991. "Rural Obstetrics: A 5-Year Prospective Study of the Outcomes of All Pregnancies in a Remote Northern Community." *Canadian Medical Association Journal* 144: 987–94.

Hammond, J., R. Keeney and H. Raiffa. 1999. *Smart Choices: A Practical Guide to Making Better Decisions*. Cambridge, MA: Harvard Business School Press.

Hearns, G., W. Trousdale, M.C. Klein, D. Butcher, C. Ulrich, C. Miewald, S. Eftekhary and the Maternity Care Research Group. 2008. *Informed Decision-Making: The Interaction between Sustainable Maternity Care Services and Community Sustainability – A Decision Support Manual*.

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- Vancouver: University of British Columbia and the Child and Family Research Institute and Northern Health.
- Ireland, J., H. Bryers, E. van Teijlingen, V. Hundley, J. Farmer, F. Harris, J. Tucker, A. Kiger and J. Caldwell. 2007. "Competencies and Skills for Remote and Rural Maternity Care: A Review of the Literature." *Journal of Advanced Nursing* 58(2): 105–15.
- Keeney, R.L. 1992. *Value-Focused Thinking: A Path to Creative Decision-Making*. Cambridge, MA: Harvard University Press.
- Kirkwood, C. 1997. *Strategic Decision-Making: Multiobjective Decision Analysis with Spreadsheets*. Pacific Grove, CA: Duxbury Press.
- Klein, M., S. Johnston, J. Christilaw and E. Carty. 2002. "Mothers, Babies and Communities: Centralizing Maternity Care Exposes Mothers and Babies to Complications and Endangers Community Sustainability." *Canadian Family Physician* 48: 1177–79 (Eng), 1183–85 (Fr).
- Larimore, W. and A. Davis. 1995. "Relation of Infant Mortality to the Availability of Maternity Care in Rural Florida." *Journal of the American Board of Family Practice* 8(5): 392–99.
- Litva, A., J. Coast, J. Donovan, J. Eyles, M. Shepard, J. Tacchi, J. Abelson and K. Morgan. 2002. "The Public Is Too Subjective: Public Involvement at Different Levels of Health Care Decision-Making." *Social Science & Medicine* 54(12): 1825–37.
- McDaniels, T., R. Gregory and D. Fields. 1999. "Democratizing Risk Management: Successful Public Involvement in Local Water Management Decisions." *Risk Analysis* 19(3): 497–510.
- Mitton, C. and C. Donaldson. 2002. "Setting Priorities in Canadian Regional Health Authorities: A Survey of Key Decision Makers." *Health Policy* 60(1): 39–58.
- Nesbitt, T.S., F.A. Connell, L.B. Hart and R.A. Rosenblatt. 1990. "Access to Obstetric Care in Rural Areas: Effect on Birth Outcomes." *American Journal of Public Health* 80(7): 814–18.
- Nesbitt, T.S., E.H. Larson, R.A. Rosenblatt and L.G. Hart. 1997. "Access to Maternity Care in Rural Washington: Its Effect on Neonatal Outcomes and Resource Use." *American Journal of Public Health* 87(1): 85–90.
- Reynolds, J.L. and M. Klein M. 2000. "Recommendations for a Sustainable Model of Maternity and Newborn Care in Canada." In J.L. Reynolds and M. Klein, eds., *Proceedings of the Future of Maternity Care in Canada: Crisis or Opportunity?* London, ON, November 24–25.
- Samuels, S., J.P. Cunningham and C. Choi. 1991. "The Impact of Hospital Closures on Travel Time to Hospitals." *Inquiry* 28(2): 194–99.

Commentary on Development of a Support Tool for Complex Decision-Making

Commentaire sur la mise au point d'un outil d'appui à la prise de décisions complexes

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HEARNES, KLEIN AND COLLEAGUES SET OUT TO DEVELOP A MATERNITY care decision-making tool for the British Columbia Northern Health Authority to assist with assessing community needs and values. They are to be commended for thinking outside the traditional decision-making approach which focuses, as they say, on “administration, fiscal and safety issues. Solutions often follow previously made decisions ... [because] this approach is less time-consuming, simpler and safer.” They go on to point out the problems with this approach, such as minimal engagement of community members or representation of their interests, potentially resulting in disempowerment and bitterness. They claim that their process rectifies this lack of engagement:

... through a structured process of identifying and evaluating alternatives, creative and defensible choices can be made in difficult decisional contexts that accommodate different capacities within communities. If these choices are done well, the stakeholders, communities and healthcare workers are more likely to be sympathetic, or at least understanding of decisions made. Moreover, the process helps ensure that creative alternatives are produced and evaluated in a transparent and unbiased manner.

The Decision Support Manual and its tools and processes are intended for use in low birth volume settings, and the authors have accomplished this and more. Changing demographics, a desire to maintain rural quality of life and economic challenges ensure that decision-making is likely to be more rather than less frequent for healthcare teams and administrators. Hence the need for tools and processes that ensure the most inclusive, transparent and action-focused approach to difficult decisions. Following such principles promotes the best opportunity for an outcome that satisfies community members that their ideas have been heard and that their needs have been addressed as well as possible. It would seem that in the long term, this

The authors' informed decision-making process should be highly relevant to those in health policy positions who are looking for a more open and transparent way to resolve identified problems and issues to ensure that solutions have support, or at the very least, can be understood by local stakeholders who may be most affected by the change.

approach is likely to be most acceptable to all involved and to promote the overall success of proposed changes to healthcare services where there are potentially conflicting interests.

This paper provides a detailed description of the development of the Decision Support Manual, *Informed Decision-Making: The Interaction between Sustainable Maternity Care Services and Community Sustainability*, which I had

the privilege to preview. The manual itself provides instructions on use of the tool and a concise, simple, step-by-step nine-point approach to this complex decision-making process which appears to be practical and straightforward and offers many tips on enhancing its use.

The authors' informed decision-making process should be highly relevant to those in health policy positions who are looking for a more open and transparent way to

resolve identified problems and issues to ensure that solutions have support, or at the very least, can be understood by local stakeholders who may be most affected by the change. The openness to involving non–health professional community stakeholders (child-bearing families, as well as cultural and business leaders) in the consultation process is particularly relevant to creating community buy-in and understanding. The authors correctly point out that not everyone may like the outcome of the process, but done in this transparent way all are heard; their voices have counted for something in the final product, and the reasons behind the choices made are understood and supported.

The authors have used a process that they designed to be value-based, informed, collaborative and transparent, and adaptive. They claim that it is intended to be reviewed, modified and updated in an iterative manner. However, they do not speak about what appears to me to be their wise incorporation of a holistic systems approach to rationalization of services, by implicitly acknowledging that reorganization, particularly reduction in services, involves and affects not just healthcare administration, personnel and facilities, but also cultural leaders, local business interests and families within the community.

Decision-makers – particularly, management and policy makers – are often challenged with difficult choices for care provision within their health authorities; consequently, they may want to try this tool to come up with acceptable alternatives within their regions, particularly those with diverse rural communities. The authors are correct to emphasize that rural maternity care is just one example of the tool’s utility.

An important strength of this paper is the immediate relevance of the authors’ process to the administrators making decisions. But it also addresses what many only espouse – inclusion of the input of key and multiple stakeholders at a grassroots decision-making level. The authors state that the health authority deemed the exercise successful, but it would also be good to see an evaluation of the communities subsequent to the changes to see whether understanding and satisfaction have actually increased with the decisions made. I would encourage the authors to do further research with other groups interested in service reallocation or reduction to test the model further.

This era of resource rationalization is a time of difficult choices for those who hold overall responsibility for our healthcare services. Tools that bring to the decision-making table local businesses and the needs of those who receive care are timely, and are bound to have more relevance to those people ultimately receiving and affected by regional health services. Such approaches are destined for the best opportunity for success. Those described here should be of interest to administrators, change agents and health policy professionals.

Cost Shifting and Timeliness of Drug Formulary Decisions in Atlantic Canada

Transferts de coûts et délais dans les décisions touchant au formulaire pharmaceutique dans le Canada atlantique



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Abstract

Context: Our objectives were to investigate the timeliness of formulary decision-making in Atlantic Canada, including the Common Drug Review (CDR) process and the adoption of positive CDR recommendations by Atlantic Canadian provincial public drug plans, and to determine the degree of cost shifting to private payers.

Methods: Dates of formulary listing decisions from Atlantic Canadian provincial drug plan formularies and utilization analyses from Medavie Blue Cross were used to calculate the timeliness of decisions and cost shifting from public payers to a private payer.

Results: The median time period between the issuance of a positive CDR recommendation and the addition of a drug to an Atlantic Canadian provincial drug plan was 26.7 weeks ($\sigma=19.1$). Cost shifting to employer-sponsored health plans provided by Medavie Blue Cross was minimal.

Discussion: There is significant variation in the timing of provincial drug formulary listings among the four Atlantic Canadian provinces and the uptake of CDR recommendations.

Conclusion: Atlantic Canadian provincial governments should support the mandate of the CDR by aiming for a more timely consideration of recommendations.

Résumé

Contexte : Nos objectifs étaient d'étudier les délais dans les décisions touchant au formulaire pharmaceutique dans le Canada atlantique, notamment pour les processus du Programme commun d'évaluation des médicaments (PCEM) et pour l'adoption des recommandations favorables du PCEM par les régimes d'assurance médicaments des provinces du Canada atlantique. Nous visions également à déterminer le degré des transferts de coûts aux tiers payant privés.

Méthodologie : Les dates des décisions d'inscription au formulaire par les régimes d'assurance médicaments des provinces du Canada atlantique, ainsi que les analyses d'utilisation de la Croix Bleue Medavie, ont été employées pour calculer les délais des décisions et les transferts de coûts des contribuables aux tiers payant privés.

Résultats : Le temps médian entre la diffusion d'une recommandation favorable du PCEM et l'ajout d'un médicament aux régimes d'assurance médicaments des provinces du Canada atlantique était de 26,7 semaines ($\sigma=19,1$). Les transferts de coûts vers les régimes d'assurance maladie des employeurs fournis par la Croix Bleue Medavie étaient minimaux.

Discussion : Il y a une variation significative, entre les quatre provinces du Canada atlantique, dans les délais d'inscription au formulaire pharmaceutique et dans l'adoption des recommandations du PCEM.

Conclusion : Les gouvernements des provinces du Canada atlantique devraient appuyer le mandat du PCEM en visant des délais plus opportuns pour la prise en compte des recommandations.

THE COMMON DRUG REVIEW (CDR) WAS ESTABLISHED IN 2002 IN response to a growing concern over duplication, inefficiency and inconsistency in the public payer drug formulary review process in Canada. Housed within the Canadian Agency for Drugs and Technologies in Health (CADTH), the

CDR acts as a centralized drug review process for all federal, provincial and territorial drug plans in Canada (except Quebec) (McMahon et al. 2006). The mandate of the CDR is to provide advice to participating drug plans on which new drugs should be added to public payer formularies. This advice is primarily based on the evaluation of a drug's cost-effectiveness when compared to existing and similar treatments using both internal and external clinical and pharmaco-economic reviewers (Tierney et al. 2008).

The CDR review process begins with a submission by either a drug manufacturer, a federal, territorial or provincial drug plan or the Advisory Committee on Pharmaceuticals (ACP). A submitted drug must receive its Notice of Compliance (NOC) from Health Canada prior to submission. A NOC is issued when a drug is deemed satisfactory and compliant with the safety, efficacy and quality standards as required under the *Food and Drugs Act and Regulations* (Health Canada 2008). Once the drug has been submitted, a review team evaluates it based upon a developed protocol using a systematic literature search and a review of all relevant clinical and pharmaco-economic information, including unpublished information provided by the manufacturer and a manufacturer-generated pharmaco-economic evaluation. The CDR's compiled evaluation, including all reviews and comments from the respective drug manufacturer, is reviewed by the Canadian Expert Drug Advisory Committee (CEDAC), which provides the final recommendation to all participating drug plans on whether or not to list the drug. The CEDAC committee comprises 12 members and a chair with varying clinical and healthcare backgrounds and expertise in methodology, health technology assessment, drug policy and economics (Tierney et al. 2008), with two spots reserved for public members. Submissions are accepted on an ongoing basis and are queued for review on a first-come, first-served basis, with some exceptions for priority status (CADTH 2008a). While the aims of the CDR compare favourably with those of its counterparts in Australia and the United Kingdom (Tierney et al. 2008), the effectiveness and timeliness of centralized drug review in Canada have been criticized in the five years since its establishment (Canadian Diabetes Association 2007; Dhalla and Laupacis 2008; Standing Committee on Health 2007).

Using public information from the Atlantic Canada provinces (Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland and Labrador), our first objective was to investigate the time taken from a drug's submission to the CDR until the adoption of a positive recommendation by Atlantic Canadian provincial drug plans. This time period is divided into two segments: the time taken by the CDR to reach a decision, and the time from when the decision is made until a drug has been listed. Our second objective was to determine how the use of non-binding recommendations for new drugs in Canada has affected the private sector through public payer-private payer cost shifting in the funding of new drugs.

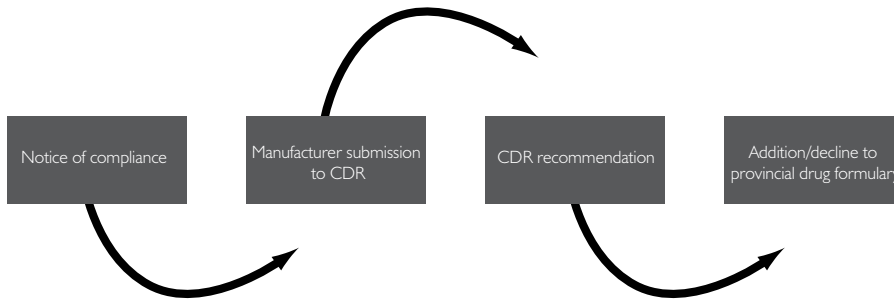
Methods

Timeliness analysis

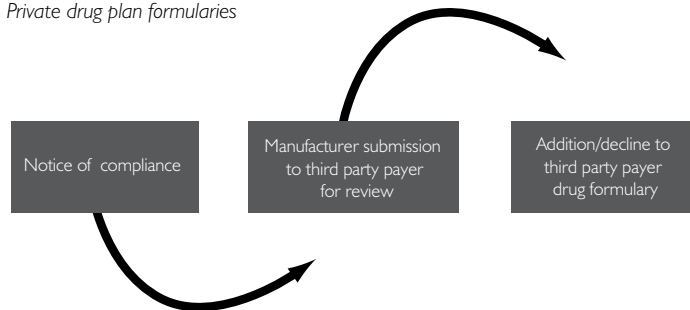
We used the online CDR database (CADTH 2008b) to identify drugs reviewed by the CDR for which recommendations were released between January 1, 2005 and May 1, 2008. Drugs that were recommended as “List,” “List with criteria/conditions” or “List in a similar manner to other drugs in class” were included in the study. Drugs with recommendations of “Do not list” were not included within the study, as it was unlikely that provinces would choose to list them (McMahon et al. 2006).

FIGURE 1. Stages in the drug formulary decision-making process in the public and private sectors

Public drug plan formularies



Private drug plan formularies



To determine whether or when these drugs were added to Atlantic Canadian provincial drug programs, we reviewed online formularies (Nova Scotia Department of Health 2008; New Brunswick Department of Health 2007; PEI Department of Social Services and Seniors 2006; Newfoundland and Labrador Department of Health and Community Services 2008) along with formulary updates. When a drug did not have an exact date of coverage (mm/dd/yyyy), the date was determined to be the first of the month in which a drug appeared in an update (e.g., if the drug was included in the February 2008 bulletin, the drug was considered to be added on

February 1, 2008). For drugs that had still not been added to a provincial formulary at the time of this study, a cut-off date of May 1, 2008 was used in order to perform timeliness calculations. To ensure accuracy, a drug program representative from each of the four Atlantic provinces confirmed our interpretation of the formulary decisions. Timeliness was calculated in two instances: (1) the median length of time between the submission of a drug to the CDR and the issuance of a recommendation and (2) the median length of time between the issuance of a recommendation by the CDR and the addition of a drug to an Atlantic Canadian provincial drug plan formulary (Figure 1). All calculations were performed in Microsoft Excel.

Medavie Blue Cross and Atlantic Canadian provincial drug plans

Medavie Blue Cross is the largest private benefits carrier in Atlantic Canada. It provides group health benefits coverage to employers located in New Brunswick, Nova Scotia, Newfoundland and Labrador, Prince Edward Island, Quebec and Ontario, as well as the company's employees throughout Canada, and personal products to individuals residing in Atlantic Canada. All four Atlantic Canadian provinces provide public prescription drug programs on an income-related basis and to individuals who require treatment for specific diseases, with the exception of Prince Edward Island, which administers a seniors' prescription drug program irrespective of income. We anticipated that these conditions would have an impact on the level of public-private cost shifting, with an increased number of cost-shifting possibilities for PEI claims due to its universal Seniors Drug Cost Assistance Plan. This reasoning was based on a greater number of PEI residents being covered under an employer-sponsored benefits plan from Medavie Blue Cross who would also be eligible in the Seniors Drug Cost Assistance Plan because of its universal eligibility.

Cost-shift analysis

The first step of the cost-shift analysis was to determine the drug programs offered in each Atlantic Canadian province and the relevant eligibility requirements. The eligibility of individuals covered under Medavie Blue Cross who may also be covered under an Atlantic Canadian provincial drug program was then determined through the assessment of eligibility criteria provided on governmental websites. In essence, private drug coverage is intended to reimburse clients for specified products and services not available through public programs to avoid costly duplication. This approach ensures that there is minimal duplication between private coverage and existing public drug benefit programs. Eligible Atlantic Canadian provincial drug programs were determined on the basis that they provided universal access to all residents, and thus would be providing coverage to Medavie clients. This step was performed to ensure that true

cost shifting took place. For the purpose of this paper, cost shifting is defined as the impact on employer-sponsored benefit plans caused by excessive time lags between a positive CDR recommendation and the addition of new drugs to provincial formularies. To capture CDR-recommended drugs that had yet to be added to one province's drug formulary as of May 1, 2008, we undertook an analysis of the formularies in the other three Atlantic provinces. If the drug was covered under any of the other eligible Atlantic Canadian provincial drug programs, then it was included in the analysis.

A list of CDR-recommended drugs covered under eligible Atlantic Canadian provincial drug programs was then compiled along with the respective time lapse from CDR recommendation to public formulary addition for each Atlantic Canadian province. Private drug data supplied by Medavie Blue Cross were analyzed in three-month intervals, where possible, to facilitate the subtraction of a three-month grace period. We utilized a grace period to account for reasonable time lags in the uptake of CDR recommendations by public drug plans. A three-month grace period was determined to be sufficient time after consulting literature and international examples of centralized drug review (McMahon et al. 2006; Morgan et al. 2006). A sensitivity analysis was performed by expanding the grace period to six months.

Cost shifting was calculated on the basis of Medavie Blue Cross's paying for a CDR-recommended drug during the time lapse between the recommendation and the date it was added to the formulary (or May 1, 2008 if the drug had still not been added to the provincial formulary) minus the three-month grace period. We calculated the actual cost shift using information provided by Medavie Blue Cross regarding the total amount paid, total co-insurance paid and total number of claims submitted.

Results

Timeliness

A total of 35 drugs were considered eligible for this study based on a CDR recommendation to "List," "List with criteria/conditions" or "List in a similar manner to other drugs in class," with a recommendation date between January 1, 2005 and May 1, 2008. The first measure of timeliness was the change in the length of the CDR process itself over the study period. Results indicated there was no improvement in the timeliness of the CDR review process over the three-year period (Table 1). For drugs recommended in 2005, the median length of time between the submission of a drug and the issuance of a CDR recommendation was 20.3 weeks. This time reached 21.9 weeks in 2006, representing an increase of 7.8%. In 2007, the length of time increased again to 24.1, an increase of 10.0% from 2006 and an increase of 18.7% over 2005.

TABLE 1. Length of time for CDR recommendations, by year of recommendation*

Generic drug name (brand name)	CDR submission	CDR recommendation	Time lapse (weeks)	σ
dutasteride (Avodart®)	24/08/2004	20/01/2005	21.3	
adalimumab (Humira® – rheumatoid arthritis)	24/09/2004	11/02/2005	20.0	
abacavir / lamivudine (Kivexa®)	26/07/2005	07/12/2005	19.1	
mycophenolate sodium (Myfortic®)	03/03/2005	08/07/2005	18.1	
erlotinib (Tarceva®)	19/07/2005	07/12/2005	20.1	
fosamprenavir calcium (Telzir®)	24/01/2005	16/06/2005	20.4	
voriconazole (Vfend® – aspergillus)	25/10/2004	14/04/2005	24.4	
drospirenone / ethinyl estradiol (Yasmin®)	20/01/2005	16/06/2005	21.0	
		Median	20.3	1.9
niacin / lovastatin (Advicor®)	18/10/2005	26/04/2006	27.1	
ciclesonide (Alvesco®)	24/07/2006	20/12/2006	21.3	
tipranavir (Aptivus®)	25/12/2005	17/05/2006	20.4	
amlodipine besylate / atorvastatin calcium (Caduet®)	25/12/2005	17/05/2006	20.4	
travoprost and timolol maleate (DuoTrav®)	24/03/2006	24/08/2006	21.9	
adalimumab (Humira® – psoriatic arthritis)	21/06/2006	29/11/2006	23.0	
quinagolide hydrochloride (Norprolac®)	23/11/2005	17/05/2006	25.0	
etonogestrel / ethinyl estradiol (NuvaRing®)	05/05/2006	29/11/2006	29.7	
pantoprazole magnesium (Pantoloc M®)	17/03/2006	20/07/2006	17.9	
efalizumab (Raptiva®)	25/10/2005	24/08/2006	43.3	
treprostinil sodium (Remodulin®)	24/02/2006	20/07/2006	20.9	
triptorelin pamoate (Trelstar®)	27/02/2006	20/07/2006	20.4	
tropium chloride (Trosec®)	24/03/2006	24/08/2006	21.9	
emtricitabine / tenofovir disoproxil fumarate (Truvada®)	29/05/2006	25/10/2006	21.3	

Cost Shifting and Timeliness of Drug Formulary Decisions in Atlantic Canada

TABLE 1. Continued

voriconazole (Vfend® – candidemia)	24/03/2006	25/10/2006	30.7	
tenofovir disoproxil fumarate (Viread®)	11/08/2005	15/03/2006	30.9	
		Median	21.9	6.4
ramipril / hydrochlorothiazide (Altace HCT®)	26/03/2007	14/06/2007	11.4	
entecavir (Baraclude®)	12/12/2006	28/11/2007	50.1	
varenicline tartrate (Champix®)	21/03/2007	16/08/2007	21.1	
ciprofloxacin hydrochloride & dexamethasone otic suspension (Ciprodex®)	15/06/2007	18/10/2007	17.9	
deferasirox (Exjade®)	26/10/2006	19/04/2007	25.0	
adalimumab (Humira® – ankylosing spondylitis)	17/11/2006	27/06/2007	31.7	
adalimumab (Humira® – Crohn's disease)	12/07/2007	19/12/2007	22.9	
adefovir dipivoxil (Hepsera®)	29/06/2007	18/10/2007	15.9	
alglucosidase (Myozyme®)	10/10/2006	14/06/2007	35.3	
abatacept (Orencia®)	26/10/2006	27/06/2007	34.9	
darunavir (Prezista®)	29/08/2006	14/02/2007	24.1	
sildenafil citrate (Revatio®)	20/09/2006	14/02/2007	21.0	
rituximab (Rituxan®)	26/06/2006	14/02/2007	33.3	
lanreotide acetate (Somatuline Autogel®)	20/02/2007	19/07/2007	21.3	
sunitinib malate (Sutent®)	20/07/2006	28/03/2007	35.9	
		Median	24.1	10.0

* Based on drugs with a recommendation of "List," "List with criteria/conditions" and "List in a similar manner to other drugs in class" issued between January 1, 2005 and May 1, 2008.

With regard to the time lapse between the issuance of a positive CDR recommendation and the addition of a drug to a provincial drug formulary, timeliness was improved over the three-year study period in both New Brunswick and Prince Edward Island; however, timeliness was not improved in Nova Scotia and Newfoundland and Labrador (Table 2).

In fact, although the length of time for the adoption of a positive CDR recommen-

dation fell by roughly 19 weeks in New Brunswick, it increased by nine weeks in Nova Scotia over the study period. The median length of time for all four Atlantic Canadian provinces between the issuance of a positive CDR recommendation and the addition of a CDR-recommended drug to a provincial drug formulary was 27.0 weeks ($\sigma=34.2$). With respect to the overall drug review and listing process, results were similar to those of the previous calculation, with New Brunswick and Prince Edward Island improving on their timeliness over the study period. The overall median length of time for drug approval in all four Atlantic Canadian provinces was 50.0 weeks ($\sigma=33.7$), representing a time lapse of nearly one year between the submission of a drug to the CDR and the uptake of a positive CDR recommendation in Atlantic Canada. Variation in provincial timeliness and listing was consistent throughout the study period.

TABLE 2. Median lengths of time, in weeks, for drug approval process for Atlantic Canada provinces, by year*

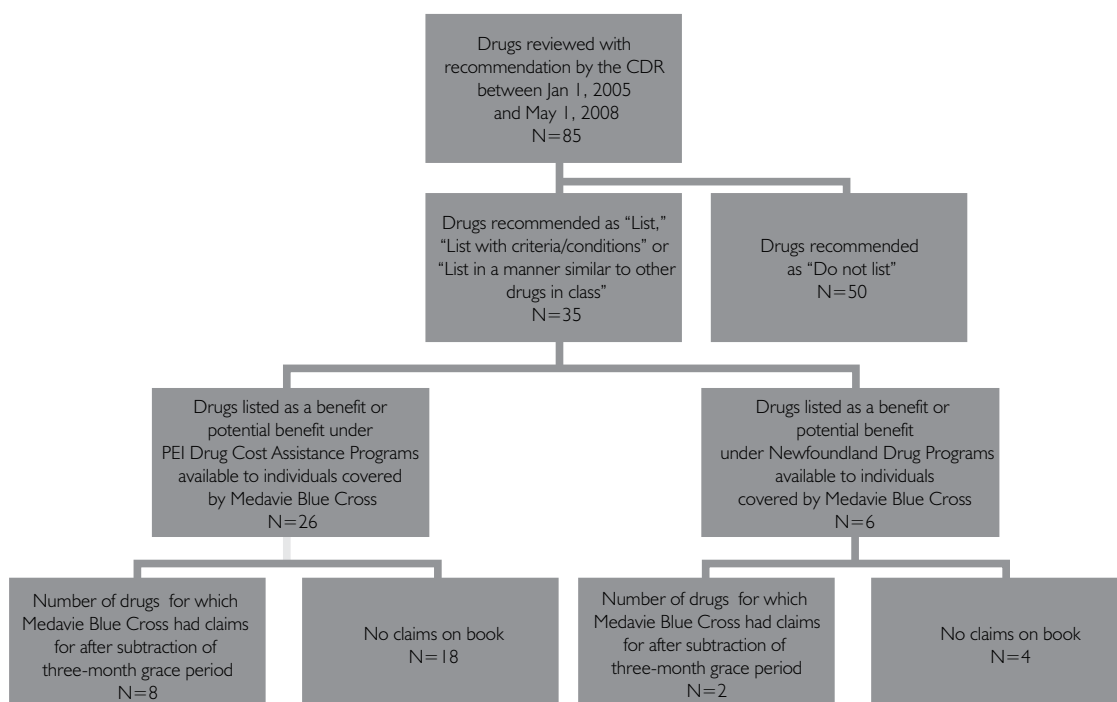
	CDR Submission – CDR recommendation	σ	CDR Recommendation – Provincial formulary	σ	Total
New Brunswick					
2005	20.3	1.9	45.1	22.7	65.4
2006	21.9	6.4	31.9	12.6	53.8
2007	24.1	10.0	22.0	8.1	46.1
Nova Scotia					
2005	20.3	1.9	6.9	7.0	27.2
2006	21.9	6.4	18.6	32.9	40.5
2007	24.1	10.0	12.1	12.9	36.2
Newfoundland & Labrador					
2005	20.3	1.9	10.1	36.5	30.4
2006	21.9	6.4	35.9	21.4	57.8
2007	24.1	10.0	13.5	13.6	37.6
Prince Edward Island					
2005	20.3	1.9	125.1	39.7	145.4
2006	21.9	6.4	76.6	27.6	98.5
2007	24.1	10.0	44.1	16.0	68.2

* Based on information for 35 drugs with a recommendation of "List," "List with criteria/conditions" and "List in a similar manner to other drugs in class" issued between January 1, 2005 and May 1, 2008.

Cost shifting

Of the 35 drugs included in this analysis, 26 (74.3%) were eligible under PEI Drug Cost Assistance, 6 (17%) were eligible under the Newfoundland and Labrador Prescription Drug Program, 6 (17%) were eligible under the Nova Scotia Drug Program and 7 (20%) were eligible under the New Brunswick Prescription Drug Program. After running a utilization analysis and accounting for the three-month grace period, Medavie Blue Cross had received claims from enrollees to reimburse costs for eight drugs in PEI and two drugs in Newfoundland and Labrador (Figure 2).

FIGURE 2. Drugs included in the cost-shift analysis



The utilization analysis revealed that a cost shift occurred in Prince Edward Island and Newfoundland and Labrador (Table 3). In PEI, public–private cost shifting with respect to Medavie Blue Cross equaled \$46,922.51 after factoring in a three-month grace period. Cost shifting related to prescription claims paid for Caduet® represented the greatest cost to Medavie Blue Cross, with a total amount paid of \$16,342.20. Vfend® and Tarceva® represented the highest costs per claim, with an average of \$4,655.33 and \$2,735.40, respectively.

In Newfoundland and Labrador, public–private cost shifting amounted to \$17,155.30 after the three-month grace period. Tarceva® accounted for the greatest cost,

with a total amount paid of \$14,167.77; however, Viread® accounted for the greatest co-insurance costs to enrollees (\$746.90). If a six-month grace period is used instead of three months, the total public–private cost-shifting amount is \$34,703.34 and \$17,155.30 in PEI and Newfoundland and Labrador, respectively. There was no evidence of cost shifting (as defined in this study) in Nova Scotia and New Brunswick.

TABLE 3. Cost-shift analysis from public payer to private payer

Drug name	Province	CDR recommendation date	Date added to provincial formulary	Total amount paid*
ramipril / hydrochlorothiazide (Altace HCT®)	PEI	14/6/2007	3/3/2008	1,174.52
dexamethasone otic suspension (Ciprodex®)	PEI	18/10/2007	3/3/2008	1,882.91
travoprost and timolol maleate (DuoTrav®)	PEI	24/8/2006	28/5/2007	85.82
ciclesonide (Alvesco®)	PEI	12/12/2006	28/5/2007	190.96
dutasteride (Avodart®)	PEI	20/1/2005	1/5/2008	8,685.90
amlodipine besylate / atorvastatin calcium (Caduet®)	PEI	17/5/2006	1/5/2008	16,342.20
erlotinib (Tarceva®)	PEI	7/12/2005	1/5/2008	9,249.55
voriconazole (Vfend®)	PEI	14/4/2005	1/5/2008	9,310.65
				46,922.51
erlotinib (Tarceva®)	NL	7/12/2005	13/2/2007	14,167.77
tenofovir disoproxil fumarate (Viread®)	NL	15/3/2006	13/2/2007	2,987.53
				17,155.30
			TOTAL	64,077.81

* Total amount paid out by Medavie Blue Cross for claims on each drug during the time period between the date the drug was recommended by the CDR and the date it was added to the provincial drug formulary minus a grace period of 3 months.

Discussion

The results of this study suggest that centralized drug review did little to reduce variation in the listing of new drugs to Atlantic provincial formularies during the study

period. The CDR process itself did not show any improvement in timeliness over the study period, with an overall increase of nearly four weeks. Timeliness in provincial decision-making regarding CDR recommendations was equally problematic, with significant variation in the listing of drugs between all four Atlantic Canadian provinces over the study period. Our results are in agreement with other studies which have shown that there has been much heterogeneity in provincial and interprovincial adoption of CDR recommendations (Grootendorst 2002; Marra et al. 2006). With a “no means no” and “yes means maybe” mentality among Canadian provincial drug plan decision-makers, the CDR remains in a strictly advisory capacity, without the authority to enforce compliance (Marra et al. 2006; McMahon et al. 2006).

As demonstrated in Prince Edward Island, while some CDR-recommended drugs were added within a few months of recommendation, many had still not been added years later. When this variability in response time exists within one province, it is easy to understand the scope of variability across provinces. Some provinces may not have

the financial resources and capacity to add some CDR-recommended drugs in a timely manner, or may choose to delay or reject the addition of drugs owing to specific population needs. While such constraints are certainly understandable, provinces are not currently held accountable for delays

This study indicates that the CDR’s response time in reviewing a drug and issuing a recommendation did not improve over the study period.

in adopting recommendations, and there is little transparency as to why delays occur. While this issue is not currently within the scope of the CDR, some experts contend that the current situation is unacceptable and argue that provinces should willingly and openly provide a rationale for delays in drug coverage (Dhalla and Laupacis 2008).

It is important to note that the CDR has no control over the quality of the manufacturer’s submission itself, including whether or not it will require further information regarding the submission. However, this study indicates that the CDR’s response time in reviewing a drug and issuing a recommendation did not improve over the study period; instead, it actually increased by roughly six weeks for the 35 drugs studied. While some may argue that the length of the CDR process could be expected to increase as the number of drug submissions increases, we argue that CADTH should devote enough resources to the CDR to ensure the timely review of future drug submissions. Furthermore, CADTH has released a time frame document for CDR review that states a desired length of 19 to 25 weeks for new drug submission reviews without reconsiderations at the manufacturer’s request (CADTH 2007). Timeliness information for the drugs examined in this study indicates that the CDR has been on the longer side of this time frame in recent years. We encourage CADTH to renew

commitment to these time frames and to increase resources where needed.

This study has also shown that time delays in the acceptance of CDR recommendations do result in financial impacts both to employer-sponsored health insurance providers and to patients in Atlantic Canada; however, these impacts are not large. It is worth noting that Tarceva® and Vfend® are two drugs that have yet to be added to the PEI formulary at the time of writing this paper, despite both being recommended for inclusion on formularies by the CDR in 2005.

The findings of this study also uphold the criticism that the CDR has not reduced variation among provincial formularies. Our findings support research conducted by Dewa and colleagues (2005) in which Nova Scotia residents had better odds of having prescription drug coverage than PEI residents. As previously stated, because the CDR acts in an advisory capacity only, provinces are able to choose which drugs they wish to add to their formulary based on CDR findings. The impact of these delays and variation on third-party health carriers and their plan sponsors throughout Canada is that some will carry the financial brunt of these delays while others will not feel the impact as much, depending on how quick the response time is. Thus, in its current capacity, the CDR fails to reduce variability, and not only between FTP drug plan formularies: it also fails to reduce variations in cost shifting from drug plans to insurance providers and patients. Ideally, if the CDR were to reduce variability, all provinces and public drug plans would be required to adopt recommendations within a certain time period, as in the United Kingdom upon the issuance of guidance by the National Institute for Health and Clinical Excellence (NICE).

Limitations

This study did have several limitations. First, we were limited by the number and type of drugs submitted to and recommended by the CDR in the last few years. Because the onus of submission is on the drug manufacturer, federal, provincial or territorial drug plans or the ACP, the CDR is unable to regulate which drugs it will review and when. The number of drugs recommended, when analyzed against the cohort of Medavie Blue Cross customers, led to only a few drugs remaining eligible for this study. It would be expected that if more disease-specific drugs for multiple sclerosis, cystic fibrosis, and others were recommended by the CDR, then there would have been a greater public–private cost shift. Moreover, this study looked at only one private benefit carrier, albeit the region’s largest.

Conclusion

The CDR was intended to create a streamlined process for the submission and review of new drugs in Canada. Although it does provide increased and equitable access to

rigorous clinical and pharmaco-economic analysis, it has done little to reduce variation in the listing of new drugs in Atlantic Canada over the three-year study period. This inaction is partly due to variation in the provincial uptake of positive CDR recommendations to provincial drug formularies, primarily as a result of the CDR's status as an advisory body only. CADTH has argued that the CDR has not further delayed the listing of drugs on public formularies (CADTH 2008c); however, this study shows that the CDR failed to improve upon its timeliness over the three-year study period. To enable a more efficient process, Atlantic Canadian provincial governments should support the mandate of the CDR by aiming for a more timely consideration of recommendations. Prior to the implementation of the CDR, the Atlantic Common Drug Review functioned to help pool resources for the review of drugs for these smaller provinces. If a pan-Canadian approach to mandate the adoption of CDR recommendations – such as NICE in the United Kingdom – is not feasible, then perhaps the Atlantic Common Drug Review could be used to ensure that there is a common approach to the adoption of decisions in this fairly homogenous part of the country.

ACKNOWLEDGEMENTS

The authors would like to acknowledge Sam Lanctin, Theresa Rose and Nancy Vincent for their help in the development of this paper. We also acknowledge the contributions of Elodie Ramos and Ranjita Benerjee in reviewing the manuscript. Andrea Scobie's salary for this study was funded as part of a national peer-reviewed research internship funded by MITACS with partnership from Medavie Blue Cross.

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REFERENCES

- Canadian Agency for Drugs and Technologies in Health (CADTH). 2007. *Common Drug Review Time Frames*. Retrieved January 6, 2010. <http://cadth.ca/media/cdr/process/cdr_timeframes_april_e.pdf>.
- Canadian Agency for Drugs and Technologies in Health (CADTH). 2008a. *Procedure for Common Drug Review*. Ottawa: Author.
- Canadian Agency for Drugs and Technologies in Health (CADTH). 2008b. *Search CDR Drug Database*. Retrieved January 6, 2010. <<http://cadth.ca/index.php/en/cdr/search>>.
- Canadian Agency for Drugs and Technologies in Health (CADTH). 2008c. *The CADTH Common Drug Review – Myths Versus Facts*. Ottawa: Author.
- Canadian Diabetes Association. 2007. *The Common Drug Review Isn't Working for Canadians with Diabetes*. Written submission to the House of Commons Standing Committee on Health. Ottawa: Author.

- Dewa, C.S., J.S. Hoch and L. Steele. 2005. "Prescription Drug Benefits and Canada's Uninsured." *International Journal of Law and Psychiatry* 28(5): 496–513.
- Dhalla, I. and A. Laupacis. 2008. "Moving from Opacity to Transparency in Pharmaceutical Policy." *Canadian Medical Association Journal* 178(4): 428–31.
- Grootendorst, P. 2002. "Beneficiary Cost Sharing Under Canadian Provincial Prescription Drug Benefit Programs: History and Assessment." *PharmacoEconomics* 9(2): 79–99.
- Health Canada. 2008. *Notice of Compliance*. Retrieved January 6, 2010. <<http://www.hc-sc.gc.ca/dhp-mps/prodpharma/notices-avis/index-eng.php>>.
- Marra, C.A., L.D. Lynd, A.H. Anis and J.M. Esdaile. 2006. "Approval Process and Access to Prescription Drugs in Canada." *Arthritis Care & Research* 55(1): 9–11.
- McMahon, M., S. Morgan and C. Mitton. 2006. "The Common Drug Review: A NICE Start for Canada?" *Health Policy* 77(3): 339–51.
- Morgan, S.G., M. McMahon, C. Mitton, E. Roughead, R. Kirk, P. Kanavos et al. 2006. "Centralized Drug Review Processes in Australia, Canada, New Zealand and the United Kingdom." *Health Affairs* 25(2): 337–47.
- New Brunswick Department of Health. 2007. *New Brunswick Prescription Drug Program Formulary*, March 2008. Retrieved January 6, 2010. <http://www.gnb.ca/0212/pdf/NBPDP_Formulary/NBPDPFormularyMarch2008english.pdf>.
- Newfoundland and Labrador Department of Health and Community Services. 2008. *Newfoundland and Labrador Prescription Drug Program Benefit Listing by Drug Identification (DIN)*. Retrieved January 6, 2010. <<http://www.health.gov.nl.ca/health/nlpdp/nldrug.pdf>>.
- Nova Scotia Department of Health. 2008. *Nova Scotia Formulary*. Retrieved January 6, 2010. <<http://www.gov.ns.ca/health/Pharmacare/formulary.pdf>>.
- Prince Edward Island Department of Social Services and Seniors. 2006. *Drug Programs Formulary, July 2006*. Retrieved January 6, 2010. <http://www.gov.pe.ca/photos/original/sss_drugformula.pdf>.
- Standing Committee on Health. 2007. *Prescription Drugs Part 1 – Common Drug Review: A F/P/T Process. Second report*. Ottawa: House of Commons Canada.
- Tierney, M., B. Manns and Members of the Canadian Expert Drug Advisory Committee. 2008. "Optimizing the Use of Prescription Drugs in Canada through the Common Drug Review." *Canadian Medical Association Journal* 178(4): 432–35.

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RESEARCH PAPER



Factors Associated with End-of-Life Health Service Use in Patients Dying of Cancer

Facteurs associés à l'utilisation des soins en fin de vie pour les patients mourant du cancer

LISA BARBERA, JONATHAN SUSSMAN, RAYMOND VIOLA, AMNA HUSAIN, DORIS HOWELL, S. LAWRENCE LIBRACH, HUGH WALKER, RINKU SUTRADHAR, CAROLE CHARTIER AND LAWRENCE PASZAT

Abstract

This study describes acute care hospital death, physician house calls and home care near the end of life among patients who died of cancer and the factors that are associated with these events and services. It is a population-based retrospective study that uses linked administrative healthcare data. The cohort includes all patients who died of cancer between 2000 and 2004 in Ontario, Canada.

Fifty-five per cent of patients died in acute care hospital, 68% received home care in the last 6 months of life and 24% received at least one physician house call in the last 2 weeks of life. Increased age was associated with a decreased likelihood of each event or service. Women were less likely to die in acute care and more likely to receive home care. Residents in low-income neighbourhoods were less likely to receive house calls or home care. Patients who received home care or house calls were less likely to die in acute care.

Our observations add to those in the literature, suggesting a need to increase the use of supportive care services at the end of life in hopes of decreasing the need for acute care. They also serve as a baseline for future comparison, which is of particular interest since new government policies directed at end-of-life care were recently introduced.

Résumé

Cette étude décrit la mortalité dans les hôpitaux de soins de courte durée, les visites à domicile des médecins et les soins à domicile vers la fin de vie parmi les patients qui sont mort du cancer. L'étude examine également les facteurs associés à ces événements et à ces services. Il s'agit d'une étude rétrospective fondée sur la population, qui emploie des données administratives couplées. Le groupe étudié comprend tous les patients qui sont morts du cancer entre 2000 et 2004, en Ontario, au Canada.

Cinquante-cinq pour cent des patients sont décédés dans un hôpital de soins de courte durée, 68 % ont reçu des soins à domicile dans les derniers six mois de leur vie et 24 % ont reçu au moins une visite à domicile d'un médecin au cours des

deux dernières semaines de leur vie. La probabilité de chacun de ces événements ou services décroît en fonction de l'âge. Les femmes sont moins susceptibles de décéder dans un établissement de soins de courte durée et plus susceptibles de recevoir des visites à domicile. Les résidents des quartiers à faible revenu sont moins susceptibles de recevoir des visites ou des soins à domicile. Les patients qui ont reçu des visites ou des soins à domicile sont moins susceptibles de décéder dans un établissement de soins de courte durée.

Nos observations s'ajoutent à celles de la littérature et font voir le besoin d'accroître l'utilisation des soins de soutien en fin de vie, dans le but de diminuer l'utilisation des soins de courte durée. Nos observations servent également de point de comparaison pour des études à venir, ce qui présente un intérêt particulier étant donné la mise en place récente de politiques gouvernementales visant les soins en fin de vie.

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ONLINE EXCLUSIVE

RESEARCH PAPER



Child and Youth Mental Health Service Referrals: Physicians' Knowledge of Mental Health Services and Perceptions of a Centralized Intake Model

Aiguillage vers les services de santé mentale pour les enfants et les jeunes : connaissance des services de santé mentale de la part des médecins et perceptions face à un modèle d'accueil central

PAULA CLOUTIER, MARIO CAPPELLI, J. ELIZABETH GLENNIE, GILLES CHARRON AND SMITA THATTE

Abstract

Objective: We conducted a survey to assess physicians' attitudes and knowledge of mental health services and centralized intake services for mental health.

Method: A survey consisting of 51 questions was sent to 735 physicians in active practice within the catchment area of a regional centralized intake for child and youth mental health services. The survey was conducted during the summer of 2006.

Results: Of 735 eligible physicians, 388 completed and returned the survey (52.8% response rate). The majority of physicians were aware of mental health services offered by their hospital. Physicians reported lower confidence levels for delivering counselling

and psychopharmacological treatments for mental health. Furthermore, over 72% indicated that they did not feel they had time in practice to provide mental health counseling. Over 65% of physicians reported that mental health referrals should have appropriate/defined criteria. The majority (92%) of physicians had referred to specialized mental health services provided by their hospital. With respect to centralized intake services, 57.2% of physicians indicated they were aware of the service and 73.9% said it should be continued. However, only 34% reported satisfaction with the centralized intake referral service. Predictors of satisfaction with the service were satisfaction with mental health feedback and satisfaction with response time of the centralized intake service.

Conclusions: Physician confidence levels in providing mental health services vary greatly. While doctors favour a centralized intake for mental health services, their satisfaction with such a service somewhat depends on variables beyond the control of the centralized intake, such as wait times and feedback from mental health providers.

Résumé

Objectif : Nous avons effectué un sondage pour évaluer l'attitude et les connaissances des médecins face aux services de santé mentale et au service d'accueil central en matière de santé mentale.

Méthodologie : Un questionnaire de 51 questions a été envoyé à 735 médecins actifs dans une région desservie par un service d'accueil central pour les services de santé mentale chez les enfants et les jeunes. Le sondage a été effectué au cours de l'été 2006.

Résultats : Au total, 388 des 735 médecins admissibles ont rempli et retourné le questionnaire (taux de réponse de 52,8 %). La majorité des médecins sont au courant des services de santé mentale offerts par leur hôpital. Ils ont manifesté des taux de confiance plus bas pour ce qui est de leurs propres possibilités d'offrir du counseling ou des traitements psychopharmacologiques pour les problèmes mentaux. De plus, plus de 72 % des répondants indiquent ne pas avoir le temps, dans le cadre de leur pratique, pour offrir des services de counseling en matière de santé mentale. Plus de 65 % des médecins indiquent que l'aiguillage vers les services de santé mentale devrait reposer sur des critères appropriés et bien définis. La majorité des médecins (92 %) ont orienté des patients vers les services de santé mentale spécialisés offerts par leur hôpital. Pour ce qui est du service d'accueil centralisé, 57,2 % des médecins indiquent qu'ils en connaissent l'existence et 73,9 % affirment qu'il devrait être maintenu. Cependant, seulement 34 % se disent satisfaits quant au service d'accueil centralisé pour l'aiguillage des patients. Les facteurs influant la perception envers ce service sont la satisfaction face à la rétroaction des services de santé mentale et la satisfaction face au temps de réponse du service d'accueil centralisé.

Conclusions : Il y a une grande variation dans les niveaux de confiance exprimés par les

médecins pour offrir des services de santé mentale. Bien que les médecins se montrent en faveur d'un accueil centralisé pour les services de santé mentale, la satisfaction face à un tel service dépend de variables hors du contrôle dudit service, telles que les temps d'attente et la rétroaction provenant des fournisseurs de services de santé mentale.

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ONLINE EXCLUSIVE

RESEARCH PAPER



Public Perspectives on Health Human Resources in Primary Healthcare: Context, Choices and Change

Point de vue du public sur les ressources humaines en santé dans les soins de santé primaires : contexte, choix et changement

SANDRA REGAN, SABRINA T. WONG AND DIANE E. WATSON

Abstract

The purpose of this study was to examine factors identified by patients as relevant to health human resources (HHR) planning for primary healthcare (PHC). Eleven focus groups were conducted in British Columbia and a thematic analysis was undertaken, informed by a needs-based HHR planning framework. Three themes emerged: (a) the importance of geographic context, (b) change management at the practice level and (c) the need for choices and changes in delivery of PHC. Findings suggest that more attention could be focused on overcoming geographic barriers to providing services, change management within office-based practices, and providing support structures that allow primary care providers to work closer to their full scope of practice. That these factors align with many strategic directions set out by government and planners signals the readiness for change in how PHC is delivered and HHR planned.

Résumé

L'objectif de cette étude est d'examiner les facteurs que les patients estiment pertinents dans la planification des ressources humaines en santé (RHS) pour les soins de santé primaires (SSP). Nous avons constitué 11 groupes de discussion en

Colombie-Britannique et nous avons mené une analyse thématique en utilisant un cadre de planification des RHS fondé sur les besoins. Trois thèmes se sont dégagés : (a) l'importance du contexte géographique, (b) la gestion du changement au niveau de la pratique et (c) la nécessité de permettre des choix et des changements dans la prestation des SSP. Les résultats font voir qu'une attention accrue doit être portée à la question des obstacles géographiques dans la prestation des services, à la gestion du changement dans les pratiques et aux structures de soutien qui permettent aux fournisseurs de SSP de travailler plus près de leur champ complet d'activité. Le fait que ces facteurs coïncident avec plusieurs stratégies conçues par le gouvernement et par les planificateurs montre qu'il est temps d'apporter des changements dans la prestation des SSP et dans la planification des RHS.

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ONLINE EXCLUSIVE

RESEARCH PAPER



Increasing Access to Cognitive-Behavioural Therapy (CBT) for the Treatment of Mental Illness in Canada: A Research Framework and Call for Action

Accroître l'accès à la thérapie cognitivo-comportementale (TCC) pour le traitement de la maladie mentale au Canada : cadre de recherche et appel à l'action

KRISTA A. PAYNE AND GAIL MYHR

Abstract

International studies suggest that cognitive-behavioural therapy (CBT) for the treatment of mental disorders results in improved clinical and economic outcomes. In Canada, however, publicly funded CBT is scarce, representing an inequity in service delivery. A research framework to evaluate the Canadian health economic impact of increasing access to CBT is proposed. Canadian data related to the epidemiology of mental disorders, patterns of usual care, CBT effectiveness, resource allocation and costs of care will be required and methodologies should be transparent and outcomes meaningful to Canadian decision-makers. Findings should be delivered by multidis-

ciplinary teams of researchers and health professionals. Barriers to funding reform must be identified and knowledge translation strategies delineated and implemented. Canadian clinical and economic outcomes data are essential for those seeking to provide decision-makers with the evidence they need to evaluate whether CBT represents value for mental health dollars spent.

Résumé

Les études internationales suggèrent que la thérapie cognitivo-comportementale (TCC) pour le traitement des troubles mentaux améliore les résultats cliniques et économiques. Au Canada, cependant, la TCC subventionnée par les fonds publics est plutôt rare et présente une inégalité dans l'offre de services. Un cadre de recherche afin d'évaluer l'impact économique sur la santé canadienne d'un plus grand accès à la TCC est proposé. Les données canadiennes sur l'épidémiologie des troubles mentaux, sur les modèles d'utilisation des soins, sur l'efficacité de la TCC, sur l'allocation des ressources et sur le coût des soins seront nécessaires et les méthodologies doivent être transparentes et les résultats doivent être pertinents pour les décideurs au Canada. Les résultats devraient être présentés par des équipes multidisciplinaires composées de chercheurs et de professionnels de la santé. Il faut repérer les obstacles à la réforme du financement et concevoir des stratégies favorisant le transfert de connaissances. Les résultats cliniques et économiques canadiens sont indispensables pour ceux qui tentent de fournir aux décideurs les données nécessaires afin de leur permettre d'évaluer la rentabilité de la TCC en fonction de l'argent dépensé pour les services de santé mentale.

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CIHR provides financial and in-kind support for the publication of *Healthcare Policy/Politiques de Santé*, and has played a key role in the journal's inception and development.

Longwoods Publishing gratefully acknowledges the financial support of the following organizations:



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Factors Associated with End-of-Life Health Service Use in Patients Dying of Cancer

Facteurs associés à l'utilisation des soins en fin de
vie pour les patients mourant du cancer



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Abstract

This study describes acute care hospital death, physician house calls and home care near the end of life among patients who died of cancer and the factors that are associated with these events and services. It is a population-based retrospective study that uses linked administrative healthcare data. The cohort includes all patients who died of cancer between 2000 and 2004 in Ontario, Canada.

Fifty-five per cent of patients died in acute care hospital, 68% received home care in the last 6 months of life and 24% received at least one physician house call in the last 2 weeks of life. Increased age was associated with a decreased likelihood of each event or service. Women were less likely to die in acute care and more likely to receive home care. Residents in low-income neighbourhoods were less likely to receive house calls or home care. Patients who received home care or house calls were less likely to die in acute care.

Our observations add to those in the literature, suggesting a need to increase the use of supportive care services at the end of life in hopes of decreasing the need for acute care. They also serve as a baseline for future comparison, which is of particular interest since new government policies directed at end-of-life care were recently introduced.

Résumé

Cette étude décrit la mortalité dans les hôpitaux de soins de courte durée, les visites à domicile des médecins et les soins à domicile vers la fin de vie parmi les patients qui sont morts du cancer. L'étude examine également les facteurs associés à ces événements et à ces services. Il s'agit d'une étude rétrospective fondée sur la population, qui emploie des données administratives couplées. Le groupe étudié comprend tous les patients qui sont morts du cancer entre 2000 et 2004, en Ontario, au Canada.

Cinquante-cinq pour cent des patients sont décédés dans un hôpital de soins de courte durée, 68 % ont reçu des soins à domicile dans les derniers six mois de leur vie et 24 % ont reçu au moins une visite à domicile d'un médecin au cours des deux dernières semaines de leur vie. La probabilité de chacun de ces événements ou services décroît en fonction de l'âge. Les femmes sont moins susceptibles de décéder dans un établissement de soins de courte durée et plus susceptibles de recevoir des visites à domicile. Les résidents des quartiers à faible revenu sont moins susceptibles de recevoir des visites ou des soins à domicile. Les patients qui ont reçu des visites ou des soins à domicile sont moins susceptibles de décéder dans un établissement de soins de courte durée.

Nos observations s'ajoutent à celles de la littérature et font voir le besoin d'accroître l'utilisation des soins de soutien en fin de vie, dans le but de diminuer l'utilisation des soins de courte durée. Nos observations servent également de point de comparaison

pour des études à venir, ce qui présente un intérêt particulier étant donné la mise en place récente de politiques gouvernementales visant les soins en fin de vie.

PALLIATIVE CARE IS AN IMPORTANT PART OF THE CANCER CARE CONTINUUM because it aims to enhance quality of life at the end of life (Ferris et al. 2002). However, researchers and policy makers have pointed to severe deficiencies in the provision of palliative care in Canada as well as the United States, United Kingdom and European Union (Romanow 2002; Kirby and LeBreton 2002; Cancer Quality Council of Ontario 2003; Carstairs and Beaudoin 2000; Institute of Medicine 2001; Centeno et al. 2007; Addington-Hall et al. 2003; Canadian Strategy for Cancer Control 2002).

A description of the healthcare services used by cancer patients in the time leading up to death can provide valuable information to decision-makers about the use of acute care services (such as admission to hospital) compared to services that reflect a more palliative or supportive approach (including home visits from physicians or nurses). Knowing which services patients receive before death offers insight into whether or not they are accessing resources meant to improve quality of dying (Patrick et al. 2003).

The literature suggests that care may be growing more aggressive near the end of life over time (Earle et al. 2004). There is also a discrepancy between what patients report as their preferred place of death (most often home) and actual place of death (Beccaro et al. 2006; Bruera et al. 2003; Burge et al. 2003; Foreman et al. 2006; Gilbar and Steiner 1996; Karlsen and Addington-Hall 1998; McWhinney et al. 1995; Heyland et al. 2000; Pritchard et al. 1998). People who die in institutions such as acute care facilities have unmet needs for symptom control, physician communication, emotional support and respectful treatment compared with those receiving patient-centred palliative care services at home (Teno et al. 2004).

Existing research describes either the use of one particular service (e.g., house calls or emergency room visits) or a number of services for one specific type of cancer. The purpose of this study is to describe a range of outcomes, specifically death in acute care bed, home care and physician house calls for patients who died of any type of cancer in Ontario, Canada. The study also describes the factors that are associated with each of these outcomes.

Methods

This is a retrospective study that uses administrative sources of healthcare data. All residents of Ontario are covered by a government-provided healthcare plan. All services described in this study are government funded.

Data sources

The Ontario Cancer Registry (OCR) is a comprehensive population-based cancer registry created to capture all incident cases of cancer in the province (Clarke et al. 1991; Robles et al. 1988). The Ontario Health Insurance Plan (OHIP) is a database that contains all medicare billing claims by physicians in the province. The Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD) lists diagnostic and procedure codes from all in-patient and outpatient hospital admissions. The Ontario Home Care Administrative System (OHCAS) captures records of every referral for home care and all home care visits to Ontario residents. In Ontario, home care most commonly refers to nursing or personal support worker services. The Registered Persons Database (RPDB) contains demographic information on all residents of Ontario who are eligible for OHIP. Canada's 2001 Census provides neighbourhood income quintiles for this study.

Case ascertainment

We used the Ontario Cancer Registry (OCR) to identify all patients who died of cancer between 2000 and 2004, as indicated by the death certificate. If more than one cancer was registered in OCR, the registration record that matched the cause of death was chosen. Cases were excluded if (a) a cancer diagnosis had not been made prior to death, (b) the death occurred within 30 days of a major cancer-related operative procedure, (c) the health insurance number was invalid during the last six months of life, (d) the patient died outside Ontario or (e) the patient was younger than 20 years of age. These criteria were meant to identify patients who might have been eligible for palliative care: they were diagnosed with cancer prior to their death and died of cancer, not a complication from cancer surgery or some other cause.

Cases were linked to the other data sets using a common unique identifier to evaluate health services use in the end-of-life period.

Patient variable definitions

AGE AT DEATH

We used date of birth from RPDB and date of death from OCR to calculate age at death.

GENDER

As per OCR.

CANCER CAUSE OF DEATH

The ICD 9 codes (OCR) were grouped as follows: head and neck: 140–149, 160, 161; breast: 174; lung: 162; prostate: 185; ovary: 183; colorectal: 153, 154; CNS: 191; lymphoma/leukemia: 200–208; other GU/gyn: 179–182, 184, 186–189; melanoma/sarcoma: 170–172; non-melanoma skin cancer: 173; other GI: 150–152, 155–159; metastases: 196–199; other: 163–165, 190, 192–194.

CO-MORBIDITY

We used diagnoses coded in CIHI in the last six months of life to capture co-morbid illness in order to calculate the Deyo modification of the Charlson score (Deyo et al. 1992) with scores for primary and metastatic cancer subtracted.

REGION

Patients were assigned to regions as per RPDB data, using their place of residence rather than where they received care. The province of Ontario is divided into 14 local health regions based on patterns of tertiary referral (Ontario MoHLTC 2007).

RURAL

We used the postal code from RPDB to categorize patients by residence in a rural or non-rural part of Ontario. Rural is considered to include rural and small towns and municipalities outside the commuting zone of larger urban centres (i.e., a population of 10,000 or more) and is constructed from census subdivisions (Statistics Canada 1994).

INCOME QUINTILE

We linked data from Canada's 2001 Census with postal code from RPDB using a postal code conversion file to construct community income quintiles (Wilkins 2001).

Outcomes

DEATH IN AN ACUTE CARE BED

The discharge disposition variable from CIHI–DAD was used to identify location of death in acute care. Re-abstraction studies indicate 98%–99% agreement for this variable (CIHI 2004).

HOME CARE IN THE LAST SIX MONTHS OF LIFE

We designated a patient as receiving home care if the patient had any record of service in the last six months of life. This method captures patients actually receiving service and would not count patients who are referred but never seen. Six months is a commonly used time-frame to describe health services use at the end of life (Huang et al. 2002) and was felt to be a clinically relevant period for initiating such a service.

HOUSE CALLS IN THE LAST TWO WEEKS OF LIFE

OHIP fee codes indicating a house call or premium for care provided in the home by a physician were used to designate house calls as long as there was no pronouncement of death billed on the same service date. A pronouncement code together with a code for care in the home was interpreted as a house call for pronouncing death. Patients who were in hospital for the entire last two weeks of life were excluded from the denominator, since they would be unable to receive a house call. Two weeks is a clinically relevant time-frame for this outcome. House calls are resource intensive, and care in Ontario is most commonly provided in an ambulatory setting for as long as possible.

Analysis

Using descriptive statistics, the population is described with respect to age, gender, type of cancer, co-morbidity, year of death, income quintile, rural residence and region. The population crude proportions are computed for each outcome. Trends over time for each outcome are examined with the Cochran Armitage trend test. Age- and sex-adjusted regional rates for each service are calculated using direct standardization according to the 1991 Canadian population. The ratio of the highest and lowest regional rates is presented.

Logistic regression models for each outcome are constructed with the following independent variables: age, gender, neighbourhood income quintile, rural residence, type of cancer, co-morbidity and region. For the outcome of acute care death, we decided a priori to add home care and house calls to the model as well. Co-linearity was examined between house calls and home care using the phi coefficient to measure the degree of association between the binary variables. For the outcome of house calls we decided a priori to add home care to the model.

Possible confounding between age and home care is explored for the outcomes of acute care death and house calls. We also examine whether house calls confound the association between income and acute care death. Upon establishing the main effects model, interactions between age and gender, as well as between home care and house calls, are also investigated.

Results

The final cohort consists of 112,398 patients who died of cancer in Ontario between 2000 and 2004. Patients in the following categories (numbers provided in parentheses) are excluded: no cancer diagnosis prior to death (0); the death occurred within 30 days of a major cancer-related operative procedure (1,581); invalid health insurance number (14,347); death outside Ontario (649); younger than 20 years of age (387). Table 1 lists descriptions of the final cohort of patients.

TABLE 1. Description of patients in cohort (N=112,398)

	N (%)
Age	
Median (range)	73 (20–108)
<50	7,430 (7%)
50–69	38,275 (34%)
≥70	66,693 (60%)
Year of death	
2000	21,744 (19%)
2001	22,244 (20%)
2002	22,489 (20%)
2003	22,821 (20%)
2004	23,070 (21%)
Sex	
Female	53,225 (47%)
Male	59,173 (53%)
Cancer	
Lung	27,899 (25%)
Other gastrointestinal	17,938 (16%)
Colorectal	11,457 (10%)
Lymphoma/Leukemia	10,929 (10%)
Breast	9,099 (8%)
Metastatic cancer NOS	8,851 (8%)
Other genitourinary/gyn	7,679 (7%)
Prostate	6,579 (6%)

Factors Associated with End-of-Life Health Service Use in Patients Dying of Cancer

TABLE 1. Continued

Ovary	2,906 (3%)
Head and neck	2,766 (2%)
Melanoma/Sarcoma	2,476 (2%)
Central nervous system	2,462 (2%)
Other	1,375 (1%)
Co-morbidity	
High	17,428 (16%)
Low	94,970 (85%)
Income quintile	
1 (low)	23,780 (22%)
2	24,221 (22%)
3	21,462 (20%)
4	19,084 (18%)
5 (high)	19,530 (18%)
Rural residence	
No	94,568 (84%)
Yes	17,767 (16%)
Region	
Erie–St. Claire	6,836 (6%)
Southwest	9,691 (9%)
Waterloo–Wellington	5,646 (5%)
Hamilton–Niagara–Haldimand–Brant	14,850 (13%)
Central West	3,960 (4%)
Mississauga–Halton	6,702 (6%)
Toronto	10,660 (10%)
Central	10,617 (9%)
Central East	12,565 (11%)
Southeast	5,869 (5%)
Champlain	10,741 (10%)
North Simcoe–Muskoka	4,408 (4%)
Northeast	6,977 (6%)
Northwest	2,584 (2%)

Table 2 indicates the crude proportion of patients who experienced each outcome. All outcomes show a statistically significant trend over time. Most of these changes are of small magnitude. The proportion of patients receiving home care in the last two weeks was 52%. The median number of visits was 31 in the last six months and 13 in the last two weeks. The proportion of patients receiving a house call in the last six months was 33%. The median number of house calls in the last six months was three, and in the last two weeks was two. The proportion of acute care deaths that occurred on a palliative care service was approximately 11%.

TABLE 2. Outcome by year, 2000–2004, across province (crude rates)

Outcome	2000 (n=21,774)	2001 (n=22,244)	2002 (n=22,489)	2003 (n=22,821)	2004 (n=23,070)	All years (N=112,398)	Cochrane– armitage trend test
Death in acute care hospital	56.4%	56.1%	56.3%	53.4%	53.1%	55.0%	$p < 0.0001$
Home care in the last 6 months of life	71.4%	69.2%	65.1%	68.3%	66.5%	68.1%	$p < 0.0001$
House calls in the last 2 weeks of life ^a	27.3%	24.6%	23.0%	23.2%	21.7%	23.9%	$p < 0.0001$

^a Denominator excludes those in hospital the entire last 2 weeks of life (n=20,091)

The ratio of the highest and lowest age–sex adjusted health region rates is presented in Table 3. Greatest variation was seen for house calls and least for home care. Region was a significant variable in the logistic regression model described below ($p < 0.0001$).

TABLE 3. Minimum and maximum age–sex adjusted regional proportions of each outcome

	Minimum proportion	Maximum proportion	Absolute difference	ratio
Acute care death	45.4%	63.3%	17.9%	1.4
House calls 2 weeks	9.5%	38.3%	28.8%	4.0
Home care 6 months	59.1%	73.3%	14.2%	1.2

Factors Associated with End-of-Life Health Service Use in Patients Dying of Cancer

Table 4 summarizes the results of the adjusted logistic regression models for each outcome. In addition to the variables reported in the tables, the models included cancer type, rural residence, co-morbidity and region. There was no co-linearity between house calls and home care (phi coefficient value 0.257). No confounding was detected.

TABLE 4. Results of regression modelling for each outcome, selected variables

Variable	Death in acute care bed		House calls in last 2 weeks		Home care in last 6 months	
	Adj OR	95 %CI	Adj OR	95% CI	Adj OR	95% CI
Age						
<50						
50–69	0.88	(0.83, 0.94)	0.93	(0.87, 1.00)	0.79	(0.74, 0.84)
≥70	0.69	(0.65, 0.73)	0.84	(0.79, 0.90)	0.56	(0.53, 0.59)
Gender						
Male						
Female	0.88	(0.85, 0.91)	0.97	(0.93, 1.00)	1.15	(1.12, 1.18)
Neighbourhood income quintile						
1	1.10	(1.05, 1.15)	0.62	(0.59, 0.67)	0.82	(0.79, 0.86)
2	1.11	(1.06, 1.15)	0.72	(0.68, 0.75)	0.88	(0.85, 0.92)
3	1.08	(1.03, 1.12)	0.77	(0.73, 0.81)	0.93	(0.89, 0.97)
4	1.05	(1.00, 1.10)	0.81	(0.77, 0.86)	0.96	(0.92, 1.01)
5 (high)						
Home care in last 6 months						
No					Not tested	
Yes	0.57	(0.55, 0.58)	6.49	(6.16, 6.84)		
House call in last 2 weeks						
No			Not tested		Not tested	
Yes	0.27	(0.26, 0.28)				

Significant results shown in bold.

The oldest age group (when compared to the youngest) was less likely to die in acute care or to receive home care or house calls. Women were less likely to die in acute care and more likely to receive home care, compared to men. Individuals living in neighbourhoods with the lowest income quintiles were less likely to receive house calls or home care.

The use of home care or house calls was associated with decreased odds of death in acute care. Home care was associated with increased odds of receiving house calls.

The acute care death model, which included physician house calls in the last two weeks as an input variable, was also re-run, excluding the 20,091 patients who were in hospital throughout the last two weeks of life. This exclusion did not substantially change the results (data not shown).

In separate models we evaluated interactions between age and sex, and home care and house calls. For the outcome acute care death, the parameter estimate of the age–sex interaction effect was significant ($p < 0.001$) for women over 70 years of age. There was no significant age–sex interaction for any of the other outcomes.

There were interaction effects between house calls and home care for acute care death. Patients who had house calls in the last two weeks of life were 62% (OR=0.38, 95% CI 0.34–0.43) less likely to die in hospital if they also had home care in the last six months than if they had no home care. Patients who had home care were 75% (OR=0.25, 95% CI 0.24–0.26) less likely to die in hospital if they also had house calls than if they had no house calls.

Discussion

Key findings

Our study describes three key outcomes for cancer patients near the end of life. Deaths in an acute care bed may be decreasing over time, but so are physician house calls and home care visits. Increased age was associated with a decreased likelihood of each outcome. Women are less likely to die in acute care and more likely to receive home care. Patients living in neighbourhoods with the lowest income quintile are least likely to receive services in the home. Patients who do receive home care or house calls are much less likely to die in acute care.

Strengths and limitations

One of the strengths of this study is its comprehensiveness. Unlike similar studies conducted in the United States, our cohort includes all adult patients, not only those over the age of 65 who are enrolled in medicare (Earle et al. 2004). Unlike some Canadian studies (Burge et al. 2005; Gagnon et al. 2004), we include all cancer diag-

noses to provide a global picture relevant for policy and planning. We include institutional and community care settings. Our cohort is from the new millennium and is population-based.

Creating a decedent cohort to retrospectively evaluate services used in a time window prior to death has been criticized (Bach et al. 2004) and defended (Earle and Ayanian 2006; Teno and Mor 2005; Barnato and Lynn 2005) as a method to study end-of-life care. Both sides agree that this approach is reasonable to describe events very close to death (six months is close to death and two weeks is even closer), as used in the present study. A recent study has confirmed this approach (Setoguchi et al. 2008).

As with many studies relying on administrative sources of healthcare data, some of the services identified in the administrative data have not been validated with chart review data. The discharge disposition variable in CIHI–DAD has been validated and is accurate (CIHI 2004). House call claims have not been validated, but when physicians provide this service they are able to claim an additional premium, and it is to their advantage to submit complete billings for all services provided. The home care data have not been validated, and the concerns about data quality for this data set suggest that our estimates may underestimate home care use.

Other findings from the literature

Our study finding that 55% of cancer patients in Ontario die in an acute care bed compares favourably with other Canadian provinces. Seventy per cent of breast cancer patients in Quebec (Gagnon et al. 2004) and 74% of patients in Nova Scotia (Burge et al. 2003) die in acute care. Acute care death rates have been reported in the range of 30% to 35% in the United States (Earle et al. 2004; Flory et al. 2004) and between 35% and 56% in Europe (Beccaro et al. 2006; Aabom et al. 2006; Cohen et al. 2006). Death in hospital from any cause (not just cancer) occurs in 45% to 55% of patients in Western Canada (CIHI 2007) and is reported to be decreasing over time nationwide (Wilson et al. 2009). In Ontario we observed 33% of patients receiving a house call in the last six months of life, a percentage similar to other Canadian studies reporting 21% and 45% for this outcome (Gagnon et al. 2004; Burge et al. 2005). We are unaware of comparable data for home care in cancer patients.

Our study found that all three outcomes were less likely with increasing age, and that women were less likely to die in hospital and more likely to receive home care. Results in the literature regarding the association with age or gender and end-of-life services are conflicting (Burge et al. 2003, 2008; Earle et al. 2004; Grande et al. 1998; Bruera et al. 2002; Gomes and Higginson 2006). Our finding that low neighbourhood income quintile is associated with fewer patients receiving house calls or home care is consistent with similar studies in cancer (Grande et al. 1998; Burge et al. 2005; Huang et al. 2002).

Studies pertaining to location of death have found that use of home care and an increased intensity of home care are associated with home death (Gomes and Higginson 2006). Randomized clinical trials comparing integrated multidisciplinary palliative care with existing regional services report improved satisfaction (Grande et al. 2000; Hughes et al. 1992; Kane et al. 1984; Brumley et al. 2007), improved symptom control (Rabow et al. 2004), decreased use of acute care services (Jordhoy et al. 2000; Zimmer et al. 1985; Brumley et al. 2007) and decreased cost (Raftery et al. 1996; Brumley et al. 2007) in the intervention arm. Non-randomized studies draw similar conclusions (Bruera et al. 1999). Two of the randomized trials reporting a decrease in in-hospital deaths had physician home visits as part of the intervention (Zimmer et al. 1985; Jordhoy et al. 2000). Other studies have also emphasized that physician home visits are crucial in providing home palliative care (Cherin et al. 2004; Aabom et al. 2005). Our data add to the evidence by showing that patients receiving home care or house calls are much less likely to die in hospital.

Policy implications

Some of the outcomes described in this study have been suggested as valid indicators for evaluating the quality of end-of-life care (Earle et al. 2003, 2004, 2005). Using administrative data in this way is consistent with a previously published quality framework for palliative and end-of-life care (Stewart et al. 1999). The feasibility of measurement in Ontario had been demonstrated (Grunfeld et al. 2006), and some of these measures have been used as indicators to evaluate health services at the end of life (Barbera et al. 2005, 2006; Cancer Care Ontario 2007).

Our observations, together with those from the literature, suggest a need to increase the use of supportive care services at the end of life in the hope of decreasing the need for acute care. Deploying resources to improve the availability of supportive care services in the community would likely improve the quality of patients' death and dying and provide more freedom for patients to die in the setting of their choice.

In 2005 the Ontario Ministry of Health announced a new \$115-million End-of-Life Strategy, targeting the majority of funds to home care (Ontario MoHLTC 2005). In 2006 a provincewide initiative began to document patient symptom scores consistently with a common instrument. Our data provide a comprehensive description of service use prior to these initiatives. Subsequent measurement will determine whether these policy changes have had an impact on health services use at the end of life.

ACKNOWLEDGEMENTS

Dr. Barbera is supported by a Career Scientist Award from the Ontario Ministry of Health and Long-Term Care. Dr. Paszat receives a clinician scientist salary funded

by the Ministry of Health and Long-Term Care. This network of researchers is supported by a grant from Cancer Care Ontario.

The authors would like to acknowledge Minh Duong-Hua, MSc (Programming and Biostatistics, Institute for Clinical Evaluative Sciences) for her programming support.

This study was supported by the Institute for Clinical Evaluative Sciences (ICES), which is funded by an annual grant from the Ontario Ministry of Health and Long-Term Care (MoHLTC). The opinions, results and conclusions reported in this paper are those of the authors and are independent from the funding sources. No endorsement by ICES or the Ontario MoHLTC is intended or should be inferred.

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REFERENCES

- Aabom, B., J. Kragstrup, H. Vondeling, L.S. Bakketeig and H. Stovring. 2005. "Population-Based Study of Place of Death of Patients with Cancer: Implications for GPs." *British Journal of General Practice* 55(518): 684–89.
- Aabom, B., J. Kragstrup, H. Vondeling, L.S. Bakketeig and H. Stovring. 2006. "Does Persistent Involvement by the GP Improve Palliative Care at Home for End-Stage Cancer Patients?" *Palliative Medicine* 20(5): 507–12.
- Addington-Hall, J., F. Aspinall, R. Hughes, M. Dunkley and I.J. Higginson. 2003. *Project to Improve Management of Terminal Illness: Summary of Findings from PROMOTE*. London, UK: National Council for Palliative Care.
- Bach, P.B., D. Schrag and C.B. Begg. 2004. "Resurrecting Treatment Histories of Dead Patients: A Study Design That Should Be Laid to Rest." *Journal of the American Medical Association* 292(22): 2765–70.
- Barbera, L., L. Paszat and C. Chartier. 2005. "Death in Hospital for Cancer Patients: An Indicator of Quality of End-of-life Care." *Palliative Medicine* 19(5): 435–36.
- Barbera, L., L. Paszat and C. Chartier. 2006. "Indicators of Poor Quality Care in End-of-Life Cancer Care in Ontario." *Journal of Palliative Care* 22(1): 12–17.
- Barnato, A.E. and J. Lynn. 2005. "Resurrecting Treatment Histories of Dead Patients." *Journal of the American Medical Association* 293(13): 1591–92.
- Beccaro, M., M. Costantini, R.P. Giorgi, G. Miccinesi, M. Grimaldi and P. Bruzzi. 2006. "Actual and Preferred Place of Death of Cancer Patients. Results from the Italian Survey of the Dying of Cancer (ISDOC)." *Journal of Epidemiology & Community Health* 60(5): 412–16.
- Bruera, E., C.M. Neumann, B. Gagnon, C. Brenneis, P. Kneisler, P. Selmsler and J. Hanson. 1999. "Edmonton Regional Palliative Care Program: Impact on Patterns of Terminal Cancer Care." *Canadian Medical Association Journal* 161(3): 290–93.

- Bruera, E., N. Russell, C. Sweeney, M. Fisch and L. Palmer. 2002. "Place of Death and Its Predictors for Local Patients Registered at a Comprehensive Cancer Center." *Journal of Clinical Oncology* 20(8): 2127–33.
- Bruera, E., C. Sweeney, N. Russell, J.S. Willey and J.L. Palmer. 2003. "Place of Death of Houston Area Residents with Cancer Over a Two-Year Period." *Journal of Pain and Symptom Management* 26(1): 637–43.
- Brumley, R., S. Enguidanos, P. Jamison, R. Seitz, N. Morgenstern, S. Saito, J. McIlwane, K. Hillary and J. Gonzalez. 2007. "Increased Satisfaction with Care and Lower Costs: Results of a Randomized Trial of In-Home Palliative Care." *Journal of the American Geriatric Society* 55(7): 993–1000.
- Burge, F., B. Lawson and G. Johnston. 2003. "Trends in the Place of Death of Cancer Patients, 1992–1997." *Canadian Medical Association Journal* 168(3): 265–70.
- Burge, F.I., B. Lawson and G. Johnston. 2005. "Home Visits by Family Physicians during the End of Life: Does Patient Income or Residence Play a Role?" *BMC Palliative Care* 4(1): 1.
- Burge, F.I., B.J. Lawson, G.M. Johnston and E. Grunfeld. 2008. "A Population-Based Study of Age Inequalities in Access to Palliative Care among Cancer Patients." *Medical Care* 46(12): 1203–11.
- Canadian Institute for Health Information (CIHI). 2004. *Data Quality of the Discharge Abstract Database Following the First Year Implementation of ICD-10-CA/CCI*. Final Report. Ottawa: Author.
- Canadian Institute for Health Information (CIHI). 2007. *Health Care Use at the End of Life in Western Canada*. Ottawa: Author.
- Canadian Strategy for Cancer Control (2002). *Palliative Care Working Group Report*. Toronto: Author.
- Cancer Care Ontario. 2007. *Cancer System Quality Index*. Retrieved January 8, 2010. <<http://csqi.cancercare.on.ca>>.
- Cancer Quality Council of Ontario. 2003. *Strengthening the Quality of Cancer Services in Ontario*. Toronto: Author.
- Carstairs, S. and G.A. Beaudoin. 2000. *Quality End-of-Life Care: The Right of Every Canadian*. Ottawa: Subcommittee of the Standing Senate Committee on Social Affairs, Science and Technology. Retrieved January 8, 2010. <<http://www.parl.gc.ca/36/2/parlbus/commbus/senate/Com-e/upda-e/rep-e/repfinjun00-e.htm>>.
- Centeno, C., D. Clark, T. Lynch, J. Rocafort, A. Greenwood, L.A. Flores et al. 2007. *EAPC Atlas of Palliative Care in Europe*. Houston, TX: IAHP Press.
- Cherin, D.A., S.M. Enguidanos and P. Jamison. 2004. "Physicians as Medical Center 'Extenders' in End-of-Life Care: Physician Home Visits as the Lynchpin in Creating an End-of-Life Care System." *Home Health Care Services Quarterly* 23(2): 41–53.
- Clarke, E.A., L.D. Marrett and N. Kreiger. 1991. "Cancer Registration in Ontario: A Computer Approach." In O.M. Jenson, D.M. Parkin and R. MacLennan, eds., *Cancer Registration Principles and Methods* (pp. 246–57). Lyon, France: IARC Publications.
- Cohen, J., J. Bilsen, P. Hooft, P. Deboosere, G. Wal and L. Deliens. 2006. "Dying at Home or in an Institution Using Death Certificates to Explore the Factors Associated with Place of Death." *Health Policy* 78(2–3): 319–29.

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- Deyo, R.A., D.C. Cherkin and M.A. Ciol. 1992. "Adapting a Clinical Comorbidity Index for Use with ICD-9-CM Administrative Databases." *Journal of Clinical Epidemiology* 45(6): 613–19.
- Earle, C.C. and J.Z. Ayanian. 2006. "Looking Back from Death: The Value of Retrospective Studies of End-of-Life Care." *Journal of Clinical Oncology* 24(6): 838–40.
- Earle, C. C., B.A. Neville, M.B. Landrum, J.Z. Ayanian, S.D. Block and J.C. Weeks. 2004. "Trends in the Aggressiveness of Cancer Care Near the End of Life." *Journal of Clinical Oncology* 22(2): 315–21.
- Earle, C.C., B.A. Neville, M.B. Landrum, J.M. Souza, J.C. Weeks, S.D. Block, E. Grunfeld and J.Z. Ayanian. 2005. "Evaluating Claims-Based Indicators of the Intensity of End-of-Life Cancer Care." *International Journal of Quality Health Care* 17(6): 505–09.
- Earle, C.C., E.R. Park, B. Lai, J.C. Weeks, J.Z. Ayanian and S. Block. 2003. "Identifying Potential Indicators of the Quality of End-of-Life Cancer Care from Administrative Data." *Journal of Clinical Oncology* 21(6): 1133–38.
- Ferris, F.D., H.M. Balfour, K. Bowen, J. Farely, M. Hardwick, C. Lamontagne et al. 2002. *A Model to Guide Hospice Palliative Care: Based on National Principles and Norms of Practice*. Ottawa: Canadian Hospice Palliative Care Association.
- Flory, J., Y.X. Yinong, I. Gurol, N. Levinsky, A. Ash and E. Emanuel. 2004. "Place of Death: US Trends Since 1980." *Health Affairs (Millwood)* 23(3): 194–200.
- Foreman, L.M., R.W. Hunt, C.G. Luke and D.M. Roder. 2006. "Factors Predictive of Preferred Place of Death in the General Population of South Australia." *Palliative Medicine* 20(4): 447–53.
- Gagnon, B., N.E. Mayo, J. Hanley and N. MacDonald. 2004. "Pattern of Care at the End of Life: Does Age Make a Difference in What Happens to Women with Breast Cancer?" *Journal of Clinical Oncology* 22(17): 3458–65.
- Gilbar, O. and M. Steiner. 1996. "When Death Comes: Where Should Patients Die?" *Hospital Journal* 11(1): 31–48.
- Gomes, B. and I.J. Higginson. 2006. "Factors Influencing Death at Home in Terminally Ill Patients with Cancer: Systematic Review." *British Medical Journal* 332(7540): 515–21.
- Grande, G.E., J.M. Addington-Hall and C.J. Todd. 1998. "Place of Death and Access to Home Care Services: Are Certain Patient Groups at a Disadvantage?" *Social Science & Medicine* 47(5): 565–79.
- Grande, G.E., C.J. Todd, S.I. Barclay and M.C. Farquhar. 2000. "A Randomized Controlled Trial of a Hospital at Home Service for the Terminally Ill." *Palliative Medicine* 14(5): 375–85.
- Grunfeld, E., L. Lethbridge, R. Dewar, B. Lawson, L.F. Paszat, G. Johnston, F. Burge, P. McIntyre and C.C. Earle. 2006. "Towards Using Administrative Databases to Measure Population-Based Indicators of Quality of End-of-Life Care: Testing the Methodology." *Palliative Medicine* 20(8): 769–77.
- Heyland, D.K., J.V. Lavery, J.E. Tranmer, S.E. Shortt and S.J. Taylor. 2000. "Dying in Canada: Is It an Institutionalized, Technologically Supported Experience?" *Journal of Palliative Care* 16(Suppl.): S10–S16.
- Huang, J., C. Boyd, S. Tyldesley, J. Zhang-Salomons, P.A. Groome and W.J. Mackillop. 2002. "Time Spent in Hospital in the Last Six Months of Life in Patients Who Died of Cancer in Ontario." *Journal of Clinical Oncology* 20(6): 1584–92.

- Hughes, S.L., J. Cummings, F. Weaver, L. Manheim, B. Braun and K. Conrad. 1992. "A Randomized Trial of the Cost Effectiveness of VA Hospital-Based Home Care for the Terminally Ill." *Health Services Research* 26(6): 801–17.
- Institute of Medicine. 2001. *Improving Palliative Care for Cancer*. Washington, DC: National Academy of Sciences.
- Jordhoy, M.S., P. Fayers, T. Saltnes, M. Ahlner-Elmqvist, M. Jannert and S. Kaasa. 2000. "A Palliative-Care Intervention and Death at Home: A Cluster Randomised Trial." *Lancet* 356(9233): 888–93.
- Kane, R.L., J. Wales, L. Bernstein, A. Leibowitz and S. Kaplan. 1984. "A Randomised Controlled Trial of Hospice Care." *Lancet* 1(8382): 890–94.
- Karlsen, S. and J. Addington-Hall. 1998. "How Do Cancer Patients Who Die at Home Differ from Those Who Die Elsewhere?" *Palliative Medicine* 12(4): 279–86.
- Kirby, M.J.L. and M. LeBreton. 2002. *The Health of Canadians – The Federal Role. Volume Six: Recommendations for Reform*. Ottawa: Senate Standing Committee on Social Affairs, Science and Technology.
- McWhinney, I.R., M.J. Bass and V. Orr. 1995. "Factors Associated with Location of Death (Home or Hospital) of Patients Referred to a Palliative Care Team." *Canadian Medical Association Journal* 152(3): 361–67.
- Ontario Ministry of Health and Long-Term Care (MoHLTC). 2005 (October 4). "McGuinty Government Improving End-of-Life Care. Strategy Will Enhance Services in Homes and Hospices." News release. Retrieved January 8, 2010. <http://www.health.gov.on.ca/english/media/news_releases/archives/nr_05/nr_100405.html>.
- Ontario Ministry of Health and Long-Term Care (MoHLTC). 2007. *Ontario's Local Health Integration Networks*. Retrieved January 8, 2010. <<http://www.lhins.on.ca/home.aspx>>.
- Patrick, D.L., J.R. Curtis, R.A. Engelberg, E. Nielsen and E. McCown. 2003. "Measuring and Improving the Quality of Dying and Death." *Annals of Internal Medicine* 139(5 Pt. 2): 410–15.
- Pritchard, R.S., E.S. Fisher, J.M. Teno, S.M. Sharp, D.J. Reding, W.A. Knaus, J.E. Wennberg and J. Lynn. 1998. "Influence of Patient Preferences and Local Health System Characteristics on the Place of Death. SUPPORT Investigators. Study to Understand Prognoses and Preferences for Risks and Outcomes of Treatment." *Journal of the American Geriatric Society* 46(10): 1242–50.
- Rabow, M.W., S.L. Dibble, S.Z. Pantilat and S.J. McPhee. 2004. "The Comprehensive Care Team: A Controlled Trial of Outpatient Palliative Medicine Consultation." *Archives of Internal Medicine* 164(1): 83–91.
- Raftery, J.P., J.M. Addington-Hall, L.D. MacDonald, H.R. Anderson, J.M. Bland, J. Chamberlain and P. Freeling. 1996. "A Randomized Controlled Trial of the Cost-Effectiveness of a District Co-ordinating Service for Terminally Ill Cancer Patients." *Palliative Medicine* 10(2): 151–61.
- Robles, S.C., L.D. Marrett, E.A. Clarke and H.A. Risch. 1988. "An Application of Capture–Recapture Methods to the Estimation of Completeness of Cancer Registration." *Journal of Clinical Epidemiology* 41(5): 495–501.
- Romanow, R.J. 2002. *Building on Values: The Future of Health Care in Canada*. Saskatoon: Commission on the Future of Health Care in Canada.
- Setoguchi, S., C.C. Earle, R. Glynn, M. Stedman, J.M. Polinski, C.P. Corcoran and J.S. Haas. 2008. "Comparison of Prospective and Retrospective Indicators of the Quality of End-of-Life Cancer Care." *Journal of Clinical Oncology* 26(35): 5671–78.

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- Statistics Canada. 1994. *Coverage, 1991 Census Technical Reports*. Ottawa: Minister of Industry, Science and Technology.
- Stewart, A.L., J. Teno, D.L. Patrick and J. Lynn. 1999. "The Concept of Quality of Life of Dying Persons in the Context of Health Care." *Journal of Pain and Symptom Management* 17(2): 93–108.
- Teno, J.M., B.R. Clarridge, V. Casey, L.C. Welch, T. Wetle, R. Shield and V. Mor. 2004. "Family Perspectives on End-of-Life Care at the Last Place of Care." *Journal of the American Medical Association* 291(1): 88–93.
- Teno, J.M. and V. Mor. 2005. "Resurrecting Treatment Histories of Dead Patients." *Journal of the American Medical Association* 293(13): 1591.
- Wilkins, R. 2001. *PCCF + Version 3G Users Guide: Automated Geographic Coding Based on the Statistics Canada Postal Code Conversions Files*. Ottawa: Statistics Canada.
- Wilson, D.M., C.D. Truman, R. Thomas, R. Fainsinger, K. Kovacs-Burns, K. Froggatt and C. Justice. 2009. "The Rapidly Changing Location of Death in Canada, 1994–2004." *Social Science & Medicine* 68(10): 1752–58.
- Zimmer, J.G., A. Groth-Juncker and J. McCusker. 1985. "A Randomized Controlled Study of a Home Health Care Team." *American Journal of Public Health* 75(2): 134–41.

Child and Youth Mental Health Service Referrals: Physicians' Knowledge of Mental Health Services and Perceptions of a Centralized Intake Model

Aiguillage vers les services de santé mentale pour les enfants et les jeunes : connaissance des services de santé mentale de la part des médecins et perceptions face à un modèle d'accueil central



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Child and Youth Mental Health Service Referrals: Physicians' Knowledge of Mental Health Services and Perceptions of a Centralized Intake Model

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Abstract

Objective: We conducted a survey to assess physicians' attitudes and knowledge of mental health services and centralized intake services for mental health.

Method: A survey consisting of 51 questions was sent to 735 physicians in active practice within the catchment area of a regional centralized intake for child and youth mental health services. The survey was conducted during the summer of 2006.

Results: Of 735 eligible physicians, 388 completed and returned the survey (52.8% response rate). The majority of physicians were aware of mental health services offered by their hospital. Physicians reported lower confidence levels for delivering counselling and psychopharmacological treatments for mental health. Furthermore, over 72% indicated that they did not feel they had time in practice to provide mental health counselling. Over 65% of physicians reported that mental health referrals should have appropriate/defined criteria. The majority (92%) of physicians had referred to specialized mental health services provided by their hospital. With respect to centralized intake services, 57.2% of physicians indicated they were aware of the service and 73.9% said it should be continued. However, only 34% reported satisfaction with the centralized intake referral service. Predictors of satisfaction with the service were satisfaction with mental health feedback and satisfaction with response time of the centralized intake service.

Conclusions: Physician confidence levels in providing mental health services vary greatly. While doctors favour a centralized intake for mental health services, their satisfaction with such a service somewhat depends on variables beyond the control of the centralized intake, such as wait times and feedback from mental health providers.

Résumé

Objectif : Nous avons effectué un sondage pour évaluer l'attitude et les connaissances des médecins face aux services de santé mentale et au service d'accueil central en matière de santé mentale.

Méthodologie : Un questionnaire de 51 questions a été envoyé à 735 médecins actifs dans une région desservie par un service d'accueil central pour les services de santé mentale chez les enfants et les jeunes. Le sondage a été effectué au cours de l'été 2006.

Résultats : Au total, 388 des 735 médecins admissibles ont rempli et retourné le questionnaire (taux de réponse de 52,8 %). La majorité des médecins sont au courant

des services de santé mentale offerts par leur hôpital. Ils ont manifesté des taux de confiance plus bas pour ce qui est de leurs propres possibilités d'offrir du counseling ou des traitements psychopharmacologiques pour les problèmes mentaux. De plus, plus de 72 % des répondants indiquent ne pas avoir le temps, dans le cadre de leur pratique, pour offrir des services de counseling en matière de santé mentale. Plus de 65 % des médecins indiquent que l'aiguillage vers les services de santé mentale devrait reposer sur des critères appropriés et bien définis. La majorité des médecins (92 %) ont orienté des patients vers les services de santé mentale spécialisés offerts par leur hôpital. Pour ce qui est du service d'accueil centralisé, 57,2 % des médecins indiquent qu'ils en connaissent l'existence et 73,9 % affirment qu'il devrait être maintenu. Cependant, seulement 34 % se disent satisfaits quant au service d'accueil centralisé pour l'aiguillage des patients. Les facteurs influant la perception envers ce service sont la satisfaction face à la rétroaction des services de santé mentale et la satisfaction face au temps de réponse du service d'accueil centralisé.

Conclusions : Il y a une grande variation dans les niveaux de confiance exprimés par les médecins pour offrir des services de santé mentale. Bien que les médecins se montrent en faveur d'un accueil centralisé pour les services de santé mentale, la satisfaction face à un tel service dépend de variables hors du contrôle dudit service, telles que les temps d'attente et la rétroaction provenant des fournisseurs de services de santé mentale.

EPIDEMIOLOGICAL STUDIES HAVE SHOWN THAT 15% OF CHILDREN EXPERIENCE mental disorders, yet only one in six receives the needed specialized services (Offord et al. 1987; Stiffman et al. 1997; Waddell et al. 2005). While finding ways to improve the identification of mental health (MH) problems in children and youth is of utmost importance, once problems are identified, where and how to access appropriate clinical services becomes crucial.

In response to the high prevalence rate of MH problems in children, many countries have begun to build policy statements to provide goals for developing adequate treatment models (Zolnierek 2008). Canada has focused on developing community support services and improving system integration (Lurie 2005). In Ontario, the Graham Report (Ontario MoHLTC 1988) proposed a "whole systems view" that effectively linked provincial psychiatric hospitals, general hospital and community services, resulting in a community-focused MH service. A later implementation framework (Ontario MoHLTC 1999) continued the previous policy and focused on system integration (Lurie 2005). While there is a move to strengthen mental healthcare within the primary care setting through increased training of primary care providers and facilitation of collaborative relationships, referral to MH specialists is still a key component of the mental healthcare system (AACAP 2009).

For many youth and families, the primary physician is the main source for MH information and help (Davidson and Manion 1996). In our review of the recent literature, a number of studies reported that MH or psycho-social problems among patients in primary care ranged from 18% to 38% (Elhai et al. 2007; Rushton et al. 2002; Kelleher et al. 2000; Kramer and Garralda 1998). Of those requiring MH services, approximately half were considered to require referrals to specialized mental healthcare (Elhai et al. 2007; Kramer and Garralda 1998). In a review of the literature based in the 1990s by Phillips and colleagues (1998), estimates of medical patients with MH needs varied widely from 4% to 88%, depending on the type of physician reporting. Psychiatrists tended to report higher referrals, whereas surgeons and internists reported much lower. Phillips and colleagues (1998) concluded that an estimate of 30% would be conservative.

As indicated in the literature, while the primary physician can often manage many of the presenting MH problems, a number of patients will need more specialized services, usually obtained in hospitals or community MH agencies, or through community MH specialists. Physicians reported that they refer to MH services when they are uncertain about a diagnosis, their patients fail to respond to treatment, patients have severe affective symptoms or require ongoing psychotherapy (Williams et al. 2005).

In order for those experiencing MH issues to receive the proper treatment, the primary physician must be able to refer patients easily to appropriate services. Phillips and colleagues (1998) reported that only 55% of paediatricians surveyed referred their MH patients for specialized psychiatric services. Considering that a number of patients could have been adequately treated within the paediatrician's practice, one could assume that some of the patients of paediatricians not reporting referrals may have benefited from specialized MH services. Even lower rates were reported in a Quebec survey of family physicians, with fewer than five referrals per year for MH services (Maheux et al. 2006).

A number of studies have explored MH referral systems in order to understand possible barriers to MH referrals (Williams et al. 2005; Walders et al. 2003; Trude and Stoddard 2003). The barriers include (a) lack of feedback from MH services on the referral outcome (Stiffman et al. 1997; Williams et al. 2005), (b) greater difficulties accessing MH services than other medical services (Trude and Stoddard 2003), (c) lack of information regarding various MH services (Maheux et al. 2006; Trude and Stoddard 2003), (d) lack of psychiatrists for referral within the community (Maheux et al. 2006) and (e) long waiting periods (Stiffman et al. 1997).

In their review of the literature, Phillips and colleagues (1998) summarize these barriers as either related to access to MH services (e.g., "large clinics and hospitals seem less responsive than private practitioners," "does my patient really need to drive 30 miles for MH care"), concerns regarding the quality of MH service ("there are so many different types of mental health providers that it is difficult to assess their quali-

fications”) or barriers related to attitudes and communication (e.g., “my patients disappear once I refer them,” “I never get any feedback or report”). Physicians noted that they had better results for referral services when a MH provider was located within their facility (Williams et al. 2005; Maheux et al. 2006), indicating that availability and convenience may facilitate MH referrals.

While existing research has suggested that primary care physicians perceive many barriers when referring for MH services, there are obvious limitations to this research. Most of the current research has been conducted in the United States and involves comparisons of families with managed care coverage to those who pay a fee for service (Walders et al. 2003; Trude and Stoddard 2003; Forrest et al. 2002). In these settings, referral determinations may be based on the individual patient’s insurance provider and the provider’s methods for referrals, which may add a level of complexity in referring for the physician. This situation differs from the model of care in Canada, which may vary by province but primarily consists of an integrated model of care within a universal funding framework. Other literature is based on samples of convenience, small samples or expert opinion (Stiffman et al. 1997; Phillips et al. 1998; Williams et al. 2005).

Because access, convenience, communication and information are all concerns in referrals for mental healthcare, one solution may be a centralized intake (CI) service facilitating MH referrals. CI provides a single point of entry for patients requiring access to more specialized services tailored to their needs. It is designed to act as a gateway and facilitator responsive to the MH needs of patients and their referring

physicians. While there has been no research regarding CI for MH services, studies have been conducted on the effectiveness of CI on treatment outcomes in drug treatment centres. Those who entered treatment programs via CI have been shown to receive more referrals to ancillary services (i.e., other health and human service providers) and to be more likely

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to show up for treatment (Scott et al. 2002). CI was also shown to improve scores on the Addiction Severity Index with regard to legal problems more than for patients who entered the treatment program directly (Barron et al. 2002).

There is currently no research on how responsive CI systems have been to physicians who have referred their patients, or on physicians’ knowledge and attitudes about the referral of children and youth to mental healthcare when CI systems have been in place. Recently in Eastern Ontario, a CI service was created as part of a regional Specialized Psychiatric and Mental Health Services for Children and Youth (SPMHS

2000), to assist physicians in directing and placing their patients in the appropriate MH service administered by the regional hospitals and outpatient hospital services. The CI should address some of the barriers to MH referrals for children and youth by providing a single point of entry for MH services. In Ontario, referrals to SPMHS, including those to psychiatrists, psychologists, social workers and occupational therapists, would be covered by the Ontario Health Insurance Plan (OHIP), whereas referrals to community psychologists or social workers would be covered by individual insurance plans only for those who have coverage.

The purpose of this survey was threefold. First, we conducted a comprehensive assessment of physicians' attitudes and knowledge of MH services. This part of the survey included questions concerning perceived barriers to referrals that have been indicated in the current literature, such as wait times for referrals, feedback and communication, as well as new questions concerning physicians' level of confidence in providing MH services and their opinions on guidelines for MH referrals. Secondly, we undertook an evaluation of physicians' attitudes and satisfaction with the services provided by a CI for mental healthcare. We hypothesized that satisfaction with the CI referral process would be predicted by satisfaction with response time for referrals, satisfaction with feedback from CI and physician confidence in managing MH concerns. Thirdly, we surveyed physicians' attitudes and knowledge of mental healthcare provided by telehealth. The results of the telehealth portion of the survey are presented elsewhere (Cloutier et al. 2008).

Methods

Procedure

Multidisciplinary teams within the Children's Hospital of Eastern Ontario (CHEO) and the Royal Ottawa Mental Health Centre (ROMHC) provide MH services to children and youth. Services include outpatient MH teams, partial hospitalization programs, emergency and crisis services, therapeutic classrooms and in-patient services. CI was implemented to streamline the referral process for these services to the appropriate MH resources, either in the community or within SPMHS. Prior to this, physicians or families had to find the appropriate MH services, with the result that sometimes patients were placed on multiple wait lists.

The regional CI located at the CHEO has been in existence since 1997. It was implemented as a part of the restructuring of MH services in Eastern Ontario as part of SPMHS, and it was designed to provide a single point of entry for children and youth in the geographical area of the Champlain Local Health Integration Network (Dall et al. 2006). The Champlain LHIN has a population of 1,100,300, with 13.1%

consisting of visible minorities and 10.8% considered to be of low income. Lone-parent families make up 23.7% of all families (Dall et al. 2006). CI was designed to provide assistance to referring physicians in identifying the appropriate available service and helping physicians to access these services for their patients in a timely and equitable manner.

Physician recruitment was based on the Tailored Design Method (Dillman 2000). This method has been found to enhance potential response rates in mail-out surveys. The population for the survey database was generated from MD Select database software (2004). This Canadian database permits selection of physicians based on location and medical specialty. In 2006, we sent a survey to all physicians (N=1,598) in the hospital catchment area who might have child or adolescent patients requiring referrals for MH services to the Regional CI. Valid physicians for the study included (a) those who would refer children and youth to MH services as required, (b) physicians who were currently practising family medicine, general internal medicine, paediatrics, neurology, community medicine or general medicine, (c) those whose practice was within the hospital catchment area and (d) those who were in active practice. A one-week reminder was sent to all potential participants followed by two-week and one-month follow-up reminders and surveys to those who had not yet returned the survey. Physicians who completed the survey were eligible to win one of five Montblanc pens valued at \$200 each. Response was voluntary. The research ethics board at CHEO approved the protocol under the rubric of an expedited review because it involved no more than minimal risk.

Measures

The survey was developed to assess the responsiveness of a regional centralized MH intake service for children and youth to the needs of the referring physicians, including awareness of service and timeliness. All survey items were developed by a multidisciplinary team in order to ensure content validity. The team included representation from community medical practitioners, MH researchers, hospital administrators and MH intake workers. The survey was available in both English and French. Questions were developed within the framework of the quality dimensions used by the Canadian Council on Health Service Accreditation to assess the responsiveness of the regional centralized MH intake service to the needs of referring physicians. The survey was piloted with a small sample of physicians, and adjustments were made based on their feedback.

The survey consisted of six sections including (1) practice status, (2) awareness of services, (3) physicians' confidence in the area of MH in working with children, youth and families with MH issues, (4) physicians' views towards mental health/illness issues, (5) MH referrals, (6) MH provided by telehealth and (7) centralized intake.

Categorical questions were used in assessment of awareness with regard to referral numbers and wait times. Five-point Likert scales were used to measure physicians' confidence levels, satisfaction with feedback, views towards MH issues, response time and referral process.

The *physician confidence scale* consisted of eight items designed to assess the degree of confidence a physician had in carrying out tasks related to MH issues with children, youth and their families. Item examples include "Elicit MH information as part of a family/medical history" and "Provide counselling related to MH issues." Answer options ranged from 1 (low confidence) to 5 (high confidence). "Not applicable" was also an answer option. A composite score was calculated as an indicator of overall confidence level. Scores ranged from 8 to 40, with a higher score indicating a higher confidence level. Cronbach's alpha for this scale was 0.88.

The *two-item satisfaction with feedback scale* was used to assess physician satisfaction with the quality of feedback from specialized MH services from CHEO and the ROMHC with regard to diagnostic assessment and treatment and follow-up plan. Answer options ranged from 1 (very dissatisfied) to 5 (very satisfied). "Not applicable" was also an answer option. A composite score for two items of the feedback satisfaction questions was calculated as an indicator of overall satisfaction. Scores ranged from 2, representing the lowest level of satisfaction, to 10, representing the highest level of satisfaction. The two items correlated with $r=0.78, p<0.001$.

Open-ended questions were used to acquire further information regarding physicians' views towards the regional CI for MH services for children and youth. Two research assistants separately coded all the open-ended data to ensure reliable coding. The open-ended question pertaining to additional thoughts on CI had a kappa value of 0.86.

The *comfort with providing information scale* was composed of six items that measured the level of comfort a physician experiences in providing information to CI in relation to the health status of patients with regard to clinical symptoms, family history, stressors/precipitating factors, socio-demographic background, previous assessments and previous treatments. Answer options ranged from 1 (very uncomfortable) to 5 (very comfortable). "Not applicable" was also an answer option. Cronbach's alpha for this scale was 0.98. A separate question regarding comfort with following up on recommendations by CI in redirecting patients to community services consisted of a yes/no or "neutral" answer.

The data were analyzed using SPSS 15.0 for Windows. Descriptive statistics were obtained by frequency analysis and measures of central tendency. Group differences were evaluated via chi-square tests for categorical data and via independent sample t-tests for continuous data. Hierarchical regression was used to examine which variables predict satisfaction with the referral process through CI. All tests were two-tailed.

Results

General findings

RESPONSE RATE

Of the 1,598 total potential participants listed in the MD Select database (2004), 735 (46.0%) were valid (i.e., met inclusion criteria), 259 (30.0%) could not be located (information could not be found) or had moved out of the hospital catchment area, 313 (36.3%) were no longer in active clinical practice and 278 (32.2%) did not see patients under the age of 18. Of the 735 valid potential participants, 388 (52.8%) had completed and returned the survey.

SURVEY RESPONDENTS VERSUS NON-RESPONDENTS

In order to assess the generalizability of the findings, a chi-square goodness of fit test was conducted on the available demographic characteristics (from the MD Select database) of survey responders versus non-responders. A significant difference was found in the proportion of responders for gender, language and location. Proportionately more females responded (58.3% female vs. 47.3% males, χ^2 [1, N=734] 8.9, $p < 0.01$); more English-speaking physicians responded (54.1% English vs. 38.3% French, χ^2 [1, N=735] 5.5, $p < 0.05$); and more rural physicians responded (76.8% rural vs. 49.2% urban, χ^2 [1, N=734] 25.3, $p < 0.001$). However, although significant differences were found for these variables, there were still a large proportion of responders representing male (47.3%), French-speaking (38.3%) and urban physicians (49.2%); therefore, these groups are represented in the responses even though there may be potential for bias. No differences were found for time in practice ($t = 0.75$ [1, 730], ns). In addition, of those who completed the survey, a number of questions were left unanswered. We compared the characteristics of those who answered the majority of the questions with those who left unanswered questions, and no differences were found between groups. Therefore, for the following analysis all available data was reported.

Sample characteristics

The sample consisted of 178 males (45.9%) and 210 females (54.1%). The mean age was 48 years (SD=9.40), with a range from 31 to 78 years. Table 1 illustrates the characteristics of the 388 participants. The majority of the participants reported English as their preferred language. Most physicians described their practice location as either "Metropolitan/central city" or "Metropolitan/suburban," and most worked in either a community group practice or a community solo practice with the majority of physicians specialized in either family medicine or general practice.

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TABLE 1. Demographic statistics

Variable	Percentage (n)
Preferred language	
English	94.1 (365)
French	5.9 (17)
Graduation country	
Canada	87.9 (341)
Other country	12.1 (18)
Geographic area of practice	
Metropolitan/Central city	50.5 (189)
Metropolitan/Suburban	30.2 (113)
Rural	9.9 (19)
Small city/Town	9.4 (20)
Work setting	
Community group practice	46.0 (171)
Community solo practice	32.0 (119)
Hospital	12.9 (48)
Academic teaching unit	5.1 (19)
Other	4.0 (15)
Specialty	
Family medicine	48.6 (188)
Physician/General practice	28.4 (110)
Paediatrics	15.5 (60)
Psychiatry	4.9 (19)
Neurology	1.3 (5)
Community medicine	0.8 (3)
Emergency Family Medicine	0.5 (2)
	M (SD)
Percentage of practice comprising youth	33.4 (31.6)
Time in practice/years	21.8 (9.6)

Physicians' attitudes and knowledge

The majority reported that they “strongly agree/agree” (65.6%, n=249) with the view that specialized MH services should have appropriate/defined criteria for referrals. Secondly, the majority “strongly disagree/disagree” (72.8%, n=276) with the statement that they have sufficient time in their practice to provide MH counselling to youth and their families; and finally, the majority “strongly disagree/disagree” (37.4%, n=142) or were “neutral” (34.5%, n=131) with regard to the statement that MH issues with youth and their families are too difficult to address.

Awareness of in-patient hospital and outpatient hospital services

The majority of physicians were aware of in-patient services delivered both at hospital facilities (73.4%) and through outpatient MH teams (62.1%). Fewer were aware of the Youth Partial Hospitalization Program (43.0%), and there was less awareness of the other specialized MH services (26.4% to 33.9%).

Perceived barriers to referrals

REFERRALS

When asked whether they have referred to specialized hospital MH services, a significantly greater number of physicians (93.3%, n=362) reported they had referred, whereas only 70.6% (n=269) of respondents said they had referred to community MH services ($\chi^2 [6, N=381]=17.291, p=0.008$).

PHYSICIAN-PERCEIVED WAIT TIMES

The majority reported having waited an average of three months or more for their patients to be seen by MH services at hospitals, and most waited 0–2 months for their patients to be seen in the community. Three hundred fifteen (81.2%) physicians indicated the type of MH professionals they refer to in the community as follows: 53.7% (n=169) reported having referred to a private psychiatrist, 77.5% (n=244) to a private psychologist, 51.1% (n=161) to paediatricians, 20.3% (n=64) to private therapists, 21.1% (n=182/240) to community/social services and 5.8% (n=22) reported having referred to other hospitals.

FEEDBACK/COMMUNICATION

The majority were “satisfied/very satisfied” with the quality of feedback from SPMHS with regard to diagnostic assessment (59.3%, n=191); fewer were “satisfied/very satisfied” with the treatment and follow-up plan provided (40.5%, n=128). The composite

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score for these two questions of satisfaction with feedback (diagnostic assessment, and treatment and follow-up plan) was M=6.5 (SD 2.3). This composite was used in the subsequent regression analysis.

PHYSICIAN CONFIDENCE

Table 2 provides a breakdown of the number and percentage of physicians reporting in the confident range for providing various aspects of MH services to their patients. Confidence levels of paediatricians were compared to other specialties (family medicine, general practice, psychiatry, neurology, community medicine and emergency family medicine) because they see the highest percentage of children and youth. There was no significant difference in confidence among the groups, with the exception of paediatricians reporting significantly lower confidence in providing counselling related to MH issues ($\chi^2 [2, N=381]=13.767, p=0.001$). Specifically, 49.1% (n=28) of paediatricians compared with 25.9% (n=84) of other specialties reported low confidence; 21.1% (n=12) of paediatricians compared with 39.8% others (n=129) reported high confidence. A composite score was calculated for all item responses for questions concerning level of physicians' confidence, 8 representing the lowest confidence and 40 the highest level of confidence. Average composite score was 27.77 (SD=5.62). This composite score was used in the subsequent regression analysis because we hypothesized that physicians' level of confidence in managing patients with MH concerns may affect their satisfaction with the referral system.

TABLE 2. Physician responses for level of confidence in providing MH services

	Low 1 n (%)	2 n (%)	Neutral 3 n (%)	4 n (%)	High 5 n (%)
Direct patients/families at risk to emergency	7 (1.8)	6 (1.5)	53 (13.9)	175 (46.1)	139 (35.8)
Elicit MH information as part of a family/medical history	3 (0.8)	10 (2.6)	72 (18.7)	186 (48.2)	115 (29.8)
Discuss MH issues with children, youth and families	7 (1.8)	33 (8.5)	99 (25.6)	175 (45.3)	72 (18.7)
Assess suicidal and homicidal risk in patients	12 (3.1)	46 (11.9)	107 (27.7)	169 (43.6)	52 (13.5)
Provide information to children, youth and families concerning risk/behaviour associated with MH illness	11 (2.8)	54 (14.0)	147 (38.1)	139 (36.0)	35 (9.1)
Provide MH information to child and youth	11 (2.9)	59 (15.3)	147 (38.2)	135 (35.1)	33 (8.6)

TABLE 2. Continued.

Provide counselling related to MH issues	28 (7.3)	84 (22.0)	128 (33.5)	116 (30.4)	26 (6.8)
Provide pharmacological treatments to children and youth with MH issues	57 (14.8)	139 (36.2)	109 (28.4)	58 (15.1)	21 (5.5)

Centralized intake

Awareness of the CI program for hospital in-patient and hospital-based outpatient/community services was 57.2% (n=222). However, when physicians were asked if CI process should continue, 73.9% (n=264) of physicians agreed, 21.8% (n=78) said that they were neutral on the matter and 4.2% (n=15) said that there should not be a CI. Of the 57% (n=222) of physicians who were aware of CI, 75.9% (n=164) agreed that it should continue.

Of the responding physicians who were aware of CI services, 39.9% (n=85) reported that they were “dissatisfied/very dissatisfied” with the referral process through CI, 34.3% (n=73) reported “satisfied/very satisfied” and 25.8% (n=55) reported “neutral.” When asked how satisfied they were with response time, 40.4% (n=84) reported “dissatisfied/very dissatisfied,” 33.6% (n=70) indicated that they were “satisfied/very satisfied” and 26% (n=54) were “neutral.”

Physicians were asked about their level of comfort in providing information to CI regarding the MH status of their patients. A high comfort level was obtained, with percentages of physicians reporting feeling “very comfortable/comfortable” as follows: 86.9% (n=193) for providing information on clinical symptoms, 85.1% (n=183) for providing information on stressors/precipitating factors, 84.2% (n=181) for providing information regarding family history, 82.7% (n=177) for providing information on socio-demographic background, 83.7% (n=180) for providing information on previous treatments and 82.8% (n=178) for providing information on previous assessments. Comfort with following up on recommendations by CI in redirecting patients to community services was reported by 65.4% (n=140) of physicians, 18.7% (n=40) reported that they were neutral on the matter and 15.9% (n=34) said they would not be comfortable.

Further comments regarding the regional CI were provided by 35.8% (n=139) of physicians. These comments could be grouped into categories that relate to three main overarching areas: (1) positive feedback, e.g., “the responses have been professional and prompt”; (2) barriers to MH referrals in general, e.g., “the impression is that resources are very scarce”; and (3) comments and suggestions relating to CI, e.g., “a mailing would be helpful. Outline all services, who you want to see and how you want them to be referred.”

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PREDICTING SATISFACTION WITH THE CI REFERRAL PROCESS

A hierarchical linear regression was performed in order to assess which variables significantly predicted satisfaction with the CI referral process. Demographic variables (i.e., age and gender) and practice information (i.e., percentage of practice comprising youth, practice location, time in practice) were entered at Step 1, and MH variables (i.e., composite score of eight-item physician confidence in providing MH services and composite score of two-item satisfaction with feedback) and CI variables (i.e., composite score of six-item comfort in providing information to CI services and single item of satisfaction with response time from CI) were entered at Step 2. Table 3 reports the results of the regression. Significant predictors were found only in the CI variables of satisfaction with feedback from MH services ($sr^2=0.06$) and response time of CI ($sr^2=0.33$).

TABLE 3. Predictors of satisfaction with CI referral process

Variable	B	β	t	sr^2
Step 1				
Gender	-0.37	-0.15	1.83	0.02
Age	0.000	0.002	0.009	0
% of practice comprising youth	-0.002	-0.05	-0.61	0
Urban vs. rural	-0.175	-0.06	-0.68	0
Time in practice	-0.02	-0.15	-0.78	0
Step 2				
Satisfaction with feedback from MH services	0.14	0.26	4.42*	0.06
Satisfaction with response time by CI	0.61	0.62	10.77*	0.33
Physician confidence	-0.02	-0.08	-1.41	0.01
Comfort providing info	0.01	0.03	0.56	0

Note: $R^2=0.04$, (ns) for Step 1; change $R^2=0.53$, ($p<0.001$); * $p<0.001$.

sr^2 =semipartial correlation squared is the unique contribution of the predictor as a proportion of total variance of the satisfaction with CI referral process (Tabachnick and Fidell 1996).

Discussion

The majority of physicians reported referring patients to hospital services. However, only a little over half were aware of CI services for referrals to these same services. Interestingly, most physicians thought the CI system should continue, even those who had not been aware of this service before the survey. Physicians also seemed to be very

comfortable providing information to CI for a variety of items relating to patients. However, for those physicians reporting that they were aware of the CI service, satisfaction with it was poor: only 34.3% of respondents said they were satisfied with the service, whereas 39.9% were dissatisfied. As hypothesized, two factors that influenced satisfaction with CI referrals were satisfaction with response time from CI and feedback from MH services in general. These concerns are similar to those reported in the current literature (Stiffman et al. 1997; Williams et al. 2005; Walders et al. 2003; Trude and Stoddard 2003). Unfortunately, although CI has control over response time for its initial service, it does not control wait times for the actual MH services.

Within the additional comments, it was noted that even with CI, barriers to referrals were still a concern. Difficulties with waiting times, perception that services are scarce, referral back to the community for services and dissatisfaction with feedback were concerns. These findings are consistent with current literature, a result that indicates physicians have difficulty with MH referrals because resources are scarce and feedback from referral services is lacking (Stiffman et al. 1997; Williams et al. 2005; Maheux et al. 2006). This research confirms that a CI service is unable to alleviate frustration with general wait times and lack of resources. However, once strengthened, CI may be able to alleviate such barriers as communication and difficulties with MH feedback. In order to strengthen the CI system, physicians noted that they would appreciate a detailed list of services that the CI system provides, clearly defined and appropriate criteria for referrals, and faster feedback and response to queries.

From physicians' responses, it was evident that participants had a good awareness of the major MH services offered at the institutional level and throughout the community, although awareness of some specific services was lacking. Additionally, this survey indicated that physicians' confidence levels with their ability to deliver MH services varied. Confidence in the area of counselling and providing pharmacological treatments was notably low. This finding is consistent with current literature, indicating that paediatricians are reluctant to prescribe psychotropic medication and corroborating reports from physicians that the need for ongoing therapy is often a reason for a MH referral (Williams et al. 2005; Steele et al. 2003). Moreover, physicians did not feel that they had sufficient time in their practice to provide adequate MH counselling, with paediatricians reporting even lower confidence levels than other physicians for providing counselling. It may be that paediatricians understand the complexities in counselling children and their caregivers for MH issues and are understandably less confident in providing this service. Further research is required to explore this finding.

Limitations

The survey was limited in that it was administered within a universal system of healthcare where most care, including psychiatric care, is funded by the provincial government authority. Although private mental healthcare is available from psychologists and private counsellors, most such care is accessed through the provincial health plan. The outcomes from this study may not be representative of perceptions of physicians from countries where different methods of referrals are in place, depending on the patient's insurance plan (or lack of insurance). However, similarities concerning barriers to referrals were found between other countries and this study, and these are discussed above. In addition, differences in the response cohort for gender, language and location may have skewed the results somewhat in favour of perceptions of female, English-speaking and rural physicians, although the sample still had good representation within genders, languages and locations. It should be noted that although the response rate was limited (52.8%), it is typical of other physician surveys found in the literature (54%; Asch et al. 1997).

Conclusions

Even though satisfaction ratings were low, three-quarters of physicians were in favour of the CI service continuing and were comfortable providing information about their patients to CI. The frustrations with the system seemed to be frustrations inherent in MH referrals, a situation that might be somewhat alleviated with clear guidelines for referrals and a detailed mail-out that lists services available through CI. A recommendation to strengthen physicians' satisfaction with the CI system would be to ensure timely feedback and better communication with regard to placement decisions. Although a CI service has limited influence on wait times, a procedure that tracks wait times between referral and first appointment, and documents these times to both physicians and policy makers, could alert these officials to the need for additional resources within the MH system.

ACKNOWLEDGEMENTS

The authors would like to thank the Children's Hospital of Eastern Ontario Research Institute for its financial assistance. We would like to thank Julie Mason for her diligent work as a summer student working on this project.

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REFERENCES

- American Academy of Child and Adolescent Psychiatry (AACAP). 2009. "Improving Mental Health Services in Primary Care: Reducing Administrative and Financial Barriers to Access and Collaboration." *Pediatrics* 123: 1248–51.
- Asch, D.A., M.K. Jedrzewski and N.A. Christakis. 1997. "Response Rates to Mail Surveys Published in Medical Journals." *Journal of Clinical Epidemiology* 50: 1129–36.
- Barron, N., B.H. McFarland and L. McCamant. 2002. "Varieties of Centralized Intake: The Portland Target Cities Project Experience." *Journal of Psychoactive Drugs* 34(1): 75–86.
- Cloutier, P., M. Cappelli, J.E. Glennie and C. Keresztes. 2008. "Mental Health Services for Children and Youth: A Survey of Physicians' Knowledge, Attitudes and Use of Telehealth Services." *Journal of Telemedicine and Telecare* 14(2): 98–101.
- Dall, K., M. Lefebvre, M. Pacey and V. Sahai. 2006. *Champlain LHIN: Socio-Economic Indicators Atlas* (p. 26). Toronto: Government of Ontario.
- Davidson, S.I. and I.G. Manion. 1996. "Facing the Challenge: Mental Health and Illness in Canadian Youth." *Psychology, Health & Medicine* 1(1):41-56.
- Dillman, D.A. 2000. *Mail and Internet Surveys: The Tailored Design Method*, 2nd ed. New York: John Wiley & Sons.
- Elhai, J., S. Voorhees, J. Ford, K. Min and B. Frueh. 2007. "Sociodemographic, Perceived and Objective Need Indicators of Mental Health Treatment Use and Treatment-Seeking Intentions among Primary Care Medical Patients." *Psychiatry Research* 165(1-2): 145–53.
- Forrest, C.B., P.A. Nutting, B. Starfield and S. von Schrader. 2002. "Family Physicians' Referral Decisions. Results from the ASPN Referral Study." *Journal of Family Practice* 51(3): 215–22.
- Kelleher, K., T.K. McInerney, W. Gardner, G. Childs and R. Wasserman. 2000. "Increasing Identification of Psychosocial Problems: 1979–1996." *Pediatrics* 105(6): 1313–21.
- Kramer, T. and M. Garralda. 1998. "Psychiatric Disorders in Adolescents in Primary Care." *British Journal of Psychiatry* 173: 508–13.
- Lurie, S. 2005. "Comparative Mental Health Policy: Are There Lessons to Be Learned?" *International Review of Psychiatry* 17(2): 97–101.
- Maheux, B., A. Gilbert, N. Haley and J.Y. Frappier. 2006. "Adolescent care. Part 1: Are Family Physicians Caring for Adolescents' Mental Health?" *Canadian Family Physician* 52(11): 1442–43.
- Offord, D.R., M.H. Boyle, P. Szatmari, N.I. Rae-Grant, P.S. Links, D.T. Cadman et al. 1987. "Ontario Child Health Study II: Six-Month Prevalence of Disorder and Rates of Service Utilization." *Archives of General Psychiatry* 44(9): 832–36.
- Ontario Ministry of Health and Long-Term Care (MoHLTC). 1988. *The Graham Report: Building Community Support for People*. Toronto: Queen's Printer.
- Ontario Ministry of Health and Long-Term Care (MoHLTC). 1999. *Making It Happen*. Toronto: Queen's Printer.
- Phillips, S., L. Clawson and A. Osinski. 1998. "Pediatricians' Pet Peeves about Mental Health Referrals." *Adolescent Medicine: State of the Art Reviews* 9(2): 243–58.
- Rushton, J., D. Bruckman and K.J. Kelleher. 2002. "Primary Care Referral of Children with Psychosocial Problems." *Archives of Pediatric and Adolescent Medicine* 156(6): 592–98.

Child and Youth Mental Health Service Referrals: Physicians' Knowledge of
Mental Health Services and Perceptions of a Centralized Intake Model

- Scott, C.K., R.E. Sherman, M.A. Foss, M. Godley and L. Hristova. 2002. "Impact of Centralized Intake on Case Management Services." *Journal of Psychoactive Drugs* 34(1): 51–57.
- Specialized Psychiatric and Mental Health Services (SPMHS) Transition Planning Steering Committee. 2000. *Specialized Psychiatric and Mental Health Services for Children and Youth in Eastern Ontario*. Workbook Prepared for Community Consultation to be led by the Mental Health Working Group of the Child and Youth Health Network. Ottawa: Author.
- Steele, M.M., S. Fisman, G. Dickie, N. Stretch, J. Rourke and A. Grindrod. 2003. "Assessing the Need for and Interest in a Scholarship Program in Children's Mental Health for Rural Family Physicians." *Canadian Journal of Rural Medicine* 8: 163–70.
- Stiffman, A.R., Y.W. Chen, D. Elze, P. Dore and L.C. Cheng. 1997. "Adolescents' and Providers' Perspectives on the Need for and Use of Mental Health Services." *Journal of Adolescent Health* 21: 335–42.
- Tabachnick, B. and L.S. Fidell. 1996. *Using Multivariate Statistics*, 3rd Edition. NY: Harper Collins.
- Trude, S. and J.J. Stoddard. 2003. "Referral Gridlock." *Journal of Internal Medicine* 18: 442–9.
- Waddell, C., K. McEwan, C.A. Shepherd, D.R. Offord and J.M. Hua. 2005. "A Public Health Strategy to Improve the Mental Health of Canadian Children." *Canadian Journal of Psychiatry* 50: 226–33.
- Walders, N., G.E. Childs, D. Comer, K.J. Kelleher and D. Drotar. 2003. "Barriers to Mental Health Referral from Pediatric Primary Care Settings." *American Journal of Managed Care* 9(10): 677–83.
- Williams, J., G. Palmes, K. Klinepeter, A. Pulley and J. Foy. 2005. "Referral by Pediatricians of Children with Behavioral Health Disorders." *Clinical Pediatrics* 44(4): 343–49.
- Zolnierek, C.D. 2008. "Mental Health Policy and Integrated Care: Global Perspectives." *Journal of Psychiatric and Mental Health Nursing* 15(7): 562–68.

RESEARCH PAPER

Public Perspectives on Health Human Resources in Primary Healthcare: Context, Choices and Change

Point de vue du public sur les ressources humaines
en santé dans les soins de santé primaires :
contexte, choix et changement



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Abstract

The purpose of this study was to examine factors identified by patients as relevant to health human resources (HHR) planning for primary healthcare (PHC). Eleven focus groups were conducted in British Columbia and a thematic analysis was undertaken, informed by a needs-based HHR planning framework. Three themes emerged: (a) the importance of geographic context, (b) change management at the practice level and (c) the need for choices and changes in delivery of PHC. Findings suggest that more attention could be focused on overcoming geographic barriers to providing services, change management within office-based practices, and providing support structures that allow primary care providers to work closer to their full scope of practice. That these factors align with many strategic directions set out by government and planners signals the readiness for change in how PHC is delivered and HHR planned.

Résumé

L'objectif de cette étude est d'examiner les facteurs que les patients estiment pertinents dans la planification des ressources humaines en santé (RHS) pour les soins de santé primaires (SSP). Nous avons constitué 11 groupes de discussion en Colombie-Britannique et nous avons mené une analyse thématique en utilisant un cadre de planification des RHS fondé sur les besoins. Trois thèmes se sont dégagés : (a) l'importance du contexte géographique, (b) la gestion du changement au niveau de la pratique et (c) la nécessité de permettre des choix et des changements dans la prestation des SSP. Les résultats font voir qu'une attention accrue doit être portée à la question des obstacles géographiques dans la prestation des services, à la gestion du changement dans les pratiques et aux structures de soutien qui permettent aux fournisseurs de SSP de travailler plus près de leur champ complet d'activité. Le fait que ces facteurs coïncident avec plusieurs stratégies conçues par le gouvernement et par les planificateurs montre qu'il est temps d'apporter des changements dans la prestation des SSP et dans la planification des RHS.

P RIMARY HEALTHCARE (PHC) REFORM AND HEALTH HUMAN RESOURCES (HHR) planning are recurring themes in policy discussions and have been identified as areas of high priority for health system renewal and research in many countries (Australian Health Workforce Advisory Committee 2004; Law et al. 2008; Health Council of Canada 2007; National Workforce Taskforce and HR Directorate Department of Health 2002). In Canada, a vision for improvements in these areas, as well as in enhanced accountability and transparency, was central to federal, provincial and territorial investments in a 10-year plan to strengthen healthcare to

ensure “that Canadians have access to the care they need, when they need it” (Health Canada 2004). For some time, Canadians have been asking for better access to PHC services, better quality of that care, and more health promotion and disease prevention services (Watson and Kruger 2005; Pollara 2007).

In the past, HHR planning has been carried out intermittently and focused on single healthcare professions in isolation from the broader contextual factors beyond public and media perceptions of surplus or shortage (O’Brien-Pallas 2002). There was also heavy reliance on statistical modelling to project future requirements for providers based on historic utilization patterns rather than the population’s evolving healthcare needs and the effectiveness of health interventions (Birch et al. 2003). In response to shifts in perceptions from surplus to shortage, despite relative stability in provider-to-population ratios over the last two decades (Chan 2002; Watson et al. 2006), governments and stakeholder groups have called for new approaches to HHR planning that focus on population healthcare needs (Birch et al. 2007; Health Council of Canada 2005). In response, all jurisdictions have endorsed a needs-based planning approach that considers the different levels of need as relative and within the context of a population’s demographics, health status and health risks (Birch et al. 1993; Advisory Committee on Health Delivery and Human Resources 2005).

In order to inform efforts to renew PHC, we turned to British Columbians to ask them about their priorities for renewal (Wong et al. 2008). A recurring theme in that discourse was HHR issues. Therefore, the purpose of this study was to conduct a secondary analysis of the qualitative focus group data to better understand British Columbians’ perspectives on the factors deemed relevant to needs-based planning vis-à-vis primary healthcare.

Methods

We conducted 11 focus groups across the province of British Columbia, Canada (n=75) with English-speaking adults who had visited their PHC provider in the past two years. Focus group sites for each community were selected to be representative of geography, population health status and per capita expenditures on family physicians. Premature mortality rates ranged from 2.01 to 7.33 per 1,000 population, and expenditures on family physicians’ services ranged from \$172 to \$246 per 1,000 population (Watson et al. 2005). Participants were recruited using random digit dial methods with a sample of telephone numbers pulled by the Canadian Sampler Survey (ASDE 2003). All procedures were approved by University of British Columbia’s Behavioural Research Ethics Board.

Focus groups were taped and transcribed, and data were analyzed using *Atlas.ti* software. Next, the co-authors conducted a content analysis using a coding scheme that was developed using the needs-based HHR planning framework collaboratively

developed and endorsed by governments (Advisory Committee on Health Delivery and Human Resources 2005). We first coded data by broad categories relevant to needs-based planning, such as context, supply, deployment and population health. Then, themes were identified within these categories.

Results

Participants were predominantly female (65%), with the majority aged 50 years and older (62%), and had more than a high school education (74%). The average number of chronic illnesses per participant was two, with arthritis (41%), hypertension (32%) and depression (29%) being the most commonly reported. Participants had been with a regular PHC provider on average for 8.5 years.

Three main themes emerged from the data. Patients discussed the importance of geographic context, change management at the practice level and the need for choices and changes in delivery of PHC.

Geographic context affects supply and service delivery

The intersection between geography and demographic trends, in particular, was related to participants' receipt of services and influenced their perspectives on HHR supply. Participants spoke about the differences among communities in terms of population demographics, geographic location and the services required and received. Many participants in northern or rural areas spoke about the urban–rural differences in PHC access and suggested that geographic issues need to be a factor in planning PHC renewal.

While participants across all focus groups (FG) discussed issues concerning the supply of providers, those living in small communities described an inadequate supply of physicians and other providers:

... the majority of the doctors and nurses are extremely committed people and they take their jobs very seriously and they try their best to give us good-quality care, healthcare. But unfortunately, like a lot of small communities, we have far too many people for far too few caregivers. [FG4]

Participants also discussed economic and political issues, including how healthcare is funded and how resources are allocated (“the problem is that the system looks at the budget one slice of the pie at a time and not the overall cost of the system” [FG7]).

Many participants shared stories of their personal health challenges and made inferences from the personal to the population. That is, knowing the resources they required, they wondered how such needs might affect services at the population level.

Participants reflected on demographic changes in society, speaking about their own aging, the incidence of chronic illness and health changes in their communities. They expressed concern about how these demographic factors will influence their ability to access PHC services in the future. Some noted geographic differences in population healthcare needs – rural or northern versus urban – with some participants in more rural areas commenting that they had a lower health status than those living in more urban centres: “If you’ve got heart disease in the north, the chances are that you’re going to die sooner.” [FG4] Others commented on how health behaviours might affect health needs: “People up north ... they all still smoke.” [FG6]

Change management within the context of the clinic

Another challenge identified by participants relevant for needs-based planning was the context in which people receive PHC services. When participants waited for appointments, waited in the office for more than 15 minutes, or were added to a waiting list to be accepted as a patient, they voiced concerns related to delays in care and unmet healthcare needs. Participants attributed these delays and unmet needs to an insufficient supply of providers, and did not discuss alternative strategies to reduce waits. For example: “... I guess if you push him [the doctor] hard enough he’d take you the next day, but it’s pretty hard ... to see me in the same day. ... I don’t know what the improvement would be, probably get more doctors.” [FG3] Another stated: “I went on a waiting list to get in with the doctor that I have.” [FG4]

When providers appeared rushed, would see participants for only one health issue, or were abrupt in manner, participants ascribed these behaviours to too many patients for an insufficient supply of providers: “We could easily have three more doctors and then we wouldn’t have to wait for two days or three days to come in.” [FG2]

Choices and changes: Broadening PHC delivery

Participants discussed a desire for change in HHR supply and deployment and how PHC services were delivered. Participants wanted to choose the types and, in some cases, the gender of the provider, and when their ability to exercise or act on their choice was constrained, they attributed these experiences to HHR issues. These factors included where participants lived, such as in remote communities; when they perceived that there were not sufficient providers available, such as one physiotherapist or pharmacist for a community; when they were deployed in a way that did not allow easy access, such as a lack of available care on weekends; or when payment for services was required.

Many participants spoke about their experiences with complementary or alternative providers, such as naturopaths or massage therapists. They spoke about using an

acupuncturist or chiropractor in conjunction with seeing their PHC provider, but also commented on barriers to access such as costs associated with these providers. “I’d like to see more naturopaths ... there’s a huge charge to see them. ... I can’t afford to go see them.” [FG8] Some suggested that the government should include these providers in PHC coverage.

The gender of the PHC provider was important for some female participants who identified discomfort in obtaining care provided by a male physician. They suggested a “shortage” of female doctors: “... and we’re short of female doctors ... there’s lots of male doctors ... but the female ones you can’t even get into.” [FG2] Others chose to drive to other communities to access a female provider or went on waiting lists to get in to see a female physician. One woman talked about a positive strategy to access a female provider:

one of the good things that they’ve done ... you don’t have to go to a doctor to get a pap [smear] done, you can go to a nurse practitioner to get it done and so what happens is more women will keep continuity. Because what’s happening is you get a strange doctor all the time. It takes you awhile to get used to that doctor ... so this way you’ve got continuity of a woman nurse. [FG5]

Participants discussed the types of PHC services they required or wanted, such as disease prevention, health promotion and chronic illness care: “I think there should be more money spent on preventing these things from happening” [FG7] They connected the importance of services to a holistic approach to PHC and more efficient use of resources:

All of those like physio, massage therapy, all of that should be covered because if you look at the holistic thing, the big picture, that’s going to make an effect on your healthcare. ... Like wellness, it’s the whole thing, why not cover all those because in the long run having all those things covered would cut down on all the visits to the doctors, right, if you have a better holistic health. [FG8]

They also commented on other services not traditionally funded by the public insurance system in Canada, such as dental care and the link to healthcare needs: “... because some people, when their teeth are bad, it can cause a lot of health problems.” [FG1]

Participants noted many instances where they believed that seeing a provider other than a physician would have been more appropriate, such as for immunizations, minor health problems, teaching and screening. They talked about how this approach could free physicians to spend more time with complex patients who required an increased

level of knowledge and skill: "... expanding what people are allowed to do, what they're trained to do ... so I would like to see ... people allowed to do more with the knowledge they have." [FG9] They also recognized that introducing new or more providers might be threatening for some: "... they need a lot more nurses, and I think the doctors will be threatened by that. ... they didn't want to have just a little bit of competition." [FG2]

Participants wanted a team approach, and having the appropriate provider deliver services:

A nurse in the office can help the doctor. ... like I have to get allergy shots. A nurse can do that but there's no nurse in the office, and I'm taking up to 15 minutes of the doctor's time from someone that needs a doctor. [FG3]

I think there's a greater role ... for nurse practitioners [FG7]

Maybe the team approach is the way. ... You have a clinic and ... there will be three separate doctors and you see this one this time, this one this time or you're a team, but part of that team is a nurse practitioner. [FG9]

The desire for broader access beyond regular office hours was suggested: "We need more doctors that work on weekends. You get sick on the weekends and you have to go to the walk-in clinic." [FG2] Participants also recognized that appropriate use of providers can contribute to greater efficiency:

I think the whole idea that came up about nurse practitioners would be great, it would save a whole amount of time. Now if every doctor set up his practice [with a nurse practitioner] that you could contact, then I think he could run his practice a lot more efficiently. [FG9]

Discussion

There are many efforts in Canada and abroad to strengthen PHC, to better align HHR with the evolving needs of populations and to enhance accountability and transparency regarding investments to improve the situation. This is one of the first studies that we know of that sought to examine (a) what factors patients of PHC suggest as important for needs-based HHR planning in their discussions regarding the priorities for PHC renewal and (b) why these factors could be priorities in PHC renewal. This study gives us insights into where improvements could be made in order to increase the quality of primary care services delivered. The results suggest that more attention could be focused on overcoming geographic barriers to providing care,

change management within office-based practices, and provision of support structures that allow PHC professionals to work closer to their full scope of practice. That these factors align with many strategic directions set out by government and planners (Advisory Committee on Health Delivery and Human Resources 2005) signals the readiness for change in how PHC is delivered and HHR planned.

Our participants were aware of the relevance of temporal shifts in the demographic and morbidity profile of the population and the impact of these on HHR planning. However, participants also cautioned that geographical context, particularly for those living in rural or northern communities, needs to be an important consideration for any HHR planning. The unique context of a community means that “one size fits all” HHR planning is not possible or desirable. While HHR planning often occurs at provincial or health authority levels, our participants suggested that planners will need to find ways to integrate the community level into their planning processes. Small-area analysis may assist to integrate context into HHR planning (Wennberg 1993). Further, our participants’ grasp of the relevance of demographics, health status and health risks was consistent with needs-based approaches to resource allocation (Eyles and Birch 1993).

There are supply-side issues, such as recruitment and retention of family physicians and registered nurses in the PHC sector, geographic variation in availability and shifts in demand for healthcare providers. Federal, provincial and territorial governments have already made significant investments to expand university enrolments, the supply of international medical graduates and family practice nurse practitioners to ensure that more healthcare providers enter practice at the same time that more retire (Health Council of Canada 2005). It takes time to train new healthcare professionals, but we are currently beginning to feel the effects of these public investments (Evans and McGrail 2008).

Importantly, we found that patients desire change to improve the way that PHC is currently delivered. Over half of Canadians (55% in 2006, 58% in 2007) believe that the healthcare system needs major repairs or complete rebuilding (Pollara 2007). At the clinic or practice level, our findings suggest that efforts to improve access to PHC providers through adoption of proven practices such as innovative appointment scheduling (Murray et al. 2003), shifts in practice hours (Health Council of Canada 2008) and offering group medical visits (Reid et al. 2009) are ways in which the PHC system is trying to address the needs of patients.

Conclusions

Through innovations in health policy, such as changes in health professions regulation and system redesign (e.g., integrated health networks), PHC providers are required to work differently. PHC can no longer be delivered only within professional silos

but through interprofessional teams, where providers work closer to their full scope of practice. Our results suggest that more emphasis could be placed on wellness and disease prevention through the use of multiple different types of providers. Indeed, almost half (42%) of Canadians strongly support funding more wellness promotion and disease prevention education and interventions, and 35% strongly support increasing investments to help patients manage their chronic illness (Pollara 2007).

Participants discussed their desire for interprofessional PHC teams and appropriate and efficient deployment of providers, an approach that is consistent with federal, provincial and territorial investments in these areas. This view is likewise consistent with Canadians continuing to suggest that access to a variety of providers is an important means of ensuring efficient use of PHC resources, financial and human, and is also imperative in addressing issues of access, appropriate care and wait times (Maxwell et al. 2002). The introduction of nurse practitioners in British Columbia occurred around the time our focus groups were being conducted. Participants appeared aware of this provider, whether through their previous experience elsewhere or actual experience in British Columbia. They seemed to be open to accessing PHC services through new providers.

As with all studies, our results should be interpreted with caution. Only English-speaking participants from British Columbia who already had access to PHC participated in these focus groups. Given that PHC is delivered at the provincial level, more work is needed to examine whether these views are similar to those of other populations across Canada. In addition, more work is needed to incorporate views of younger patients. However, a strength of these data is that focus groups were conducted across British Columbia. Our findings suggest areas where there is alignment between policy and patient priorities in needs-based HHR planning. Patients can contribute to decisions on how the current supply of providers could be deployed in order to deliver high-quality PHC services. Their views suggest an openness and readiness to new ways of receiving services, and offer policy makers prescriptions for change.

ACKNOWLEDGEMENTS

The authors would like to acknowledge all focus group participants and those who helped facilitate this study in their communities. At the time of this study, Ms. Regan was supported by a Canadian Institutes of Health Research – TUTOR–PHC Fellowship and Doctoral Research Award, Michael Smith Foundation for Health Research Senior Graduate Studentship, Western Regional Training Centre and Canadian Nurses Foundation Doctoral Scholarship; Dr. Wong was supported by a career award from the National Institute of Aging (444918-31259); and Dr. Watson was a member of the Centre for Health Services and Policy Research, University of British Columbia.

Public Perspectives on Health Human Resources in Primary Healthcare:
Context, Choices and Change

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REFERENCES

- Advisory Committee on Health Delivery and Human Resources. 2005. *A Framework for Collaborative Pan-Canadian Health Human Resources Planning*. Retrieved January 11, 2010. <http://www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/pubs/hhr/2007-frame-cadre/2007-frame-cadre-eng.pdf>.
- ASDE Survey Sampler. 2003. Retrieved January 11, 2010. <<http://www.surveysampler.com>>.
- Australian Health Workforce Advisory Committee. 2004. *Nursing Workforce Planning in Australia: A Guide to the Process and Methods Used by the Australian Health Workforce Advisory Committee*. North Sydney: New South Wales Department of Health. Retrieved January 11, 2010. <<http://www.nhwt.gov.au/documents/Publications/2004/Nursing%20workforce%20planning%20in%20Australia.pdf>>.
- Birch, S., J. Eyles, J. Hurley, B. Hutchison and S. Chambers. 1993. "A Needs-Based Approach to Resource Allocation in Health Care." *Canadian Public Policy* 19: 68–85.
- Birch, S., G. Kephart, G. Tomblin Murphy, L. O'Brien-Pallas, R. Alder and A. MacKenzie. 2007. *Health Human Resources Planning and the Production of Health: Development of an Extended Analytical Framework for Needs-Based Health Resources Planning* (Rep. No. 168). Hamilton, ON: McMaster University.
- Birch, S., L. O'Brien-Pallas, C. Alksnis, G. Tomblin Murphy and D. Thomson. 2003. "Beyond Demographic Change in Human Resources Planning: An Extended Framework and Application in Nursing." *Journal of Health Services and Research Policy* 8: 225–29.
- Chan, T.B.B. 2002. *From Perceived Surplus to Perceived Shortage: What Happened to Canada's Physician Workforce in the 1990s?* Ottawa: Canadian Institute for Health Information.
- Evans, R.G. and K.M. McGrail. 2008. "Richard III, Barer-Stoddart and the Daughter of Time." *Healthcare Policy* 3(3): 18–28.
- Eyles, J. and S. Birch. 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: 112–17.
- Health Canada. 2004 (September 16). *First Ministers' Meeting on the Future of Health Care 2004: A 10-Year Plan to Strengthen Health Care*. Retrieved January 11, 2010. <http://www.hc-sc.gc.ca/hcs-sss/delivery-prestation/fptcollab/2004-fmm-rpm/index_e.html>.
- Health Council of Canada. 2005. *Modernizing the Management of Health Human Resources in Canada: Identifying Areas for Accelerated Change*. Ottawa: Author.
- Health Council of Canada. 2007. *Health Care Renewal in Canada: Measuring Up? Annual Report to Canadians, 2006*. Ottawa: Author.
- Health Council of Canada. 2008. *Fixing the Foundation: An Update on Primary Health Care and Home Care Renewal in Canada*. Retrieved January 11, 2010. <http://www.healthcouncilcanada.ca/en/index.php?option=com_content&task=view&id=214&Itemid=10>.

- Law, S., C. Flood and D. Gagnon, on behalf of the Listening for Direction partners. 2008. *Listening for Direction III: National Consultation on Health Services and Policy Issues, 2007-2010*. Retrieved January 11, 2010. <http://www.chsrf.ca/other_documents/listening/documents/LfDIII-FINAL_ENG.pdf>.
- Maxwell, J., K. Jackson, B. Legowski, S. Rosell, D. Yankelovich, P.-G. Forest and L. Lozowchuk. 2002. *Report on Citizens' Dialogue on the Future of Health Care in Canada*. Ottawa: Commission on the Future of Health Care in Canada.
- Murray, M., T. Bodenheimer, D. Rittenhouse and K. Grumbach. 2003. "Improving Timely Access to Primary Care: Case Studies of the Advanced Access Model." *Journal of the American Medical Association* 289: 1042–46.
- National Workforce Taskforce and HR Directorate Department of Health. 2002. *HR in the NHS Plan*. London, UK: Department of Health.
- O'Brien-Pallas, L. 2002. "Where To from Here?" Editorial. *Canadian Journal of Nursing Research* 33: 3–14.
- Pollara. 2007. *Health Care in Canada: 10th Annual Edition Survey Results, Part 1*. Retrieved January 11, 2010. <http://www.hcic-sssc.ca/pdf/2007_hcic_1.pdf>.
- Reid, R.J., P.A. Fishman, O. Yu, T.R. Ross, J.T. Tufano, M.P. Soman and E.B. Larson. 2009. "Patient-Centered Medical Home Demonstration: A Prospective, Quasi-Experimental, Before and After Evaluation." *The American Journal of Managed Care* 15(9): e71–e87.
- Watson, D.E. and H. Krueger. 2005. *Primary Health Care Experiences and Preferences: Research Highlights*. Vancouver: University of British Columbia Centre for Health Services and Policy Research.
- Watson, D.E., H. Krueger, D. Mooney and C. Black. 2005. *Planning for Renewal: Mapping Primary Health Care in British Columbia*. Vancouver: University of British Columbia Centre for Health Services and Policy Research.
- Watson, D.E., S. Slade, L. Buske and J. Tepper. 2006. "Intergenerational Differences in Workloads among Primary Care Physicians: A Ten-Year, Population-Based Study." *Health Affairs* 25: 1620–28.
- Wennberg, J.E. 1993. "Future Direction for Small Area Variations." *Medical Care* 31: YS75–YS80.
- Wong, S.T., D.E. Watson, E. Young and S. Regan. 2008. "What's Important about Primary Health Care? Public priorities." *Healthcare Policy* 3(3): 89–104.

Increasing Access to Cognitive- Behavioural Therapy (CBT) for the Treatment of Mental Illness in Canada: A Research Framework and Call for Action

Accroître l'accès à la thérapie cognitivo-
comportementale (TCC) pour le traitement
de la maladie mentale au Canada :
cadre de recherche et appel à l'action



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Abstract

International studies suggest that cognitive-behavioural therapy (CBT) for the treatment of mental disorders results in improved clinical and economic outcomes. In Canada, however, publicly funded CBT is scarce, representing an inequity in service delivery. A research framework to evaluate the Canadian health economic impact of increasing access to CBT is proposed. Canadian data related to the epidemiology of mental disorders, patterns of usual care, CBT effectiveness, resource allocation and costs of care will be required and methodologies should be transparent and outcomes meaningful to Canadian decision-makers. Findings should be delivered by multidisciplinary teams of researchers and health professionals. Barriers to funding reform must be identified and knowledge translation strategies delineated and implemented. Canadian clinical and economic outcomes data are essential for those seeking to provide decision-makers with the evidence they need to evaluate whether CBT represents value for mental health dollars spent.

Résumé

Les études internationales suggèrent que la thérapie cognitivo-comportementale (TCC) pour le traitement des troubles mentaux améliore les résultats cliniques et économiques. Au Canada, cependant, la TCC subventionnée par les fonds publics est plutôt rare et présente une inégalité dans l'offre de services. Un cadre de recherche afin d'évaluer l'impact économique sur la santé canadienne d'un plus grand accès à la TCC est proposé. Les données canadiennes sur l'épidémiologie des troubles mentaux, sur les modèles d'utilisation des soins, sur l'efficacité de la TCC, sur l'allocation des ressources et sur le coût des soins seront nécessaires et les méthodologies doivent être transparentes et les résultats doivent être pertinents pour les décideurs au Canada. Les résultats devraient être présentés par des équipes multidisciplinaires composées de chercheurs et de professionnels de la santé. Il faut repérer les obstacles à la réforme du financement et concevoir des stratégies favorisant le transfert de connaissances. Les résultats cliniques et économiques canadiens sont indispensables pour ceux qui tentent de fournir aux décideurs les données nécessaires afin de leur permettre d'évaluer la rentabilité de la TCC en fonction de l'argent dépensé pour les services de santé mentale.

CANADIAN MENTAL HEALTHCARE COSTS ARE FORMIDABLE, WITH TOTAL annual direct expenditures estimated at CAD\$5.5 billion in 2004 (Jacobs et al. 2008). Spending in this sector will undoubtedly increase, given goals delineated within the Canadian Mental Health Strategy to improve mental health

treatment, accessibility and service delivery (Mental Health Commission of Canada 2009). Currently, only 40% of mentally ill Canadians present themselves for diagnosis and treatment (LeSage et al. 2006). As stigma is reduced and access to care improves (Mental Health Commission of Canada 2009), more Canadians will seek out the treatments they need. A rational, evidence-based approach to the allocation of limited mental healthcare dollars is more important than ever.

Health economic evaluations such as cost-effectiveness analyses (Gold et al. 1996) and budget impact evaluations (Trueman et al. 2001), are essential for informed funding decisions (Canadian Agency for Drugs and Technologies in Health 2006). While routine for pharmacotherapies, they are not so for non-pharmacological treatments (Evers et al. 1997). Cognitive-behavioural therapy (CBT), a psychological, guideline-recommended, first-line treatment for many mental disorders, has been an exception.

CBT is a problem-focused, empirically based psychotherapy that teaches patients to detect and modify thought patterns and change behaviour to reduce distress and promote well-being. It is as efficacious as medication for major depressive and anxiety disorders (Otto 2005). In combination with medications, CBT has improved outcomes in schizophrenia (Wykes et al. 2008) and bipolar disorder (Otto 2005). Compared to medications, CBT is associated with higher patient satisfaction (Turkington et al. 2002) and fewer side effects, relapses (Otto et al. 2000; Hollon et al. 2005) and drop-outs (Gould et al. 1995). In addition to its clinical benefits, a published systematic review has demonstrated that CBT for the treatment of mental disorders can also lead to improved economic outcomes, with cost-effectiveness ratios well below accepted thresholds (Myhr and Payne 2006). Unlike medications, CBT has enduring effects even after treatment's end, a benefit that comes at no additional cost (Hollon et al. 2005). In the United Kingdom (Lam et al. 2005; Scott et al. 2003; Haddock et al. 2003) and Australia (Haby et al. 2004b; Sanderson et al. 2003; Vos et al. 2005a; Heuzenroeder et al. 2004; Issakidis et al. 2004), compelling economic evidence has contributed to shifts in healthcare funding policy, resulting in increased access to publicly funded CBT in these countries.

In Canada, publicly funded CBT remains limited. While medical visits and "medically necessary" expenses are covered by the Canada Health Act (1985), many psychological services are not (Romanow and Marchildon 2003). Typically, provinces only fund physician-administered psychotherapy, or in the case of non-physicians, therapists employed by public institutions (Romanow and Marchildon 2003; Hunsley 2002). In most care settings, CBT is available mainly to those with private health insurance, or to those who can afford to pay out of pocket. This inequity in the delivery of optimal mental healthcare is an example of how socio-economic status can determine the quality of healthcare received.

Economic evaluations of the impact of treating more Canadians with CBT require a systematic approach to the gathering and analysis of clinical and economic data. The

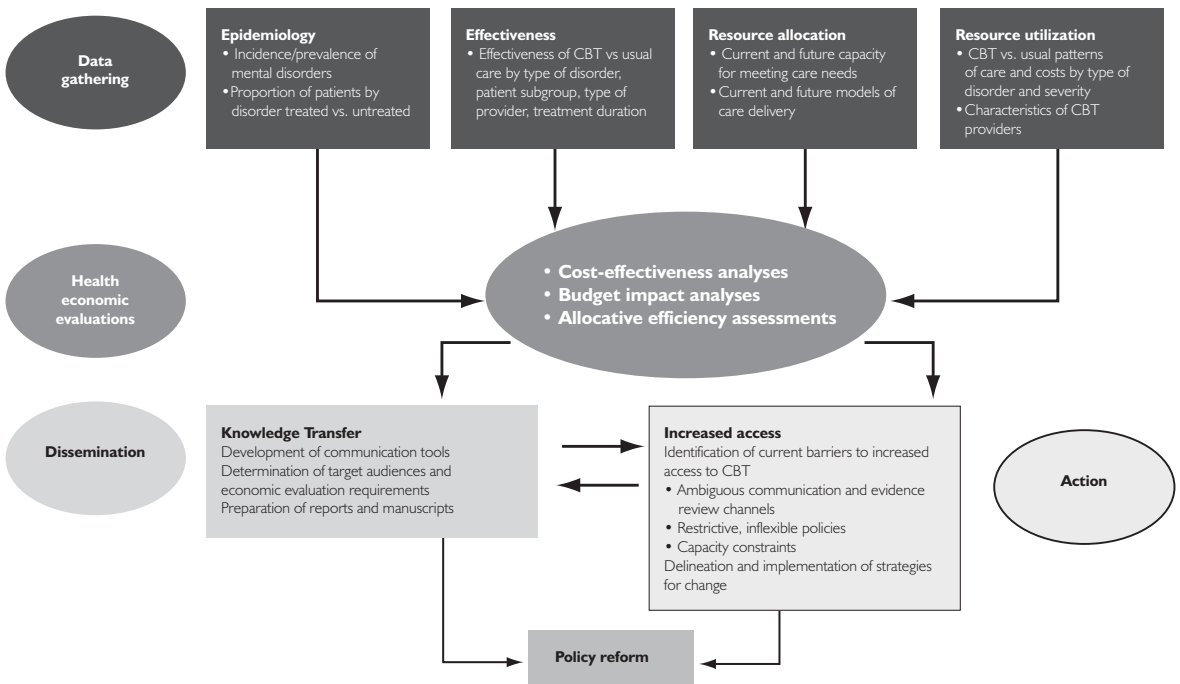
objectives of this paper are (a) to provide a compelling rationale to initiate Canadian health economic analyses of CBT and (b) to describe an organizational framework to identify, prioritize and coordinate research initiatives in support of these analyses, and effective knowledge translation.

Proposed Research Framework

Overview

At the core of the research framework (Figure 1) are the health economic evaluations required for healthcare policy decisions. Researchers need to design analytical models identifying outcomes meaningful to decision-makers and specify the associated Canadian data requirements. Results must be communicated strategically to target audiences, such as multidisciplinary research teams and collaborative networks or coalitions of health professionals, interest groups and patients. Barriers to CBT-related mental health funding policy reform should be identified. This proposed CBT research framework is consistent with the vision for knowledge translation at the Canadian Institutes for Health Research (CIHR 2004): to develop a systematic, integrated approach to accelerate the optimal use of research evidence to improve the health of Canadians.

FIGURE 1. Schematic overview of proposed CBT research framework in support of Canadian



economic analyses and knowledge translation

Economic evaluations

Cost-effectiveness analyses quantify the efficiency of spending, considering both the costs and effectiveness of treatment (Gold et al. 1996). Budget impact evaluations assess the affordability of an intervention (Trueman et al. 2001; Langley 2000). Although the cost-effectiveness of CBT has been demonstrated in various patient populations and countries (Haby et al. 2004b; Lam et al. 2005; Lynch et al. 2005; Revicki et al. 2005; Sanderson et al. 2003; Scott et al. 2003; Von Korff et al. 1998; Vos et al. 2005a; Heuzenroeder et al. 2004; Issakidis et al. 2004; Otto et al. 2000; Katon et al. 2006; Haddock et al. 2003), no Canadian analyses have yet been undertaken. Also lacking are budget impact analyses, which would estimate the total cost of increasing access to CBT, including hiring and training providers (Myhr and Payne 2006). The conceptualization of these evaluations represents the first step in the organization of research activities described in the framework. Methodologies to evaluate the health economic impact of CBT have already been published (Haby et al. 2004a; Vos et al. 2005b), and Canadian health economic evaluation guidelines are available (Canadian Agency for Drugs and Technologies in Health 2006). Key questions to be addressed include:

- What is the estimated per-patient treatment cost of CBT for each mental disorder in Canada? What are the main determinants of these costs? What cost savings are associated with CBT?
- Is CBT for mentally ill Canadians cost effective? If so, for which subgroups, by which type of provider, over what duration and within which models of service delivery?
- What is the projected rate of uptake of CBT if increased accessibility is achieved? To what extent would factors relevant to the Canadian context, such as geographic remoteness and special populations (e.g., First Nations peoples, immigrants), affect its uptake?
- How can competency in CBT as a therapeutic modality be evaluated, monitored and regulated if significantly more CBT providers are required to meet demand?
- What are the total training and employment costs associated with meeting the demand for adequate numbers of CBT providers?

In a recent systematic review of economic evaluations of CBT (Myhr and Payne 2006), 13 cost-effectiveness studies were identified (five from Australia, five from the United States and three from the United Kingdom). Limitations of the economic analyses reviewed were the omission of CBT provider training and start-up costs, the exclusion of productivity losses, short time horizons and the lack of effectiveness data

from the usual care environment. Moreover, budget impact analyses of the affordability of CBT to healthcare payers have been lacking altogether. Canadian analyses must overcome these shortfalls.

Data gathering

Canadian economic evaluations of CBT require comprehensive data including the epidemiology of mental disorders in Canada, the proportion of Canadians who seek care, the type and patterns of care received and associated treatment costs. Acute and long-term effectiveness data by subgroup, type of provider and format (e.g., individual versus group; treatment length) will also be important to assess treatment costs and effectiveness outcomes over time.

The epidemiologic data supporting numerous Australian cost-effectiveness analyses (Vos et al. 2005a; Heuzenroeder et al. 2004; Issakidis et al. 2004) resulted from a national survey of more than 10,000 households (Australian Bureau of Statistics 1998), reporting patterns and types of mental healthcare received. Analyses quantified the cost-effectiveness of treating all mentally ill patients seeking treatment with optimal care (featuring CBT) relative to the patterns of usual care dominated by medication.

A mental health survey of similar scale was undertaken in Canada (Gravel and Beland 2005). The Canadian Community Health Survey, administered to almost 37,000 Canadian households, determined that approximately 10% of Canadians used services for their mental health in a one-year period. However, of those Canadians who reported a mental disorder, only 40% sought treatment (Lesage et al. 2006). These data would be key inputs for Canadian economic analyses.

Most published economic analyses have used clinical trial data to estimate the expected magnitude of CBT treatment effects (Gould and Clum 1993; Gould 1997). Although these data constitute strong clinical evidence, they lack external validity. Economic and clinical outcomes data from the real-world setting are warranted.

Emerging data and assessment tools suggest that better CBT treatment outcomes can be achieved in specific subgroups of patients (Myhr et al. 2007). The ability to identify patients optimally suited to CBT a priori will improve cost-effectiveness ratios further because increased effectiveness would be achieved at lower total cost.

While clinical outcomes data can be shared across countries, resource utilization data should be local (Gold et al. 1996). Only two Canadian studies reporting resource utilization and costs in relation to treatment with CBT have been identified (Roberge et al. 2005, 2008). More Canadian studies of this type will be necessary.

CBT may be administered by psychologists, psychiatrists, general practice physicians, nurses or other mental health professionals working within diverse care settings, with treatment costs varying accordingly. However, professional accreditation says nothing about specific CBT training and competency. As yet, there is no Canadian

CBT accreditation body. The Academy of Cognitive Therapy (ACT) in Philadelphia is a multidisciplinary, international certifying organization that specifically evaluates applicants' knowledge and ability in CBT before granting certification. At the time of this writing, only 54 CBT providers in Canada were formally accredited by ACT (2010). The vast majority of CBT practitioners in Canada currently practising are not accredited by any independent body certifying CBT competency. The reimbursement of CBT with public dollars will necessitate a more standardized approach to training and evaluations of competency. The number of qualified providers needed to meet current and future demands, and the affordability of reimbursing these services, will be key concerns. Surveys of Canadian professional associations, accreditation and licensing bodies, as well as cohort studies of treatment outcomes by type of CBT provider, may help fill these information gaps. A step in the right direction is the recent inception of the Canadian Association of Cognitive and Behavioural Therapists in 2009, whose membership list will ascertain self-identified practitioners of CBT.

Dissemination

Target audiences, which could include government representatives, regional or institutional health administrators, healthcare providers and patients, should be identified before research is begun to ensure that analysis parameters and outcome variables are relevant to them (Canadian Agency for Drugs and Technologies in Health 2006). Moreover, the source that communicates the evidence may be just as important as the information that is communicated. Surveys suggest that clinical opinion and published reviews may be preferred over advice from health economists and external organizations (Weatherly et al. 2002; Hoffman and Graf von der Schulenberg 2000). Canadian economic evidence may be more persuasive if evaluations are conducted by multidisciplinary research teams rather than economists working in isolation.

Effective dissemination of economic outcomes requires improved interpretability and transparency (Weatherly et al. 2002; Fattore and Torbica 2006). Many decision-makers report a lack of health economics knowledge (Zwart-van Rijkom et al. 2000; Hoffmann et al. 2002; Payne and Proskorovsky 2007). Thus, explanations of the practical relevance of economic evaluation results to decision-makers should be provided (Hoffman and Graf von der Schulenberg 2000). Communications describing methodologies, data sources and limitations of economic evaluations of CBT will need to meet these criteria.

Action

Health economic evidence amassed in support of greater access to CBT will not be sufficient to reform mental health funding. Decision-makers must act on this evidence.

What are the Canadian barriers to action?

First, formal health economic analyses of CBT are lacking. Even if available, the channels for submission of this evidence are difficult to determine. This situation contrasts with the clearly defined procedures for medications, which are evaluated via the Common Drug Review process (Canadian Agency for Drugs and Technologies 2009). Evidence is also more likely to be implemented when it includes systematic reviews. To date, only one review of the health economic impact of CBT has been published (Myhr and Payne 2006). Funding policy reform is more likely if a coalition of healthcare providers and other interest groups work together towards the common goal of increased public access to CBT. In the United Kingdom, for example, a high-profile government commission is credited with achieving the reimbursement of CBT services with public dollars (Layard 2006). Other barriers to reform include inflexible budgets, the inability to free resources (Drummond et al. 1997; Hoffman and Graf von der Schulenberg 2000) and healthcare system fragmentation (Latimer 2005). Health economists must consider local financing structures and budgeting processes in order to make economic evaluations more realistic and applicable to those who use them (Duthie et al. 1999). A final hurdle to increased access to CBT may well be the affordability of actually meeting the demand.

Integral to the proposed research framework (Figure 1) is the need for more detailed information about the actual barriers to increasing access to CBT in this country. Carefully designed qualitative surveys of mental health decision-makers may be useful in this regard.

Discussion

Although there have been previous calls for increased access to publicly funded CBT for mental health disorders (Romanow and Marchildon 2003; Canadian Alliance on Mental Health and Mental Illness 2006), economic analyses of the potential impact of CBT on Canadians with mental illness have been lacking (Myhr and Payne 2006). Much work needs to be done. Canadian health economic analyses should be performed and, if favourable, decision-makers must act. Without funding policy reform, optimal mental healthcare will remain available only to Canadians who can afford it, rather than to those who may need it the most. Goals of the Canadian Mental Health Strategy include equitable and timely access to effective treatment.

The United Kingdom and Australia have already reformed their policies to reimburse CBT (Department of Health 2000; Policy and Strategy Directorate 2006). In these countries, health economic analyses have been instrumental in reforming policy, as have effective lobbying and high-profile calls for action. Richard Layard, a UK economist, has called for the large-scale deployment of evidence-based psychological therapies through National Health Service reimbursement of CBT providers and the establish-

ment of psychological treatment centres (Layard 2006). The target of 10,000 new CBT providers and one treatment centre for every 250,000 people by the year 2013 has been set. It was hypothesized that treating more patients would result in enough cost savings (due to increased productivity and taxation) to cover the costs of CBT reimbursement. While some have argued against these ideas (Zinkler 2006; Taylor 2006; Joseph 2006), pilot psychological treatment centres have been implemented and will be evaluated. In Australia, population-based economic assessments have resulted in increased public access to CBT (Pirkis et al. 2004; Wagner et al. 2002).

Conclusion

Mental illness is debilitating to patients and families and costly to governments. Internationally, CBT has been shown to result in improved clinical and health economic outcomes – and in some circumstances even cost savings (Myhr and Payne 2006). The same outcomes are likely to be demonstrated in the Canadian context. To this end, a research framework has been proposed and a call to action has been made. The intent is to motivate, unify, focus and coordinate researchers who are seeking to offer Canadian decision-makers objective evidence to evaluate if CBT represents good clinical and economic value for public healthcare dollars spent. If the answer is yes, then current funding policy must be reformed. In accordance with the Canadian Mental Health Strategy, all Canadians must have equitable and timely access to effective evidence-based treatments.

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REFERENCES

- Academy of Cognitive Therapy (ACT). 2010. *Welcome to the Academy of Cognitive Therapy Website*. Philadelphia: Author. Retrieved January 26, 2010. <<http://www.academyofct.org/Library/CertifiedMembers/Index.asp?Country=Canada&Action=States&FolderID=1137&SessionID={DBFECF93-7685-478B-8790-B5EB0E72D745}>>.
- Australian Bureau of Statistics. 1998. *Mental Health and Well-being: Profile of Adults, Australia, 1997*. Canberra: Author.
- Canada Health Act, RSC 1985, c. C-6.
- Canadian Agency for Drugs and Technologies in Health. 2006. *Guidelines for the Economic Evaluation of Health Technologies: Canada, 3rd ed.* Ottawa: Author. Retrieved January 12, 2010. <http://www.cadth.ca/media/pdf/186_EconomicGuidelines_e.pdf>.
- Canadian Agency for Drugs and Technologies. 2009. *Procedure for Common Drug Review*. Ottawa: Author. Retrieved January 12, 2010. <http://www.cadth.ca/media/cdr/process/CDR_

Procedure_e.pdf>.

Canadian Alliance on Mental Health and Mental Illness. 2006. *Recommendations to Health and Social Policy Leaders of Canada for a National Action Plan on Mental Illness and Mental Health*. Ottawa: Author. Retrieved January 12, 2010. <<http://www.camimh.ca/frameworkforaction.htm>>.

Canadian Institutes for Health Research (CIHR). 2004. *Knowledge Translation Strategy 2004–2009. Innovation in Action*. Ottawa: Author. Retrieved January 12, 2010. <<http://www.cihr-irsc.gc.ca/e/26574.html#defining>>.

Department of Health. 2000. *NHS Plan – A Plan for Investment, a Plan for Reform (2000–2010)*. London, UK: Author. Retrieved January 12, 2010. <http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyandGuidance/DH_4002960>.

Drummond, M., J. Cooke and T. Walley. 1997. "Economic Evaluation Under Managed Competition. Evidence from the UK." *Social Science and Medicine* 45(4): 583–95.

Duthie, T., P. Trueman, J. Chancellor and L. Diez. 1999. "Research into the Use of Health Economics in Decision Making in the United Kingdom, Phase II: Is Health Economics 'for Good or Evil?'" *Health Policy* 46(2): 143–57.

Evers, S.M., A.S. Van Wijk and A.J. Ament. 1997. "Economic Evaluation of Mental Health Care Intervention. A Review." *Health Economics* 6(2): 161–77.

Fattore, G. and A. Torbica. 2006. "Economic Evaluation in Healthcare: The Point of View of Informed Physicians." *Value in Health* 9(3): 157–65.

Gold, M.R., J.E. Siegel, L.B. Russell and M.C. Weinstein. 1996. *Cost-Effectiveness in Health and Medicine*. Oxford: Oxford University Press.

Gould, R.A. 1997. "Cognitive Behavioral and Pharmacological Treatment of Generalized Anxiety Disorder: A Preliminary Meta-Analysis." *Behavior Therapy* 28(2): 285–305.

Gould, R.A. and G.A. Clum. 1993. "A Meta-Analysis of Self-Help Treatment Approaches." *Clinical Psychology Review* 13(169): 186.

Gould, R.A., M.W. Otto and M.H. Pollack. 1995. "A Meta-Analysis of Treatment Outcome for Panic Disorder." *Clinical Psychology Review* 15(8): 819–44.

Gravel, R. and Y. Beland. 2005. "The Canadian Community Health Survey: Mental Health and Well-Being." *Canadian Journal of Psychiatry* 50(10): 573–79.

Haby, M.M., R. Carter, C. Mihalopoulos, A. Magnus, K. Sanderson, G. Andrews and T. Vos. 2004a. "Assessing Cost-Effectiveness – Mental Health: Introduction to the Study and Methods." *Australian & New Zealand Journal of Psychiatry* 38(8): 569–78.

Haby, M.M., B. Tonge, L. Littlefield, R. Carter and T. Vos. 2004b. "Cost-Effectiveness of Cognitive Behavioural Therapy and Selective Serotonin Reuptake Inhibitors for Major Depression in Children and Adolescents." *Australian & New Zealand Journal of Psychiatry* 38(8): 579–91.

Haddock, G., C. Barrowclough, N. Tarrier, J. Moring, R. O'Brien, N. Schofield, J. Quinn, S. Palmer, L. Davies, I. Lowens, J. McGovern and S. Lewis. 2003. "Cognitive-Behavioural Therapy and Motivational Intervention for Schizophrenia and Substance Misuse: 18-Month Outcomes of a Randomised Controlled Trial." *British Journal of Psychiatry* 183(5): 418–26.

Heuzenroeder, L., M. Donnelly and M. Haby. 2004. "Cost-Effectiveness of Psychological and Pharmacological Interventions for Generalized Anxiety Disorder and Panic Disorder." *Australian & New Zealand Journal of Psychiatry* 38(8): 602–12.

Increasing Access to Cognitive-Behavioural Therapy (CBT) for the Treatment of Mental Illness
in Canada: A Research Framework and Call for Action

- Hoffman, C. and J.M. Graf von der Schulenberg. 2000. "The Influence of Economic Evaluations on Decision Making. A European Survey. The EUROMET Group." *Health Policy* 52(179): 192.
- Hoffmann, C., B.A. Stoykova, J. Nixon, J.M. Glanville, K. Misso and M.F. Drummond. 2002. "Do Health-Care Decision Makers Find Economic Evaluations Useful? The Findings of Focus Group Research in UK Health Authorities." *Value in Health* 5(2): 71–78.
- Hollon, S.D., R.J. DeRubeis, R.C. Shelton, J.D. Amsterdam, R.M. Salomon, J.P. O'Reardon, M.L. Lovett, P.R. Young, K.L. Haman, B.B. Freeman and R. Gallop. 2005. "Prevention of Relapse Following Cognitive Therapy vs. Medications in Moderate to Severe Depression." *Archives of General Psychiatry* 62(4): 417–22.
- Hunsley, J. 2002 (May). "The Cost-Effectiveness of Psychological Interventions." Ottawa: Canadian Psychological Association. Retrieved January 12, 2010. <http://www.cpa.ca/cpsite/userfiles/Documents/Practice.../Cost_Effectiveness.pdf>.
- Issakidis, C., K. Sanderson, J. Corry, G. Andrews and H. Lapsley. 2004. "Modelling the Population Cost-Effectiveness of Current and Evidence-Based Optimal Treatment for Anxiety Disorders." *Psychological Medicine* 34(1): 19–35.
- Jacobs, P., R. Yim, A. Ohinmaa, K. Eng, C.S. Dewa, R. Bland, R. Block and M. Slomp. 2008. "Expenditures on Mental Health and Addictions for Canadian Provinces in 2003 and 2004." *Canadian Journal of Psychiatry* 53(5): 306–13.
- Joseph, S.A. 2006. "Psychological Treatment Centres: The Case Against." *British Medical Journal* 332(7550): 1154–55.
- Katon, W., J. Russo, C. Sherbourne, M.B. Stein, M. Craske, M. Fan and P. Roy-Byrne. 2006. "Incremental Cost-Effectiveness of a Collaborative Care Intervention for Panic Disorder." *Psychological Medicine* 36(3): 353–63.
- Lam, D.H., P. McCrone, K. Wright and N. Kerr. 2005. "Cost-Effectiveness of Relapse-Prevention Cognitive Therapy for Bipolar Disorder: 30-Month Study." *British Journal of Psychiatry* 186(6): 500–06.
- Langley, P.C. 2000. "Is Cost-Effectiveness Modeling Useful?" *American Journal of Managed Care* 6(2): 250–51.
- Latimer, E. 2005. "Organizational Implications of Promoting Effective Evidence-Based Interventions for People with Severe Mental Illness." *Canadian Public Policy* 31: S47–S52.
- Layard, R. 2006. "The Case for Psychological Treatment Centres." *British Medical Journal* 332(7548): 1030–32.
- Lesage, A., H.M. Vasiliadis, M.A. Gagne, S. Dudgeon, N. Kasman and C. Hay. 2006. *Prevalence of Mental Illnesses and Related Service Utilization in Canada: An Analysis of the Canadian Community Health Survey*. Report prepared for the Canadian Collaborative Mental Health Initiative, Mississauga, Ontario, Canada.
- Lynch, F.L., M. Hornbrook, G.N. Clarke, N. Perrin, M.R. Polen, E. O'Connor and J. Dickerson. 2005. "Cost-Effectiveness of an Intervention to Prevent Depression in At-Risk Teens." *Archives of General Psychiatry* 62(11): 1241–48.
- Mental Health Commission of Canada. 2009 (November). *Toward Recovery and Well-Being. A Framework for a Mental Health Strategy for Canada*.
- Myhr, G. and K. Payne. 2006. "Cost-Effectiveness of Cognitive-Behavioural Therapy for Mental Disorders: Implications for Public Healthcare Funding Policy in Canada." *Canadian Journal of*

Psychiatry 51(10): 662–70.

Myhr, G., J. Talbot, L. Annable and G. Pinar. 2007. "Suitability for Short-Term Cognitive-Behavioral Therapy." *Journal of Cognitive Psychotherapy* 21(4): 334–45.

Otto, M.W. 2005. "Combined Psychotherapy and Pharmacotherapy for Mood and Anxiety Disorders in Adults: Review and Analysis." *Clinical Psychology: Science & Practice* 12(1): 72–86.

Otto, M.W., M.H. Pollack and K.M. Maki. 2000. "Empirically Supported Treatments for Panic Disorder: Costs, Benefits, and Stepped Care." *Journal of Consulting & Clinical Psychology* 68(4): 556–63.

Payne, K.A. and I. Proskorovsky. 2007. "A Health Economics Survey of European Hospital Pharmacists." *European Journal of Hospital Pharmacy Science* 13: 33–39.

Pirkis, J., J. Livingston, H. Herrman, I. Schweitzer et al. 2004. "Improving Collaboration between Private Psychiatrists, the Public Mental Health Sector and General Practitioners: Evaluation of the Partnership Project." *Australian & New Zealand Journal of Psychiatry* 38(3): 125–34.

Policy and Strategy Directorate, Department of Health. 2006. *Health Reform in England: Update and Commissioning Framework*. London, UK: Author. Retrieved January 12, 2010. <http://www.dh.gov.uk/fs/en?CONTENT_ID=4137226&chk=D2YSig>.

Revicki, D.A., J. Siddique, L. Frank, J.Y. Chung, B.L. Green, J. Krupnick, M. Prasad and J. Miranda. 2005. "Cost-Effectiveness of Evidence-Based Pharmacotherapy or Cognitive-Behavior Therapy Compared with Community Referral for Major Depression in Predominantly Low-Income Minority Women." *Archives of General Psychiatry* 62(8): 868–75.

Roberge, P., A. Marchand, D. Reinharz, K. Cloutier, N. Mainguy, J.-M. Miller, J. Begin and J. Turcotte. 2005. "Healthcare Utilization Following Cognitive-Behavioral Treatment for Panic Disorder with Agoraphobia." *Cognitive Behaviour Therapy* 34(2): 79–88.

Roberge, P., A. Marchand, D. Reinharz and P. Savard. 2008. "Cognitive-Behavioral Treatment for Panic Disorder with Agoraphobia: A Randomized, Controlled Trial and Cost-Effectiveness Analysis." *Behavior Modification* 32(3): 333–51.

Romanow, R.J. and G.P. Marchildon. 2003. "Psychological Services and the Future of Health Care in Canada." *Canadian Psychology* 44(4): 283–95.

Sanderson, K., G. Andrews, J. Corry and H. Lapsley. 2003. "Reducing the Burden of Affective Disorders: Is Evidence-Based Health Care Affordable?" *Journal of Affective Disorders* 77(2): 109–25.

Scott, J., S. Palmer, E. Paykel, J. Teasdale and H. Hayhurst. 2003. "Use of Cognitive Therapy for Relapse Prevention in Chronic Depression. Cost-Effectiveness Study." *British Journal of Psychiatry* 182(3): 221–27.

Taylor, S. 2006. "Psychological Treatment Centres: Quality of Psychological Treatment Is Important." *British Medical Journal* 332(7550): 1155.

Trueman, P., M. Drummond and J. Hutton. 2001. "Developing Guidance for Budget Impact Analysis." *Pharmacoeconomics* 19(6): 609–21.

Turkington, D., D. Kingdon and T. Turner. 2002. "Effectiveness of a Brief Cognitive-Behavioural Therapy Intervention in the Treatment of Schizophrenia." *British Journal of Psychiatry* 180: 523–27.

Von Korff, M., W. Katon, T. Bush, E.H. Lin, G.E. Simon, K. Saunders, E. Ludman, E. Walker and J. Unutzer. 1998. "Treatment Costs, Cost Offset, and Cost-Effectiveness of Collaborative Management of Depression." *Psychosomatic Medicine* 60(2): 143–49.

Increasing Access to Cognitive-Behavioural Therapy (CBT) for the Treatment of Mental Illness
in Canada: A Research Framework and Call for Action

- Vos, T., J. Corry, M.M. Haby, R. Carter and G. Andrews. 2005a. "Cost-Effectiveness of Cognitive-Behavioural Therapy and Drug Interventions for Major Depression." *Australian & New Zealand Journal of Psychiatry* 39(8): 683–92.
- Vos, T., M.M. Haby, A. Magnus, C. Mihalopoulos, G. Andrews and R. Carter. 2005b. "Assessing Cost-Effectiveness in Mental Health: Helping Policy-Makers Prioritize and Plan Health Services." *Australian & New Zealand Journal of Psychiatry* 39(8): 701–12.
- Wagner, R.W., V. Manicavasagar and D. Silove. 2002. "Challenges and Early Experiences in the Development of an Anxiety Clinic in the Public Health Sector." *General Hospital Psychiatry* 24(6): 406–11.
- Weatherly, H., M. Drummond and D. Smith. 2002. "Using Evidence in the Development of Local Health Policies. Some Evidence from the United Kingdom." *International Journal of Technology Assessment in Health Care* 18(4): 771–81.
- Wykes, T., C. Steel, B. Everitt and N. Tarrier. 2008. "Cognitive Behavior Therapy for Schizophrenia: Effect Sizes, Clinic Models, and Methodological Rigor." *Schizophrenia Bulletin* 34(3): 523–37.
- Zinkler, M. 2006. "Psychological Treatment Centres: May Be Less Effective Than Suggested." Comment. *British Medical Journal* 332(7550): 1155.
- Zwart-van Rijkom, J.E., H.G. Leufkens, J.J. Busschbach, A.W. Broekmans and F.F. Rutten. 2000. "Differences in Attitudes, Knowledge and Use of Economic Evaluations in Decision-Making in the Netherlands. The Dutch Results from the EUROMET Project." *Pharmacoeconomics* 18(2): 149–60.

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