

HEALTHCARE

POLICY

Politiques de Santé

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

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Dismal Science

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

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POLICY

Politiques de Santé

Health Services, Management and Policy Research
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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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DISCUSSION AND DEBATE

30  "An Honest Tale Speeds Best, Being Plainly Told": Another Look at Health Spending and the Supply of Physicians
DARRELL THOMSON AND JONATHAN D. AGNEW
The current physician resource shortage is due not to reduced work effort on the part of doctors, but rather to demographic trends within the profession, growth in non-physician spending and the relative decline in spending on physician services over the past 20 years.

36  Health in Language Minority Situation

LOUISE BOUCHARD, ISABELLE GABOURY, MARIE-HÉLÈNE CHOMIENNE,
ANNE GILBERT AND LISE DUBOIS

Analysis of Canadian Community Health Survey (CCHS) data shows that minority French-speaking groups in Canada are more likely to declare themselves in poorer health than the majority English-speaking groups. The authors show how health determinants can be modulated by the minority/majority ratio and suggest a need for policies on linguistic healthcare access.

DATA MATTERS

43  The Ontario New Graduate Nursing Initiative: An Exploratory Process Evaluation
JANICE BEATY, WENDY YOUNG, MARLENE SLEPKOV, WINSTON ISAAC AND SUE MATTHEWS
The authors examine outcomes of the New Graduate Nursing Initiative of the Ontario Ministry of Health and Long-Term Care as implemented by one home care agency. Participants endorsed many aspects of the program but identified several areas for improvement.

KNOWLEDGE TRANSLATION, LINKAGE AND EXCHANGE

52 Rethinking How We Replace Knees and Hips
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57 Retaining Institutional Wisdom: Using an Evidence-Informed Approach to Transfer Knowledge from Experienced Nurses to New Nursing Staff
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RESEARCH PAPERS

61  Sorry, You Can't Have That Information: Data Holder Confusion Regarding Privacy Requirements for Personal Health Information and the Potential Chilling Effect on Health Research
DARYL PULLMAN, SHARON K. BUEHLER, LARRY FELT, KATHERINE GALLAGHER, JEANNIE HOUSE, T. MONTGOMERY KEOUGH, LUCY MCDONALD, ANGELA POWER, ANN RYAN AND ROY WEST
While the need to protect privacy of personal health information (PHI) is broadly accepted, overly strict controls might curtail research. The authors' survey of healthcare professionals, researchers and the public reveals that laypeople are less concerned about use of their PHI for research purposes than are the professionals who gather and share it.

77  Adverse Event Reporting for Herbal Medicines: A Result of Market Forces
RISHMA WALJI, HEATHER BOON, JOANNE BARNES, ZUBIN AUSTIN, G. ROSS BAKER AND SANDY WELSH
Despite widespread lack of knowledge about Canada's adverse event reporting system, health food store staff routinely relay information on adverse reactions to herbal products to manufacturers along with product returns. The authors suggest that this process can be formalized to augment post-market surveillance procedures for herbal products.

91  Gone South: Why Canadian Nurses Migrate to the United States
LINDA MCGILLIS HALL, GEORGE H. PINK, CHERYL JONES, PEGGY LEATT, MICHAEL GATES, LEAH PINK, JESSICA PETERSON AND LISA SETO
This study examines the reasons that Canadian nurses emigrate to the United States and whether some consider returning to work in Canada. Nurses cited lack of full-time work and undervaluing of the profession as incentives to stay away.

108  Office Home Care Workers' Occupational Health: Associations with Workplace Flexibility and Worker Insecurity
ISIK U. ZEYTINOGLU, MARGARET DENTON, SHARON DAVIES AND JENNIFER MILLEN PLENDERLEITH
The authors describe the effects of workplace flexibility and worker insecurity on supervisors, case managers and office administrative staff in home care. Results show

that workers' perceptions of insecurity, but not of workplace flexibility measures, are positively associated with worker stress and musculoskeletal disorders.

ONLINE EXCLUSIVES

Research Papers

e133  The Gatekeeper System and Disparities in Use of Psychiatric Care by Neighbourhood Education Level: Results of a Nine-Year Cohort Study in Toronto

LEAH S. STEELE, RICHARD H. GLAZIER, MOHAMMAD AGHA AND RAHIM MOINEDDIN

This study explored socio-economic differences in patterns of mental health service delivery with and without referral by a family physician (FP/GP). The authors found that social inequities are particularly marked when the gatekeeper role of the FP/GP is bypassed and that even within the gatekeeper system there is evidence of inequity in referral patterns and referral times.

e151  Forecasting the Need for Dialysis Services in Ontario, Canada to 2011

ROBERT R. QUINN, ANDREAS LAUPACIS, JANET E. HUX, RAHIM MOINEDDIN, MICHAEL PATERSON AND MATTHEW J. OLIVER

The authors used time series techniques to model the historical incidence and prevalence counts for dialysis services and to predict the number of Ontario patients requiring dialysis to 2011. Traditional definitions of "chronic dialysis" capture only 52% of all incident patients and ignore the acute dialysis population, who must be included in resource planning.

e162  Breadth, Depth and Agreement among Provincial Formularies in Canada

STEVE MORGAN, GILLIAN HANLEY, COLETTE RAYMOND AND RÉGIS BLAIS

This investigation of apparent variation in drug coverage across nine provinces found that Canada currently operates with an "implicit national formulary" – that is, provincial formularies independently yet mutually list most of the top-selling medicines in the marketplace.

e185  Reinforcement of the Interface between Public Health Services and Primary Care: Issues and Solution Ideas

DANIEL PAQUETTE AND DANIEL REINHARZ

Collaborations between public health and clinical services are presumed to benefit quality of care and equity of access, and reduce the burden of disease. The authors of this study of the Quebec healthcare system suggest opportunities to improve the interface.



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DISCUSSION ET DÉBATS

30  « Une parole honnête fait impression quand elle est dite simplement » :
un regard différent sur les dépenses en santé et sur la disponibilité de
médecins
DARRELL THOMSON ET JONATHAN D. AGNEW
La pénurie actuelle de médecins n'est pas attribuable à une réduction de l'effort de leur part, mais plutôt attribuable aux tendances démographiques de la profession, à la croissance des dépenses pour les non médecins et au déclin relatif des dépenses pour les services médicaux au cours des 20 dernières années.

36  La santé en situation linguistique minoritaire

LOUISE BOUCHARD, ISABELLE GABOURY, MARIE-HÉLÈNE CHOMIENNE,
ANNE GILBERT ET LISE DUBOIS

L'analyse des données tirées des Enquêtes sur la santé dans les collectivités canadiennes (ESCC) montre que les groupes minoritaires francophones au Canada sont plus enclins à déclarer une moins bonne santé que les anglophones majoritaires. Les auteurs démontrent comment les déterminants de la santé peuvent être modulés par le rapport minoritaire/majoritaire et appellent à une réflexion sur les politiques d'accès linguistique aux soins de santé.

QUESTIONS DE DONNÉES

43  La Garantie d'emploi pour les diplômés en soins infirmiers de l'Ontario : une évaluation exploratoire des processus

JANICE BEATY, WENDY YOUNG, MARLENE SLEPKOV, WINSTON ISAAC ET SUE MATTHEWS

Les auteurs examinent les résultats de la nouvelle Garantie d'emploi pour les diplômés en soins infirmiers de l'Ontario – une initiative du ministère de la Santé et des Soins de longue durée de l'Ontario – telle que mise en œuvre dans un établissement de soins à domicile. Les participants accueillent positivement plusieurs aspects du programme, mais indiquent nombre de secteurs où des améliorations sont possibles.

TRANSPOSITION DE CONNAISSANCES, LIENS ET ÉCHANGES

52 Nouvelle approche pour le remplacement de la hanche et du genou
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61  Désolé, vous ne pouvez obtenir cette information : confusion face aux exigences en matière de renseignements personnels sur la santé et revers potentiels pour la recherche

DARYL PULLMAN, SHARON K. BUEHLER, LARRY FELT, KATHERINE GALLAGHER, JEANNIE HOUSE, T. MONTGOMERY KEOUGH, LUCY MCDONALD, ANGELA POWER, ANN RYAN ET ROY WEST

Bien que l'importance de protéger les renseignements personnels sur la santé (RPS) est généralement acceptée, les contrôles excessivement sévères peuvent faire obstacle à la recherche. Le sondage effectué par les auteurs auprès des professionnels de la santé, des chercheurs et du grand public révèle que ce dernier est moins préoccupé par l'utilisation des RPS à des fins de recherche que ne le sont les professionnels qui les recueillent et qui les partagent.

77  Déclaration des effets indésirables associés aux médicaments à base de plantes médicinales : le résultat des forces du marché

RISHMA WALJI, HEATHER BOON, JOANNE BARNES, ZUBIN AUSTIN, G. ROSS BAKER ET SANDY WELSH

En dépit d'un manque général de connaissances au sujet du système canadien de déclaration des effets indésirables, les employés des magasins de produits naturels transmettent régulièrement l'information sur les effets indésirables des produits à base de plantes médicinales aux manufacturiers, quand ils leur retournent un produit.

Les auteurs proposent d'officialiser ce processus afin d'accroître la surveillance post-commercialisation des produits à base de plantes médicinales.

91  Déménager au sud : pourquoi le personnel infirmier canadien émigre-t-il aux États-Unis

LINDA MCGILLIS HALL, GEORGE H. PINK, CHERYL JONES, PEGGY LEATT, MICHAEL GATES, LEAH PINK, JESSICA PETERSON ET LISA SETO

Cette étude examine les raisons qui poussent le personnel infirmier canadien à émigrer aux États-Unis et tente de voir si ces professionnels ont l'intention de revenir travailler au Canada. Les infirmières et les infirmiers indiquent que le manque de possibilités d'emploi à temps plein et la sous-évaluation de la profession sont des aspects qui les portent à ne pas revenir.

108  Santé au travail chez les employés de bureau dans les organismes de soins à domicile : liens avec la flexibilité en milieu de travail et la précarité d'emploi

ISIK U. ZEYTINOGLU, MARGARET DENTON, SHARON DAVIES ET JENNIFER MILLEN PLENDERLEITH

Les auteurs décrivent les effets de la flexibilité en milieu de travail et de la précarité d'emploi sur les superviseurs, les gestionnaires de cas et les employés de soutien administratif qui travaillent dans les organismes de soins à domicile. Les résultats montrent que les troubles musculosquelettiques sont directement associés à la perception en matière de précarité d'emploi, mais pas aux mesures de flexibilité en milieu de travail.

EXCLUSIVITÉS EN LIGNE

Rapports de recherche

e133  Système de contrôle d'accès et disparités dans l'utilisation des soins psychiatriques selon le niveau de scolarité : résultats d'une étude menée sur une cohorte, à Toronto

LEAH S. STEELE, RICHARD H. GLAZIER, MOHAMMAD AGHA ET RAHIM MOINEDDIN

Cette étude examine les différences socioéconomiques dans les modèles de prestation de services de santé mentale avec et sans recommandation du médecin de famille. Les auteurs ont découvert que les inéquités sociales sont particulièrement présentes quand la fonction de contrôle exercée par le médecin est contournée et que, même dans le cadre du système de contrôle, il y a des inéquités dans les modèles et les temps de recommandation.

e151  Prévision des besoins en services de dialyse jusqu'en 2011 en Ontario, Canada

ROBERT R. QUINN, ANDREAS LAUPACIS, JANET E. HUX, RAHIM MOINEDDIN, MICHAEL PATERSON ET MATTHEW J. OLIVER

Les auteurs ont employé la technique des séries chronologiques pour créer un modèle

de l'incidence et de la prévalence des cas de dialyses et pour prévoir le nombre de patients ontariens qui auront besoin de services de dialyse jusqu'en 2011. La définition traditionnelle de la « dialyse pour les cas chroniques » ne correspond qu'à 52 % de toutes les incidences et ne tient pas compte des cas de dialyses d'urgence, lesquels devraient être inclus dans la planification des ressources.

e162  Étendue, profondeur et concordance des listes provinciales de médicaments, au Canada

STEVE MORGAN, GILLIAN HANLEY, COLETTE RAYMOND ET RÉGIS BLAIS

Cette étude de la variation apparente de la couverture pour les médicaments dans neuf provinces dévoile la présence, au Canada, d'une « liste nationale implicite », c'est-à-dire que les listes provinciales contiennent de façon indépendante, bien que mutuelle, la plupart des médicaments les plus vendus sur le marché.

e185  Le renforcement de l'interface entre les services de santé publique et de première ligne : enjeux et pistes de solution

DANIEL PAQUETTE ET DANIEL REINHARZ

Les collaborations dans l'interface entre la santé publique et les services cliniques sont susceptibles de favoriser la qualité des soins et l'équité d'accès ainsi que de réduire le fardeau des maladies. Les auteurs de cette étude sur le système de santé au Québec proposent des possibilités de développement pour l'interface.

 Examen par les pairs

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Wanted: Partners in the Journey

WHEN ALBERT EINSTEIN SPOKE ABOUT RELATIVITY, HE WASN'T THINKING of health policy, but you don't have to stretch the analogy far to find parallels. Depending on your perspective, five years can be either a very long time in health policy – or no time at all.

Since Brian Hutchison and his founding editorial team launched *Healthcare Policy/Politiques de Santé* in 2005, health spending in OECD countries has risen steadily; it is up by more than \$30 billion in Canada alone (CIHI 2008). Dozens of ministers and deputy ministers have come – and in most cases gone. Health region boundaries have been drawn, redrawn and erased. New programs and policies have been introduced, while existing ones have evolved. And yet amidst this change, many fundamental policy challenges are as relevant today as they were when this journal began. For example, questions endure of how best to ensure and improve access to care, quality of services, value for money and health for all.

From hopeful but modest beginnings, *Healthcare Policy/Politiques de Santé* has become a key new forum for research, discussion and debate, thanks to the efforts of Brian and his team, as well as those of the research and policy communities. As I step into the role of Editor-in-Chief, I am conscious of the debt that we owe to all those who have been involved with *Healthcare Policy/Politiques de Santé* to date, and grateful that so many continue to be committed to helping the journal, its potential and its impact grow.

Andy Warhol once quipped that "they always say time changes things, but you actually have to change them yourself." Thousands of people in Canada and around the world are committed to meeting this challenge and improving health policy and health systems. But we have too few places where we can share insights – and fewer where we can have the vigorous and healthy debates that generate creative and innovative solutions to tough problems. *Healthcare Policy/Politiques de Santé* aims to help to fill this gap. Our goal is to provide insights on the policy questions that keep you up at night and, perhaps more importantly, on the issues that don't yet but should... and will, after you read about them in the journal's pages.

To provide these insights, we need your help. We need researchers to submit their best and most relevant policy-oriented findings for publication. We need keen, effective and speedy peer reviewers and editors to ensure and strengthen the quality of the journal's content. And we need thoughtful voices, new and old, to contribute to the

conversation and debates, both within and beyond the journal's pages. To this end, I am delighted that as of March 2009, *Healthcare Policy/Politiques de Santé* will be listed in the National Library of Medicine's PubMed Central, making its content more accessible around the world.

Whether you are reading this issue from near at hand or from far away, I hope that you will join us on this journey.

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JENNIFER ZELMER, BSC, MA, PHD

Editor-in-chief

—

À la recherche de partenaires

EN PARLANT DE LA RELATIVITÉ, ALBERT EINSTEIN NE PENSAIT CERTAINEMENT pas aux politiques de santé, mais il est facile de faire des rapprochements. Selon le point de vue, cinq années peuvent sembler une longue période, ou encore un très court instant, dans le contexte des politiques de santé.

Depuis le lancement de *Politiques de santé/Healthcare Policy* par Brian Hutchison et son équipe, en 2005, les dépenses pour la santé dans les pays de l'OCDE n'ont cessé de croître; au Canada seulement, elles ont augmenté de plus de 30 milliards de dollars (CIHI 2008). Des douzaines de ministres et de sous-ministres ont été nommés puis, dans plusieurs cas, ont quitté leurs fonctions. Les limites des régions sanitaires ont été retracées, modifiées ou effacées. De nouveaux programmes et de nouvelles politiques ont fait leur apparition, tandis que les autres ont progressé. Malgré tout ces changements, plusieurs défis fondamentaux en termes de politique restent aussi pertinents aujourd'hui qu'ils ne l'étaient quand cette revue a été créée. Certaines questions demeurent d'actualité, par exemple, comment assurer et améliorer l'accès aux soins, la qualité des services, l'optimisation des ressources et la santé pour tous.

La revue *Politiques de santé/Healthcare Policy* est née modestement et pleine d'espoir, mais elle est vite devenue un important forum de recherche, de discussion et de débat grâce aux efforts de M. Hutchison, de son équipe et des gens des milieux de la recherche et des politiques. En prenant les rênes à titre de rédactrice en chef, je suis consciente de la dette que nous avons envers tous ceux qui ont contribué à la revue *Politiques de santé/Healthcare Policy* et je remercie les nombreuses personnes qui continuent à s'engager pour appuyer la revue, son potentiel et son impact.

Andy Warhol a pertinemment observé qu'« on dit toujours que le temps change les choses, mais en vérité il faut les changer soi-même ». Des milliers de gens au Canada et dans le monde se consacrent à relever le défi et à améliorer les politiques et les systèmes de santé. Mais il y a trop peu de lieux où échanger les idées, et encore moins d'endroits propices aux débats vifs et éclairés qui font naître des solutions créatives et novatrices aux problèmes complexes. *Politiques de santé/Healthcare Policy* vise à combler cette lacune. Notre objectif est de fournir des pistes pour aborder les enjeux politiques qui vous tracassent, mais davantage pour les enjeux qui ne vous préoccupent pas encore, mais qui le feront quand vous aurez pris connaissance de leur existence en lisant cette revue.

Pour fournir ces pistes, nous avons besoin de votre aide. Nous souhaitons que les chercheurs parmi vous soumettent pour publication le fruit de leurs recherches les plus pertinentes en matière de politiques. Nous avons besoin d'éditorialistes et de pairs examinateurs efficaces et lucides afin d'assurer et de solidifier la qualité des articles de la revue. Et nous avons besoin d'intervenants éclairés – nouveaux ou chevronnés – afin de nourrir les discussions et les débats, tant dans cette revue qu'au-delà de ses pages. En ce sens, je suis heureuse d'annoncer qu'à partir de mars 2009, *Politiques de santé/Healthcare Policy* sera listée dans la base de donnée PubMed Central de la National Library of Medicine, permettant encore plus d'accessibilité à son contenu.

Que vous lisiez ce numéro tout près d'ici ou au loin, j'espère que vous vous joindrez à notre parcours.

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JENNIFER ZELMER, BSC, MA, PHD
Rédactrice en chef



Jennifer Zelmer: *Healthcare Policy's* New Editor-in-Chief

The healthcare community is overwhelmed by torrents of information each and every day – some of it important, much of it not – and so a journal editor's role matters a great deal. The journal must, after all, make a difference. If the members of this community are to understand what is happening in healthcare and in society, and if they are presented with credible options and alternatives to respond, she will serve them well. If she can move them to action, she will be an inspiration.

The right individual to take on the role of editor must be intelligent; well briefed about healthcare policy and practice; intimately familiar with data and information sources; linked directly to an international community of researchers, academics, payers, policy makers, managers and providers of care; and she will have a thorough understanding of the healthcare consumer. In addition to these credentials, she must be a leader, or no one will follow her. Finally, she must be highly organized in order to deal with the many proposals, manuscripts and reviews that cross her desk.

A tall order.

Allow me to introduce Dr. Jennifer Zelmer. Her current focus is the use of health systems performance data to make international comparisons. She is CEO of the International Health Terminology Standards Development Organisation (IHTSDO), based in Copenhagen. Previously, she was vice president for research and analysis at the Canadian Institute for Health Information (CIHI), where she initiated and oversaw an integrated program of analytical activities, including leading teams responsible for developing CIHI's annual report on healthcare in Canada. Prior to joining CIHI, she worked with a variety of health, academic and governmental organizations in Canada, Australia, Denmark and India, among other countries. She has also held such positions as adjunct lecturer at the University of Toronto and research associate with the Research Institute for Quantitative Studies in Economics and Population at

McMaster University. Currently, she is a member of several health-related boards and advisory committees. She has a bachelor's degree in health information science and a doctorate in economics from McMaster University.

Good currency.

When Zelmer took her current position, Richard Alvarez, president and CEO of Canada Health Infoway, remarked that she "is a young, dynamic and talented professional who will bring vision, passion and energy to the development and establishment of IHTSDO. Canada's loss is truly the International Standards community's gain!" She was selected for this position based on her impressive track record of working in an international and political environment, and her extensive experience in successfully leading and motivating teams within a new organization.

You will also want to hear from her mentor – Denis Protti, founder of the University of Victoria's School of Health Information Science.

I have known Jennifer for over 15 years. Our first meeting was memorable. She came for an interview to enter our school. After conducting herself very well, she left the room as my colleagues and I completed our assessment forms. I opened the discussion with the comment that she was, in my opinion, an ideal and outstanding candidate. All agreed – there was really no need for any discussion. Faculty and students alike were constantly amazed how she could perform at such a high intellectual level – someone who is bright, personable and a doer. The Canadian healthcare system and the field of health informatics has been the lucky party. She could have gone into any other sector and been a star.

Longwoods is honoured to support Jennifer Zelmer as she shares her talent and insight through the pages of *Healthcare Policy*. We welcome our new Editor-in-Chief.



Anton Hart
Publisher



Jennifer Zelmer : la nouvelle rédactrice en chef de *Politiques de santé*

Le milieu des services de santé reçoit chaque jour une multitude d'information, qui est parfois importante, mais souvent accessoire. Le rôle d'une rédactrice en chef revêt donc une grande importance; la revue doit, après tout, se démarquer. Si le milieu est en mesure de comprendre ce qui se passe dans les services de santé et dans la société, si on lui présente des renseignements crédibles et des façons de répondre adéquatement aux diverses options, alors la rédactrice en chef a accompli sa mission. Si elle arrive à les pousser à l'action, elle devient pour eux une source d'inspiration.

Pour assumer le rôle de rédacteur, une personne doit être intelligente. Elle doit être bien à jour sur les politiques et les pratiques actuelles dans les services de santé; elle doit connaître très bien les sources d'information et de données; il lui faut être en contact direct avec les milieux internationaux de chercheurs, d'universitaires, de bailleurs de fonds, de responsables des politiques, de gestionnaires et de prestataires de services de santé. Elle est tenue aussi de comprendre à fond le point de vue de ceux qui reçoivent ces services. En plus, elle doit exercer un rôle de leader, si non personne ne suivra. Pour terminer, elle doit être parfaitement organisée afin de traiter les nombreux manuscrits, propositions et révisions qui passent entre ses mains.

Il s'agit là d'un mandat de taille.

Permettez-moi de vous présenter Mme Jennifer Zelmer. Ses intérêts actuels portent sur l'analyse comparative internationale au moyen des données de rendement des systèmes de santé. Elle est PDG de l'International Health Terminology Standards Development Organisation (IHTSDO), établi à Copenhague. Avant ce poste, elle a été vice-présidente du Service de recherche et d'analyse à l'Institut canadien d'information sur la santé (ICIS), où elle a créé et supervisé un programme intégré d'activités analytiques, notamment à titre de responsable des équipes pour la préparation des rapports annuels de l'ICIS sur les soins de santé au Canada. Auparavant, elle a travaillé au sein de plusieurs organisations sanitaires, universitaires ou gouvernementales, notamment au Canada, en Australie, au Danemark et en Inde. Elle a, entre autres, occupé les postes de professeur auxiliaire à l'Université de Toronto et de cher-

cheur associé auprès du Research Institute for Quantitative Studies in Economics and Population, à l'Université McMaster. Mme Zelmer est présentement membre de nombreux conseils d'administration et comités consultatifs dans le domaine de la santé. Elle possède un baccalauréat en science de l'information sur la santé et un doctorat en économie décerné par l'Université McMaster.

Ce sont d'excellents antécédents.

Quand Mme Zelmer a accepté son poste actuel, M. Richard Alvarez, président et chef de la direction d'Inforoute Santé du Canada, s'est exprimé de la façon suivante : « Jennifer Zelmer est une jeune professionnelle dynamique et talentueuse qui apportera sa vision, sa passion et son énergie au développement et à l'établissement de l'IHTSDO. Il s'agit d'une perte pour le Canada, mais d'un gain important pour la communauté internationale des normes! » Elle a été choisie pour ce poste en raison d'un solide dossier et d'une riche expérience de travail dans les milieux international et politique, ainsi que pour son impressionnant travail de direction et de motivation d'équipes dans une nouvelle organisation.

Voici également un mot de son mentor, M. Denis Protti, fondateur de l'École des sciences d'information sur la santé, à l'Université de Victoria :

Je connais Mme Zelmer depuis plus de quinze ans. Je n'oublierai jamais notre première rencontre. Elle venait pour un entretien afin de se joindre à notre école. Après une entrevue excellente, elle a quitté la salle et j'ai terminé l'évaluation avec mes collègues. Au cours de cette discussion, j'ai indiqué qu'elle était selon moi la candidate idéale pour le poste; nous étions tous d'accord. Le corps professoral et les étudiants ont toujours montré une grande admiration pour son habileté à manier de grands concepts intellectuels; c'est une personne brillante, agréable et très travaillante. Le système de santé canadien et le domaine de l'informatique de la santé avait eu de la chance. Elle aurait pu joindre tout autre domaine et y devenir une star.

Les éditions Longwoods se félicitent de la présence de Jennifer Zelmer, qui apportera son talent et son savoir-faire aux pages de Politiques de santé. Bienvenue à la nouvelle rédactrice en chef.



Anton Hart
Éditeur

Dismal Science

Morne science

by ROBERT G. EVANS

Abstract

“No prediction, no science.” By this standard, the past year has not been kind to the pretensions of “economic science,” Nobel prizes notwithstanding. The issue is more than semantic. As Neil Postman (1992) pointed out, sciences study natural *processes* that repeat themselves under constant conditions. The social disciplines study *practices* of human communities that are embedded in history. There are no constant conditions; it is impossible to step into the same river twice (Heraclitus). “Physics envy” has led mainstream economic theorists to attempt to understand their discipline through methods and models borrowed from the natural sciences. (By unfortunate coincidence, these have reinforced a certain class of ideological preconceptions and associated economic interests.) Today the results of this methodological mismatch speak for themselves.

Résumé

« Pas d'argent, pas de Suisse. » Suivant cette formule, on peut dire que l'année écoulée n'a pas été à la hauteur des ambitions de la « science économique », malgré les prix Nobel. Ce n'est pas simplement une question de sémantique. Comme l'a indiqué Neil Postman, la science étudie des *processus* naturels, qui sont itératifs sous les mêmes conditions; tandis que les sciences sociales s'intéressent aux *pratiques* des collectivités humaines qui sont ancrées dans l'histoire. Ici, les conditions sont variables; on ne peut pas plonger deux fois dans le même fleuve (Héraclite). L'« envie de la physique » a poussé les économistes à tenter d'approcher leur discipline avec les méthodes et les modèles des sciences naturelles. (Malheureusement, cela a renforcé une certaine classe d'idées préconçues et d'intérêts financiers connexes.) Aujourd'hui le résultat de ces méthodologies incompatibles se passe de tout commentaire.

“If economists could manage to get themselves thought of as humble, competent people on a level with dentists, that would be splendid.” – J.M. Keynes

JOHN MAYNARD KEYNES WAS HIMSELF SURELY THE LEAST HUMBLE ECONOMIST of his generation, and subsequent progress towards his goal is difficult to detect. In our own time, Alan Greenspan probably qualified as the leading celebrity economist. Chairman of the United States Federal Reserve System for 18 years, labelled a “genius” and an “oracle,” and hero of Bob Woodward’s (2000) book, *Maestro*, he appeared to bestride the narrow financial world like a colossus – and to revel in the role.

Times change. In the midst of the global economic crisis, many critics have pointed to Mr. Greenspan’s policies of low interest rates and minimal regulation of financial markets as principal contributing factors. He may himself now recognize the value of a little humility; his congressional testimony last October (Committee of Government Oversight and Reform 2008) has been very widely quoted:

... those of us who have looked to the self-interest of lending institutions to protect shareholders’ equity (myself especially) are in a state of shocked disbelief. ... What went wrong ... ?

Committee chairman Henry Waxman was searching in his questioning:

WAXMAN: You had the authority to prevent irresponsible lending practices that led to the subprime mortgage crisis. You were advised to do so by many others. Do you feel that your ideology pushed you to make decisions that you wish you had not made?

GREENSPAN: Yes, I've found a flaw. I don't know how significant or permanent it is. But I've been very distressed by that fact.

As for Greenspan's life-long advocacy of deregulation in financial markets:

WAXMAN: Were you wrong?

GREENSPAN: Partially.¹

Four months later, the "high priest of laissez-faire" had reluctantly accepted the desirability of (temporarily) nationalizing some of America's biggest banks (Guha and Luce 2009). Milton Friedman must be spinning in his grave.

The point is not simply that pride goeth before a fall, nor that Mr. Greenspan was a singularly incompetent economist. He may well have been; his economic thinking was after all heavily influenced by novelist, capitalist cheerleader and general all-round economic nutter Ayn Rand.² But if he became caught up in his own ideology and cult of personality, his adulators are at least as much to blame. America's elites wanted to believe in the man and his radical free-market message. Moreover, Americans in general seem to have a powerful need for heroes.

The flaws in Mr. Greenspan's policies are now glaringly obvious. But few professional economists, in business, government or academia, were any more prescient than he (present company not excepted). Many were aware that American housing prices were riding a bubble of unsound lending practices, but almost none foresaw the terrible worldwide consequences. (If they had, the stock markets would have crashed at least a year earlier.) James Galbraith drove the point home in an interview with Deborah Solomon for the *New York Times* (2008):

SOLOMON: ... there are at least 15,000 professional economists in this country, and you're saying only two or three of them foresaw the mortgage crisis?

GALBRAITH: Ten or 12 would be closer than two or three.

SOLOMON: What does that say about the field of economics, which claims to be a science?

GALBRAITH: It's an enormous blot on the reputation of the profession. There are thousands of economists. Most of them teach. And most of them teach a theoretical framework that has been shown to be fundamentally useless.

"Is no prediction, is no science," says the crusty old Russian astronomer in Fred

Hoyle's (1957) novel *The Black Cloud*. Scientists make predictions about the outcome of experiments or other forms of observation. Their theories stand or fall on those observations. By this standard, "economic science" came up rather short last year. It often does.

There is, however, one prediction that is dead easy for any health economist. The proportion of national income taken up by healthcare spending is about to surge. In our last major recession, healthcare spending rose from 8.5% of GDP in 1989 to 10.0% in 1992. Between 1981 and 1983, the ratio rose from 7.3% to 8.3%. When the general economy turns down, the healthcare sector – public or private – is typically immune.³ This recession appears to be more severe and may be longer-lasting; by 2010, Canadians will probably be spending close to 13% of their national income on healthcare. The 2008 estimate of the Canadian Institute of Health Information – 10.7% – has, I suspect, already been overtaken by events.

Recent US government projections (Sisko et al. 2009) predict a jump from 16.6% in 2008 to 17.6% in 2009, but assume economic recovery in 2010. This outcome looks increasingly unlikely. The government's projection of 20.2% in 2018 may well be reached five years earlier if the crisis is prolonged.

Governments worldwide are in serious fiscal trouble, facing falling revenues and rising bills for industry bail-outs. Deficits are heading up, way up. The prospects for public healthcare systems are likely to include more aggressive efforts to contain costs – as Canadian governments did in the early and mid-1990s – and to transfer costs from public to private budgets.

Providers of healthcare will increasingly press for the latter approach, attempting to shore up their own incomes by extracting a larger share of the declining incomes of others. (Remember, total spending on healthcare is always and necessarily equal to the total incomes of direct and indirect providers of healthcare – that's an accounting identity, not an economic theory.) We will hear a lot more about fiscal unsustainability, and the virtues of payment by patients, over the next few years, encouraged by right-wing governments and random judicial interventions. The ideology may be in tatters, but the economic interests are as robust as ever. The objective is simply to shift the economic pain from (higher-income) taxpayers to (lower-income) sick people.

These predictions are in no sense "scientific"; they do not arise from any clearly articulated and progressively expanded body of tested and confirmed theory (much less from a set of mathematical equations!). They are generalizations based on long observation of the behaviour of healthcare systems, and from a (small) number of previous recessions. They may be right or wrong – I'd bet on them, actually – but they are not science. Any disciplinary roots they have are in history, watered with a squirt of logic.

But the almost total failure of economists to predict the onset, and certainly the severity, of the current crisis raises deeper questions about the pretensions of "economic science." Whether or not economics is a science has more than semantic significance. The attempt to "do science" has, I would argue, had deleterious effects on both the

methods and the results of the enterprise of academic economics.

Good economists, it has been said, come back in their next lives as physicists. Bad ones return as sociologists. Apart from illustrating the quality of economist humour, this little joke makes an important point about the disciplinary aspirations of many academic economists. Their hope, their intellectual program, is to construct theoretical frameworks that are both as mathematically rigorous and as opaque to outsiders as those of physics, and as comprehensive and successful in prediction. Progress in understanding economic phenomena will come through the careful specification (in mathematical language) of empirically testable propositions, along with increasingly sophisticated statistical methods for performing such tests. (And, of course, more data.)

In short, they suffer from physics envy.⁴

And they have reason. There is much to envy. But this aspiration, encapsulated in the idea of “economic science,” is fundamentally misplaced. Social phenomena, including those studied by economists, are categorically different from natural phenomena, including those studied by physicists. And the attempt to study the former by the methods that have been so successful in advancing understanding of the latter leads to a great deal of waste motion, misleading conclusions and occasionally acute embarrassment – as at present.

Following the very useful distinction introduced by Postman (1992), physicists and other scientists study *processes* while economists and other students of society study *practices*.⁵ Processes occur in the natural world, and repeat themselves under constant conditions; it is this repetitive feature, rather than their accessibility to experiment (consider astronomy), that is essential for the application of the methods of science. The “Laws of Nature” do not change, but our understanding of them evolves, and the behaviour of the entities they govern is thus determinate (subject to quantum considerations) and discoverable.

Practices, on the other hand, are characteristics of human communities, the behaviour of individuals or groups. They have an inherently arbitrary element: “There are nine and sixty ways of constructing tribal lays, and every single one of them is right.” Most importantly, practices have unique histories. One cannot study repetition under constant conditions, because there *are* no constant conditions. In the poetic paraphrase of (Heraclitus), it is impossible to step into the same river twice.⁶ The perceptions of participants evolve with their histories; behaviour will differ in apparently similar circumstances. Information is not only imperfect but subject to revision in unpredictable ways.⁷ Students of the other social disciplines seem comfortable with this reality; their quest for borrowed prestige goes no further than labelling themselves with the oxymoron “social scientists” and flinging the word “theory” around until it is as meaningless as “paradigm.” Only the economists seem to have repudiated Heraclitus to follow Democritus and his indistinguishable atoms.

The primary entities studied by physicists, from atoms on down, do not have indi-

vidual identities. Protons, electrons, neutrons and the rest of the particle zoo are interchangeable members of classes of objects. Having no identity, they do not pay the price of mortality. They may change their forms, dividing and re-combining, but the dance of the particles has no beginning and no end, save perhaps on a cosmological scale.

The various “representative agents” of economic theory – hypothetical consumers, firms and others ad hoc – share these characteristics, interchangeability and immortality.⁸ Lacking individuality and governed by very simple laws of attraction and repulsion, they become mathematically tractable and predictable. But their predictable behaviour, correspondingly, can be a very unsafe guide to the world we actually live in. In extreme circumstances, those relying on it are left in a state of “shocked disbelief” as trillions of dollars vanish to money heaven.

The mental states of those losing jobs, homes and life savings might be more pungently expressed. Who the hell was in charge here? (And how much were they paid?) Mr. Greenspan was humiliated, Mr. Madoff convicted. But the now notorious “quants” (including mathematicians and physicists), whose elaborate mathematical models of risk proved so disastrously misleading, have not had to give back their bonuses (or even their Nobel prizes). Nor have the senior executives who relied upon them – nor, beneath them, the legions of professional “wealth managers” who were paid to advise the rest of us.

The perils of following Democritus rather than Heracleitus were underlined by economic historian Niall Ferguson in a wide-ranging and disturbing interview with the *Globe and Mail* (Scoffield 2009):

Most projections are wrong, because they’re based on models that don’t really correspond to the real world. If anything good comes of crisis, I hope it will be to discredit these ridiculous models ... and a return to something more like a historical understanding about the way the world works. ... these models ... don’t really have enough data to be illuminating ... and assume this has to end this year because, well, that’s what recessions do.

In Ferguson’s view, economists’ predictions of recovery are likely to be as erroneous as their (non) predictions of collapse, and for the same reasons.

Bad economics ruins lives, just as surely as bad medicine. But there is an important difference. Medicine draws heavily on various sciences but does not pretend to be a science, and physicians (or dentists, or pharmacists...) do not have much to say about “medical theory” and what it might dictate.⁹ Medical researchers put enormous effort into identifying, explaining and developing remedies for specific pathologies of the human condition, in individuals and (to a lesser extent) in groups.¹⁰ Physicians then try to recognize such pathologies in their patients and to offer appropriate remedies.

They may not all succeed equally well. The pervasiveness of wide variations in

clinical practice unrelated to either the patient's condition or the outcome of therapy is a bit of an embarrassment, even a "blot on the reputation of the profession" – or it might be if the public were as aware of it as they now are of the failings of economists. But at least most clinicians know that "we are not all Volkswagens"; individual differences matter a lot. There is no "representative patient."

The central core of economic theory, however, is the development of more and more refined descriptions of "normal" behaviour, primarily of various forms of interaction among identical individual transactors whose objectives and scope of behaviour are precisely delineated. Pathological behaviour – murdering one's business competitors, for example, or, less dramatically, lying, cheating, theft, corruption by or of public officials and various other forms of "opportunistic behaviour" – are ruled out by assumption or simply ignored. Their study is confined to side alleys of the discipline.

There is no need to study such unscientific and grubby details, because the immortal representative agents of standard economic theory all possess full information, or at least as much as anyone else has. Opportunistic behaviour requires not only imperfect but also asymmetric information. (Bernie Madoff knew some important things that his investors did not.) It also happens to be at the core of "why healthcare is different": the institutional peculiarities of healthcare systems, such as professional self-regulation and not-for-profit organizations, are intended to protect patients against opportunistic behaviour in an environment of pervasive asymmetric information. The financial meltdown is a dramatic example of what can happen in an insufficiently regulated industry characterized by extreme asymmetry of information. There's a message here.

Now, when whole economies are acting like an organism in anaphylactic shock, the poverty of policy responses (poverty of ideas, not money!) is perhaps even more remarkable than the failure of prediction.

Increased public spending on public infrastructure is good, but these are the Keynesian remedies of the 1930s. If there is progress, it is that this time around, most economists and government authorities recognize the importance of preventing massive failures of financial institutions. Low interest rates, yes, but even rates near zero have little effect when no one wants to lend or borrow – the Keynesians referred to this as the "liquidity trap."

In fact, policy thinking has gone backwards since the post-war era. Real sciences do not generally run backwards, with hard-won understanding overturned by ideology and political agendas.¹¹

In the 1950s and 1960s, economists studied "automatic stabilizers" – progressive taxation and spending programs like unemployment insurance that would automatically pump purchasing power into economies heading towards recession. They studied the different multiplier effects of alternative tax structures and spending programs,

and were well aware of the relatively weak impact of general, across-the-board tax cuts. They recommended cyclically balanced public budgets in which surpluses in good times were an opportunity to accumulate financial assets that would support deficits in bad times, not a signal for ideologically driven tax cuts.

But in the monetarist dark ages of the next 30 years, much of that lore was lost. The dominant ideology was “markets good, governments bad.” Left alone, markets stabilized themselves. Fiscal policies, taxing and spending, were powerless to influence the “natural” equilibrium levels of output and unemployment; in fact, fiscal interventions actually accentuated or even generated instability. (Roosevelt caused the Great Depression. Really.) Public budgets should be balanced, period, and the smaller the better.

The automatic stabilizers, we were told, were not only ineffective but also reduced economic growth. Progressive taxation and social programs discouraged work effort, savings and investment, and regulation of all kinds inhibited innovation. High and stable growth rates required only sound people like Alan Greenspan to keep a steady hand on the monetary tiller. When times are good and public budgets are in surplus, cut taxes – people know best how to spend their own money. If times are bad and fiscal stimulus cannot be avoided, well, cut taxes, eh?¹²

The return to the orthodoxies of the pre-Depression era – balanced budgets at all times, small governments with minimal regulation and lower taxes at every opportunity – has obvious roots in both ideology and economic interest. It has supported the dramatic increase in economic inequality over the past quarter-century. But it has also been powerfully assisted by contemporaneous trends in the orthodoxy of academic macro-economics, which I think can be attributed to physics envy.

In a harsh and analytically sophisticated critique of that orthodoxy, Buiter (2009) argues that

... the typical graduate macroeconomics and monetary economics training received at Anglo-American universities during the past 30 years or so may have set back by decades serious investigations of aggregate economic behaviour and economic policy-relevant understanding. It was a privately and socially costly waste of time and other resources.

Most mainstream macroeconomic theoretical innovations since the 1970s ... have turned out to be self-referential, inward-looking distractions at best. Research tended to be motivated by the internal logic, intellectual sunk capital and esthetic puzzles of established research programmes rather than by a powerful desire to understand how the economy works – let alone how the economy works during times of stress and financial instability. So the economics profession was caught unprepared when the crisis struck.

The practice of removing all non-linearities and most of the interesting aspects of uncertainty from the models that were then let loose on actual numerical policy analysis was a major step backwards. I trust it has been relegated to the dustbin of history by now in those central banks that matter.

In its place is an intellectual potpourri of factoids, partial theories, empirical regularities without firm theoretical foundations, hunches, intuitions and half-developed insights. It is not much, but knowing that you know nothing is the beginning of wisdom.

It is perhaps just an unfortunate coincidence that faith in the self-stabilizing nature of competitive private markets, which the theoretical models sustained, happened to align so neatly with the ideological predilections of Alan Greenspan and the economic interests of the class he represented.

The point is not that the discipline of economics is empty of content, or that economists know nothing useful for the ordering of social affairs. But I do believe that, Nobel prizes to the contrary, economics is not, need not be and indeed, by the nature of its subject matter, cannot be a science.¹³ Attempts to make it look scientific by trying to copy the physicists have a certain air of the cargo cult; the elaborate theoretical runways carved out of the jungle by the application of advanced mathematics look sort of scientific, but no one delivers the goods.

What, though, does all this have to do with a column on health policy? Three things:

First, as noted, the economic crisis will pose serious threats to healthcare systems. Second, the pseudo-scientific methodology that Buiter excoriates is unfortunately well rooted among a number of health economists – though primarily in the United States. Third, once upon a time I used to work in macro-economic modelling, abandoning the field at the beginning of the dark ages.

Foresight? No; health was just much more interesting.

Notes

1. Reminiscent of the Curate's Egg (*Punch*, November 9, 1895). Retrieved March 30, 2009. <http://en.wikipedia.org/wiki/Curate's_egg>.

2. "In a 1963 essay for Ms. Rand's newsletter, Mr. Greenspan dismissed as a 'collectivist' myth the idea that businessmen, left to their own devices, 'would attempt to sell unsafe food and drugs, fraudulent securities, and shoddy buildings.' On the contrary, he declared, 'it is in the self-interest of every businessman to have a reputation for honest dealings and a quality product'" (Krugman 2007). Greenspan has had a very costly education, all at public expense.

3. In an extra twist, the collapse of financial markets has wiped out hundreds of thousands of dollars from the portfolios of late-in-career Canadian physicians. To shore up their retirement assets,

many are likely to increase their working hours and delay retirement. If they do, there will be an unanticipated increase in physician billings (Sylvain 2009).

4. The work of sociologists, by contrast, is typically treated with indifference if not actual disdain. Why would anyone be interested in all that personal or institutional detail? Worse still, “[t]hey do not make modls [sic]” (Leijonhufvud 1973).
5. Postman attributes the distinction to the philosopher Michael Oakeshott, but provides no reference.

6. *Παυτα ρει, ουδεν μενει.*

7. John Helliwell captured this point nicely when, in the 1960s, he was working with a team at the Bank of Canada to develop a multi-equation model of the Canadian economy. If we develop a really good one, we must not tell anyone it exists. The equations are estimated from past transactor behaviour. If transactors know that the Bank, Finance Canada or both can accurately predict and manage economic conditions, their behaviour will change and the equations will become invalid.

8. The casual substitution by some health economists of the label “consumer” for “patient” – intellectual laziness or deliberate deception – is spectacularly inappropriate.

9. Academic nurses do, but that is another story.

10. Recognition of normality may be more problematic: “Health is merely a state of inadequate diagnosis.”

11. Lysenkoism died with its sponsor; the influence of creation science will now wane with that of its sponsors – though it will no doubt return. Neither penetrated the international scientific community.

12. This policy pattern might lead one to wonder if the Prime Minister’s Office was occupied by the head of the Canadian Taxpayers’ Foundation. But the anti-tax ideology has obviously not been confined to Canada.

13. The Prize in Economic Sciences is actually awarded by the Sveriges Riksbank in memory of Alfred Nobel. Gunnar Myrdal, who won the prize in 1974 jointly with Friedrich von Hayek, subsequently argued that Nobel prizes should not be awarded in a field so heavily freighted with ideology.

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“An Honest Tale Speeds Best, Being Plainly Told”: Another Look at Health Spending and the Supply of Physicians

« Une parole honnête fait impression quand elle est dite simplement » : un regard différent sur les dépenses en santé et sur la disponibilité de médecins



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Abstract

Claims that the current physician resource shortage is due to the reduced work effort of physicians are misleading and ignore important trends, namely the demographic changes within the profession, the growth in non-physician spending that has out-paced spending on physicians and the relative decline in spending on physician services over the past 20 years. Such data make it difficult to support Evans's and McGrail's

(2008) assertions, which distract from more fruitful policy discussions about eliminating the current shortage of physicians, integrating non-physician health providers into medical practice and otherwise meeting the growing demand for health services.

Résumé

Les allégations à l'effet que la pénurie actuelle de médecins est imputable à une réduction de l'effort de leur part sont trompeuses et ne tiennent pas compte des principales tendances, c'est-à-dire les changements démographiques au sein de la profession, la croissance des dépenses pour les non médecins qui ont dépassé celles pour les médecins et le déclin relatif des dépenses pour les services médicaux au cours des 20 dernières années. De telles données ne permettent pas d'appuyer les assertions de Evans et McGrail (2008), lesquelles font obstacle à des débats politiques plus fructueux qui visent à remédier à la pénurie de médecins en intégrant les fournisseurs de santé non médecins dans la pratique médicale, répondant ainsi à la demande grandissante pour les services de santé.



"An honest tale speeds best, being plainly told."

— William Shakespeare, *Richard III*, Act IV, Scene IV

In "RICHARD III, BARER-STODDART AND THE DAUGHTER OF TIME," EVANS and McGrail (2008) lament the vilification of Barer and Stoddart (1992, 1999) as perpetrators of cuts to medical school enrolment. They go on to state that the current physician resource shortage is due not to a lack of capable bodies, but rather reduced work effort, noting that Canadians are now paying "more for less" for their (at least somewhat unnecessary) medical care. We detect an alternative agenda.

Clearly, past decisions for medical school cuts cannot be laid at the feet of Barer and Stoddart. Those choices were the purview of governments and, in any case, were well underway prior to publication of their report. But neither can they avoid all responsibility (nor do we think they would want to); their participation in that policy debate in the preceding years is a matter of record. Their very public report provided a validation for government action, so it should be no surprise that it was the focal point for contrary reaction: flag bearers are always prime targets.

Assigning or avoiding blame is a fool's exercise that impedes future progress. The more important question is "Where to go from here?" As Evans and McGrail correctly note, the actual physician head count has been growing, albeit due to a greater reliance on foreign-trained physicians, something that Barer and Stoddart counselled against. Evans and McGrail also point out that, notwithstanding the increase in head count,

individual physicians, on average, now seek to work fewer hours per week owing to a variety of lifestyle issues. Much of this impact is explained by demographic changes, including the increasing number of female physicians, who tend to work less than their male counterparts (National Physician Survey 2007). This is not surprising. Nor should it be portrayed in an unsavoury manner à la “paying physicians more to work less.” The fact that average physician remuneration is increasing in this environment is a conscious societal decision achieved largely through negotiation led by governments that presumably know what they are doing.

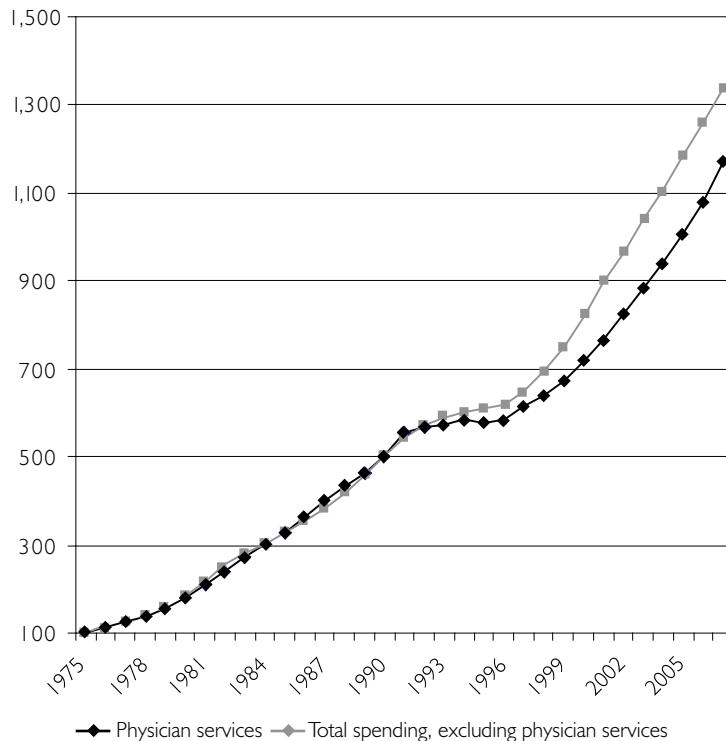
Furthermore, the authors’ analysis neglects the consistent trend of growing expenditures across all areas of healthcare, not just physician services. Indeed, spending on hospitals, non-physician health professionals, prescription drugs, administration and public health has increased more rapidly than for physician services (Figure 1). Since 1976, annual growth of non-physician expenditures has averaged 8.5%, compared to 8.0% for physicians. In the last 10 years, the figures are 7.5% and 6.6%, respectively. Moreover, when spending on physician services is examined as a percentage of total healthcare spending (Figure 2), one sees a declining trend over the past 20 years, from a high of 15.7% in 1988 to just over 13% in 2006 (National Health Expenditure Trends 2006). Such data not only make it difficult to support the authors’ assertions that increased spending on physicians uniquely “threatens serious fiscal trouble over the next two decades, and is likely to pre-empt any significant system reform,” but also call into question their motivation for singling out physician services from among any other area of healthcare spending.

Finally, the case is not helped by the authors’ rather oblique inference that the medical community somehow sees an economic advantage to ramping up the supply of doctors, thus keeping any attempt to introduce alternative providers at bay, without affecting their own incomes (back to the supplier-induced demand theory). Aside from contradicting a previous assertion that the medical community limits the supply of doctors to maintain incomes (Evans 1984), such Machiavellian thinking seems out of place for a Shakespearian theme. Perhaps m’lord gives too much credit!

Do we need more doctors? Certainly. The ongoing reduction in physicians’ weekly work hours (National Physician Survey 2004, 2007), increasing global competition for well-trained physicians and increasing demand for services in the face of technological advances and decreased mortality of chronic diseases will only exacerbate the existing shortage, currently estimated at 4,000 physicians in Canada (CMA 2008). Do we need more Canadian training slots? For sure. In the global market for physician services, Canada cannot continue to rely so heavily on foreign-trained physicians. Should we be prudent with respect to what types of physicians we train and where we train them? Without doubt. However, until we can establish a plan for what we need, this goal will be difficult to achieve.

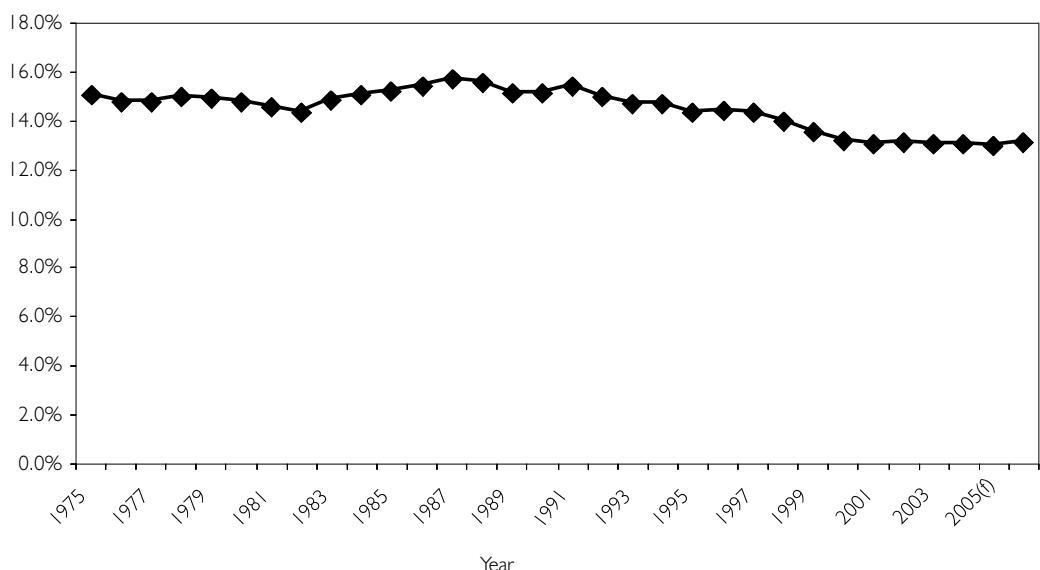
"An Honest Tale Speeds Best, Being Plainly Told"

FIGURE 1. Index of increase in health expenditures by use of funds, Canada, 1975–2007 (1975 = 100)



Source: National Health Expenditure Database 2007. "Total spending" includes spending on hospitals, other institutions, non-physician professionals, drugs, capital, public health and administration.

FIGURE 2. Spending on physician services as a percentage of total healthcare spending, Canada, 1975–2006



Source: National Health Expenditure Trends, 1975-2006.

Can we do a better job of integrating non-medical personnel into the equation? Absolutely. It is not a question of whether we should do it but how we do it. Scope-of-practice expansion for alternative care providers plays a role, but it is hardly less expensive; a comparison of rates of pay for midwives in British Columbia and cost-effectiveness studies on nurse practitioners (DeAngelis 1994; Venning et al. 2000) does not support an economic argument. Thus, integration must be carefully managed.

Physicians' desire to work alongside other healthcare professionals has been amply shown by any number of demonstration projects, and potential wider-scale physician interest has been made clear (National Physician Survey 2007). Yet, golden opportunities to make significant progress have been lost over the past 30 years, stymied by a variety of ideological considerations introduced by government policy makers (Hutchison et al. 2001). Most notable among those was a lemming-like pursuit of non-fee-for-service payment modalities as the price of admission. This decades-long refusal to accept fee-for-service as compatible with multidisciplinary care has needlessly set integrated practice initiatives back a generation. Only recently, and amidst continued detractors, has the possibility of a more pluralistic payment approach rekindled physicians' interest.

Could we use a little less finger pointing and a lot more collaboration? Most assuredly.

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La santé en situation linguistique minoritaire

Health in Language Minority Situation



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Résumé

La littérature suggère l'hypothèse d'une santé différentielle des francophones en situation minoritaire au Canada. L'effet de minorité sur la santé perçue a été mesuré à l'aide des Enquêtes sur la santé dans les collectivités canadiennes (ESCC) de 2001 et 2003. Une analyse de régression logistique multivariée séquentielle montre que les francophones minoritaires – hommes et femmes – sont plus enclins à déclarer une moins bonne santé que les anglophones majoritaires. Contrairement aux femmes, cette disparité chez les hommes demeure significative même lorsque nous ajustons pour certains grands déterminants de la santé. L'étude illustre que l'action des déterminants de santé peut être ainsi modulée par le rapport minoritaire/majoritaire. Les inégalités ainsi révélées appellent à une réflexion sur les politiques d'accès linguistique aux soins de santé.

Abstract

Literature suggests the hypothesis that there is a health differential for minority French-speaking groups in Canada. The effect of minority on perceived health has been measured using the 2001 and 2003 Canadian Community Health Survey (CCHS). The sequential multivariate logistic regression analysis shows that the minority French-speaking groups – men and women – are more likely to declare a poorer health condition than the majority English-speaking groups. Contrary to women, this disparity among men groups remains significant even when adjustments are made according to some of the key health determinants. The study shows that the action of health determinants can be modulated by the minority/majority ratio. The identified disparities remind the need for a reflection on linguistic healthcare access policies.



LES COMMUNAUTÉS FRANCOPHONES VIVANT EN SITUATION MINORITAIRE évaluées à 1 million de personnes (4,4 % de la population canadienne) sont dispersées un peu partout au pays. Les plus fortes concentrations sont en Ontario (509 265) et au Nouveau Brunswick (239 400), alors qu'ailleurs, on peut compter de 63 000 francophones (Alberta) à moins de 500 francophones (Nunavut) (Statistique Canada 2002). Ces communautés présentent un profil diversifié : elles sont en général moins jeunes, moins scolarisées et moins nombreuses sur le marché du travail, bien que leur revenu moyen soit cependant similaire à celui des anglophones. Elles sont davantage concentrées dans des régions où l'économie est plus instable rendant ainsi plus difficile le développement et l'accès aux ressources sociales. La communauté anglophone minoritaire n'existe, par définition, qu'au Québec et représente 13,9 % de la population québécoise, soit 1 009 185 de personnes.

La refonte de la *Loi sur les langues officielles* de 1988 a engagé le gouvernement fédéral à appuyer le développement des communautés francophones et anglophones en situation minoritaire au Canada et à promouvoir la pleine reconnaissance et l'usage du français et de l'anglais. La langue revêt une dimension particulière lorsqu'il s'agit de la santé. Une revue de la littérature faite pour Santé Canada décrit les effets négatifs de la barrière linguistique sur l'accès aux services de santé, sur la qualité des soins, sur les droits des patients, sur l'efficacité de la communication patient-médecin, et sur la santé elle-même (Bowen 2001). La barrière linguistique réduirait le recours aux services préventifs et le suivi adéquat des patients particulièrement en ce qui a trait aux services basés sur la communication (santé mentale, réadaptation, services sociaux). En contrepartie elle contribuerait à accroître l'utilisation des services d'urgence et le recours à des tests additionnels. Quelques études montrent qu'il y a lieu d'investiguer cette situation. Celle de la Fédération des communautés francophones et acadiennes du Canada (FCFA 2001) a révélé qu'entre 50 et 55 % des francophones ont aucunement ou rarement accès à des services de santé en français. Une analyse secondaire de l'ESCC indique que 62 % des francophones âgés de 65 ans et plus de l'Ontario communiquent en anglais avec leur médecin et sont plus insatisfaits de l'accessibilité et de la qualité des services (Bourbonnais et al.). Enfin, selon une étude de Statistique Canada (2006), les francophones (de 16 à 65 ans) minoritaires affichent un niveau d'alphabétisme plus faible que les anglophones, ce qui peut exercer une influence négative sur la santé.

Ces quelques observations permettent de soutenir l'hypothèse d'une santé différentielle et d'un rôle plus grand chez les minoritaires de certains déterminants.

Méthodologie

Nous posons comme hypothèse que la situation linguistique minoritaire par delà les déterminants socioéconomiques influence négativement les états de santé perçus.

Avec la collaboration du groupe d'analyse et de modélisation de la santé de Statistique Canada, nous avons fusionné les Enquêtes sur la santé dans les collectivités canadiennes (ESCC) de 2001 (cycle 1.1) et de 2003 (cycle 2.1). La population à l'étude comprend les personnes de 12 ans et plus vivant à domicile et inclut les provinces et les territoires¹. Le taux de réponse global est de 85,1 % au cycle 1.1 et de 80,6 % au cycle 2.1; les tailles des échantillons étaient de 131 535 et 135 573 répondants.

L'analyse se fonde sur un échantillon d'adultes de 25 ans et plus (76 674 hommes dont 3450 francophones et 92 734 femmes dont 4729 francophones). Afin de déterminer les groupes linguistiques francophone et anglophone, nous avons créé un algorithme permettant de filtrer les individus à partir des variables présentes dans l'ESCC : la langue de conversation, la langue maternelle, la langue de l'entrevue et la langue de contact préférée lors de l'enquête. Cette méthode a permis de distinguer le plus clairement possible les groupes à partir de la langue parlée et préférée et de retenir uniquement les

personnes qui parlent le français (francophones ou nouvellement immigrées) ou l'anglais (anglophones, francophones s'exprimant en anglais et/ou nouvellement immigrées).

Des distributions de fréquences pondérées et des tableaux croisés ont été utilisés pour décrire le profil sociodémographique de l'échantillon. Afin de faciliter l'interprétation des résultats, la variable santé perçue a d'abord été dichotomisée entre un état de santé excellent, très bon et bon ou passable et mauvais. Lorsque plus de 1 % des données étaient manquantes pour une variable donnée, une catégorie supplémentaire les regroupant a été créée. Deux modèles (hommes/femmes) de régression logistique multivariés séquentiels additifs examinent l'association entre le fait d'être francophone en situation minoritaire et la santé perçue. Les modèles sont ajustés pour diverses variables sociodémographiques, se rapportant au style de vie et à la condition médicale et sociale de l'individu. Les variables sociodémographiques incluent le revenu du ménage en quintile ajusté pour la région, l'éducation (universitaire, postsecondaire, secondaire, secondaire non terminée) et la présence sur le marché du travail (temps plein, temps partiel, inactif). Cette information est complétée des mesures sur le type de ménage (individu seul, couple seul, couple et enfants, monoparental ou autre type), le statut de résidence (immigrant ou non), l'habitat en milieu rural ou urbain et la province de résidence. Le style de vie est mesuré par l'indice de masse corporelle (kg/m^2) regroupée en trois catégories (<25 , $25-30$, >30), la fréquence de la consommation de boisson alcoolique (buveur régulier, occasionnel, ne consomme plus ou non-buveur), la consommation de tabac (régulier, occasionnel, ne fume plus ou non-fumeur), la consommation de fruits et légumes (de 5 à 10 portions par jour ou moins de 5 portions) et l'activité physique (actif ou modéré/inactif). La co-morbidité est obtenue depuis une liste de 11 maladies chroniques soumise aux répondants, l'incapacité physique est mesurée par le besoin d'aide pour les activités habituelles de la vie et le stress par la réponse à une question sur le degré de stress ressenti dans une journée.

Afin de tenir compte du plan d'enquête complexe, les erreurs-type des coefficients de régression ont été estimées à l'aide de la technique de Bootstrap (Rao et al. 1992).

Résultats

Les résultats confirment que la minorité francophone se perçoit en moins bonne santé que la majorité anglophone. Des résultats similaires ont été observés quand à la minorité anglophone québécoise (Tableau 1).

En ce qui concerne la relation entre la situation minoritaire et la santé perçue, les modèles de régression montrent qu'en tenant compte des différences de structure d'âge, les francophones minoritaires sont moins enclins à déclarer une bonne santé que les anglophones majoritaires, tant chez les hommes (RC 0,66; IC 95 % 0,60, 0,73) que chez les femmes (RC 0,83; IC 95 % 0,75, 0,92). Chez les femmes, cet écart diminue suite à l'ajustement des variables de style de vie (RC 0,88; IC 95 % 0,79, 0,98) et dis-

paraît après avoir ajusté pour le revenu et l'éducation (RC 0,95; IC 95 % 0,85, 1,07). Pour les hommes, l'écart demeure significatif après avoir ajusté pour l'ensemble des variables du cadre conceptuel (RC 0,83; IC 95 % 0,72, 0,95). La Figure 1 montre l'influence de chaque bloc sur la relation entre la situation minoritaire et la santé perçue.

TABLEAU 1. Distribution des personnes qui se perçoivent en mauvaise santé selon leur appartenance linguistique et situation géographique

	Francophones	Anglophones	valeur <i>p</i>
	%		
Hors Québec	17,64	13,26	<0,001
Québec	12,44	14,11	0,001

Discussion

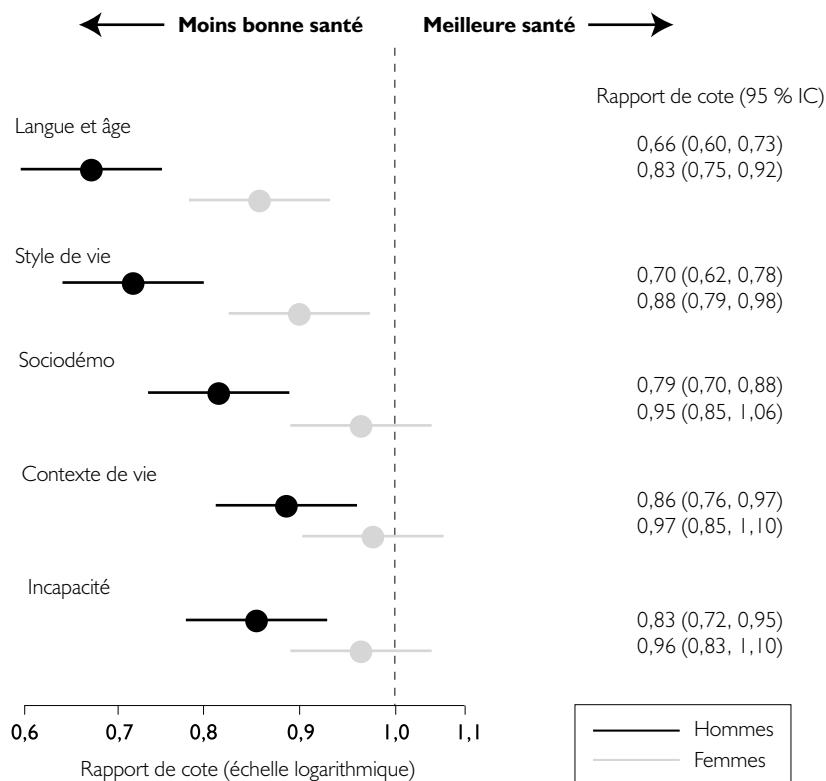
L'étude montre que la minorité francophone se perçoit en moins bonne santé que la majorité anglophone, tant chez les hommes que chez les femmes. Toutefois lorsque nous ajustons cette relation pour les grands déterminants de la santé, il demeure chez les hommes francophones un résiduel de disparité que nous pourrions attribuer au facteur de « vie en situation minoritaire ». Cette observation est différente pour les femmes francophones, chez qui la disparité avec leurs congénères anglophones semble s'expliquer par les grands déterminants de la santé (socioéconomiques, éducation, etc.).

Le différentiel plus marqué pour les hommes que pour les femmes soulève diverses hypothèses. Une moins bonne santé, tout déterminant de santé étant égal, peut s'expliquer par une utilisation réduite ou inefficiente des soins de santé tout comme une mauvaise pénétration des campagnes de promotion de la santé auprès de la clientèle masculine. Enfin, l'exposition à des environnements physiques et psychosociaux spécifiques à chacun des sexes pourraient aussi contribuer à expliquer cette différence. Ce résultat correspond au constat établi par Hunt et Macintyre qui atteste d'une tendance à des inégalités socioéconomiques de santé plus marquées chez les hommes que chez les femmes et ce, pour la mortalité, la morbidité et la santé perçue (Hunt et Macintyre 2000; Wilkins et al. 2002).

Cette étude présente les limites inhérentes à l'utilisation de données secondaires. L'ESCC étant transversale, la relation de causalité ne peut être établie. De plus, la santé étant une valeur auto-rapportée et non mesurée, elle peut être sujette à des biais d'auto-déclaration. Enfin, le mode de collecte de données (téléphonique ou sur place) peut influencer certaines estimations. En 2001, 32 % des entrevues ont été faites au téléphone et 35 % en 2003. Selon St-Pierre et Béland (2004), les personnes interviewées au téléphone ont tendance à surévaluer leur santé et déclarer des taux plus élevés que celles interviewées en personne. Par contre, nos données ont tout lieu d'être

robustes. Le fait d'avoir agrégé les résultats des deux dernières enquêtes nous donne un échantillon suffisant pour tirer des conclusions valides.

FIGURE 1. Modèles de régression entre la santé perçue et la situation linguistique minoritaire comme facteur de risque



Données pondérées fondées sur un échantillon de 76 674 hommes dont 3450 francophones et 92 734 femmes dont 4729 francophones.

Conclusion

Les résultats soulèvent un fait important qui n'avait jamais été exploré dans le contexte canadien des langues officielles. Comme l'a amplement démontré la littérature, l'âge, le sexe, le revenu sont les principaux déterminants de la santé mais le fait de vivre en situation linguistique minoritaire n'avait pas, jusqu'à maintenant, été documenté. Ainsi, le rapport minoritaire/majoritaire semble traduire une inégalité sociale et d'accès aux ressources qui, traversée par les autres déterminants sociaux de la santé (statut socio-économique, éducation et littératie, immigration) contribue *de facto* aux disparités de santé. L'étude montre l'importance d'approfondir et de mieux comprendre l'ensemble des déterminants de la santé ainsi que les interactions entre les contextes, les milieux de vie locaux, l'impact des politiques et la santé.

REMERCIEMENTS

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NOTE

1. Elle exclut les personnes vivant en établissement, les membres réguliers et les habitants des bases des Forces armées canadiennes; les habitants des réserves indiennes, et de certaines régions éloignées.

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The Ontario New Graduate Nursing Initiative: An Exploratory Process Evaluation

La Garantie d'emploi pour les diplômés en soins infirmiers de l'Ontario : une évaluation exploratoire des processus



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Abstract

Objective: To conduct an exploratory process evaluation of the Ontario Ministry of Health and Long-Term Care's (MOHLTC) New Graduate Nursing Initiative implemented by one home care agency.

Methods: Qualitative data were gathered online, stored electronically and then analyzed using an Affinity Diagram.

Results: Seven groupings of participants' comments were created: advertising and external information dissemination; orientation; internal dissemination; impact of the program; transition to the workforce; pay/benefits; and retention. Participants viewed many aspects of the program favourably but identified the following areas for improvement: comprehensibility of the Health Force Ontario website (advertising and external information); orientation of new graduates (orientation); and communication of information about the initiative to existing staff (internal dissemination).

Conclusions: This exploratory study points to both strengths and weaknesses of the New Graduate Nursing Initiative. Further study of the implementation of this policy is recommended.

Résumé

Objectif : Effectuer une évaluation exploratoire des processus de la Garantie d'emploi pour les diplômés en soins infirmiers – une initiative du ministère de la Santé et des Soins de longue durée de l'Ontario – mise en œuvre dans un établissement de soins à domicile.

Méthodologie : Des données qualitatives ont été recueillies en ligne et enregistrées numériquement, puis elles ont été analysées au moyen d'un diagramme d'affinités.

Résultats : Les commentaires des participants ont été regroupés en sept catégories : recrutement et diffusion de l'information externe; orientation; diffusion interne; impact du programme; transition sur le marché du travail; salaire et avantages sociaux; et rétention. Les participants estiment que plusieurs aspects du programme sont favorables, mais indiquent les points suivants, qui pourraient être améliorés : la clarté du site Web Professions Santé Ontario (recrutement et information externe); l'orientation des nouveaux diplômés (orientation); et la communication au personnel en place de renseignements au sujet de l'initiative (diffusion interne).

Conclusions : Cette étude exploratoire indique à la fois les forces et les faiblesses de la Garantie d'emploi pour les diplômés en soins infirmiers de l'Ontario. Nous recom-

mandons de mener des études plus poussées sur la mise en œuvre de cette politique.

—

DECISION-MAKERS ACROSS CANADA ARE DEVELOPING AND IMPLEMENTING recruitment and retention policies to address the current and anticipated shortage of nurses (O'Brien-Pallas et al. 2003). In Ontario, for example, the Ministry of Health and Long-Term Care (MOHLTC) recently introduced the New Graduate Nursing Initiative, a comprehensive strategy for nursing workforce planning and management. "The initiative ... seeks to ... promote the availability of permanent full time positions for new nurse graduates ... promote retention among Ontario's Nurse Graduates ... and facilitate recruitment to all sectors" (MOHLTC 2008). The Ministry of Health provides salaries for the first six months for newly recruited graduate nurses, both registered nurses (RNs) and registered practical nurses (RPNs). The new graduate nurse is paired with a mentor during this time frame to help make the transition from school to work.

If the new graduate nurse enters into a permanent full-time position after three months, but prior to six months, the employer may use the funds for other activities, such as backfilling of staff nurses, allowing nurses to intern into specialty positions. The remaining funds can also be used to assist internationally educated nurses to transition into the nursing workforce. If the new graduate is not in a full-time position after six months, the employer must commit to funding an additional six weeks of full-time employment for the new graduate, even if this is above complement.

To date there have been few evaluations of these policies (Shamian and El-Jardali 2007). Our exploratory process evaluation was designed to determine, from the perspective of participants within one home care organization (VON Canada), what works well and what does not work well with the implementation of the MOHLTC New Graduate Nursing Initiative. Ethics approval was received from VON Canada's Ethics Committee and Ryerson University.

Methodology

Design: An exploratory descriptive study

Participants: Of the 18 RNs and RPNs involved in the Initiative at VON Canada, six participated in our online study.

Procedures

One mini-focus group with four participants and two individual interviews were conducted online and recorded using methodology described by Gaiser (1997). All

online statements by the participants were electronically saved in a readable file. Each participant was assigned a unique font colour, which provided a visual cue to ensure that all participants were contributing. Open-ended questions (see Appendix A) were distributed in advance to allow time for reflection. The questions focused on nurses' perceptions of the New Graduate Nursing Initiative. Nurses were asked to comment on what worked well, what did not work so well and how things could be improved.

The electronic file for the focus group and the files for the two individual interviews were created in real time and included all comments made by all participants. Each individual comment was printed onto a label and affixed to a "post-it" note. All notes were individually affixed to a large white board before the creation of the Affinity Diagram.

Data analysis

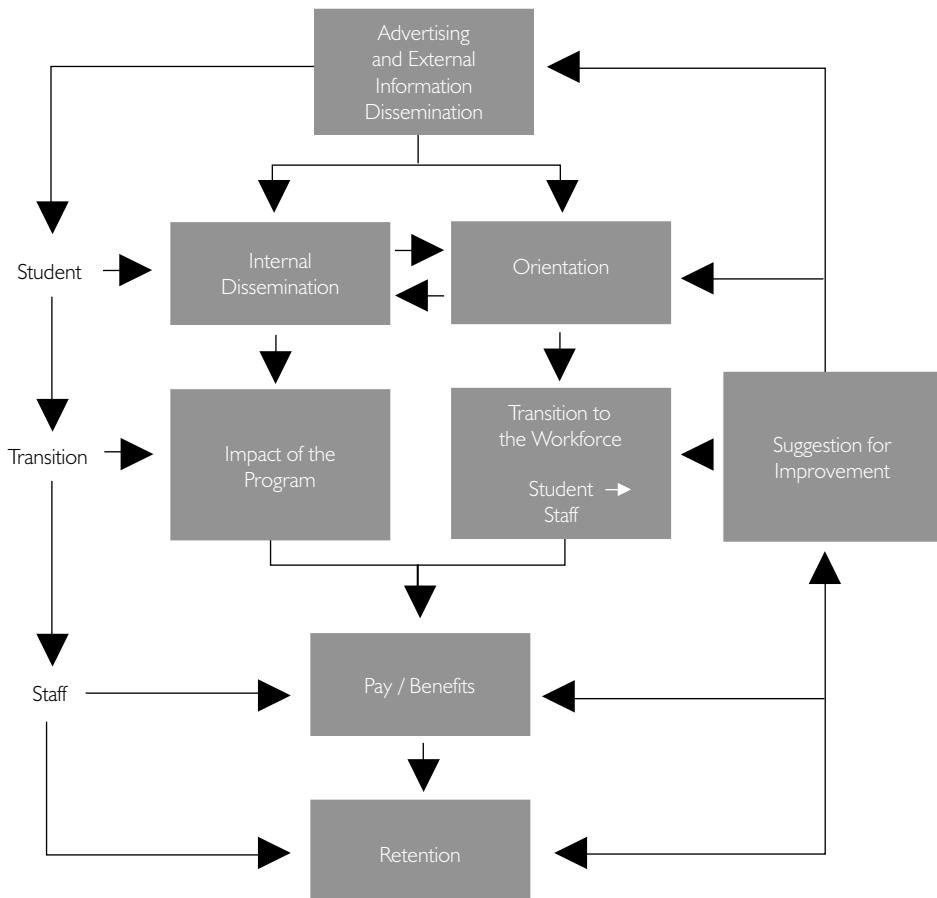
Four healthcare managers were instructed to create an Affinity Diagram. The Affinity Diagram "gathers large amounts of data and organizes them into groupings based on natural relationships" (Balanced Scorecard Institute 2007). The use of the Affinity Diagram to analyze qualitative data on nurses' perceptions has been used by Young and colleagues (2004). The instructions that were given to the healthcare managers were directly taken from webpage of the Balanced Scorecard Institute on the creation of the Affinity Diagram, titled "Affinity Diagram – How to Do It" (Balanced Scorecard Institute 2007). The managers were told to read the comments silently and move them one by one, placing together those that seemed to be most closely related. The managers were told that the cards could be moved among groups, and that the sorting would end when card movement ceased. The healthcare managers sorted cards for approximately two hours, and then together agreed on the common characteristics of the group. They put labels on each group and then displayed the relationships among the groups to create the Affinity Diagram (Balanced Scorecard Institute 2007).

Results

The healthcare managers arranged all comments into seven groups: (1) advertising and external information dissemination, (2) orientation, (3) internal dissemination, (4) impact of the program, (5) transition to the workforce, (6) pay/benefits and (7) retention. The relationships among these seven groups were visually displayed in the Affinity Diagram (Figure 1). The managers added a superheader, "Suggestions for Improvement," to show that the recent graduates had identified areas that were not working well in each of the seven groups. The interconnections are clear. At the top of the diagram is the theme of advertising and external information dissemination (group 1). The information distributed to students by academic institutions and by the government was viewed very favourably: "The school offered supportive information ...

someone took the time to invest in our future. It made the process of signing up much easier." Participants said the Health Force Ontario website was well advertised, and some could easily access the job portal. Nevertheless, participants also commented that the website was not easy to understand.

FIGURE 1. Affinity Diagram



Advertising and external information dissemination is connected in the Affinity Diagram to orientation (group 2) and internal dissemination (group 3). The new graduates, once at the home care agency, received an orientation and began working with colleagues in the agency. Based on their experience, participants suggested that an orientation unique to the New Graduate Nursing Initiative be provided: "The orientation should be different. Many grads believed that most things were the same between grads and other employees, when they're not." ("Other employees" refers to experienced RNs and RPNs.) Other suggestions included more time for orientation and increased information on corporate policy and procedures, as well as on community nursing.

Participants wanted more clarity on benefits, preceptorships, time frames and expectations. The participants also suggested improvements to the internal dissemination of information about the Initiative. In their opinion, some colleagues appeared to have received incomplete information because the colleagues wondered why the new graduate nurses were partnered with another nurse.

One can also see from the Affinity Diagram that once the new graduates got beyond the orientation phase, they were very enthusiastic about the impact of the program (group 4) and the transition to the workforce (group 5). Nurses were pleased to start working after graduating, and to have someone available to answer questions and provide on-the-job training. They were pleased with the “opportunity for additional learning, having a full-time job and guaranteed placement for six months.” Participants appreciated activities that eased them into a staff position: “The support makes everything so much easier and less stressful. It was a great learning experience, and provided more peace of mind.” With the support of a preceptor, one participant felt better prepared for independent practice: “My preceptor was and is great, she helped me with the idea of being on my own, allowing me to become more confident in my abilities to care for my patients.”

The Affinity Diagram also highlighted the relationship of pay and benefits (group 6) to retention (group 7). Some participants commented that the New Graduate Nursing Initiative does not provide sufficient incentive to stay, given the pay differential, the extended workdays and the independent nature of community nursing. Nevertheless, the Initiative does help new graduates make the transition from school to employment. “The program is a great incentive to keep nurses in Canada. Otherwise, I may have considered working in another country.”

Discussion

Participants tended to view the MOHLTC’s New Graduate Nursing Initiative, and VON’s implementation of it, favourably. Participants appreciated how support provided by VON Canada eased their transition into becoming community nurses. In particular, the participants appreciated preceptors’ dedication and support at this home care agency. Participants suggested that the Ministry should be applauded for recognizing the difficulties in nursing recruitment and retention. They stated that they appreciated the funding provided to address nursing recruitment and retention.

Participants also commented on what was not working well and identified areas for improvement, including a more specific orientation program. Compensation matters should be clearly identified during recruitment, and providing benefits from the time of hire would be a distinct advantage. Employees within the organization should know the program and how it is used.

Strengths and limitations

This study has several strengths. First, it is the first evaluation of this new program. Second, it used online methods to collect qualitative data from geographically dispersed new graduates. Third, subjectivity in coding the verbatim quotes was addressed by the methods used to analyze the data. Experts coded the data until they reached consensus on themes and their interrelationships.

This study also has some limitations. Given its qualitative nature and the small sample size, we consider it a preliminary study. Because it was done at only one home care agency, the results may not be generalizable to other organizations.

Recommendations for future study

Our study can be a platform on which to build further studies. We recommend that a provincial survey be developed and administered in other organizations to obtain the perceptions of nurses about the New Graduate Nursing Initiative. Further, we recommend that additional focus groups be conducted on the Initiative after its second year of implementation.

Conclusion

This exploratory study suggests that the New Graduate Nursing Initiative may be an effective way to introduce nurses into practice. Nevertheless, further studies at other agencies are recommended. Further research and ongoing sharing of findings may contribute to providing an ample supply of qualified, dedicated nurses in the home care sector.

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Appendix A: Focus Group Questions

1. As a new nurse involved with this Initiative, what are your perceptions regarding the support that was provided to allow you to transition into practice within Community Health Nursing as a practising Registered Nurse or Registered Practical Nurse at VON Canada?
2. As a new nurse involved with this Initiative, how do you think VON Canada

could enhance utilization of the New Graduate Initiative to support recruitment and retention of nurses within home care?

3. Tell me about your intentions in remaining employed with VON Canada as a result of this Initiative.
4. As a new nurse involved with this initiative, what are your perceptions of what works well and what does not work well within the New Graduate Initiative at VON Canada?
5. As a new nurse involved with this Initiative, what are your impressions of how well staff embraced the program to support the transition from student to nurse at VON Canada?

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Knowledge Translation, Linkage and Exchange

Transposition de connaissances, liens et échanges

The case study presented here is drawn from a publication of the Canadian Institutes of Health Research, *Knowledge to Action: A Knowledge Translation Casebook*, by CIHR's Knowledge Translation (KT) Portfolio. This KT casebook highlights original submissions from across Canada that focus on lessons learned from both successful, and less than successful, knowledge translation activities. Designed as a means for researchers and decision-makers to share and recognize their experiences, this casebook also demonstrates the impact that research can have in shaping policy, program and practice changes.

The casebook was published in early 2009. Please visit CIHR's website at www.cihr-irsc.gc.ca for more details.

L'étude de cas présentée ici est tirée d'une publication des Instituts de recherche en santé du Canada intitulée *Des connaissances à la pratique : recueil de cas d'application des connaissances*, préparée par le portefeuille de l'application des connaissances (AC) des IRSC. Ce recueil présente les leçons tirées d'activités d'application des connaissances, réussies ou non, provenant de partout au Canada. Conçu pour permettre aux chercheurs et aux décideurs de connaître et de partager leurs expériences, le recueil illustre l'impact potentiel de la recherche dans l'élaboration de politiques ou de programmes et dans les changements touchant à la pratique.

Le recueil a été publié en janvier 2009. Pour plus de renseignements, veuillez visiter le site Web des IRSC, à www.cihr-irsc.gc.ca.

Rethinking How We Replace Knees and Hips

Nouvelle approche pour le remplacement de la hanche et du genou

by ALBERTA BONE AND JOINT HEALTH INSTITUTE

BUD MCLEAN AND HIS WIFE, GERI, HAVE TRAVELED THE WORLD TOGETHER. When Bud's hip started slowing him down, he thought he knew what to expect in having it replaced, and was not looking forward to the process. A previous hip replacement in 1999 had left him in terrible shape. This time, though, he was pleasantly surprised. His care – including all aspects of pre-operative preparation, surgery, recovery and rehabilitation – was fully integrated and delivered by a multidisciplinary team. Bud was walking without support less than a month after being referred for surgery.

This Calgary resident's experience was thanks to the Alberta Hip and Knee Replacement Pilot Project – a radical new approach to providing joint replacements that dramatically reduced waiting times while improving patient care. The project proved so successful that the new model will be implemented all across Alberta.

A Growing Need

Hip and knee replacements are a proven method of alleviating pain and restoring function and mobility. However, the care that patients receive can vary according to such factors as socio-economic status, age and geographic location. Wait times, both

for a consultation and for surgery, are long. In Alberta, as in virtually every other jurisdiction in Canada, these wait times were currently beyond what is deemed optimal for most patients at the same time that the study was

The KT Challenge

Improving patient care and reducing wait times for hip and knee replacements by implementing evidence-based health system changes

initiated (WCWL Project 2003; ABJHI 2006). Alberta's aging population and growing proportion of seniors (Alberta Health and Wellness 2006), as well as rising rates of obesity (Statistics Canada 2005), indicate that the need for hip and knee replacements will grow.

In 2004, the Alberta Orthopaedic Society (AOS), Alberta Bone and Joint Health Institute (ABJHI), the province's health regions and Alberta Health and Wellness decided to partner together to address the issues associated with hip and knee replacements. They agreed to redesign the continuum of care for these surgeries in Alberta and, in 2005, the partners launched a 12-month pilot project in three health regions to compare their new approach to conventional practice.

Five key groups were involved in the pilot project, each charged with specific responsibilities:

- Orthopaedic surgeons, whose practices and procedures would be altered and subject to standardization based on best available evidence;
- Family physicians, whose referral processes would be standardized and who would take on a more active role in their patients' pre-operative preparation and post-operative follow-up;
- Health regions, which would establish evidence-based practices and procedures, providing the resources required to support them;
- Alberta Health and Wellness, which would provide funding for the necessary pilot resources and a policy environment to support the changes in the continuum of care for hip and knee replacements; and
- Patients, who would consent to participate in a randomized, controlled study throughout the pilot, involving intervention and control groups.

Setting a High Standard

The partners based the pilot project on a framework of patient-centred principles:

- Deliver all services according to best benchmarks.
- Advance approaches to prevention, diagnosis and treatment based on informed decision-making, using a combination of the best available evidence and sound medical judgment.
- Continually evaluate all services for quality to ensure that value is always being created.
- Give referring physicians and patients access to the first available surgeon, or to the surgeon of their choice, recognizing that surgeon choice may mean a longer wait.

Knowledge Translation Activities

Knowledge users engaged in

- Shaping research questions
- Data collection and tool development
- Interpreting study findings
- Disseminating results
- Moving evidence into practice
- Widespread dissemination and application of knowledge

These principles could not have been applied, and the pilot could not have been successful, without constant interaction and communication among partners.

ABJHI, together with the health regions, AOS, surgeons and physicians, developed the tools and processes required for a standardized hip and knee replacement care path that extended from primary care through to surgery, recovery and rehabilitation. The care path

included a consultation referral template, patient contracts, customized treatment plans, a patient optimization program, evidence-based clinical practices and procedures and scheduled patient follow-up.

Referral, diagnosis and treatment were all provided in multidisciplinary, community-based, single-purpose hip and knee replacement clinics. Health region clinical leaders, supported by ABJHI, trained hospital acute care and operating room staff in the new continuum, and engaged family physicians in the referral process.

ABJHI, which served as the hub for the pilot, met regularly with surgeon groups, health regions and Alberta Health and Wellness department leaders to provide updates on progress, issues, interim results and proposed actions to remedy issues as they arose.

A provincial committee was formed to provide project oversight, while a working group representing all stakeholders managed activities and issues and kept the stakeholder groups informed of progress. One health region seconded an executive-level employee to act as project director.

How Did It Work?

The pilot project, conducted in a protected research environment, improved patient care and outcomes and reduced wait times. Key results included the following:

- Hospital stays were reduced by almost a day and a half, from 6 days to 4.7 days.
- Eighty-five per cent of patients were up and mobile the day of their surgery.
- Patients were better able to function physically and had less pain following surgery.
- The wait to see a surgeon dropped from an average of 145 working days to 21, and the wait from consultation to surgery fell from an average of 290 working days to 37.
- Patients and healthcare providers were more satisfied.

Impact

- Pilot results include reduction in wait to see a surgeon, reduction in length of hospital stay, increased patient/provider satisfaction, earlier mobility, improved physical function and less pain following surgery.
- The success of the pilot has led to province-wide implementation of the new continuum of care.

The partners caution that results such as these will be more difficult and take longer to achieve outside a controlled pilot environment where services are subject to normal day-to-day operational pressures. But the effort has begun.

Alberta Health and Wellness declared the pilot a “success story” and announced that the new continuum

would be implemented as the standard of care province-wide. Health and Wellness has committed funds to Alberta’s health regions to support the transition from the former practices to the new continuum, and has provided ABJHI with funding to facilitate the province-wide implementation.

In the process of carrying out the pilot project, the partners learned a great deal about how to effect change in the healthcare system. Above all, they learned that problems such as wait times, service quality and system efficiency can be solved, however challenging the process.

The partners found that the key to the successful pilot was collaboration among all stakeholders. Change often meets with resistance, and physician affinity for independent practice makes team-based medicine difficult to implement. Attention must be paid to the different interests of all stakeholders, and everyone involved needs to define collaboratively the required resources, funding, testing period and standardized measurement framework.

Collaboration and consensus among partners are essential to gathering the evidence that is needed to underpin change, and are also critical to gaining acceptance by

physicians and healthcare providers. Further, it's essential that healthcare administrators, policy makers and practitioners agree that practices, decisions and technologies used in healthcare delivery should be informed by the best available evidence, and that they must be willing to change based on new evidence. A system needs to be in place to gather data for monitoring and evaluation of system performance, to support continuous improvement and to provide the evidence that supports change.

Using these key tools – collaboration, evidence and a willingness to change – the new approach to hip and knee replacement could be applied to other areas of musculoskeletal care and provide a template for change that could be applied to other areas of healthcare all across Canada.

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Retaining Institutional Wisdom: Using an Evidence-Informed Approach to Transfer Knowledge from Experienced Nurses to New Nursing Staff

La sagesse d'un établissement : le transfert des connaissances des infirmières chevronnées aux nouvelles recrues au moyen d'une stratégie de rétention éclairée par des données probantes

by CANADIAN HEALTH SERVICES RESEARCH FOUNDATION

Abstract

The Baie-des-Chaleurs Health and Social Services Centre in Quebec has developed an evidence-informed approach to capture the knowledge of experienced nurses and transfer it to new staff. By drawing on the expertise of senior staff, and through the development of tools such as a training video, the centre has been able to reduce attrition rates and enhance job satisfaction. This innovative initiative was recently featured in *Promising Practices in Research Use*, a series produced by the Canadian Health Services Research Foundation highlighting organizations that have invested their time,

energy and resources to improve their ability to use research in the delivery of health services. Additional issues from the series can be found at http://www.chsrf.ca/promising/index_e.php.

Résumé

Le Centre de santé et de services sociaux de Baie-des-Chaleurs au Québec s'est inspiré de données probantes pour concevoir un mode de relevé et de transfert des connaissances des infirmières chevronnées aux nouvelles recrues. Grâce à l'expertise des cadres supérieurs et au développement de nouveaux outils tels qu'une bande vidéo de formation, le centre a réduit les taux d'attrition et a amélioré la satisfaction au travail. Récemment, cette initiative novatrice a fait l'objet d'un numéro de *Pratiques prometteuses dans l'utilisation de la recherche*, publication de la Fondation canadienne de la recherche, qui présente des organismes qui ont investi temps, énergie et ressources pour améliorer leur capacité à utiliser la recherche dans la prestation de services de santé. Il est possible de consulter d'autres numéros au http://www.chsrf.ca/pratiques/index_f.php.



Key Messages

- The nursing service of a Quebec-based health and social services centre has developed an evidence-informed approach to capture knowledge – especially tacit knowledge – from experienced nurses, and transfer it to new nursing staff.
- A key element in the creation of organizational knowledge is the active participation of staff members who are directly involved in care delivery, combined with best practices.
- The project has increased the success rate of new nurse orientations and retention, and has reduced reliance on supplemental nursing resources. This project, grounded in a philosophy of continuous quality improvement, has helped to reduce the occurrence of adverse events.

MANY HEALTHCARE ORGANIZATIONS ARE GRAPPLING WITH THE CONSEQUENCES of high attrition rates. To address this problem, and as part of the process of becoming a learning organization, the Baie-des-Chaleurs Health and Social Services Centre in Quebec has developed an evidence-informed approach to capture the knowledge of experienced nurses and transfer it to new staff.

"It really started with our continuous improvement committee," says Christine Arsenault, department head and learning organization project adviser. She explains

that the committee had been developing procedures and best practices to help eliminate nursing errors, but encountered problems in implementing the procedures effectively. Committee members finally realized that something important was missing: the direct involvement of nurses in the process.

In 2005, a nurse committee was established to review existing literature on knowledge creation and transfer. The committee's research revealed many key concepts, including the importance of formalizing tacit or implicit knowledge and the benefits of supporting professional skills development within an organization.

Armed with the evidence, the committee mapped out a new process to identify, formalize and transfer knowledge at the Centre. However, Arsenault says, the committee quickly saw that it needed a specific project that would allow them to apply the key concepts "hands on" and yield tangible outcomes.

At the time, the Centre was facing high retirement rates among nurses. "We were concerned," explains Jean-Luc Gendron, coordinator of quality and risk management and communications, "about the influx of new, inexperienced nurses, the loss of institutional knowledge from those retiring, and the impacts these could have on the quality of care." The maternity department – which had a high number of new, inexperienced nurses – was selected for a pilot project.

After a preliminary phase of knowledge capitalization and research on best practices, senior nursing staff, in collaboration with new nurses, identified the various skills and competencies required by nurses in the maternity unit. They then developed strategies to transfer this knowledge. Initiatives included clinical monitoring by an experienced nurse mentor, a "tricks of the trade and expert advice" summary from experienced nurses and a tool to help new nurses reflect upon their clinical experiences and transfer the knowledge to other situations.

However, says Arsenault, it was the video that really captured people's attention. A video was produced that followed an experienced nurse as she provided care in the maternity unit, from admission to the delivery to the post-partum period, with a voice-over explaining the rationale for each action taken by the nurse. The committee knew from its research that video technology had been proven to be an effective way to capture and transfer tacit knowledge – knowledge that is difficult to transfer because it is acquired over years of experience. Videos are also especially helpful for nurses in remote areas, who often do not have experienced colleagues to consult.

The pilot project was effective on several levels. "All of our new maternity nurses in 2007/2008 successfully completed their orientation," reports Arsenault. (In 2005, only 40% succeeded.) Moreover, the use of supplemental staff to compensate for less experienced nurses is down, no adverse events have been reported since the project began and the Centre hasn't lost a single new maternity nurse in the past two years. As an added bonus, the project has built pride and cohesiveness throughout the organization: new nurses feel part of a team, and experienced nurses now recognize the value

of the knowledge they possess and the value of sharing it.

The team won a 3M Innovation Award for the pilot project in eastern Quebec, and the model is currently being implemented elsewhere in the Centre. Another project, dubbed “Virtual Companion,” is now underway to create video clips of various procedures, which nurses can access with an MP3 player. Arsenault says that the number of projects under development is growing at an accelerated pace, and they affect all spheres of activity of the organization. “We hope,” she says, “that our experience will help and inspire others to undertake this type of initiative.”

For more information, contact Jean-Luc Gendron at Jean-Luc.gendron.chbc@sss.gouv.qc.ca.

Call to Authors

Health Technology Briefs provides a forum for brief reports of health technology assessments and policy analyses that can inform Canadian health policy development and health system management. Submissions from health technology assessment organizations or researchers working in other settings should be no more than 1500 words, exclusive of up to two tables and 10 references and an abstract of 100 words or less.

Appel aux auteurs

La rubrique « Coup d’œil sur les technologies de la santé » est une tribune qui présente de courts résumés d’évaluations des technologies de la santé ou d’analyses de politiques, visant à éclairer l’élaboration de politiques ou la gestion des systèmes de santé au Canada. Les résumés, proposés par des organismes d’évaluation des technologies de la santé ou par des chercheurs provenant d’autres types d’établissements, ne comptent pas plus de 1500 mots, et sont accompagnés d’un maximum de deux figures, de dix références et d’un résumé de 100 mots ou moins.

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Sorry, You Can't Have That Information: Data Holder Confusion Regarding Privacy Requirements for Personal Health Information and the Potential Chilling Effect on Health Research

Désolé, vous ne pouvez obtenir cette information :
confusion face aux exigences en matière de
renseignements personnels sur la santé et revers
potentiels pour la recherche



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Abstract

This study, conducted in Newfoundland and Labrador, assessed the level of awareness, perceptions and concerns of healthcare providers, health researchers, data managers and the general public about the collection, use and disclosure of personal health information (PHI) for research purposes. Data collection involved surveys and follow-up focus groups with participants. Results indicate a poor understanding generally with regard to privacy rights and responsibilities. Many professionals are unfamiliar with the legislative environment for PHI, particularly as it pertains to the access and use of PHI for research purposes. Lack of familiarity with basic requirements for patient-based research, coupled with heightened sensitivity to privacy issues owing to various federal and provincial regulatory initiatives, could have a chilling effect on health research. Importantly, our results indicate that the public is much less concerned about the use of their PHI for health research purposes than are professionals who collect, store and share it.

Résumé

La présente étude, menée à Terre-Neuve-et-Labrador, évalue le degré de sensibilisation, de perception et de préoccupation des fournisseurs de soins de santé, des chercheurs, des gestionnaires de données et du grand public au sujet de la collecte, de l'utilisation et de la divulgation des renseignements personnels sur la santé (RPS) à des fins de recherche. Les données ont été recueillies au moyen de sondages et de groupes de discussion auprès des répondants. Les résultats indiquent une faible compréhension générale des droits et des responsabilités au sujet des renseignements personnels. Plusieurs professionnels ne sont pas familiers avec le contexte législatif des RPS, particulièrement en ce qui concerne l'accès et l'utilisation des RPS à des fins de recherche. Le manque de connaissances des exigences de base pour la recherche axée sur les patients, conjugué à la sensibilité des questions touchant aux renseignements personnels en raison des nombreux règlements fédéraux et provinciaux, pourrait causer des revers pour la recherche sur la santé. De plus, nos résultats indiquent que le public est beaucoup moins préoccupé par l'utilisation de leurs RPS à des fins de recherche que ne le sont les professionnels qui recueillent, gèrent et partagent ces renseignements.



PERSONAL HEALTH INFORMATION (PHI) INCLUDES INFORMATION ABOUT AN identifiable individual's health or healthcare history, including the provision of healthcare to the individual, payment for such healthcare, any personal health identification number or code, as well as genetic information about the individual. While there is wide agreement that protection of individual privacy with regard to

PHI is important, there is ongoing concern that overly stringent controls on access could severely curtail valuable health research. In the United States, worries about the deleterious effects of the *Health Insurance Portability and Accountability Act* (HIPAA) on health research prompted the National Academy of Sciences (2006) to conduct a national forum. Potential barriers identified included increased bureaucracy, difficulties with obtaining informed consent and problems with clinical trials. Forum participants reported numerous HIPAA horror stories of research that was either curtailed or never initiated because of concerns about the new regulations. Despite efforts to address such concerns, complaints about onerous privacy requirements continue (Fost and Levine 2007; Ness 2007; Kaiser 2006).

Efforts to preserve individual privacy while facilitating health research have been ongoing in Canada as well. The Canadian Institutes of Health Research (CIHR 2005) have provided guidance to researchers with regard to best practices for protecting PHI in health research. Various studies have examined the public's opinions with regard to access to PHI for research, and their preferences as to if and when individual consent should be required (Willison et al. 2003; Page and Mitchell 2006; Jones et al. 2006). However, comparatively little, if anything, is known about the awareness, perceptions and concerns of health professionals and data managers who collect, store and maintain the PHI of patients and clients. Indeed, although the vast majority of healthcare providers are not themselves health researchers, they often act as gatekeepers in either granting or denying access to PHI when approached by health researchers.

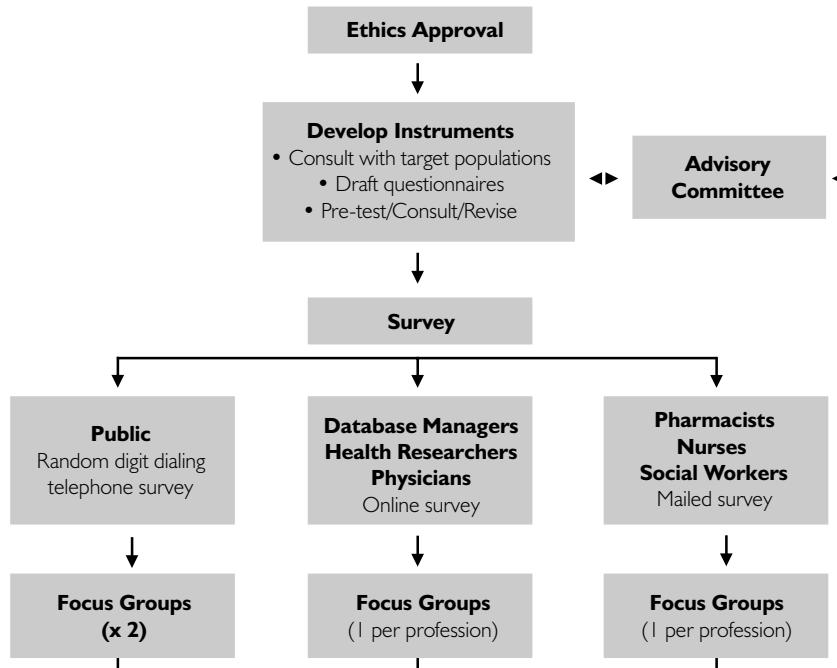
This study, conducted in Newfoundland and Labrador, assessed the levels of awareness among health professionals and data managers with regard to their legal and professional responsibilities vis-à-vis the PHI they control, and their perceptions and concerns about sharing PHI for research purposes. A survey of the public was included to compare and contrast public perceptions with those of professionals, and to gauge whether the public displays a similar range and intensity of concern.

Participants and Methods

The interdisciplinary project team involved researchers from the fields of bioethics, sociology, business and epidemiology, along with those experienced in health legal issues and others in database management. An advisory committee was convened early in the project to bring together persons from the target groups for consultation as the project progressed.

Target groups included nurses, social workers, physicians and pharmacists, as well as health researchers, database managers and the public. All were surveyed for their knowledge and attitudes about the access, use and disclosure of PHI. Focus groups of participants from each target group were convened subsequent to the survey to clarify and expand on survey responses. (See Figure 1.)

FIGURE 1. Study overview



Survey questions were developed through a review of the literature and communication with other projects and agencies exploring privacy issues. Early drafts of the questionnaires were developed by a working group within the research team and reviewed by the team as a whole. All surveys included core questions that addressed awareness of privacy legislation and its impact, concerns about privacy issues and questions about acceptable access and uses of PHI in research. In addition, each target group was presented with brief scenarios appropriate to its practice environment, and participants were asked to respond to specific questions. Responses were framed as five-point Likert scales with "not applicable" as appropriate. The instruments were pre-tested with representatives of each group and revised as indicated. In most cases, following the suggestions of the pre-test groups, wording was made more specific to the target group in question. These revisions led to more diverse wording of some questions than had been anticipated.

Potential participants were identified through their professional organizations in the case of physicians, nurses, social workers and pharmacists. Database managers are individuals responsible for the day-to-day operation of a database, including adding new entries, data quality and the release of data. Their clients are the people who request access to the data. Database managers were identified through researchers and institutional administrators. Faculty research descriptions on the Memorial University website were used to identify health researchers. The research team contacted the full

list of potential participants in each group. A random sample of 600 (200 respondents to questions based on each of three scenarios) of the general public was identified using a list provided by Aliant Newfoundland, with monitoring during recruitment to ensure a balance of males and females and educational levels. Statistical analysis was not a primary goal, as our aim was to obtain descriptive data.

Three survey methods were used: mail, online and telephone. The method chosen for each professional group was determined by its respective provincial association. Nurses, social workers and pharmacists were contacted via mail; physicians, researchers and database managers received an online survey. Experienced interviewers, trained on the questionnaire, surveyed a sample of the general public by telephone. A list of 2,766 randomly generated telephone numbers was necessary to make contact with 855 eligible participants.

Two follow-up e-mails were sent to physicians and database managers and four to health researchers. Budget constraints did not allow mailed reminders for the 540 pharmacists, 1,926 nurses or 1,080 social workers, but reminders were sent through their respective professional association newsletters and postings on their websites. Consent was implied by return of online and mailed questionnaires and obtained verbally in telephone interviews.

The study was reviewed and received ethics approval from the Human Investigation Committee, Memorial University.

Results

Results were analyzed according to three major themes: (1) awareness of privacy-related issues, policies and initiatives, (2) concerns with regard to privacy of PHI and (3) use of PHI for research purposes.

1. Awareness of privacy-related issues, policies and initiatives

In general, professional respondents indicated a low level of awareness about various provincial initiatives pertaining to the collection, storage and use of PHI, including efforts to create an electronic health record (EHR) and to develop a Pharmacy Network that will eventually track all prescriptions in the province. Overall, only 45% of professional respondents reported familiarity with the EHR, while 34% expressed awareness of the Pharmacy Network. Public respondents were not asked specifically about these initiatives.

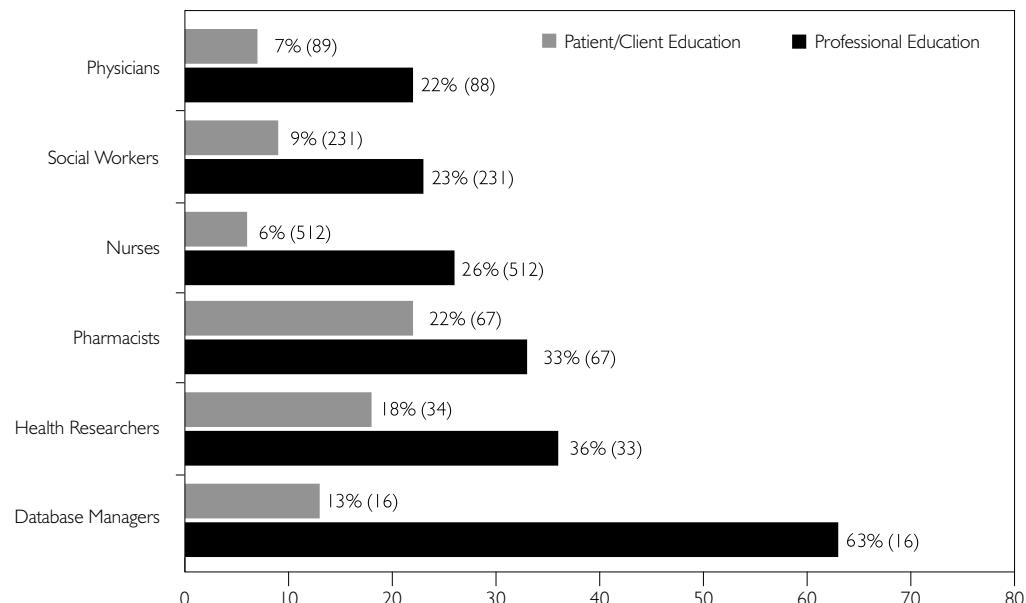
When asked if the provincial government was doing enough to protect PHI, 49% of the public agreed on average, while only 32% of professionals agreed. However, there was wide variation among professional groups: physicians and health researchers were the least in agreement (18% and 21%, respectively), while pharmacists were the

most confident (58%). Many professionals gave a “neutral” response to this question (70% for health researchers; 57% for physicians), while only 16% of the public gave a neutral response.

All professional participants were asked if they understood the meaning of the technical terms “anonymous data” and “de-identified data.” Overall, 78% of professionals stated they understood the meaning of the former, while 58% agreed they knew the meaning of the latter. Health researchers expressed the highest level of confidence in their understanding of these terms (91% anonymous data; 97% de-identified data). Physicians were least confident about their understanding (66% anonymous; 42% de-identified).

Professional groups, in general, did not believe enough had been done within their profession to educate them about privacy-related issues, although database managers were an exception in this regard. Professionals were even less confident that enough had been done to educate their patients/clients (Figure 2).

FIGURE 2. Enough has been done to improve education for my profession/my patient/my clients



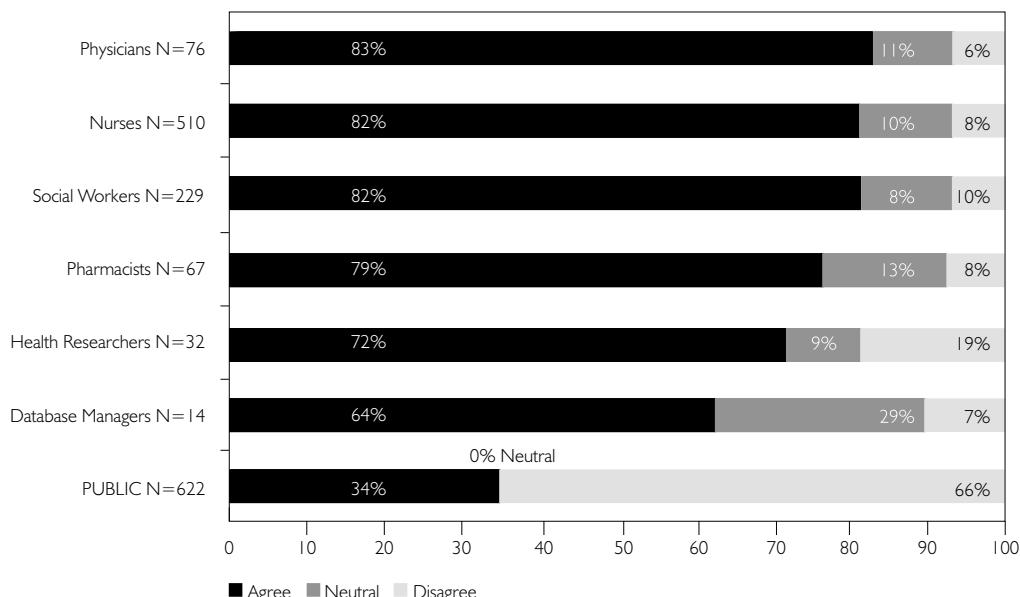
2. Concerns with regard to privacy of PHI

All participants were asked about their general level of concern over the safety and security of their own PHI. Figure 3 compares the responses of each group.

Only 34% of the general public was concerned about the privacy of their PHI, compared to almost 85% of professionals. Professionals reported a similar level of concern about the privacy of their clients'/patients' PHI.

Participants in all professional groups were asked whether they had ever (a) had a patient/client mention an infringement of his/her privacy in the health system, or (b) experienced an infringement of their own privacy in the health system. Overall, just under half of all professionals surveyed reported that at least one of their patients or clients had mentioned an infringement of privacy in the health system at some point, and one-quarter of professionals reported they themselves had experienced such an infringement. Only 10% of the general public surveyed reported experiencing a breach. It should be noted that all such reports were anecdotal, and were not confined to complaints that had been reported to an oversight body that subsequently investigated and confirmed the breach.

FIGURE 3. I am concerned about the privacy of my own PHI

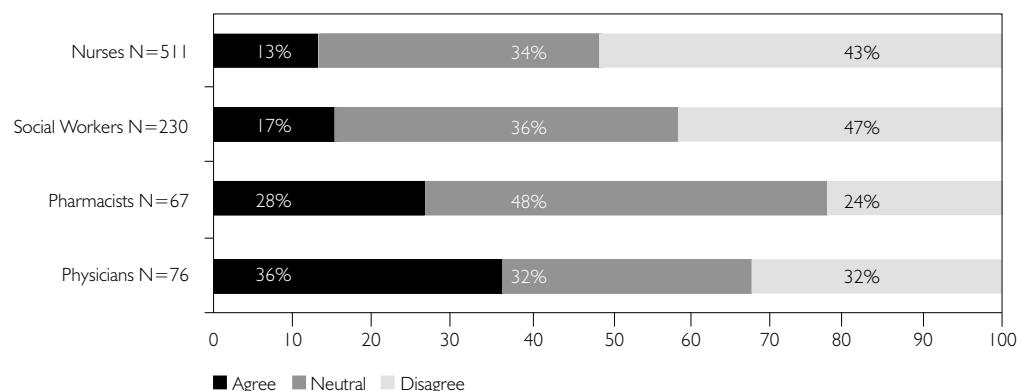


Professional groups expressed greater confidence in the security of computer files than paper files, while the public was more likely to trust the security of paper files. However, none of the participant groups expressed much confidence with either option. Only 16% of all professionals agreed that paper files are safe and secure, and only 20% trusted the security of computer files. The public expressed greater confidence in paper files (34%) than in computer files (24%). Among professionals, pharmacists were noticeably more comfortable with both types of files, with 39% agreeing that computer files are secure, and 31% agreeing that paper files are secure. However, even among this group, well over half did not trust the security of either type of file.

A series of questions was designed to assess the degree to which health professionals understand and appreciate the need for health research in order to improve the

delivery of health services. Figure 4 summarizes the responses to one such question in which professionals who deal directly with patients/clients were asked if they agreed they would be able to provide better care if researchers had easier access to health information in general. There was wide variation on this question, from a low of 13% of nurses who agreed, to a high of 36% of physicians. However, 33% of physicians and 43% of nurses disagreed with this statement. Again, there were a large number of neutral responses among all groups.

FIGURE 4. I would be able to provide better patient care if researchers had easier access to health information in general



3. Use of PHI for research purposes

Earlier in the survey, professionals were asked whether they understood the meanings of the terms “anonymous data” and “de-identified data.” Before completing this section of the survey, respondents were provided with clear definitions of these terms. Pharmacists, physicians, social workers and nurses were then asked whether sharing their patients’/clients’ de-identified data for health research purposes without the consent of the patient would be acceptable. On average, 74% of respondents either would not or were not sure that sharing de-identified information without consent would be appropriate. Physicians (37%) were the most likely to agree that they would share such information, but they also had the largest neutral response (27%). Thirty per cent of pharmacists agreed that sharing without consent would be permissible. Nurses (24%) and social workers (23%) were the least likely to agree.

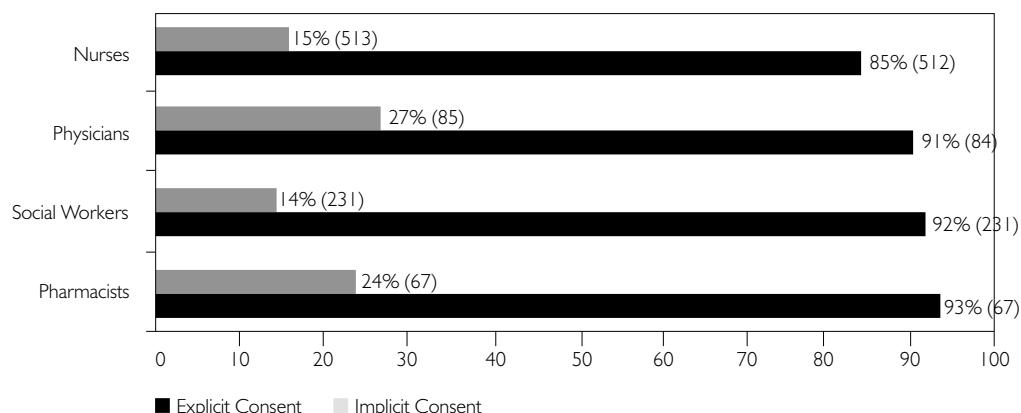
Further examination of these results revealed that respondents with previous research experience were more likely to agree that sharing de-identified information for health research purposes without consent was acceptable. The current convention permits such disclosure if approval has been obtained from a research ethics board.

Professionals who routinely manage PHI for patients/clients in their workplace were asked whether sharing such information would be acceptable if they had either

(a) explicit or (b) implicit consent.

On average, 88% of professionals who responded agreed that sharing their patients'/clients' PHI with explicit consent was acceptable, but only 17% agreed if the consent was only implicit (Figure 5). On average, 12% of professionals were not willing to share PHI even with explicit consent. Again, further analysis of these results indicated that professionals with research experience were more likely to share information with implicit consent than were those without this experience.

FIGURE 5. It is OK to share patient/client PHI for research if I have their explicit/implicit consent



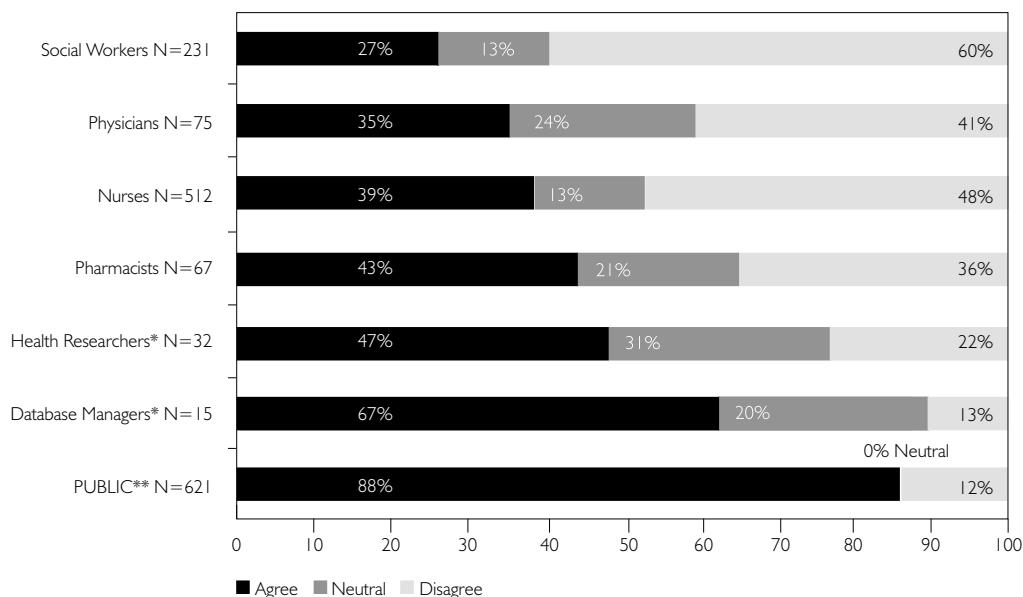
All respondents were asked whether it would be okay for new researchers to view de-identified information that had been collected for a previous study with patient/client consent, without re-contacting for consent to the second study. Among the professional groups surveyed, database managers (67%) and health researchers (47%) were most likely to agree that this would be acceptable, followed closely by pharmacists (43%) (Figure 6). Those professionals who have clinical relationships with their patients/clients were less likely to agree (nurses 39%; physicians 35%; social workers 27%). The most important observation with regard to these data, however, is that the public appears to be much less concerned about the use of PHI for research purposes: 88% were willing to allow other researchers to view their de-identified PHI for a new study, even though they had not consented explicitly to this subsequent use.

Discussion

The tension between an individual's right to privacy and the broader public good accomplished through public health research admits no easy solutions. Regulators

and research ethics boards have been criticized for giving undue weight to the privacy of the individual (National Academy of Sciences 2006), and researchers continue to complain that privacy rules impede research (Cressey 2007; Ness 2007). Some have questioned whether individual informed consent is even necessary for participation in health services research (Cassell and Young 2002), while others struggle to interpret how privacy guidelines may affect the work of research ethics boards and researchers (National Academy of Sciences 2000; Willison et al. 2008).

FIGURE 6. It is OK for NEW researchers to look at “de-identified” information from a previous study without re-consent



Notes:

* Health Researchers and Database Managers were asked whether they agreed or disagreed with the statement: “If ethics approval had been granted, it would be okay for me to share individuals’ de-identified health information for health research, without the individuals’ consent.”

** General Public was asked whether they agreed or disagreed with the statement: “It would be okay if new researchers looked at my information from the first study if my name wasn’t on it.”

Data custodians, various institutions that collect data and research ethics boards have struggled to determine what PHI can or should be shared among institutions and with researchers (Kulynych and Korn 2003; Willison et al. 2008). The results of the present study indicate that this uncertainty extends to the level of members of various professional groups as well.

Our results indicate that individuals responsible for collecting and retaining PHI are often unfamiliar with privacy legislation and with policies and procedures regarding the use of PHI for health research. This finding is evidenced, for example, by the

fact that between 7% and 15% of professionals surveyed would not share PHI for research purposes even with the explicit consent of the individuals to whom the information belongs. This result is both interesting and disturbing. Explicit consent is the highest standard imposed to effect release of PHI to a third party. Our result could indicate respondents' lack of familiarity with the legislative and policy environment with regard to PHI, a lack of awareness and understanding regarding the meaning of explicit consent and what it permits, or the existence of an institutional policy or procedure within the professional's organization that requires someone else to decide if and when release of PHI is appropriate. Many nurses and social workers do not have direct authority to share information with other parties unless they receive permission to do so. This stipulation may explain, in part, the greater reluctance of nurses and social workers to share PHI with either explicit or implicit consent. Our results indicate that those with research experience appear to be more familiar and comfortable with the research process and with privacy requirements with regard to PHI, and are thus more inclined to support maximum use of research data.

All health research involving human subjects must be submitted to a research ethics board for review and approval prior to proceeding (NSERCC 2009). This is a requirement even for studies that utilize data collected previously with consent. Researchers and database managers who participated in this study were reminded of this requirement prior to being asked if using previously collected data would be acceptable without re-consent, because the professional representatives who screened the questionnaire thought that failing to make this point explicit might confuse respondents. However, respondents from other professional groups were not reminded of this requirement. Hence, it is possible that more health researchers and database managers may have agreed that use of previously collected data was permissible than might otherwise have done so. Nevertheless, even with this reminder, 33% of database managers either disagreed or were neutral on this question, while more than half (55%) of health researchers did not agree that such research could proceed without re-consent. Again, it is noteworthy that the public respondents to this question were not reminded of the role of the ethics review board either, yet 88% were still willing to let new researchers look at their previously collected PHI without re-consent. However, as one anonymous reviewer of an earlier version of this paper observed, the public's lack of concern in this regard could be due to a naïve sense of security that is not shared by professionals who are more familiar with the manner in which PHI is managed on an ongoing basis within the healthcare system. Private citizens are not responsible to collect, store or share the PHI of other persons, and hence are likely not as concerned about their individual responsibilities vis-à-vis relevant legislation and regulations.

The high percentage of professionals who either disagree or were unsure of the appropriateness of sharing de-identified information for research purposes portends a rather chilly climate for health research. Inasmuch as it would be impractical to

get consent for much of the research conducted on de-identified PHI, professionals who are less inclined to grant access to de-identified information need to be better informed about the ethical standards in this regard, about the role of research ethics boards and about what constitutes acceptable practice according to current standards. However, it is noteworthy that a recent study indicates wide variation among research ethics boards on these matters as well (Willison et al. 2008).

In the spring of 2008, the Government of Newfoundland and Labrador introduced the *Personal Health Information Act*, which is expected to be proclaimed in 2009. The process leading up to the proclamation will be an opportune time for professional bodies to educate members and for the government to educate the public as to their respective rights and responsibilities under this legislation.

Previous research indicates the public is generally convinced that the benefits of access to PHI outweigh privacy risks (Bright 2007; Campbell et al. 2007). The results of the present study confirm that the public in general is not nearly as concerned about the sharing of their PHI for health research purposes as are various groups of professionals. This finding could be due to the fact that those professionals who collect and store PHI feel a special fiduciary responsibility for their patients/clients. Social workers, for example, often deal with highly sensitive information on some of the most vulnerable individuals and families, and thus may be particularly concerned.

We interpret the high percentage of neutral responses among professionals to indicate that often professionals are unsure of what is required of them. This finding was suggested by a number of comments received in the post-survey focus groups. One respondent commented that the consensus among his group was: "If in doubt, don't share." This position is congruent with a common observation in both the United States (National Academy of Sciences 2006) and the United Kingdom (Haynes et al. 2007) to the effect that those responsible for collecting and managing PHI simply are not clear on what is required of them. When a lack of familiarity with basic requirements for patient-based research is coupled with a heightened sensitivity to privacy issues due to various federal and provincial regulatory initiatives, the potentially negative impact on health research efforts could be significant. It is worth noting that members of the public generally did not give neutral responses.

Key recommendations of the study

RECOMMENDATIONS FOR GOVERNMENTS, DEPARTMENTS OF HEALTH AND COMMUNITY SERVICES, AND REGIONAL HEALTH BOARDS

A concerted, systematic effort must be made to educate the public about:

- health research in general and the respective roles of government, university, industry health professionals and research ethics boards in research;

- their privacy rights with regard to the uses of PHI in the context of currently existing privacy protections.

RECOMMENDATIONS FOR PROFESSIONAL ASSOCIATIONS

Professional associations should provide privacy training for health professionals to:

- remind them of the benefits of health research for improving patient care;
- alert them to their specific responsibilities vis-à-vis PHI and the requirements with regard to privacy and access;
- educate them about research guidelines and procedures, privacy standards, and the role of research ethics boards;
- instruct them about privacy-related legislation;
- provide information about the various levels and strengths of privacy protection

RECOMMENDATIONS FOR UNIVERSITIES

When training researchers and fostering research, universities must:

- ensure that all health researchers receive specific training with regard to the access, collection, use, maintenance, storage and disclosure of PHI;
- ensure that all health researchers are educated in research ethics policies and procedures and, in particular, the role of the research ethics board;
- promote the opportunity for additional research to gain a more in-depth understanding of health professionals' specific concerns and the implications for health research.

RECOMMENDATIONS FOR DATA GUARDIANS

Healthcare institutions and government agencies that hold PHI must:

- develop and maintain comprehensive security systems and procedures to address health professionals' legitimate concerns while balancing the equally legitimate need for access to PHI for research purposes.

Limitations of the study

The complex design of this study, which included seven target groups and three different survey methods, resulted in a number of methodological challenges. Consultation and pre-testing of survey questions with representatives of the target groups resulted

in revisions that increased the diversity of question wordings. The analysis of even some core questions was complicated by these differences. For example, some questions included a “not applicable” option and some did not. As well, certain questions elicited large numbers of neutral responses, which seemed to indicate lack of knowledge. Had this outcome been anticipated, a “don’t know” option would have been added.

Although it was possible for potential participants to be on two lists (e.g., pharmacist and faculty researcher) and thus to receive two questionnaires, there was no way to detect such duplication. The research team agreed it was unlikely that any such person would take the time to complete two questionnaires. Despite these and other challenges, we are confident of our results. Our study design included post-survey focus group consultations with target group members, which enabled us to clarify and confirm our interpretations of the survey data.

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Adverse Event Reporting for Herbal Medicines: A Result of Market Forces

Déclaration des effets indésirables associés aux médicaments à base de plantes médicinales : le résultat des forces du marché



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Abstract

Herbal products are readily available over the counter in health food stores and are often perceived to be without risk. The current Canadian adverse event reporting system suffers from severe underreporting, resulting in a scarcity of safety data on herbal products. Twelve health food store personnel in the Greater Toronto Area were interviewed about their responses to herbal product-related adverse reactions. They generally fostered customer loyalty by offering generous return policies, which included collecting contact information to be sent to the manufacturers with the returned product. Thus, despite the public's lack of knowledge about the formal reporting system, adverse reaction information was directed to manufacturers whenever it resulted in a product return. The relationship between health food stores, industry and Health Canada provides a new opportunity to facilitate adverse event reporting. Additional information could be collected during the return process, and educational initiatives could be implemented to augment current post-market surveillance procedures for herbal products.

Résumé

Les magasins de produits naturels offrent sans ordonnance des produits à base de plantes médicinales qui, souvent, donnent l'impression de ne comporter aucun risque. Au Canada, le système actuel de déclaration des effets indésirables présente un très faible taux de déclaration, ce qui se traduit par une insuffisance de données sur la sécurité des produits à base de plantes médicinales. Les employés de 12 magasins de produits naturels du Grand Toronto ont été interrogés sur leur réponse aux cas d'effets indésirables associés aux médicaments à base de plantes médicinales. En général, ils encouragent la fidélisation de la clientèle en proposant de généreuses politiques de retour, qui comprennent la collecte des coordonnées, lesquelles sont transmises aux manufacturiers avec le produit retourné. Ainsi, en dépit du manque de connaissance sur le système officiel de déclaration, l'information sur les effets indésirables est trans-

mise aux manufacturiers quand un produit est retourné. La relation entre les magasins de produits naturels, l'industrie et Santé Canada offre de nouvelles occasions pour faciliter la déclaration des effets indésirables. Des renseignements supplémentaires pourraient être récoltés au cours du processus de retour d'un produit, et des activités d'éducation pourraient être mises en place pour accroître la surveillance post-commercialisation des produits à base de plantes médicinales.



THE EXTENSIVE USE OF NATURAL HEALTH PRODUCTS (NHPs), SUCH AS vitamins and herbal medicines, is partially explained by a widespread belief that such products are “natural” and thus safe. Increasingly, it has become clear that NHPs, especially herbal medicines, can have adverse effects, including drug interactions (McNeill 1999; Pittler and Ernst 2003). However, relatively little is known about the adverse effects associated with herbal medicines.

Adverse drug reactions (ADRs) are defined as unintended consequences suspected to be related to the use of medicinal products, including herbal medicines (WHO 1995). Spontaneous reporting systems, such as the Canada Vigilance Program (previously named the Canadian ADR Monitoring Program), are used by many countries as a way of monitoring suspected ADRs. Voluntary reports of serious or unexpected ADRs and those associated with recently marketed products are particularly encouraged (Fletcher 1991). In Canada, physicians, pharmacists, other healthcare providers and consumers can submit reports for assessment to identify product safety concerns that require action, such as changes to product labelling or dosing, or removal from the market.

Although NHPs are widely used, few adverse reactions are reported to pharmacovigilance systems (Green et al. 2001; Barnes 2003; Health Canada 2007). It is well established that underreporting of suspected ADRs is an important limitation of spontaneous reporting systems (Rogers et al. 1988; Fletcher 1991; Mann and Andrews 2002). Low ADR reporting rates associated with prescription medicines are recognized as an international problem. It is generally accepted that less than 10% of adverse drug reactions are reported (Rogers et al. 1988; Moride et al. 1997; Alvarez-Requejo et al. 1998). Underreporting is likely to be greater for herbal medicines and other NHPs than for pharmaceutical drugs for several reasons. For example, healthcare professionals are often unaware of patients' NHP use (Barnes et al. 1998; Winslow and Shapiro 2002; Barnes 2003; NHPD 2005; Wheaton et al. 2005), how to identify adverse reactions associated with NHPs and what to report (Herdiero et al. 2004; Charrois et al. 2007). In Canada, NHPs have been categorized as medicinal products and regulated by Health Canada only since January 2004 (NHPD 2003). It is unclear whether the lack of ADR reports for NHPs suggests that they are truly

rare, or reflects a history of inadequate effort (in Canada and internationally) to encourage, collect and assess such reports.

Herbal medicines and other NHPs are available over the counter in Canada at community pharmacies, grocery outlets and health food stores, as well as from the Internet. The Canadian regulatory status of NHPs (i.e., non-prescription, non-pharmacy only) has provided an opportunity for health food stores to respond to public demand, and they now offer a wide selection of such products. There are approximately 2,700 health food stores (typically, retail outlets where at least 50% of stock comprises NHPs, health foods or both) across Canada, mostly in the provinces of Ontario, Quebec and British Columbia (CHFA 2005). These stores may be independently operated or belong to a retail chain with multiple outlets city- or nationwide. There are no legal requirements regarding educational background or training for staff; each store has different employment requirements, ranging from online courses or in-store training/mentoring to no training/experience requirements (Glisson *et al.* 2003; Mills *et al.* 2003).

Although health food stores are an important source of NHPs, their staff do not have a defined role in monitoring the safety of the medicinal products they sell (Healey *et al.* 2002). Rather, their business is providing health-related products, meeting customer demands and providing adequate customer service to remain viable in a competitive marketplace. In contrast, conventional healthcare professionals (e.g., doctors, pharmacists) are bound by professional and ethical standards to report serious or unexpected instances of suspected ADRs. In reality, however, many health professionals do not report, despite expectations to do so (Inman 1985; Alvarez-Requejo *et al.* 1998; Hazell and Shakir 2006).

One way in which health food stores remain competitive is by offering generous return policies for dissatisfied consumers to reduce the purchase risk of finding a good product match or a product of acceptable quality. Money-back guarantees can signal sellers' confidence in the quality of their products (McWilliams and Gerstner 2006). The economic rationale for return policies is that of warranty. Return policies insure customers against products about which they are uncertain, making risk-averse customers willing to pay for the product (Che 1996). With NHPs, uncertainty about product benefits and the wide range of product options may raise doubts for the consumer. This uncertainty, along with strong competition from other stores selling similar goods, provides a rationale for these return policies.

Against this background, this study examined the views of health food stores' staff on herbal product safety issues. The work forms part of a larger study also involving pharmacists and consumers who have experienced adverse reactions from NHPs. This paper explores how business incentives influence collection and reporting of adverse effect information in health food stores and how return policies may be related to store personnel's ability to respond to Health Canada's attempts to collect ADR information

associated with herbal products. Herbal products were specifically selected based on the increased risks associated with these products, compared with other NHPs.

Methods

Ethics approval was obtained at the University of Toronto. In-depth, semi-structured interviews were conducted with 12 health food store personnel by a single interviewer (RW) with extensive training in qualitative research methods. A purposive sample was chosen to include participants from independent and chain health food stores, from city and suburban areas as well as from different age and gender groups, and with varying retail experience. Participants from health food stores located in the Greater Toronto Area, identified from telephone directories, Internet listings and by word of mouth, were approached in person. Interviews were conducted until theoretical saturation of the key emerging themes was obtained (Creswell 1998). Interviews were audio-recorded, and field notes were handwritten during and immediately following the interviews. Interviews and field notes were transcribed and coded using content analysis techniques by two independent coders; disagreement was resolved through in-depth discussion. NVIVO 7 software was used to organize the data (Richards and Richards 2002). Data analysis and coding took place throughout data collection. The interview guide was updated and modified after the coding sessions to ensure more elaborate data collection in key emerging themes.

Results

The results of this study show that health food store personnel were unaware of the reporting system for ADRs. They also perceived and identified ADRs differently than does the medical community. When the ADR resulted in consumer dissatisfaction, however, the product was returned to the manufacturer, including a report of some type. Table 1 summarizes participants' demographic characteristics.

Generally, health food store personnel did not know that suspected herbal-related ADRs could be reported to Health Canada, whom to contact to report ADRs or which types of reactions should be reported.

Q: Are you familiar with the reporting system in Canada for side effects?
A: No. [interviewer explains] I didn't know about it at all. (#10)

Most participants described examples of "side effects" (a lay term for ADRs as defined by Health Canada) associated with NHPs that were reported by consumers. Store personnel considered predictable untoward responses, such as a niacin flush, or diarrhea from a "detoxification" product, as examples of possible ADRs about which

TABLE 1. Demographics of health food store personnel interviewed (n=12)

Interview	Gender	Position	Contact hours*	Years of experience	Training in natural health products	Type of store
1	F	Advisory staff	Part time	10 years	3 years formal training	Small chain
2	M	Manager	Full time	16 years	Self-study	Independent
3	F	Staff	Part time	3 years	3 weeks in-store training	Chain
4	M	Manager	Full time	5 years	6 months in-store training	Chain
5	M	Sales rep	Full time	11 months	Graduate student in healthcare	Chain
6	M	Advisory staff	Full time	9 years	2 years formal training	Independent
7	F	Owner	Full time	8 months	Self-study	Independent
8	F	Sales staff	Full time	7 months	6 weeks in-store training	Small chain
9	F	Sales staff	Part time	1 year	6 months formal training	Small chain
10	F	Owner	Full time	1.5 years	Self-study	Independent
11	F	Sales staff	Part time	3 years	Self-study	Small chain
12	F	Sales staff	Part time	2 years	3 years formal training	Independent

* Part time < 24 hours per week; full time ≥ 25 hours per week

they might inform consumers prior to purchase of the product. They reported that these “true” ADRs were rare. More common was a situation they described as NHPs that “did not agree” with or “did not suit” specific customers. This situation might manifest as an upset stomach or “uneasy feeling” after taking the product. Although these effects would be classified as ADRs by Health Canada, health food store personnel did not consider them cause for concern about the product per se. Rather, such incidents were conceptualized as a need to help the consumer find a better product “fit”:

I think I would take it back from them thinking that maybe it really didn't suit them and then I will ask them why, what happened to you? Why don't you feel that it suited you, or maybe I will tell them “why not try another one to see if it suits you.” In that way, I could guide them. (#8)

Health food store personnel described more serious symptoms, such as rashes, as the result of individual allergies, which they did not classify as ADRs. Often, store personnel would attribute “side effects” to inappropriate product use by consumers rather than ADRs (allergies, and effects associated with inappropriate use, are considered ADRs by Health Canada). Health food store personnel therefore perceived and

identified ADRs differently than the medical community. Participants stated that they commonly referred customers to their healthcare providers, or the product manufacturer, for more information if they suspected that a customer had a reaction.

Oh, I take it very seriously. I want to make sure that ... if it was really serious I would say "go and see your doctor," and if it was a side effect and I don't really know why [it happened] I would give them the phone number and the website to contact the company so that they can directly call them and double-check with them because they have to know that as well, and if they don't feel comfortable, I will call them myself with them there. (#10)

This example relates to another key theme that emerged from the data: the strong drive of health food store personnel to provide good customer service. Store personnel described the importance of developing and maintaining relationships with their customers, and this extended to provision of advice and information about NHPs. Health food store staff appear to encourage consumers to see them as a source of information about NHPs to help maintain customer loyalty.

You know, at the store level we have to be prudent to gain enough information about the dangers and risks of products to be able to guide the consumer, and they are, after all, looking at us for advice. (#2)

[Customers] want technical information, and they are looking to us as if we're naturopaths in a health food store, not sales associates in a health food store. (#12)

Another perceived component of providing good customer service was swift response to product dissatisfaction (possibly resulting from ADRs) by accepting returns. The return procedure included collection of customer contact information, subsequently submitted to the manufacturer in conjunction with the reason for the return in order to recoup retailer losses on the product. Health food store personnel had difficulty conceptualizing ADRs, and thus also had difficulty describing how they might respond if one occurred. They talked about how they would return products to the manufacturer and refund the cost if the customer were dissatisfied with the product for any reason:

Even if it is not a bad reaction ... you believe them and you refund it regardless, but just by their answers. You have to trust them; whether you believe it or not you have to return the product if they have a reaction, and then we just take their information and we contact the company and sometimes the com-

pany calls them back. [It happens about] once a week. (#9)

Thus, participants essentially reported ADRs to product manufacturers as a consequence of processing product returns. They described their continuing relationships with the manufacturers, in particular with staff answering questions about their products and the department that handles returns.

I know this company, because ... we buy many of their products. ... They give us very good information. Especially if they have enough time with you, they don't hurry you and they explain things and they also tell you things. You know, we are not doctors – they just advise [us], so they are very good. (#8)

Participants described how the return policy was used as a mechanism to generate customer loyalty and satisfaction by reducing the customer's perceived risk. The return policy was also used to evaluate a product's quality to help decide whether the store should continue to sell it.

We have a very good return policy, and we actually encourage people to give us the feedback: if they're not satisfied, we want to hear about it, because we might not carry the line in the future if there are problems with it. It helps us, and it helps us not to lose the customer as well, where some people, if they bought something [and] they have no recourse to get any money back or refund, they might just stop shopping at this location, or other locations, for that matter. Whereas if they come back here, well, we could encourage them to exchange the product or try something else that may be more to their liking, and that way we could have a satisfied customer that continues to come back. (#4)

The costs of the returned product can be recouped by the store that accepts the return from the customer only if the product is returned to the manufacturer with customer contact information and a reason for the return:

We write up a credit request from the company and we fax the company the credit request. We phone them and we email them and we put the paperwork together, and leave the product to be picked up by the company at some point. It is just pretty much a form that asks for return address, name, phone number, that sort of thing. (#11)

Health food store personnel considered manufacturers responsible for providing good-quality products.

Sometimes batch numbers are also messed up. We have had [product] recalls before. I would go with the company first. For sure, it would be the company's responsibility. (#6)

Discussion

Although health food store staff were unaware of the Canada Vigilance Program for reporting suspected ADRs, they learn of consumers' experiences of suspected adverse reactions associated with NHPs and they return products to manufacturers in cases where customers may have experienced them. The arrangement between health food stores and manufacturers regarding product returns raises the question of whether this process could be harnessed to improve ADR reporting for NHPs.

Financial incentives have been used to encourage health professionals to complete ADR reports, but it is not clear whether this approach improves the number and quality of such reports (Inman 1985). For health food store personnel, providing information to the manufacturer along with the return is the result of a financial incentive – recouping losses on returned products. In order to receive financial remuneration for their product costs, they provide consumer contact information and reason for the return. It is possible that this process could be expanded to facilitate submission of more information to the manufacturer by retailers, which the manufacturer could then use for ADR reporting to Health Canada. Additional information (such as other medications/products taken at that time, length of exposure to the product, a description of the reaction) would need to be incorporated into the return reports to allow them to be used as ADR reports. The manufacturer would then send the information to Health Canada, as is currently required under Canadian NHP regulations, as expedited reports for serious ADRs or, for non-serious events, in an annual summary. Given the close relationships between health food stores and industry, reporting of ADR information by retail staff to manufacturers would seem relatively straightforward to implement.

However, reliance on product manufacturers to submit reports of suspected ADRs to Health Canada has limitations. A key issue for pharmacovigilance for herbal medicines and other NHPs concerns the accuracy and comprehensiveness of manufacturers' ADR reports to Health Canada as part of their legal obligations. Regulatory changes have been implemented to ensure quality, safety and efficacy of NHPs. Safety information is particularly important for appropriate regulation of these products (NHPD 2003; Citizen Petition 2008; Harvey et al. 2008). Where manufacturers or licensees receive information on serious ADRs (those that require hospitalization, are life-threatening or result in significant disability or death), the NHP regulations (which are still being phased in) require them to provide Health Canada with case reports within 15 calendar days after becoming aware of the reactions (NHPD 2003). Licensees are also

required to prepare annual summary reports containing an analysis of all ADRs occurring for their products within the previous year. Because of the inherent conflict of interest, questions remain over whether all relevant reports are included and whether the information presented complies with Health Canada's requirements.

Another important limitation to submission of information to manufacturers is confidentiality. Manufacturers require a customer name and contact information as a measure of authenticity of the return. Health Canada's ADR reporting form, however, requires anonymity to ensure confidentiality of health information.

If submission of suspected ADR reports by health food stores to Health Canada via product manufacturers is not an ideal mechanism, how else might the information obtained by health food store staff reach the pharmacovigilance system? There are three ways in which retail staff could be more actively involved in reporting suspected ADRs associated with NHPs. On learning of adverse reactions or "problems" with herbal medicines or other NHPs, health food store staff could:

1. *Advise the purchaser to contact his or her doctor or pharmacist.* Study data suggest that this is happening to some extent. While this approach would direct purchasers to conventional healthcare professionals (who are generally trained in identifying ADRs and have a formal role in reporting them), there are still several barriers to a report's reaching Health Canada. For example, consumers appear to be hesitant to disclose use of NHPs to physicians and other conventional healthcare providers, particularly if they experience adverse effects associated with these products. In addition, the healthcare provider must recognize the symptoms as a suspected ADR, as well as follow through to complete an ADR report which is submitted to the Canada Vigilance Program. However, underreporting from healthcare professionals is a problem owing to lack of time or knowledge, or uncertainty about ADRs and the ADR reporting system (Sweis and Wong 2000; Herdiero et al. 2004; Hazell and Shakir 2006).
2. *Advise the purchaser to report the event directly to the Canada Vigilance Program,* possibly with the assistance of the customer's conventional healthcare provider or health food store personnel.
3. *Store personnel report the event to the Canada Vigilance Program on the purchaser's behalf.*

Options 2 and 3 have their own limitations. Health Canada would categorize reports from either health food store personnel or consumers as public or "lay" reports. While these reports may serve to improve signal detection on certain products, they may not have the detail or quality of information required, such as laboratory test results and accurate records of concomitant medications (although these details can also be missing from health professionals' reports). Healthcare providers are encour-

aged to submit all reports of suspected ADRs – it is not necessary for them to attempt to confirm causality nor to undertake intensive investigations of the events. However, the quality and completeness of ADR reports are important factors in Health Canada's ability to undertake causality assessments. Although some argue that patient ADR reports may be less likely to represent true reactions than are physician reports, large-scale reporting from laypersons (such as retail personnel) might be valuable for detection of symptomatic reactions to new drugs (Mitchell et al. 1988). For example, signals might be identified earlier when patient reports are included in the data analysis (Jarernsiripornkul et al. 2003; Hammond et al. 2007). Patient reports may be particularly important when little is known about the product and its use with other products, as is the case with many NHPs (Woo 2007). In fact, some research shows that consumer reports may be of higher quality than physician reports, with more complete descriptions of the event (Medawar et al. 2002; Medawar and Herxheimer 2004).

Another challenge is that health food store staff would need training in Health Canada's ADR reporting procedures. Training for health food store personnel varies widely, and staff are often untrained in disease recognition or medical terminology, making it difficult for them to assess whether a given return was actually associated with an ADR. False positives could be generated if customers exaggerate symptoms to receive refunds on purchased products. Additionally, suspected ADRs will be identified only if consumers attempt to return the products. Even if a system were devised to train health food store personnel in ADR recognition and completion of ADR reports, there is currently no way to enforce standards in the unregulated retail industry. Furthermore, there is no incentive for health food store staff to report ADRs directly to Health Canada other than contributing to protection of public health; thus, willingness to participate may vary.

Limitations

This study has some limitations. First, it involved only a small number of interviews. Nevertheless, participants varied in their demographic characteristics, and saturation of key themes indicates that additional interviews were unlikely to raise completely new views. Participants reported very similar return policies and gave similar answers regarding their knowledge about the Canada Vigilance Program. The highly focused research questions for the study (regarding perceptions of herbal ADRs and how they are handled) may also have contributed to early saturation of key themes after a small number of interviews (Guest et al. 2006).

Although the intent of the research was to ask participants primarily about herbal medicines, they interpreted the term more broadly and discussed perceptions related to all NHPs, implying that they would behave similarly regardless of the type of NHP associated with an ADR.

Conclusions and Policy Implications

Consumers utilize health food store personnel for information about NHPs and to make complaints about the products they are using. Store personnel, through business and economic incentives, are motivated to process returns for dissatisfied consumers and, in so doing, transmit ADR information to industry. Through the existing process, with certain caveats, there may be an opportunity to improve ADR monitoring by enhancing the detail of information collected. Educating health food store personnel about the ADR reporting system to facilitate their direct reporting to Health Canada, or at minimum, informing customers of the option to report to Health Canada, should be investigated.

This study has important policy implications for ADR reporting and post-market surveillance of NHPs. Encouraging health food store personnel to report NHP-related ADRs might be an important step in populating the Canada Vigilance Program database with valuable information. Increasing awareness of the ADR monitoring system within the NHP sector is an essential part of improving safety monitoring. Important next steps will be to ensure, through improved communication, that health-care providers and consumers understand the true degree of risk. Additionally, it is important to investigate how health food retailers react to an invitation to participate actively in NHP pharmacovigilance, including the quantity, quality and completeness of their submitted ADR reports. Health Canada will need to assess how best to use this new source of information for protection of public health.

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Gone South: Why Canadian Nurses Migrate to the United States

Déménager au sud : pourquoi le personnel infirmier canadien émigre-t-il aux États-Unis



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Abstract

The movement of Canadian nurses to the United States increased over the past decade and is an ongoing concern of health policy analysts. This study examines why Canadian nurses emigrate to the United States and whether there is interest in returning to work in Canada. A survey of Canadian-educated nurses in North Carolina showed that lack of full-time work opportunities played a key role in emigration. Focus groups of respondents revealed deep dissatisfaction with many aspects of nursing practice in Canada, particularly undervaluing of the profession. There is an urgent need for healthcare policy makers to explore what should be done to reduce the loss of this critical human resource.

Résumé

Le nombre d'infirmières et d'infirmiers canadiens qui s'installent aux États-Unis a augmenté au cours de la dernière décennie et constitue une préoccupation pour les analystes des politiques de santé. La présente étude se penche sur les raisons qui poussent le personnel infirmier à émigrer aux États-Unis et tente de voir si ces professionnels ont l'intention de revenir travailler au Canada. Un sondage effectué auprès du personnel infirmier qui a reçu sa formation au Canada et qui travaille en Caroline

du Nord montre que le manque de possibilités de travail à temps plein joue un rôle important dans l'émigration. Les groupes de discussion révèlent une profonde insatisfaction envers plusieurs aspects de la pratique infirmière au Canada, particulièrement en ce qui a trait à la sous-évaluation de la profession. Les responsables de politiques de santé devraient sérieusement examiner les mesures à prendre afin de réduire les pertes touchant cette importante ressource humaine.

INTERNATIONAL MOBILITY IS KNOWN TO CHARACTERIZE SOME HEALTHCARE professions (Buchan 2001), particularly nursing, which has been described as a “carousel” (Kingma 2006). Global nursing shortages create opportunities that give nurses the ability to move more easily between countries. Nurses have taken advantage of these opportunities to seek improved wages and working conditions abroad (Gamble 2002).

Increased mobility of the nursing workforce has generated concerns: one Canadian report stated that Ontario nurses were leaving to go to other jurisdictions or to jobs outside healthcare (Nursing Task Force 1999). The United States has been actively recruiting and employing foreign nurses for more than 50 years (Brush et al. 2004). Recent literature indicates that many hospitals across the United States are recruiting foreign nurses for the first time to address their staffing challenges (Brush 2008). Brush (2008) reports that 20.2% of foreign nurses entering the United States to work emigrate from Canada. Some authors have suggested that US hospitals, which employ the majority of expatriate Canadian nurses, favour Canadians because they do not experience language barriers or significant culture shock, and their education and training is comparable to that of US nurses (Elabdi 1996).

The US Health Resources and Services Administration (2004) has estimated that the United States will face a shortage of almost a million nurses by the year 2020. These numbers are staggering and affirm the urgency with which the United States is recruiting foreign-educated nurses to cope with its nursing shortage. At the same time, US immigration policy and individual state efforts to eliminate the Commission on Graduates of Foreign Nursing Schools (CGFNS) entrance examinations have facilitated foreign nurse migration (Brush and Sochalski 2007). As the rates of international nurse migration increase (Buchan et al. 2003) and, specifically, as Canadian nurses continue to migrate to the United States, the need for Canadian healthcare policy makers to act on the loss of nurses becomes more urgent to confront Canada's own nursing shortage. Although there is descriptive literature on global nurse migration, little primary research has been done to determine factors that contribute to emigration. There is also limited research on nurses' migration to specific areas of the United States. This study was aimed at addressing these research gaps by examining

why Canadian nurses emigrate to the United States, specifically to North Carolina, and whether they would be interested in returning to work in Canada in the future.

Method

This study was conducted over a four-month period – from February 1 to May 31, 2006 – using a mixed-method approach. First, a cross-sectional survey research design using a sample of all RN registrants from Canada working in North Carolina was obtained from the North Carolina Board of Nursing (NCBON), the registration body for the state's registered nurses (RNs) and licensed practical nurses (LPNs). Next, four focus groups were held with a random sample of 17 Canadian nurses employed in North Carolina to verify the survey findings.

This state was selected for several reasons. First, North Carolina has reciprocal licensure with Canadian nurses, a practice that facilitates the process for Canadian nurses to acquire licenses and obtain employment in the state. Second, North Carolina is one of five states that employ a large number of Canadian nurses, third only to Texas and Florida (CGFNS 2002). Third, North Carolina hospitals reported that Canada ranked third among countries from which they were actively recruiting the greatest number of RNs, behind India and the Philippines (NCCN 2004). Fourth, the NCBON biennial registration for the state's RNs includes extensive personal data and the state/country of basic nursing education; thus, the NCBON database is of high quality and current. Finally, the team of researchers assembled for this study has extensive knowledge of the United States and Canadian nursing workforces. Specifically, at the time of this study, three of the five researchers had studied the Canadian nursing workforce for many years, four had lived and worked in North Carolina and two had extensive experience studying the US nursing workforce.

Following institutional ethics review board approval, the NCBON provided mailing labels to the researchers for all registrants who obtained their nursing education in Canada, were licensed and were currently working in North Carolina. A total of 1,412 Canadian nurse registrants were surveyed; 678 nurses (48%) responded, of which 651 (46%) questionnaires were usable. The survey, developed by the study team of researchers following a systematic review of the literature on issues related to nurse migration, was pilot-tested for face and content validity with a group of eight Canadian nurses working in the United States to ensure the relevance of the data items. The survey comprised 28 items, with some forced-choice items requiring a "yes" or "no" answer (e.g., "Do you have any plans to return to work in Canada?") and other, open-ended items providing the opportunity for respondents to select more than one item (e.g., "Why did you come to North Carolina to work as a nurse? Please check [✓] as many responses as apply").

Survey items were grouped into four sections: (1) *emigrating to work in the United*

States: five items capturing the timing and reasons for the study nurses' migration to North Carolina, and the types of incentives that attracted them to the United States to work; (2) *current work characteristics*: nine items, including work setting, position, reasons for staying in the United States to work, work environment characteristics such as nurse-to-patient ratio, and supports in place for career development and ongoing education; (3) *returning to work in Canada*: six items, including plans to return to work in Canada, possible incentives for returning to work in Canada and the disincentives of returning to Canada to work; and (4) *demographic characteristics*: eight items.

All nurses who participated in the survey were asked to indicate their interest in participating in a focus group to be held at a later point in the study. Over 80 nurses indicated interest in participating in the focus groups, from which 20 were randomly selected by the research team. A total of 17 nurses, ranging in age from 22 to 58 years (similar to the age range of the sample from the study survey reported below), attended the one-hour focus group. To improve accessibility, enable a broad range of Canadian nurses to attend and minimize excluding nurses for reasons of geography, the focus groups were held in different areas of North Carolina. The majority of focus group participants were diploma-prepared, while a few held baccalaureate degrees. The participants were asked to describe their perceptions and elaborate on the preliminary study findings regarding the migration of Canadian nurses to North Carolina. Focus groups were taped, field notes were taken and transcripts were produced. The transcripts were reviewed using a set of codes to ensure consistent interpretation and reporting. Analysis of the data resulted in the identification of various themes.

Descriptive statistics were used to analyze the survey responses. The number of responses and the percentages are reported for the open-ended items. Analysis of variance (ANOVA) was conducted to determine any significant differences in responses between the nurses who indicated interest in returning to work in Canada and those indicating no interest. The results of the thematic analysis of the focus group data were simultaneously triangulated with the survey data. The process of simultaneous triangulation was well suited to this study because it permits the complementary use of qualitative and quantitative methods. The findings were integrated at the end of the study (Morse 1991).

Results

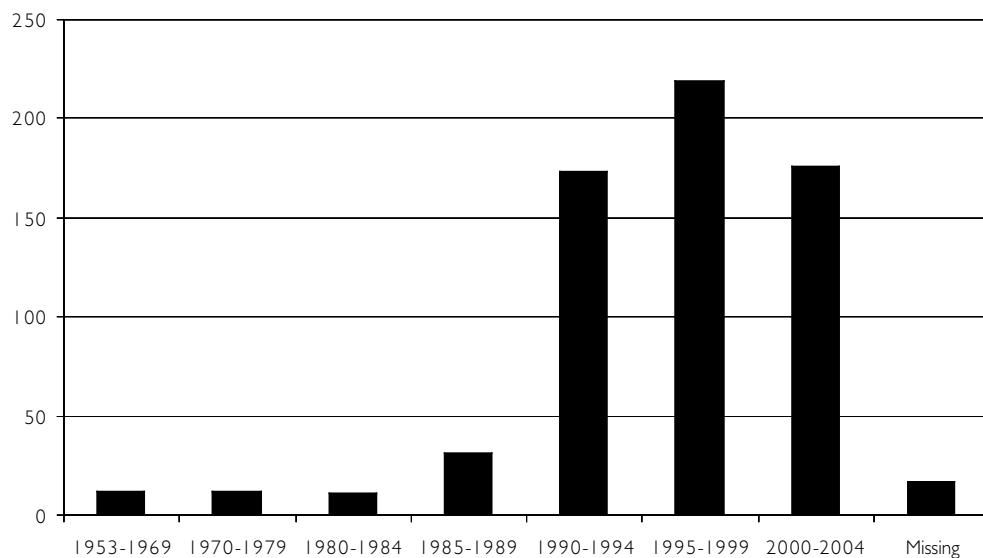
Table 1 shows the characteristics of the Canadian nurse sample responding to the survey and compares the study nurses to other nurses working in North Carolina and the United States at this time. All study respondents were registered nurses; most were relatively young, with half the sample younger than 40 years of age. Participants were also younger than the average nurse working in North Carolina and in the United States overall. A higher proportion of study participants were male compared to nurses work-

ing in North Carolina and elsewhere in the United States. Over half the sample held diploma certification, while close to one-third were baccalaureate-prepared. The proportion of baccalaureate respondents was similar to state and US averages, although a far greater number of Canadian than US diploma-prepared nurses was apparent in this survey. Although few respondents were enrolled in educational programs at the time of the survey, more Canadian-educated nurses were enrolled in ongoing education than their counterparts working in North Carolina and the United States overall. Over three-quarters of the sample were employed full time, with a few employed part time or in casual or contract positions. This number is slightly higher than North Carolina and US averages. Few of the respondents held more than one nursing position, similar to other nurses in North Carolina and the United States overall. Over three-quarters of the participants were employed in direct patient care roles; approximately two-thirds of North Carolina and US nurses overall held direct care roles.

When did Canadian nurses migrate to North Carolina?

Data from the participants in this study indicate that nurse migration from Canada to North Carolina escalated in the 1990s, peaked in the latter half of that decade and remained high early into the 21st century. Figure 1 demonstrates that 27% (n=173) of nurse respondents migrated to the United States between 1990 and 1994, followed by 34% (n=219) between 1995 and 1999 and 27% (n=176) between 2002 and 2004.

FIGURE 1. Timing of migration to North Carolina



Gone South: Why Canadian Nurses Migrate to the United States

TABLE 1. Characteristics of the study sample compared to US and NC nurses

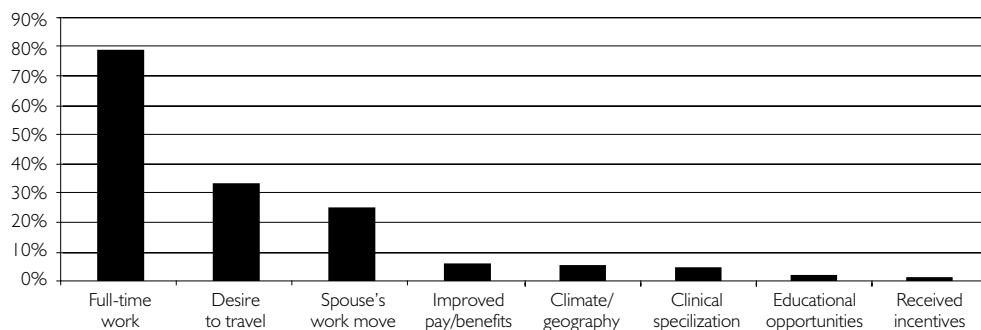
		Canadian nurses in North Carolina		Working United States nurses		Working North Carolina nurses	
		Number	Percentage	Number	Percentage	Number	Percentage
Sex	Male	65	10	1,792	6.3	39	6.4
	Female	586	90	26,640	93.7	573	93.6
	Not stated	0	0	3	<1	0	0
Age	<30	74	11	2,475	8.7	63	10.3
	30-39	255	39	5,664	19.9	150	24.5
	40-49	186	28	9,665	34.0	201	32.8
	50-59	102	16	8,116	28.5	150	24.5
	>60	24	4	2,387	8.4	48	7.8
	Not stated	10	2	157	<1	0	0
Highest educational preparation	Diploma	348	55	4,122	14.5	74	12.1
	Baccalaureate	201	31	9,948	35.0	198	32.4
	Master's	46	8	3,556	12.5	83	13.6
	Associate degree	35	5	10,481	36.9	248	40.5
	Doctorate	4	1	244	0.9	7	1.1
	Not stated	0	0	126	<1	2	<1
Enrolment in educational programs	No	551	85	26,088	91.8	579	94.6
	Yes	87	14	2,341	8.2	32	5.2
	Not stated	13	1	6	<1	1	<1
Work status	Full-time	516	79	19,802	69.6	470	76.8
	Part-time	67	10	8,596	30.2	142	23.2
	Casual/contract	56	9	N/A	N/A	N/A	N/A
	Not stated	12	2	37	<1	0	0
Number of employers	One	553	85	24,062	84.6	530	86.6
	More than one	89	14	4,373	15.4	820	13.4
	Not stated	9	1	0	0	0	0
Involvement in direct patient care	Yes	505	78	18,815	66.2	424	69.3
	No	146	22	9,267	32.5	180	29.4
	Not stated	0	0	353	1.3	8	1.3

Source: 2004 National Sample Survey of Registered Nurses, US Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Division of Nursing.

Why do Canadian nurses move to North Carolina?

When the participants were asked to indicate their rationale for moving to the United States, over three-quarters of respondents said they left Canada to obtain full-time RN employment (see Figure 2). One-third reported leaving Canada because of a desire to travel, while one-quarter migrated with a spouse or partner who moved to the North Carolina area. Fewer respondents identified improved pay and benefits, climate or geographical location, the opportunity to specialize in a specific field, educational opportunities or targeted incentives as reasons for leaving Canada. These findings are similar to those of a study of new nursing graduates from Atlantic Canada who identified greater job availability, full-time work, appropriate orientation, packages for job benefits and career development opportunities as the key factors that influenced their decision to migrate to the United States (Gillis et al. 2004).

FIGURE 2. Reasons for move to North Carolina



These findings were substantiated by focus group participants, who provided detailed examples of the challenges they faced seeking employment as a nurse in Canada. Focus group attendees overwhelmingly verified that their main reason for emigration to the United States was the lack of employment opportunities in Canada, in particular full-time nursing jobs.

The hospital I was working in was a very small hospital and it was basically someone had to retire or die for you to get a job because there weren't any openings. It didn't seem like there was ever going to be any openings, so we moved down here to gain full-time employment.

By the time I finished school there wasn't a job to be had, not one. The valedictorian of my class was offered a part-time position in Toronto and [for] the rest of us, there wasn't a job anywhere.

I went into nursing school knowing I was going to have to move to the States for a full-time job. My [relative] had done it ahead of me and when I finally

decided I was going to nursing school, I mean, I went into it knowing I was moving, highly doubting I was going to get a job in Canada. Then by the time I finished nursing school and figured out what area I wanted to work in, I knew I wasn't getting a job in Canada in that area. There had been people that had been working in the hospital at home for seven, eight years trying to get into that department and still hadn't been able to get in, so I packed up and left.

What are the incentives for working in North Carolina?

Close to two-thirds of study participants indicated that the opportunity for full-time employment was the key incentive that North Carolina hospitals used to recruit Canadian nurses. Other important incentives included relocation assistance, salary incentives, career advancement opportunities, innovative scheduling strategies, signing bonuses, educational subsidies and organizational reputation for good physician–nurse relationships. Many of the participants indicated that more than one incentive played a role in their decision to immigrate to the United States.

Focus group participants also discussed the incentives provided to Canadian nurses. For the most part, nurse participants capitalized on the main incentive offered by North Carolina healthcare organizations that was pushing Canada's nurses to the United States: the search for full-time employment. At the same time, North Carolina's interest in Canada's nurses contrasted starkly with the situation in Canada. While some nurses in the focus groups identified salary as an incentive for migrating, the majority described North Carolina's strong interest in and valuation of Canadian nurses as a human resource.

The fact that they offered you a full-time job, I mean, that makes you feel valued other than you're just this disposable person that they're going to call when they need you.

I didn't feel very valued as a nurse in Canada, it was just kind of like you're not even just a cog in the wheel, it was like you were really low man on the totem pole, so you didn't have a lot of respect as a nurse. But coming to the States, they really wanted you and they were very happy to have you here and you were valued and respected even if, you know, I didn't get my bachelor's or my master's until much later. Just the fact that you were a Canadian-educated nurse.

Well, they paid for a luxury apartment. I mean, they paid for everything. All I had to pay was my long-distance phone bill. So they paid the heating, they paid, you know, the basic phone bill.

Why have Canadian nurses stayed in North Carolina?

One-third of the respondents identified salary as a factor influencing them to continue to work in North Carolina, while close to one-third identified benefits as a factor. As well, attempts by management to accommodate nurse schedules, good relationships between physicians and nurses, mentorship and colleagueship among nurses, opportunities for continuing education, adequate staffing levels, management that listens to nurse concerns, opportunities for career advancement, and control over nursing practice were also cited as important retention factors.

Focus group participants provided a number of reasons for staying in the United States to work as a nurse. Again, while some nurses acknowledged salary as an important factor, most described respect for nurses and good relationships between management and staff nurses as influential factors keeping them in the United States. Several described opportunities provided by management for their professional development.

Part of it is the pay, but at the same time I need to know their [hospital] reputation in the way they treat nurses, how they handle conflicts ... with nurses, and I make decisions based on that. I look at the way they treat their nurses.

I have been encouraged to participate in our professional association locally and nationally. ... That makes you feel valued

Other subtle things, like being given the opportunity or being encouraged to present at a national level, to publish in a national journal, to do a poster presentation at a national level, just to be sort of pushed off a cliff to do that and then, you know, having the feeling of being published and ... just being proud of that.

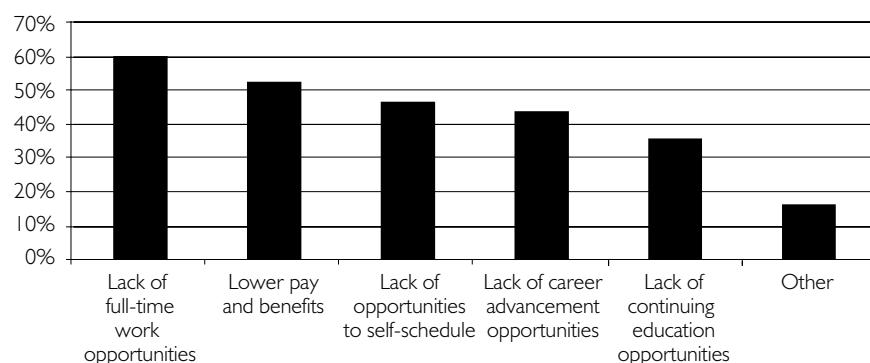
One of the big things I noticed when I came down here is back home there was a big separation between management and the employees. I would never back home have dreamed of going and knocking on my manager's door to discuss x, y, z either from a departmental standpoint or a personal issue. Now two, three times a week I'm knocking on my manager's door: "You'll never believe what just happened..." And it's an open-door policy; she wants to know, she's there, she reacts to it, she supports us. Everything that we had to do back home had to go through the union, had to be funnelled through the union. Management was scared to talk to us because of what it would do, you know, were they violating the collective agreement.

What are the disincentives for returning to work in Canada?

Figure 3 identifies five primary disincentives for Canadian nurses to return to Canada

to work. Almost two-thirds of respondents identified the lack of full-time work opportunities, and over half indicated lower pay and benefits. Lack of opportunity to self-schedule work hours and lack of career advancement opportunities were identified by just under half the participants, while two-thirds indicated lack of continuing education opportunities as a deterrent. These five disincentives clearly stand apart from the “other” category, which included climate, specific issues in the work environment and cost of living, all of which are more commonly held beliefs about Canadian nursing workforce migration behaviours.

FIGURE 3. Disincentives to return to work in Canada



Focus group participants expressed frustration with Canadian health human resources strategies related to the employment of nurses. Much of the discussion focused on the gap between management and staff in the Canadian healthcare environment.

Even though there's a nursing shortage ... administrators are being hired; nurses are being laid off. People are scrambling because they're always working two and three people short. They don't get breaks, don't get lunches, there's not enough staffing. They have laid off part-time people and they've hired casual retired people, and so people are still being laid off and can't get hours but they're hiring retired people to come back. So I don't understand why there's such a shortage when nurses are available to work.

I think when we were in Canada it was like they were doing us a favour by giving you a job, by hiring us. It was a big deal that we got the job, but here in the United States they wanted you, I mean, it was really a sense that they really wanted you. They needed you.

In Canada everyone has to work two weekends a month. What is that about?

Some people want to work weekends. You know, that whole shift idea is just obsolete here. You can do whatever you want, and that's a huge issue. People who want to work strictly weekends that have young kids and don't want to put them in daycare get to do that.

In Canada it was strictly a job because I never actually chose anywhere I could work – it was wherever anything is open, you jump in there. It doesn't matter if you like it or not, you need a paycheque, so you just work wherever.

Hospitals down here aren't prone to shutting down beds, you know, because that's their business.

Interest in returning to work in Canada

The vast majority of nurses responding to the survey who had migrated to North Carolina (72%, n=468) expressed no interest in returning to work in Canada. This finding was substantiated by participants in the focus groups.

I'm so angry with the Canadian government, I don't think I would go back from the way I was treated when I left. They didn't want me, well fine, somebody else did.

For me there [are] just no opportunities because last year about this time I looked into going back, and [for] the job offers that I did receive I would have to go back to rotating days, nights.

I feel like I've worked my way to where I am, worked very hard to have the reputation that I do and have a lot of people that I'm mentoring to blossom into other things in the department or in their professional careers. I enjoy something like that versus, let's say, going to a part-time position [in Canada].

I'm towards the end of my nursing career, so I wouldn't think about going back because I can call whenever I want to work, and if I want to work even less than that, I can.

On the other hand, close to one-quarter of respondents (23%, n=149) reported an interest in returning to work in Canada. Further analysis revealed statistically significant differences between nurses who indicated that they would be interested in returning to work in Canada and those who said they were not interested ($F=13.342$;

$df=627, 2; p=0.000$). Specifically, nurses who indicated an interest in returning to Canada to work were more likely to have migrated to the United States more recently. This finding is similar to that of a study of 51 new graduate nurses from Atlantic Canada, which reported that 35.2% returned to Canada to work (Gillis et al. 2004). Nurses participating in the focus groups provided further context regarding repatriation, discussing the logistical problems as well as the political or policy issues.

Canada needs to recruit us. They need to gear their marketing towards their Canadian nurses. I get offers on my computer every day: "We'll hire you for \$120,000 in southern California to do this." Every single day I get them. I don't even open them because I know I'll just get more.

It is a nightmare, I'm telling you. Everyone says to me, "How come you didn't go back?" People don't understand; in Canada, when you leave a job you don't have a job to go back [to]. I had nothing to go back to, so I had to stay.

I would go back if I could have a full-time job and the security that I have in my job right now. I would go back very easily.

Discussion and Policy Implications

This study provides evidence of both the timing and reasons for recent Canadian nurse migration to North Carolina, but it may also provide broader explanations of why Canadian-educated nurses work in the United States, in general.

First and foremost, Canadian-educated nurses moved to the United States, and specifically to North Carolina, in search of full-time employment. Although other factors were evident in the decision to move, they were not as important as full-time employment. Given that Canadian-educated nurses, like other professionals, invest years to acquire an education and absorb some of the associated training costs, it is only reasonable to expect that they would desire to practise professionally and seek full-time employment. When these opportunities are not available to them in Canada, many nurses may have no choice other than to search for employment in the United States.

Nurses in this study reported that a number of financial incentives – including relocation assistance, higher salaries and signing bonuses – helped to recruit them from Canada. As well, opportunities for career advancement and subsidies for continuing education were important recruitment incentives. Finally, participants identified specific organizational characteristics, including flexible and innovative scheduling systems such as self-scheduling, and the reputation of the organization for good physician–nurse relationships, as important recruitment factors.

Although financial incentives are a common recruitment and retention strategy, this study also highlights the importance of a hospital administration that supports and values its nurses. This finding is evidenced by flexible schedules that accommodate nurses' needs, career advancement and continuing education opportunities, adequate staffing levels, control over practice and managers who listen to nurses' concerns. An organizational climate that fosters good relationships with medical staff and colleague-ship and mentorship with peers are reasons for many of Canada's nurses to remain in the United States.

Most of the incentives to remain in the United States were also identified as disincentives to return to work in Canada. Of greatest importance was the perception that full-time work is not available. There is clearly a perception, founded or unfounded, that there may not be full-time employment available for nurses in Canada.

They think they're saving money, but what they're doing is they're devaluing a workforce and they continue to do that. How can you go back to Canada when there's no guaranteed security, even as a professional nurse?

At the same time, among a minority of respondents, specifically nurses who had migrated recently, there was some interest in returning to Canada to work. For this to occur, healthcare administrators and policy makers would need to create an environment that supports nurses' repatriation. The importance of healthcare leaders' focusing on creating healthy work environments in efforts to recruit and retain Canadian nurses has been highlighted in recent literature (Keatings 2006). A need has also been identified for policy makers in nursing to consider capacity-building mechanisms, including improvements in nursing work conditions, educational capacity, salaries, professional career development and enhanced roles in health policy and practice (Brush 2008).

Nurses must be reassured that they will have full-time employment, otherwise they will search elsewhere. Clearly, different signals need to be sent. A campaign needs to be mounted to send a strong message to Canadian nurses that they are wanted and needed in Canada's healthcare system, and that there are jobs available for them. Such an approach would require greater attention to long-term planning of human resources needs for nursing. In the past, approaches have lacked consistency and follow-through. Healthcare delivery organizations need to have some level of guarantee of ongoing funding so that their employees can be assured of predictable employment. In other words, there is a need to eliminate the boom-and-bust cycles of RN hiring and find a healthcare financing strategy that reduces the perpetual instability of RN employment cycles.

Nurse migration has been described as unchecked, uncoordinated and individualized, to the point where some countries benefit while others suffer (Brush et al. 2004).

One health economist has suggested that the nursing shortages being experienced in many Western countries reflects a failure by planners to recognize the increased intensity of nursing work and the associated stress and burnout (Armstrong 2003). If this is truly the case, then there is a great opportunity to undertake the challenge of changing the work environment for nurses and to assume a more global approach to nursing workforce planning. Are there aspects of professional practice in the United States that Canada could emulate? Are there opportunities for career advancement (e.g., clinical ladders, enhanced scope-of-practice models) that should be considered? Clearly, these questions must be explored and, if certain strategies are identified and adopted, the effectiveness of these approaches must be examined.

Limitations

This study utilized a purposive sample because it allowed the researchers to survey the population of interest – Canadian-educated nurses working in North Carolina. Because the findings do not represent all Canadian nurses working in the United States, they may not be generalizable beyond the specific population studied.

Conclusion

This study provides evidence about the reasons nurses chose to leave Canada to pursue nursing careers in the United States and their interest in returning to work in Canada. Although the survey provided the “hardest” evidence, some of the most poignant findings were obtained from the focus groups. The level of dissatisfaction and occasional anger expressed by focus group participants at the way they had been treated by hospitals, physicians, managers, unions and governments in Canada were striking. Although concrete issues, such as the lack of full-time work opportunities, were the most frequent topics of discussion, they were often accompanied by anecdotes, comments and asides indicating a lack of respect and an undervaluing of their work in Canada. These stories typically included examples of how the situation in the United States differs.

The exodus of Canadian nurses to the United States is long-standing and shows little inclination to slow. There is an urgent need for healthcare policy makers to be cognizant of the career interests of these nurses and to develop more effective strategies for enhancing recruitment and retention in the nursing profession.

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Office Home Care Workers' Occupational Health: Associations with Workplace Flexibility and Worker Insecurity

Santé au travail chez les employés de bureau dans les organismes de soins à domicile : liens avec la flexibilité en milieu de travail et la précarité d'emploi



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Abstract

Office home care workers provide support to visiting staff, although their work tends to be invisible in many respects. This paper focuses on managers, supervisors, coordinators, case managers and office administrative staff in home care. We examine the effects of workplace flexibility and worker insecurity on office home care workers' occupational health, particularly their self-reported stress and musculoskeletal disorders. Data come from our survey of 300 home care office staff in a mid-sized city in Ontario. Results show that workers' perceptions of insecurity are positively associated with musculoskeletal disorders but not workplace flexibility measures. We recommend that managers and other decision-makers in the home care field pay attention to the perceptions of workers' insecurity in initiating workplace flexibility measures.

Résumé

Les employés de bureau des organismes de soins à domicile offrent un soutien au personnel qui effectue les visites. Leur travail, cependant, passe souvent inaperçu. Le présent article porte sur les gestionnaires, les superviseurs, les coordonnateurs, les gestionnaires de cas et les employés de soutien administratif dans les organismes de soins à domicile. Nous avons examiné les effets de la flexibilité en milieu de travail et de la précarité d'emploi sur la santé au travail des employés de bureau, plus particulièrement le stress et les troubles musculosquelettiques signalés par eux-mêmes. Les données proviennent d'un sondage que nous avons effectué auprès de 300 employés de bureau des organismes de soins à domicile dans une ville ontarienne de taille moyenne. Les résultats montrent que les troubles musculosquelettiques sont directement associés à la perception en matière de précarité d'emploi, mais pas aux mesures de flexibilité en milieu de travail. Nous recommandons aux gestionnaires et autres décideurs du milieu des soins à domicile, qui veulent mettre en place des mesures de flexibilité en milieu de travail, de prêter attention aux perceptions des travailleurs.



FLEXIBLE AND INSECURE EMPLOYMENT ARE CHARACTERISTIC OF THE HOME care sector. The Canadian Home Care Human Resources Study (2003) reports a large percentage of part-time and casual workers among home support workers, home care nurses and therapists. There are, however, no similar figures available for

office home care workers. Although these people provide support to visiting care providers, their work tends to be invisible in many respects. Recent federal-level consultations (Dault et al. 2004), policy reports (Koehoorn et al. 2002), national-level roundtable discussions (CHSRF 2006) and policy meetings (HCC 2005) all report concerns about unhealthy work environments in healthcare and recommend studies to contribute to knowledge and provide information to policy makers on this important issue.

Musculoskeletal disorders are now a major occupational health problem for most workers, including home care workers (HCHSA 2003). Between 1996 and 2004 in Ontario, the province where this study took place, musculoskeletal disorders accounted for 42% of all lost-time claims and costs and 50% of all lost-time days (OHSCO 2007). Home care workers report high levels of stress (Denton et al. 2002), and their stress has consequences for musculoskeletal disorders (Kuorinka et al. 1995; Messing 1997; Zeytinoglu et al. 2000).

This paper focuses on stress and self-reported musculoskeletal disorders as occupational health problems of managers, supervisors, coordinators, case managers and office administrative staff in the home care sector. It examines the effects of workplace flexibility and worker insecurity on stress and musculoskeletal disorders. Stress is examined as a short-term consequence of workplace flexibility and worker insecurity, and is included as a mediating variable in our analysis of musculoskeletal disorders. We examine musculoskeletal disorders as the longer-term consequence of workplace flexibility and worker insecurity.

The topic of this paper and its focus are important and timely for several reasons. First, studies focusing on office home care workers' occupational health are rare. Second, recent literature reviews show that the association between workplace flexibility and worker insecurity variables and occupational health are not entirely clear (Quinlan et al. 2001; Virtanen et al. 2005). Our study clarifies the relationships among these factors. Third, although there are a variety of workplace flexibility strategies and resultant worker insecurities, most research focuses on a single type of workplace flexibility or worker insecurity (Burchell 2002). This study examines a large number of flexibility and insecurity factors. Fourth, this study took place at a time when home care was being restructured to a competitive, market-based model. There has been little research on the impact of this change on home care workers.

Workplace Flexibility, Worker Insecurity and Their Associations with Stress and Musculoskeletal Disorders

Conceptual models of musculoskeletal disorders (Kuorinka et al. 1995; Sauter and Swanson 1996) and the rich empirical research on the topic (Putz-Anderson et al. 1997; EASHW 2003) show a number of work-related physical, psycho-social and

individual factors such as heavy workload, repetitive work, hazards at work, lack of support at work, work injuries and stress that may lead to musculoskeletal disorders. This study builds upon the existing research and integrates employment contract factors of workplace flexibility and worker insecurity with established models of musculoskeletal disorders.

Flexibility can be achieved through hiring workers into non-permanent contracts, for part-time or casual hours, or hiring on call, in split shifts or in hourly pay with variable hours. While employers use workplace flexibility policies to achieve flexibility, workers experience them as insecure working conditions. Worker insecurity is a multi-dimensional concept, incorporating arbitrary dismissal or layoff; unregulated work environments; unstable or contingency-based pay; fragmented, shortened or irregular hours of work; and perceived labour market insecurities due to labour surpluses (Standing 1997). In addition, workplace flexibility and worker insecurity can be conceptualized as "objective" and "subjective" phenomena (see the discussion on job insecurity by De Witte and Näswall 2003). Objective phenomena refer to such characteristics of employment contracts as hours of employment. The subjective components include workers' perceptions of insecurity, for which there is no clear definition; most workers refer to a wider concept of insecurity (Burchell 2002). We expect workplace flexibility and worker insecurity to be associated with increased symptoms of stress and musculoskeletal disorders. We also expect stress to act as a mediating variable among flexibility, insecurity and musculoskeletal disorders.

Methodology

Sample and data collection process

The population of this study comprised all home care workers ($N=1,949$) in 11 organizations in a mid-sized city in Ontario. Data were collected using a self-administered questionnaire mailed to all workers in 2002. Those who had not returned their questionnaires by a specified date were mailed first a reminder card, and later a second letter and copy of the questionnaire. A total of 1,311 home care workers (67% response rate) responded to the survey, excluding those who could not be reached.

The sample for this paper was 300 office staff. Prior to collecting data, there was no information on the number of workers according to occupation; we learned of their occupation only when they responded to the survey. Thus, the response rate refers to the full sample.

Instrument and measures

A self-completion questionnaire on health and work life of home care workers was used in this study. The dependent variable was *self-reported musculoskeletal disorders*.

A musculoskeletal disorder scale (Zeytinoglu et al. 2000, as adapted from Kuorinka et al. 1987) was used. A sample question was: "Please indicate how often you had this in the past few months: pain or discomfort in your neck or shoulder." The responses were coded on a five-point Likert scale from 1 ("none of the time") to 5 ("all of the time"). The scale was developed by summing the scores of seven items, with higher scores representing more extensive musculoskeletal disorders. The descriptive statistics of the scale, including Cronbach's alpha (α) to determine the reliability of the scale items, appear in Table 1.

Independent variables were the objective measures of *workplace flexibility* and the subjective measures of *worker insecurity*. The objective measures included whether the employment contract was permanent; lost job when employer lost contract; work was full-time, part-time or casual hours; involuntary hours; salaried, paid per visit or hourly pay with variable hours (all coded as 1=yes, 0=no); and work on call, work split shifts (coded as "1=none of the time" to "5=all of the time"). The subjective measures of worker insecurity included perceived employment insecurity and labour market insecurity factors.

The employment insecurity scale was developed from Cameron and colleagues (1994) and was a summative measure consisting of six items: "I am presently safe from dismissal at this agency" (reversed in coding), "I feel I am likely to be laid off at this agency," "I am worried about my future with this agency," "I feel uneasy about the security in my present job," "I am worried about my job security" and "I am concerned about losing my job due to overall changes in the long-term care sector." Responses were coded as "1=strongly disagree" to "5=strongly agree." Confirmatory factor analysis (principal components factor analysis) with "varimax" rotation method was used to identify items composing the scale. Descriptive statistics of the scale are included in Table 1. The perceived labour market insecurity item was worded, "If I lose my job here I will likely find another job in my profession" (coded as "1=strongly disagree" to "5=strongly agree" and reverse coded).

Stress was first examined as a dependent variable and then used as the mediating variable in the musculoskeletal disorders analysis. Stress was measured using the symptoms of the stress scale described by Denton and colleagues (2002). A sample scale item was: "Not able to sleep through the night," coded on a Likert scale from 1 ("none of the time") to 5 ("all of the time"). It was developed by summing the scores of 14 indicators of stress. Confirmatory factor analysis was conducted on scale items.

Control variables were those identified in research as determinants of stress and musculoskeletal disorders including studies on home care workers (Denton et al. 2002; Zeytinoglu et al. 2000). The physical and psycho-social work environment factors were the "heavy workload" scale and "job is repetitious" item, and the psycho-social work environment factors were "organizational support" and "peer support"

TABLE 1. Office workers (N=300) – descriptive statistics (means, standard deviations and scale reliabilities [α])

Variable	Mean (SD) or %	Min-Max Value (Scale α)
Dependent variable: Musculoskeletal disorders	12.97 (4.50)	7–35 (0.78)
Independent variables: Objective flexibility factors:		
Non-permanent contract	17%	N/A
Lost job when employer lost contract	0.7%	N/A
Full-time hours	83%	N/A
Part-time hours	13%	N/A
Casual hours	4%	N/A
Involuntary hours	30%	N/A
Work on call	1.25 (0.56)	1–5
Work split shifts	1.02 (0.18)	1–5
Salaried	68%	N/A
Paid per visit	0.7%	N/A
Hourly pay with variable hours	30%	N/A
Subjective (perceived) insecurity factors:		
Employment insecurity	17.88 (5.76)	6–30 (0.90)
Labour market insecurity	2.20 (0.99)	1–5
Mediating variable: Stress	31.87 (7.66)	14–70 (0.86)
Control variables:		
Heavy workload	25.13 (5.62)	7–35 (0.91)
Job is repetitious	2.71 (1.07)	1–5
Organizational support	30.65 (8.34)	9–45 (0.85)
Peer support	16.18 (2.73)	4–20 (0.84)
Work injuries in past year	7%	N/A
Age	44 (9)	N/A
Job title: Manager, supervisor, coordinator	36%	N/A
Job title: Office staff (other)	36%	N/A
Job title: Case manager	28%	N/A

scales (summative Likert scale with each scale item coded as 1=strongly disagree to 5=strongly agree). Individual factors included work injuries in the past year (coded as 1=yes, 0=no), age (measured by years of age) and job title (manager, supervisor or coordinator group, office staff and case managers; each as 1=yes, 0=no). All of these factors are explained in detail elsewhere (Denton et al. 2002; Zeytinoglu et al. 2000).

Analysis

Descriptive statistics, bivariate regression and hierarchical ordinary least square (OLS) regression were conducted. The equal interval assumption was used for Likert-scale measurement of the dependent variable. Two methods were used to reduce missing data in the analyses. With respect to each item in the scales, missing values were coded to the mean; for dichotomous variables, missing values were coded to 0. In most cases, missing values comprised less than 5% of the responses.

In the hierarchical regression, first the control variables were entered. These were followed by the flexibility and insecurity measures that were found to be significant in the bivariate analysis. In the full model for musculoskeletal disorders, stress was included as the mediating variable and was tested following Baron and Kenny's (1986) method. We provided adjusted R^2 to show the variance explained by factors included in each model, and change in R^2 to show the additional variance explained by including new variables. We conducted a separate analysis excluding those subjects with diagnosed musculoskeletal disorders. Their results were substantially similar to the full sample.

Demographic characteristics of the respondents

The majority of home care workers in this study were female (94%), also characteristic of the industry. The average age was 44 years. About one in five (19%) were immigrants. Most respondents were married or living with a partner (77%), and the rest were widowed, divorced, separated or never married. A large proportion had a relatively high level of education: 44% had postgraduate or bachelor's degrees, 43% had some university courses or a college degree or diploma and the rest (10%) had some college courses, a high school diploma or lower. In terms of occupational distribution, 36% were managers, supervisors or coordinators, 36% were support staff and 28% were case managers.

Results

There was a moderate level of musculoskeletal disorders among office workers (see Table 1). In terms of workplace flexibility factors, 17% held non-permanent contracts; the percentage of workers who previously lost their job when the employer lost the

contract was small; a substantial majority of the workers were full-time, with just a small percentage in part-time or casual hours. Close to one-third of employees worked involuntary hours, and a small percentage worked on call or split shifts. A good majority were salaried, but about one in three earned hourly pay with variable hours. A moderate level of employment insecurity and labour market insecurity was perceived by fewer than one in ten. Stress was high, and symptoms were common everyday experiences for workers.

Bivariate regression coefficients are presented in Tables 2 and 3. None of the workplace flexibility measures were significantly associated with stress, but work on call was significantly and negatively associated with musculoskeletal disorders (although at a low level of significance). The subjective (perceived) employment insecurity was significantly and positively associated with stress, and labour market insecurity was significantly and positively associated with stress and musculoskeletal disorders.

Turning to multivariate regression results, as presented in Table 2, controlling for other factors, only employment insecurity was significantly and positively associated with stress. Magnitudes of standardized coefficients (beta) of these variables show that heavy workload, followed by employment insecurity, were significant contributors to stress. The model explains about 30% of the variance in office home care workers' stress. As for the musculoskeletal disorders results, controlling for other factors, labour market insecurity was significantly and positively associated with musculoskeletal disorders. All other flexibility and insecurity factors were not significant. The model explains 16% of the variance in office home care workers' musculoskeletal disorders.

In the full model, controlling for other factors, stress was significantly and positively associated with office workers' musculoskeletal disorders. The magnitude of the standardized coefficients show that stress was the most important factor, followed by perceived labour market insecurity, in contributing to office home care workers' musculoskeletal disorders. The full model, including stress, explains 28% of the variance in office home care workers' musculoskeletal disorders, with 12% of that attributed to stress. The results in Table 2, taken together with those in Table 3, show that controlling for other factors, employment insecurity was fully mediated through stress in its association with musculoskeletal disorders.

Discussion and Implications

Based on the literature review, we expected to find a positive association between objective workplace flexibilities, stress and musculoskeletal disorders. However, results did not show such associations for office home care workers. There are several possible reasons for this finding. A majority of office home care workers are not directly affected by workplace flexibilities, and thus results may not show associations. It is also possible that some workers accept workplace flexibility measures as an expected

TABLE 2. Stress as a short-term consequence of workplace flexibility and worker insecurity (bivariate regressions and hierarchical OLS regressions)

Variables	Bivariate regression coefficients	Full regression model
	B (SE)	B (SE)
Constant		26.692 (3.678)***
Independent variables: Objective flexibility		
Permanent contract	2.056 (1.183)	
Lost job when employer lost contract	2.649 (5.442)	
Full-time hours (ref)	1.601 (1.176)	
Part-time hours	-1.300 (1.315)	
Casual hours	-3.754 (2.347)	
Involuntary hours	1.026 (0.962)	
Work on call	-0.453 (0.428)	
Work split shifts	-0.149 (1.096)	
Salaried	1.415 (0.949)	
Paid per visit	0.132 (5.444)	
Hourly pay with variable hours	-1.678 (0.959)	
Subjective (perceived) insecurity		
Employment insecurity	0.373 (0.074)***	0.307 (0.073) ***
Labour market insecurity	1.014 (0.445)*	0.203 (0.387)
Control variables		
Heavy workload	0.501 (0.073) ***	0.352 (0.072)***
Job is repetitious	0.404 (0.414)	
Organizational support	-0.380 (0.048) ***	-0.149 (0.056)**
Peer support	-0.482 (0.160) **	-0.369 (0.144)*
Work injuries in past year	6.077 (1.663)***	3.596 (1.461)*
Age	0.010 (0.048)	
Job title: Manager, supervisor, coordinator	-1.869 (0.917)*	-0.228 (0.910)
Job title: Office staff (ref)	-1.538 (0.921)	
Job title: Case manager	3.858 (0.957)***	2.607 (1.042)*
Adj. R ²		0.296
N	300	300

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Office Home Care Workers' Occupational Health

TABLE 3. Musculoskeletal disorders as a longer-term consequence of workplace flexibility and worker insecurity (bivariate regressions and hierarchical OLS regressions)

Variables	Bivariate regression coefficients	Regression with control & independent variables	Full model with stress included
	B (SE)	B (SE)	
Constant		5.325 (2.244)*	-5.38 (2.228)
Independent variable: Objective flexibility			
Permanent contract	-0.319 (0.698)		
Lost job when employer lost contract	4.053 (3.187)		
Full-time hours (ref)	0.752 (0.691)		
Part-time hours	-0.888 (0.772)		
Casual hours	-1.106 (1.382)		
Involuntary hours	1.040 (0.563)		
Work on call	-0.584 (0.249)*	-0.299 (0.265)	-0.289 (0.245)
Work split shifts	-0.086 (0.643)		
Salaried	-0.251 (0.559)		
Paid per visit	2.542 (3.193)		
Hourly pay with variable hours	0.113 (0.566)		
Subjective (perceived) insecurity			
Employment insecurity	0.093 (0.045)	0.098 (0.047)	0.025 (0.045)
Labour market insecurity	0.798 (0.259)**	0.632 (0.250)*	0.586 (0.231)*
Control variables			
Heavy workload	0.149 (0.046)**	0.100 (0.047)*	0.016 (0.045)
Job is repetitious	0.912 (0.237)***	0.673 (0.230)**	0.769 (0.213)***
Organizational support	-0.085 (0.031)**	0.025 (0.034)	0.073 (0.032)*
Peer support	0.092 (0.095)		
Work injuries in past year	4.24 (0.967)***	3.186 (0.942)**	2.213 (0.881)*
Age	0.037 (0.028)		
Job title: Manager, supervisor, coordinator	-1.917 (0.530)***	-1.301 (0.633)*	-1.239 (0.585)*
Job title: Office staff (ref)	0.474 (0.542)		

TABLE 3. Continued

Job title: Case manager	1.640 (0.569)**	0.389 (0.664)	-0.165 (0.618)
Stress	0.265 (0.030)***		0.247 (0.034)***
Adj. R^2		0.155	0.279
R^2		0.180	0.303
Change in R^2			0.123
N	300	300	300

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

employment condition in this sector, and thus results may not show significant associations with stress and musculoskeletal disorders. Further, some workers may actually choose to work in flexible employment conditions to suit their lifestyle; because this is their choice, it does not contribute to stress or musculoskeletal disorders.

For the subjective insecurity factors, workers' perception of insecurity contributed to stress, and stress, in turn, affects musculoskeletal disorders. The fear that they could easily be replaced by other workers in the field (i.e., perceived labour market insecurity) also contributes to musculoskeletal disorders.

Limitations

There are several limitations of our study. First, because home care falls under provincial jurisdiction, home care services delivery and organization vary from province to province. Even within provinces, home care services delivery can vary regionally (Wilson et al. 2007). Our research is therefore limited in that it is a cross-sectional study of one city in Ontario, and findings are therefore not generalizable to the larger population of home care workers. Future research would benefit from comparison studies with other areas of Ontario and other Canadian provinces.

Second, it is possible that those with higher levels of work-related health problems were more likely to respond to our survey because they were more interested in the topic. However, biases seem unlikely given the high response rate. Third, some might argue that this study is limited by the self-reported nature of musculoskeletal disorders and stress measures. Given our objective of focusing on working conditions rather than biomechanics in the workplace, self-reported measures should be acceptable.

Conclusion

We can conclude from this study that objective workplace flexibilities are not the most significant determinant of occupational health; rather, how workers feel about their

employment conditions is significant. While some employees may not be concerned, others are very concerned with their job and labour market security. This finding is important for understanding why workers in similar working conditions report different outcomes in terms of stress and musculoskeletal disorders.

In order to prevent occupational health problems, we recommend that policy makers address the issue of employment and labour market insecurity in the home care field. Future research is recommended to examine the consequences of workplace flexibility and worker insecurity for the individuals, their workplaces and society as a whole.

ACKNOWLEDGEMENTS

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“

I never teach my pupils; I only attempt to provide the conditions in which they can learn."

- Albert Einstein

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RESEARCH PAPER

**The Gatekeeper System and Disparities in Use of Psychiatric Care by Neighbourhood Education Level: Results of a Nine-Year Cohort Study in Toronto****Système de contrôle d'accès et disparités dans l'utilisation des soins psychiatriques selon le niveau de scolarité : résultats d'une étude menée sur une cohorte, à Toronto**

LEAH S. STEELE, RICHARD H. GLAZIER, MOHAMMAD AGHA

AND RAHIM MOINEEDIN

Abstract

Background: In Ontario, psychiatric care is fully covered by provincial health insurance without co-payments or deductibles. The provincial fee schedule supports a “gatekeeper” system for psychiatric care by paying psychiatrists more for consultations with patients who have a physician referral. In this context, we sought to explore socio-economic differences in patterns of mental health service delivery.

Method: We employed a retrospective cohort design using administrative and census data from 1995 to 2004. Subjects were 1,448,820 adults in Toronto with no physician mental healthcare in the previous three years. We determined time-dependent differences by sex and neighbourhood education quintile for the time to first mental health visit, time to the first mental health visit with a family physician or general practitioner (FP/GP), referral time from the FP/GP to a psychiatrist and the time to the first mental health visit with a psychiatrist.

Results: Relative to the lowest neighbourhood education group, individuals in the highest neighbourhood education groups were less likely, and took longer, to have a first visit to a FP/GP, but once seen were more likely, and took less time, to be referred to a psychiatrist. The highest education group was more than twice as likely to see a psychiatrist without a FP/GP referral and took less time to do so than the lowest education group.

Conclusions/Discussion: The patterns of care we found suggest three major conclusions: (1) that a significant portion of psychiatric service users in our setting bypass the gatekeeper function of the FP/GP; (2) that social inequities are particularly marked when the gatekeeper role of the FP/GP is bypassed; and (3) that even within the gatekeeper system there is evidence of inequity in referral patterns and referral times. New models of mental healthcare delivery or adjustment of the current model may be needed to redress these disparities.

Résumé

Contexte : Les soins psychiatriques en Ontario sont entièrement couverts par le régime d'assurance maladie de la province, et ce, sans franchise ou participation aux coûts. La grille tarifaire prévoit un système de contrôle pour les soins psychiatriques en versant une somme plus élevée aux psychiatres dont les visites des patients ont été recommandées par un médecin. Dans ce contexte, nous avons étudié les différences socioéconomiques dans les modèles de prestations de services de santé mentale.

Méthodologie : Nous avons employé un modèle de cohorte rétrospective en consultant des données administratives et des données issues de recensements, de 1995 à 2004. Les sujets étaient 1 448 820 adultes de Toronto qui n'avaient pas eu recours à des services de santé mentale au cours des trois années précédentes. Nous avons déterminé les différences chronologiques, en fonction du sexe et des quintiles du niveau de scolarité du quartier, pour le temps d'une première consultation en santé mentale, pour le temps de la première consultation en santé mentale auprès d'un médecin ou omnipraticien, pour le temps entre la recommandation par l'omnipraticien et la consultation auprès du psychiatre, et pour le temps d'une première visite chez le psychiatre.

Résultats : En comparaison au groupe le moins scolarisé, les individus appartenant au groupe le plus scolarisé sont moins susceptibles d'avoir une première visite chez l'omnipraticien et prennent plus de temps avant de le faire. Cependant, une fois qu'ils ont effectué la visite, ils ont plus de probabilités d'obtenir une recommandation pour le psychiatre, et ce, plus rapidement. Le groupe le plus scolarisé est deux fois plus susceptible de visiter un psychiatre sans recommandation de l'omnipraticien, et ce, plus rapidement que le groupe le moins scolarisé.

Conclusions/Discussion : Le modèle de soins que nous avons dégagé nous porte à tirer trois conclusions principales : a) une grande partie des utilisateurs de services psychiatriques de notre étude contournent la fonction de contrôle exercée par le médecin ou l'omnipraticien; b) les iniquités sociales sont particulièrement marquées quand la fonction de contrôle de l'omnipraticien est contournée; et c) même dans le cadre du système de contrôle, on observe une iniquité dans les modèles et les temps associés aux recommandations. Afin de réduire ces disparités, il faudrait penser à ajuster les modèles actuels ou concevoir de nouveaux modèles de prestation pour les services de santé mentale.

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RESEARCH PAPER



Forecasting the Need for Dialysis Services in Ontario, Canada to 2011

Prévision des besoins en services de dialyse jusqu'en 2011 en Ontario, Canada

ROBERT R. QUINN, ANDREAS LAUPACIS, JANET E. HUX, RAHIM MOINEDDIN,
MICHAEL PATERSON AND MATTHEW J. OLIVER

Abstract

Careful projections of the demand for dialysis services are important to assist healthcare planners in forecasting the need for equipment, facilities and personnel. We used time series techniques to model the historical incidence and prevalence counts and to forecast the predicted number of patients requiring dialysis in the province of Ontario to 2011. We showed that the incidence and prevalence of dialysis patients continues to grow rapidly. More importantly, traditional definitions of "chronic dialysis" capture only 52% of all incident patients and ignore the acute dialysis population. Projections about the need for dialysis services based on these definitions may result in underestimation of the resources required to care for the end stage-renal disease (ESRD) population.

Résumé

Une projection consciente de la demande pour les services de dialyse est cruciale pour aider les planificateurs de la santé dans leurs prévisions en matière d'équipement, d'installation et de personnel. Nous avons employé la technique des séries chronologiques pour créer un modèle de l'incidence et de la prévalence et pour prévoir le nombre de patients ontariens qui auront besoin de services de dialyse jusqu'en 2011. Nous démontrons que l'incidence et la prévalence en matière de dialyse continuent de croître rapidement. De plus, la définition traditionnelle de la « dialyse pour les cas chroniques » ne correspond qu'à 52 % de toutes les incidences et ne tient pas compte des cas de dialyses d'urgence. Les projections qui se fondent sur cette définition pourraient mener à une sous-estimation des ressources nécessaires pour traiter les cas d'insuffisances rénales terminales.

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RESEARCH PAPER



Breadth, Depth and Agreement among Provincial Formularies in Canada

Étendue, profondeur et concordance des listes provinciales de médicaments, au Canada

STEVE MORGAN, GILLIAN HANLEY, COLETTE RAYMOND AND RÉGIS BLAIS

Abstract

Background: Previous studies have concluded that there is significant variation in drug coverage across Canadian provinces because conventional measures of inter-rater reliability for formulary listings are low. We sought to investigate whether conventional methods are appropriate for formulary concordance measurement by testing the hypotheses that (a) conventionally measured variations in provincial formularies are driven by disagreement over large numbers of drugs that represent very small segments of the market and (b) patterns in coverage levels and agreement across therapeutic categories might provide evidence of “potentially legitimate” variation in provincial formularies.

Methods: We studied December 2006 formulary listings for general pharmacare programs in all but the smallest Canadian province. We characterized formularies in terms of the simple percentage of all available drugs that were listed on them and by a similar percentage that weighted each drug by its total national retail sales during 2006. We measured agreement among formularies using conventional inter-rater reliability scores (Kappa statistics) and a simple coverage-agreement measure.

Results: Provincial formularies studied here listed between 55% and 73% of the 796 drugs analyzed. When formulary listings were weighted by national retail sales, the measure of formulary coverage exceeded 86% in all provinces studied. Conventional inter-rater reliability scores (Kappa statistics) indicate that coverage agreement among most provincial formularies was low to moderate; however, drugs that were listed on all nine provincial formularies studied accounted for 77% of total retail spending in Canada. When analyzed by therapeutic category, the extent of coverage offered was relatively consistent across provinces in all but three leading categories: anti-migraine drugs, anti-dementia drugs and sedatives.

Conclusion: While variations in coverage for specific drug classes and drug products remain important areas for investigation and policy consideration, Canada is currently operating with a significant “implicit national formulary” by way of the fact that provincial formularies independently yet mutually list most of the top-selling medicines in the marketplace.

Résumé

Contexte : Des études antérieures ont conclu qu'il y a des variations significatives dans la couverture pour les médicaments entre les provinces canadiennes, et ce, parce que les mesures conventionnelles du coefficient d'objectivité pour les listes de médicaments sont faibles. Nous avons cherché à savoir si les méthodes conventionnelles sont adéquates pour mesurer la concordance des listes, en vérifiant les hypothèses suivantes : a) les variations mesurées de façon conventionnelle sont influencées par la divergence d'un grand nombre de médicaments qui représentent une petite portion du marché; et b) les modèles pour la couverture et la concordance des catégories thérapeutiques peuvent fournir des éléments justifiant une variation « potentiellement légitime » entre les listes provinciales de médicaments.

Méthodologie : Nous avons étudié les listes de médicaments du mois de décembre 2006 pour les programmes généraux d'assurance médicaments dans toutes les provinces canadiennes, sauf la plus petite. Nous avons caractérisé les listes selon le pourcentage de chacun des médicaments listés et selon le pourcentage de chacun des médicaments en fonction du total de ses ventes au détail au cours de 2006.

Nous avons mesuré la concordance des listes en utilisant les résultats du coefficient d'objectivité (statistique Kappa) et en effectuant une simple mesure entre la couverture et la concordance.

Résultats : Les listes provinciales examinées comprennent entre 55 et 73 % des 796 médicaments analysés. Si les listes de médicaments sont pondérées en fonction de la vente au détail à l'échelle nationale, la mesure de la couverture pour les listes dépasse 86 %, dans toutes les provinces étudiées. Les résultats conventionnels du coefficient d'objectivité (statistique Kappa) indiquent que la concordance de la couverture pour la plupart des listes provinciales est de faible à modérée. Cependant, les médicaments listés pour les neuf provinces étudiées correspondent à 77 % du total des dépenses pour la vente au détail, au Canada. Si on procède à une analyse selon les catégories thérapeutiques, l'étendue de la couverture offerte est relativement cohérente d'une province à l'autre dans toutes les catégories, sauf les trois suivantes : les antimi-graineux, les médicaments antidémence et les sédatifs.

Conclusion : Bien que les variations pour la couverture de certains produits ou classes de médicaments sont des sujets importants pour la recherche et les politiques, on observe, au Canada, la présence d'une « liste nationale implicite », puisque les listes provinciales contiennent de façon indépendante, bien que mutuelle, la plupart des médicaments les plus vendus sur le marché.

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RESEARCH PAPER

**Le renforcement de l'interface entre les services de santé publique et de première ligne : enjeux et pistes de solution****Reinforcement of the Interface between Public Health Services and Primary Care: Issues and Solution Ideas**

DANIEL PAQUETTE ET DANIEL REINHARZ

Résumé

Le développement de liens étroits entre la santé publique et les services cliniques, notamment ceux offerts par les médecins de famille œuvrant en première ligne, est prôné dans tous systèmes de santé occidentaux. On suppose que les collaborations formant une telle interface ont des impacts positifs à la fois sur la qualité des soins, sur le fardeau des maladies et sur l'équité dans le système de santé. Si les acteurs des deux domaines admettent le bien-fondé de l'interface et favorisent en principe son développement, plusieurs barrières nuisent aux collaborations dans la réalité. Or, peu est connu sur ces barrières dans le système de santé québécois. Cette étude vise à répondre à ce manque d'information en étudiant l'interface à partir d'une perspective organisationnelle. Deux cadres conceptuels ont été utilisés, soit la typologie de Lasker (1997) et les archéotypes de Hinings et Greenwood (1988).

L'analyse met en évidence deux des six formes de collaboration proposées par la typologie utilisée, soit la coordination des services aux individus et la mise à profit des rencontres cliniques pour les fins de la santé publique. Les activités associées à ces formes de collaboration, qui sont importantes en égard au mandat de la santé publique, comportent un intérêt essentiellement pour la santé publique et sont déterminées en pratique unilatéralement par cette dernière. En outre, le manque de coordination des activités qui impliquent une collaboration avec les médecins constitue un obstacle au développement de telles activités en créant des irritants pour les médecins. Il y a donc, dans le système de santé québécois, des possibilités de développement de l'interface là où la collaboration se fait également au profit du travail clinique et là où elle tient compte des contraintes du milieu clinique.

Abstract

The development of close relationships advocated public health and clinic services, particularly those provided by primary care family physicians, is supported in all western healthcare systems. Collaborations leading to such interface are supposed to have

positive impacts on the quality of care, the burden of diseases and the equity in the healthcare system. If players in both fields accept the relevance of the interface and support in principle its development, there are still many barriers that impede the collaborations in reality. That said, little is known about the barriers in the Quebec healthcare system. The purpose of this study is to answer to this lack of information by studying the interface from an organizational perspective. Two conceptual frameworks have been used: the Lasker's typology (1997) and the Hinings and Greenwood archetypes (1988).

The analysis highlights two of the six forms of collaboration proposed by the typology used: the coordination of services provided to individuals, and the use of clinic visits for the purpose of public health. Activities associated to these forms of collaboration, which are important with regard to the public health mandate, are of interest essentially for public health and are practically unilaterally determined by public health. Moreover, the lack of coordination in activities involving a collaboration with physicians is an obstacle for the development of such activities and generates irritants for the physicians. Thus, in the Quebec healthcare system there are opportunities for the development of the interface when the collaboration occurs also at the benefit of the clinic practice and where it takes into account the constraints of the clinic sector.

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