HEALTHCARE

POLICY
Politiques de Santé

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

Volume 19 • Number 1

Economic Evidence for Home and Community Care Investment: The Case for Ontario Personal Support Workers' Wage Parity

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E-Mental Health Services in Canada: Can They Close the Access Gap?

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Reforming Paediatric Drug Regulations in Canada: A Clinical and an Access Imperative

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Enterprise Healthcare Physician Services in Canada: An Environmental Scan

SHERYL SPITHOFF AND LANA MOGIC

Data Matters • *Discussion and Debate* • *Research Papers*

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HEALTHCARE
POLICY
Politiques de Santé

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

VOLUME 19 NUMBER 1 • AUGUST 2023

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.

* * *

Politiques de Santé/Healthcare Policy 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 *Politiques de Santé/Healthcare Policy* 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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Professor, Department of Health Administration, Faculty of medicine, Université de Montréal
Researcher, Groupe de recherche interdisciplinaire en santé (GRIS), Montréal, QC

SABRINA WONG, RN, PhD, FAAN
Faculty, Centre for Health Services and Policy Research;
Professor, UBC School of Nursing,
Vancouver, BC

CONTRIBUTING EDITORS
STEVEN LEWIS
President, Access Consulting Ltd., Saskatoon (temporarily in Melbourne, Australia); Adjunct Professor of Health Policy, Simon Fraser University, Burnaby, BC

EDITORIAL DIRECTOR
DIANNE FOSTER-KENT
dkent@longwoods.com

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Professor of Public Policy and Management, Professor of Political Science, Yale School of Management, New Haven, CT

VICENTE ORTÚN
Economics and Business Department and Research Center on Health and Economics (CRES), Pompeu Fabra University, Barcelona, Spain

ROBIN OSBORN
Vice President and Director, International Program in Health Policy and Practice, Commonwealth Fund, New York, NY

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Professor Emeritus and Dean Emeritus, Faculty of Nursing, University of Toronto, Toronto, ON

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LONGWOODS PUBLISHING CORPORATION

PUBLISHER & CEO
MATTHEW HART
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REBECCA HART
rhart@longwoods.com

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dkent@longwoods.com

ASSOCIATE PUBLISHER, CAREERS & WEB
SUSAN HALE
shale@longwoods.com

ASSOCIATE PUBLISHER, CUSTOMER SERVICE & ADMINISTRATION
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bmarshall@longwoods.com

PRODUCTION MANAGER & SOCIAL MEDIA COORDINATOR
SUSMITA DEY
sdey@longwoods.com

DESIGN
BEN HARRIS

CREATIVE
ERIC HART

* * *

HOW TO REACH THE EDITORS AND PUBLISHER
Telephone: 416-864-9667; fax: 416-368-4443

ADDRESSES
All mail should go to: Longwoods Publishing Corporation, 260 Adelaide Street East, No. 8, Toronto, Ontario M5A 1N1, Canada.

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

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Healthcare Policy/Politiques de Santé is published four times per year by Longwoods Publishing Corp., 260 Adelaide St. East, No. 8, Toronto, ON M5A 1N1, Canada. Manuscripts are reviewed by the editors and a panel of peers appointed by the editors.

Longwoods Publishing was founded by Publisher Anton Hart (1946–2022).

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

ISSN No. 1715-6572
eISSN No. 1715-6580

Publications Mail Agreement No. 40069375

EDITORIAL

Reversing the Stigma around Canada's Poor-Performing Healthcare Systems

RECENT STATISTICS REPORT THAT HEALTHCARE SPENDING GROWTH IS PERSISTENTLY high; in recent years, spending growth exceeded 5% (CIHI 2022). Some portion of the outsized growth can be attributed to the COVID-19 pandemic, though the cause is irrelevant. High spending growth in the healthcare sector is not a good prospect for taxpayers or for education and social programs competing for the same pot of money. Spending is important, but it is not the only attribute for measuring the success of our provinces' and territories' efforts to fund healthcare services that maintain or improve their populations' health.

Access to care and the quality of that care are important indicators of performance. Unfortunately, for Canadians, performance on these indicators is also not highly regarded. The oft-cited Commonwealth Fund data recently noted that Canada has the dubious ranking of the tenth lowest-performing health system of the 11 countries examined (Schneider et al. 2021). To borrow a hockey catchphrase, how do governments' health systems get out of the penalty box and make the substantial reforms needed to stop performing so poorly?

In my opinion, governments need an aggressive multi-pronged strategy to catch up with the performance of other countries' health systems. Canadians should not continue to accept slow and incremental gains through low-intensity policies or "value veneers" (Batniji and Shrank 2023; Pandey et al. 2023). A well-funded strategy for improving health system performance would apply policies in a number of key areas simultaneously to address underlying factors (Drummond et al. 2023).

Social Care

To improve health system performance, reforms must expand outside healthcare. Reforms should include provincial and territorial social care systems that affect their residents' health and well-being. Not addressing residents' social determinants of health, such as poverty or homelessness, will perpetuate clogged emergency departments and overreliance on acute care.

Poverty is an acute problem when provincial and territorial healthcare delivery systems include many private providers whose services and products cause out-of-pocket costs to the patient. Physician and hospital care are free for most Canadians, yet mental healthcare services, vision or hearing technologies and mobility aids are not. The economically disadvantaged should not be forced to choose between high-quality diets or accessing needed drugs, mental health services and mobility aids.

With rising rates of episodic and chronic homelessness, stable high-quality housing is a precious and precarious commodity for some provincial and territorial residents. Person-centred care with consistency is challenging in these contexts and is associated with preventable emergency department visits and hospitalizations. Provincial and municipal governments need new housing policies – beyond affordability – that reflect health and well-being outcomes.

Delivery System

Provincial and territorial delivery systems are managed in silos that prioritize physical healthcare. This has created incentives for optimizing within but not across silos of care. New policies are needed that support people with complex physical and mental healthcare or social care needs across sectors, providers and settings.

Successive governments' failures to update the *Canada Health Act* (1985) for modern modalities of healthcare have exposed glaring gaps in provincially insured health services. Delisting of healthcare services, which occurred with physiotherapies, shifted the financial burden from the provinces or territories to their residents' financial resources. This created disparities in access to uninsured services, therapies and technologies according to financial status.

There have been few expansions of insured health services. The private-pay market for accessing services offered by mental healthcare providers, dietitians or occupational therapists contributes to disparities in health according to wealth. New policies are needed to extend provincial and territorial public insurance programs to improve access to physical and mental health services, drugs and technologies that improve health and well-being. The need is acute among subpopulations disadvantaged by the built-in inequities of accessing care.

The delivery system should focus on strengthening team-based primary care. Many residents cannot access a family doctor to manage their physical and mental health needs (Flood et al. 2023). The statistics support this claim: the Canadian Institute for Health Information (CIHI n.d.) reports that most Canadians are unable to access a family doctor when needed, and The College of Family Physicians of Canada (2023) reports that approximately 20% of Canadians are without a family physician. Policies that support access to primary and team-based models of care need to be expanded.

Health Human Resources

The COVID-19 pandemic laid bare significant shortcomings with provinces' and territories' management of their health human resources. Other than streamlining foreign-trained licensure and improving labour mobility, there are few quick fixes available to remedy existing shortages of skilled health professionals. The shortage and maldistribution of skills exacerbate delays in accessing care, such as waitlists for specialist consultation and surgery (Nagase et al. 2022). To attract and retain current and future healthcare professionals in all sectors, provinces and territories need new policies aimed at training programs, remuneration, work culture, extending scopes of practices and well-being.

Data and Information

Fragmentation of health data between providers and settings is a well-known problem in Canada. Lack of process and infrastructure means that important data regarding function or symptoms are not shared between physiotherapists, mental health professionals or private homecare providers and primary or secondary care providers. As articulated elsewhere, policies are needed to share data between sectors and extend further into community healthcare providers' settings (Expert Advisory Group 2022).

Provincial and territorial health systems are criticized for not collecting data that are meaningful to patients and their caregivers. The current focus on administrative and payment data misses key information regarding recovery goals, symptoms and caregiver burden. New mandates are needed to collect patient-reported outcome and experience data in order to align healthcare services with residents' preferences for treatment.

Payment Policy

The way that governments pay healthcare providers has an effect on their activities. For instance, hospitals manage their global budgets, which causes them to ration care. With the modest exceptions of partial capitation payments for primary care in several provinces and limited fee-for-service hospital payment in several provinces, for several decades there have been no significant changes in the methods that governments use to pay for the healthcare services that they remunerate (McKillop et al. 2001).

Reforms to the ways healthcare providers have been remunerated have been proposed in a number of countries. These significant reforms propose payment policies that create financial incentives for efficiency and improving health outcomes and moving away from paying per input, such as fee for service (Pandey et al. 2023; Struijs et al. 2012; Wise et al. 2022). While the concept of payment reform is not new to Canada (Drummond et al. 2023; Sutherland and Hellsten 2017), policy development, implementation and execution have fallen flat. Provinces and territories need to align their payment policies with the population-based health outcomes they seek to achieve.

Measurement and Evaluation

An organization with independence and access to existing and new streams of data is needed to provide stimulus to improve provinces' and territories' health systems' performance. The activities of the organization would include setting performance targets for provincial health systems, comparing provinces on the pace and effectiveness of their reforms – not unlike the Health and Welfare Commissioner of Quebec (Government of Québec 2023a, 2023b) – or providing technical support and advice. Progress on improving performance could be aligned with federal financial or non-pecuniary incentives for provincial and territorial governments or their healthcare provider organizations.

Canadians should not continue to accept their provinces' and territories' health systems ranking near the bottom of the league tables. Overly timid policies have not been effective over the past several decades. It is time for leadership and thoughtful coordinated policies that focus on improving health system performance.

In This Issue

This issue of *Healthcare Policy* is led by a Discussion and Debate article, which highlights wage disparities faced by personal support workers based on whether they work in publicly funded long-term care homes or home and community care settings. Drawing from statistics demonstrating acute needs for attracting labour to home and community care settings, Zagrodney et al. (2023) describe the implications of setting-neutral wage parity policies. The authors conclude that funding policies that improve wages for personal support workers would help stabilize and potentially expand the home and community care workforce.

A rejoinder to the article goes further and describes a need to increase wages and extend wage parity policies across a broader array of settings and industries (Kokorelias et al. 2023). Based on a broad array of evidence, the rejoinder describes a competitive labour market in which the home and community care sector competes for personal support workers with non–healthcare-related industries. Kokorelias et al. (2023) argue that a broader perspective to wage parity is needed to attract and retain home and community care workers and wages are an important signal of the value given to the profession.

This issue's second Discussion and Debate article describes significant barriers to accessing mental health services in the community (Gatov et al. 2023). The article reports that e-mental health services may be a promising approach to help address the gap in access, although expansion of e-mental health services should beget investments in enhancing digital literacy and competency in order to support equitable access.

The rejoinder to the above-mentioned article emphasizes the history of underfunding mental health services and the challenges patients encounter in attempting to access mental healthcare (Goldbloom and Gratzer 2023). The rejoinder points out that there are other treatment modalities that can complement e-mental health services. Goldbloom and Gratzer (2023) conclude that public investments in mental health services should be increased and coupled with better accountability for well-being outcomes.

A third Discussion and Debate article describes how Canada does not have paediatric drug provisions and lags behind many countries in requiring paediatric safety and efficacy data in new drug submissions (Moore Hepburn et al. 2023). Arguing that the unique physiological and pharmacological needs of children have been underserved, the article calls for expanding the authorities of Health Canada to mandate manufacturers to provide paediatric data with all new drug submissions.

A rejoinder to this article emphasizes the neglected state of paediatric drug provisions in Canada (Lewis 2023). This gap in the drug approval process may have caused some paediatric patients to miss out on treatment benefits and also has been associated with dosing uncertainty. Lewis (2023) points to possible policy options for Health Canada, which would align Canada with other countries.

The Data Matters article highlights the prevalence of healthcare services offered by employers to employees in Canada through third-party corporations (Spithoff and Mogic 2023). The objective of the study was to report on the characteristics of the "enterprise" platforms. The study found that millions of Canadians have access to physician services through the platforms and many offer same-day virtual visits with physicians. Spithoff and Mogic (2023) conclude that these platforms offer tiered access to physician services and may have deleterious effects on continuity of care.

The first manuscript in Research Papers focuses on evaluating whether provincial and territorial governments have quality targets for their health systems (Chan et al. 2023). Based on documentation analyses, the study reports whether ministries of health or their health authorities have targets, baseline measures and time-based changes and whether they issue progress reports on healthcare quality. The study finds that most jurisdictions do not establish quality targets though there are exemplars that provide clear objectives and targets.

The second manuscript in Research Papers explores vaccine hesitancy (Memedovich et al. 2023). Based on a cross-sectional survey of Canadian residents, the study explored residents' reasons for receiving COVID-19 vaccines. The study found that the most common reason for remaining unvaccinated was the speed with which the vaccines were developed. Based on the results, the study concluded that adherence to the full-length traditional drug approval process is non-negotiable for some Canadians.

The final research study in this issue assesses factors associated with declining per capita family physician visits (Lavergne et al. 2023). Based on population-based administrative data from British Columbia, the study measured factors associated with service volume and physician visits. The study found that increasing levels of service use have exceeded the expected levels attributed to population aging. The study concluded that family physicians may have experienced increases in activities associated with care coordination.

Conclusion

We invite readers of articles and manuscripts to provide feedback to the journal. The journal also welcomes new submissions or suggestions for special topics. Please contact the editorial team to share your ideas.

JASON M. SUTHERLAND, PhD
Editor-in-Chief

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ÉDITORIAL

Renverser la stigmatisation à l'égard des systèmes de soins de santé canadiens peu performants

SELON LES STATISTIQUES RÉCENTES, LA CROISSANCE DES DÉPENSES DE SANTÉ EST toujours élevée; au cours des dernières années, elle a dépassé 5 % (ICIS 2022). Une partie de cette croissance démesurée peut être attribuée à la pandémie de COVID-19, mais la cause n'est pas pertinente. Une forte croissance des dépenses dans le secteur de la santé n'est jamais une bonne perspective pour les contribuables ou pour l'éducation et les programmes sociaux qui se disputent les mêmes fonds. Les dépenses sont importantes, mais ce n'est pas le seul facteur qui permet de mesurer les efforts des provinces et territoires visant à financer des services qui maintiennent ou améliorent la santé des populations.

L'accès aux soins et leur qualité sont, quant à eux, d'importants indicateurs de performance. Malheureusement pour les Canadiens, le rendement de ces indicateurs n'est pas non plus très apprécié. Les données souvent citées du Fonds du Commonwealth montrent que le Canada se classe au dixième rang, parmi 11 pays étudiés, pour ce qui est du rendement du système de santé (Schneider et al. 2021). Pour reprendre une expression propre au hockey, comment les systèmes de santé gouvernementaux pourront-ils quitter le banc des pénalités afin d'effectuer les réformes substantielles nécessaires et cesser d'afficher un si mauvais rendement?

À mon avis, les gouvernements auront besoin d'une stratégie dynamique à plusieurs volets pour rattraper le rendement des systèmes de santé d'autres pays. Les Canadiens ne devraient plus accepter des gains lents et progressifs obtenus grâce à des politiques de faible intensité ou plaquées d'un « vernis de pacotille » (Batniji et Shrank 2023; Pandey et al. 2023). Une stratégie bien financée pour améliorer le rendement du système de santé devrait sans doute apporter des politiques simultanément dans un certain nombre de domaines clés afin d'aborder les facteurs sous-jacents (Drummond et al. 2023).

Soins sociaux

Pour améliorer la performance des systèmes de santé, les réformes doivent s'étendre au-delà des soins de santé. Elles devraient inclure les systèmes de soins sociaux provinciaux et territoriaux qui ont une répercussion sur la santé et le bien-être des populations. Ne pas tenir compte des déterminants sociaux de la santé, comme la pauvreté ou l'itinérance, ne fera que nourrir l'engorgement des services d'urgence et accentuer la dépendance envers les soins de courte durée.

La pauvreté devient un sérieux problème quand un système de soins de santé provincial ou territorial comprend de nombreux fournisseurs privés dont les produits et services sont payés à même la poche des patients. Les soins médicaux et hospitaliers sont gratuits pour la plupart des Canadiens, mais les services de santé mentale, les technologies de la vision ou de l'ouïe et les aides à la mobilité ne le sont pas. Les personnes économiquement défavorisées ne devraient pas se voir obligées de choisir entre un régime alimentaire sain ou l'accès aux médicaments nécessaires, aux services de santé mentale et à l'aide à la mobilité.

Compte tenu de l'augmentation des taux d'itinérance épisodiques et chroniques, les logements stables et de qualité constituent un bien précieux et précaire pour certains. Prodiguer des soins cohérents et axés sur la personne devient difficile dans ce contexte, et cela mène à des hospitalisations ou à des visites aux urgences qui seraient autrement évitables. Les gouvernements provinciaux et municipaux doivent mettre en place de nouvelles politiques de logement – au-delà des questions d'abordabilité – qui reflètent les résultats en matière de santé et de bien-être.

Système de prestation

Les systèmes de prestation provinciaux et territoriaux sont gérés en silos qui accordent la priorité aux soins de santé physique. Cela a créé des incitatifs pour optimiser les soins à l'intérieur des silos, mais pas à l'extérieur. De nouvelles politiques sont nécessaires pour soutenir les personnes ayant des besoins complexes en matière de soins de santé physique et mentale ou de soins sociaux, et ce, dans tous les secteurs et contextes ainsi que pour tous les types de fournisseurs.

Les échecs successifs des gouvernements à mettre à jour la *Loi canadienne sur la santé* (1985) afin de moderniser les soins de santé font voir des lacunes flagrantes dans les services de santé assurés par les provinces. La radiation de certains services, comme ce qui a eu lieu pour la physiothérapie, a placé le fardeau financier des provinces et des territoires dans les mains des citoyens. Cela a donné lieu à des disparités, selon la situation financière de chacun, en matière d'accès aux services, aux thérapies ou aux technologies non assurés.

Il y a eu peu d'expansion des services de santé assurés. Le marché privé des services offerts par les professionnels de la santé mentale, les diététistes ou les ergothérapeutes, contribue aux disparités de santé selon la richesse. Il faut de nouvelles politiques pour élargir les programmes d'assurance publique provinciaux et territoriaux afin d'améliorer l'accès aux services de santé physique et mentale, aux médicaments et aux technologies. Le besoin est pressant parmi les sous-populations défavorisées par les inégalités inhérentes à l'accès aux soins.

Le système de prestation devrait se concentrer sur le renforcement des soins primaires en équipe. De nombreux résidents n'ont pas accès à un médecin de famille pour gérer leurs besoins en santé physique et mentale (Flood et al. 2023). Les statistiques appuient cette affirmation : l'Institut canadien d'information sur la santé (ICIS s.d.) signale que la plupart des Canadiens sont incapables d'avoir accès à un médecin de famille au besoin. Pour sa part, le Collège des médecins de famille du Canada (2023) signale qu'environ 20 % des Canadiens n'ont pas de médecin de famille. Il faut élargir les politiques qui favorisent l'accès aux modèles de soins primaires et en équipe.

Ressources humaines en santé

La pandémie de COVID-19 a révélé d'importantes lacunes dans la gestion des ressources humaines en santé des provinces et des territoires. Outre la rationalisation du processus d'autorisation pour les personnes formées à l'étranger et l'amélioration de la mobilité de la main-d'œuvre, il existe peu de solutions rapides pour remédier aux pénuries actuelles de professionnels qualifiés. La pénurie et la mauvaise répartition des compétences aggravent les retards dans l'accès aux soins, comme les listes d'attente pour une consultation ou une chirurgie chez un spécialiste (Nagase et al. 2022). Pour attirer et retenir les professionnels de la santé dans tous les secteurs, les provinces et les territoires ont besoin de nouvelles politiques qui visent les programmes de formation, la rémunération, la culture de travail, l'élargissement des champs de compétences et le bien-être.

Données et informations

La fragmentation des données sur la santé entre les fournisseurs et les établissements est un problème bien connu au Canada. Le manque de processus et d'infrastructure signifie que certaines données importantes sur la fonction ou les symptômes ne sont pas partagées entre les physiothérapeutes, les professionnels de la santé mentale ou les fournisseurs de soins à domicile privés et les fournisseurs de soins primaires ou secondaires. Comme on l'a expliqué ailleurs, des politiques sont nécessaires pour permettre le partage des données entre les secteurs et s'étendre davantage aux contextes des fournisseurs de soins de santé communautaires (Comité consultatif d'experts 2022).

Les systèmes de santé provinciaux et territoriaux sont critiqués pour ne pas recueillir de données significatives pour les patients et leurs soignants. L'accent mis actuellement sur les données administratives et les données sur les paiements ne contient pas de renseignements clés sur les objectifs de rétablissement, les symptômes et le fardeau des aidants naturels. De nouveaux mandats seront nécessaires pour recueillir les résultats et les données sur l'expérience des patients afin d'harmoniser les services de santé avec les préférences de la population en matière de traitement.

Politique de paiement

La façon dont les gouvernements rémunèrent les prestataires de soins a un impact sur leurs activités. Par exemple, les hôpitaux gèrent des budgets globaux, ce qui les amène à rationner les soins. Outre la modeste exception des paiements par capitation partiels pour les soins primaires et du paiement à l'acte des services hospitaliers dans plusieurs provinces, il n'y a eu aucun changement important depuis des années dans les méthodes utilisées par les gouvernements pour la rémunération des services de santé (McKillop et al. 2001).

Des réformes pour la rémunération des prestataires de soins ont été proposées dans un certain nombre de pays. Ces réformes importantes proposent des politiques de paiement qui créent des incitatifs financiers pour l'efficience et l'amélioration des résultats en matière de santé et qui délaissent le paiement par intrant, comme la rémunération à l'acte (Pandey et al. 2023; Struijs et al. 2012; Wise et al. 2022). Bien que l'idée d'une réforme des paiements ne soit pas nouvelle au Canada (Drummond et al. 2023; Sutherland et Hellsten 2017), l'élaboration, la mise en œuvre et l'exécution des politiques stagnent. Les provinces et les territoires doivent harmoniser leurs politiques de paiement avec les résultats qu'ils tentent d'obtenir en matière de santé axée sur la population.

Mesure et évaluation

Une organisation indépendante et ayant accès aux flux de données existants et nouveaux est nécessaire pour stimuler l'amélioration du rendement des systèmes de santé des provinces et des territoires. Les activités de l'organisme pourraient comprendre l'établissement d'objectifs de rendement pour les systèmes de santé provinciaux, la comparaison entre les provinces sur le rythme et l'efficacité de leurs réformes – un peu comme le Commissaire à la santé et au bien-être du Québec (gouvernement du Québec 2023a, 2023b) – ou encore la mise en place d'un soutien technique et de conseils. Les progrès en matière d'amélioration du rendement pourraient s'harmoniser avec les incitatifs financiers ou non pécuniaires fédéraux pour les gouvernements provinciaux et territoriaux ou leurs organisations de soins de santé.

Les Canadiens ne devraient plus accepter que les systèmes de santé de leur province et de leur territoire se positionnent parmi les derniers rangs dans les classements. Les politiques trop timides n'ont pas été efficaces au cours des dernières décennies. Il est temps de faire preuve de leadership et d'élaborer des politiques coordonnées et réfléchies qui visent à améliorer le rendement du système de santé.

Dans le présent numéro

Ce numéro de *Politiques de Santé* commence par un article de la section Discussions et débats qui met en lumière les disparités salariales auxquelles sont confrontés les préposés aux services de soutien à la personne selon qu'ils travaillent dans des foyers de soins de longue durée financés par le secteur public ou dans le contexte des soins à domicile et en milieu communautaire. S'appuyant sur des statistiques qui démontrent le besoin urgent d'attirer la main-d'œuvre dans les soins à domicile et communautaires, Zagrodney et al. (2023) décrivent les répercussions de la mise en place de politiques qui visent la parité salariale. Les auteurs concluent que des politiques de financement qui améliorent les salaires des préposés aux services de soutien à la personne contribueraient à stabiliser et possiblement à accroître la main-d'œuvre des soins à domicile et en milieu communautaire.

Une réplique à cet article va plus loin et décrit la nécessité d'augmenter les salaires et d'étendre les politiques de parité salariale à un plus large éventail de contextes et d'industries (Kokorelias et al. 2023). Fondée sur un vaste ensemble de données probantes, la réplique décrit un marché du travail concurrentiel dans lequel le secteur des soins à domicile et communautaires doit faire concurrence aux industries non liées à la santé pour attirer les préposés aux services de soutien à la personne. Kokorelias et al. (2023) soutiennent qu'une perspective plus large de la parité salariale est nécessaire pour attirer et retenir les travailleurs en soins à domicile et en milieu communautaire, et les salaires sont un signe important de la valeur accordée à la profession.

Le deuxième article de la section Discussions et débats décrit les obstacles importants à l'accès aux services de santé mentale dans la collectivité (Gatov et al. 2023). L'article indique que les services de santé mentale en ligne peuvent constituer une approche prometteuse pour aider à combler l'écart d'accès, bien que leur expansion devrait s'accompagner d'investissements dans l'amélioration de la littératie et des compétences numériques afin de favoriser l'équité d'accès.

La réplique à cet article met l'accent sur l'histoire du sous-financement des services de santé mentale et sur les défis auxquels les patients font face lorsqu'ils tentent d'accéder aux soins de santé mentale (Goldbloom et Gratzer 2023). La réplique souligne que d'autres modalités de traitement pourraient venir compléter les services de santé mentale en ligne. Goldbloom et Gratzer (2023) concluent qu'il convient d'accroître l'investissement public dans les services de santé mentale et qu'il faut une meilleure reddition de comptes pour les résultats en matière de bien-être.

Le troisième article de la section Discussions et débats décrit le manque de dispositions relatives aux médicaments pédiatriques et le retard du Canada par rapport à plusieurs pays quant à l'exigence de présenter des données sur l'innocuité et l'efficacité pédiatriques dans les demandes d'approbation pour de nouveaux médicaments (Moore Hepburn et al. 2023). Faisant valoir que les besoins physiologiques et pharmacologiques uniques des enfants ont été mal desservis, l'article demande que les pouvoirs de Santé Canada soient élargis afin d'obliger les fabricants à fournir des données pédiatriques dans toute présentation de nouveaux médicaments.

La réplique à cet article souligne l'état négligé des dispositions sur les médicaments pédiatriques au Canada (Lewis 2023). En plus de mener à une incertitude posologique, cette lacune dans le processus d'approbation des médicaments pourrait avoir fait en sorte que certains patients pédiatriques n'aient pas bénéficié des avantages d'un traitement donné. Lewis (2023) propose des choix stratégiques possibles pour Santé Canada, lesquels permettraient d'harmoniser les pratiques du Canada avec celles d'autres pays.

L'article de la section Question de données souligne la prévalence au Canada des services de santé offerts par les employeurs aux employés par l'entremise de sociétés tierces (Spithoff et Mogic 2023). L'objectif de l'étude était de rendre compte des caractéristiques de ces plateformes « d'entreprise ». L'étude révèle que des millions de Canadiens ont accès aux services médicaux par l'entremise de telles plateformes et que bon nombre d'entre elles offrent des consultations virtuelles le jour même avec des médecins. Spithoff et Mogic (2023) concluent que ces plateformes offrent un accès progressif aux services médicaux et qu'elles pourraient avoir des effets néfastes sur la continuité des soins.

Le premier manuscrit présenté dans la section Rapports de recherche vise à évaluer dans quelle mesure les gouvernements provinciaux et territoriaux se sont dotés d'objectifs concernant la qualité de leur système de santé (Chan et al. 2023). À partir d'analyses documentaires, l'étude indique dans quelle mesure il y a, chez les ministères de la Santé ou leurs autorités sanitaires, des objectifs, des mesures de référence et des échéanciers, et si ces organismes publient des rapports d'étape sur la qualité des soins de santé. L'étude révèle que la plupart des administrations n'établissent pas d'objectifs concernant la qualité des soins, bien qu'on puisse trouver certains exemples où il y a des objectifs et des cibles clairs.

Le deuxième manuscrit de la section Rapports de recherche se penche sur l'hésitation face à la vaccination (Memedovich et al. 2023). À partir d'un sondage transversal mené auprès de Canadiens, l'étude explore les raisons pour lesquelles ils acceptaient ou non de se faire vacciner contre la COVID-19. On y révèle que la raison la plus évoquée pour justifier le refus de la vaccination est la rapidité avec laquelle les vaccins ont été mis au point. D'après les résultats, l'étude conclut que le respect du processus entier traditionnel pour l'approbation des médicaments n'est pas négociable aux yeux de certains Canadiens.

L'article de recherche qui termine ce numéro évalue les facteurs associés à la diminution des consultations chez le médecin de famille par habitant (Lavergne et al. 2023). À partir de données administratives fondées sur la population de la Colombie-Britannique, l'étude mesure les facteurs associés au volume de services et aux visites chez le médecin. L'étude révèle que les niveaux croissants d'utilisation des services dépassent les niveaux prévus attribués au vieillissement de la population. L'étude conclut que les médecins de famille pourraient avoir connu une augmentation de leurs activités associées à la coordination des soins.

Conclusion

Nous invitons les lecteurs d'articles et de manuscrits à faire part de leurs commentaires à la revue. La revue accueille également les nouvelles propositions ou suggestions pour des sujets spéciaux. Veuillez communiquer avec l'équipe éditoriale pour faire part de vos idées.

JASON M. SUTHERLAND, PHD
Rédacteur en chef

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DISCUSSION AND DEBATE

Economic Evidence for Home and Community Care Investment: The Case for Ontario Personal Support Workers' Wage Parity

Données économiques sur l'investissement dans les soins à domicile et en milieu communautaire : la cause de la parité salariale des préposés aux services de soutien à la personne en Ontario

KATHERINE A.P. ZAGRODNEY, PhD
Senior Research Associate – Quantitative Lead
VHA Home HealthCare
Toronto, ON
Research Associate and
Home and Community and Long-term Care Sector
Co-Lead
Canadian Health Workforce Network
Ottawa, ON
Assistant Professor (Status)
Institute of Health Policy, Management and Evaluation
University of Toronto
Toronto, ON

EMILY C. KING, PhD
Manager of Research
VHA Home HealthCare
Toronto, ON
Assistant Professor (Status)
Dalla Lana School of Public Health
University of Toronto
Toronto, ON

DEBORAH SIMON, MBA
Chief Executive Officer
Ontario Community Support Association
Toronto, ON

KATHRYN A. NICHOL, PhD
Chief Executive Officer
VHA Home HealthCare
Assistant Professor (Status)
Dalla Lana School of Public Health
University of Toronto
Toronto, ON

SANDRA M. McKAY, MBA, PhD
Vice-President of Research and Innovation
VHA Home HealthCare
Assistant Professor (Status)
Institute of Health Policy, Management and Evaluation
University of Toronto
Assistant Professor (Status)
Ted Rogers School of Management
Toronto Metropolitan University
Toronto, ON

Abstract

The home and community care (HCC) sector is in a health human resource crisis. Particularly concerning is the shortage of personal support workers (PSWs) who provide the majority of HCC. This paper outlines a strategy to mitigate the HCC PSW shortage by applying appropriate funding to HCC and focusing on equal pay between HCC and institutional long-term care facilities' PSWs. Using publicly available data, our calculations estimate substantial government cost-savings from investing in HCC PSWs to increase HCC capacity. Beyond the economic evidence, how such investments would benefit those seeking care are also highlighted.

Résumé

Le secteur des soins à domicile et en milieu communautaire (SDMC) traverse une crise en matière de ressources humaines. La pénurie de préposés aux services de soutien à la personne (PSSP), qui fournissent la majorité des SDMC, est particulièrement préoccupante. Le présent document décrit une stratégie visant à atténuer la pénurie de PSSP dans les SDMC en appliquant un financement approprié aux SDMC et en mettant l'accent sur la parité salariale entre les PSSP dans les SDMC et ceux des établissements de soins de longue durée. À l'aide de données publiquement accessibles, nous estimons que le gouvernement réaliserait d'importantes économies s'il investissait pour accroître la capacité des PSSP dans les SDMC. Au-delà des considérations économiques, nous soulignons également la façon dont ce type d'investissement profiterait à ceux qui souhaitent obtenir des soins.

Introduction

The home and community care (HCC) sector is experiencing an unprecedented health human resource crisis. Particularly concerning is the scarcity of personal support workers (PSWs) who provide the majority of paid HCC services to over one million Ontarians annually (OCSA 2022a). With the onset of the COVID-19 pandemic, all sectors experienced a decline in the availability of PSWs (OCHU and CUPE 2021). The HCC sector was hit particularly hard (Deloitte 2021) and continues to face massive shortages with more than a threefold increase in unfilled full-time PSW roles from February 2021 to February 2022 (OCSA 2022b). The availability of HCC services is directly dependent on the availability of staff, particularly PSWs. Without their services, patients are less likely to be able to live in the community as most would prefer (Sinha and Nolan 2020), and are more likely to require institutional long-term care (ILTC) services (Gentili et al. 2022).

The HCC staffing crisis is substantially driven by a lack of competitive wages to attract and retain workers. Those who leave HCC often seek employment in better-paying sectors, including ILTC, hospitals and non-healthcare occupations, such as retail, service and manufacturing sectors (Denton et al. 2006). Although other factors – including supervisory support, precarity, scheduling inconsistency and health and safety challenges – also play a role in turnover (Denton et al. 2006; Keefe et al. 2011), the historical wage gap between sectors has long placed HCC at a disadvantage (Home Care Ontario [HCO] and OCSA 2019) and resulted in the movement of PSWs from HCC toward ILTC or hospitals (Government of Canada 2021). The pandemic and related policies (e.g., single-employer policy [O. Reg. 146/20]) have accelerated PSWs' transitions toward higher-paid jobs in ILTC and hospitals. The resulting staffing crisis has reduced the availability of HCC services to only those patients who need it, with rejection rates jumping from 5% pre-pandemic to 30% by August 2021 for nurses (HCO 2021) and even higher rejection rates for PSWs. The lack of HCC services, particularly from PSWs, severely impacts the ability to support these patients in the community and increases demands on the ILTC system (Gentili et al. 2022).

Although PSW wages (beyond the minimum $16.50/hour) are set by employers, the ability to increase these wages is constrained within the government funding envelope for service reimbursement (Lewis and Dijkema 2020), which has remained relatively stagnant over the past decade (OCSA 2022a). While wages have not risen, task shifting has led to increases in the complexity of HCC PSWs' work as PSWs are supporting clients with higher needs and are providing increasingly diverse services (Berta et al. 2013; Saari et al. 2018).

Wages play a key role in PSW sector choice (Zagrodney 2022) and are an important lever to improving HCC capacity, while saving valuable resources in other sectors. Recent announcements by the Ontario government to make pandemic pay permanent will move the entire PSW workforce toward more desirable compensation; however, the gap between HCC and ILTC will remain. Elimination of this wage gap is a promising approach to help stem the flow of PSWs out of HCC. It must be acknowledged that this could negatively impact ILTC's ability to attract PSWs from the HCC sector. However, the historical practice of privileging the more expensive and less preferred ILTC sector (Sinha and Nolan 2020) over HCC through structural wage inequalities is not meeting Ontarians' current care needs (HCO 2021), nor can it meet the future demand for care, which is expected to grow by over 50% by 2031 (Deloitte 2021).

We use publicly available data to demonstrate how investing in wage parity between HCC and ILTC is a cost-efficient option for meeting the care needs of Ontarians. Many individuals currently receiving care in ILTC or designated alternative level of care (ALC) while waiting in hospital for HCC could be supported safely at less expense and experience better medical and social outcomes at home (Lee et al. 2015). Realizing these benefits requires competitive wages for HCC PSWs to overcome chronic and, now acute, staffing shortages in this sector.

Why Is HCC Needed?

It is the government's obligation to provide healthcare to Ontarians who need it. Enabling people to receive care in their own homes is a safe, practical, high-quality solution (Gitlin 2003; Lee et al. 2015; Marek et al. 2012). Living at home is preferred by most Ontarians (Sinha and Nolan 2020) and has the lowest cost of care (Williams et al. 2016).

Our healthcare system is struggling to meet the current demand for care, and the need for HCC and ILTC care will more than double by 2031 (Deloitte 2021), raising concerns about system sustainability. ILTC facilities are already operating at full capacity (FAO 2019) while hospitals continue to struggle with overcapacity due in part to ALC patients waiting in hospitals for HCC or ILTC placements (Devlin 2019).

Creating new capacity in hospitals and ILTC is expensive. While this will be part of the solution, minimizing the need to create institutional beds by capitalizing on the potential of HCC can rapidly improve patient flow, access to care and value for money in the healthcare system (Williams et al. 2016). If HCC capacity does not increase, the growing number of individuals seeking HCC will experience poorer health and, ultimately, require more expensive institutional care.

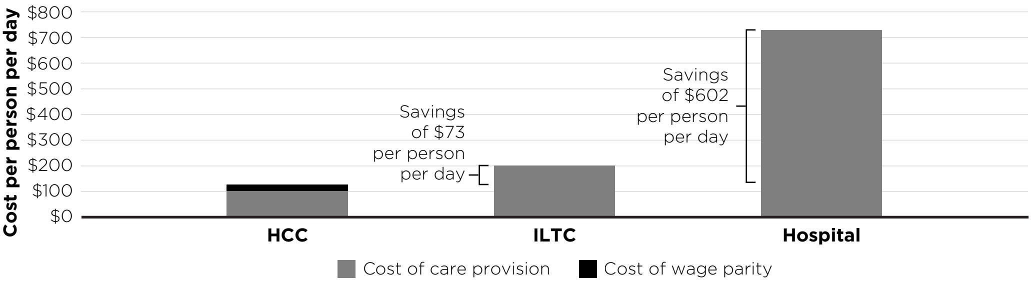
What Is the Wage Gap between HCC and ILTC?

The most recent publicly available cross-sector wage data come from 2017 and show that average PSW wages in HCC ($19.10/hour) are 26% lower than in ILTC ($24.08/hour) (HCO and OCSA 2019). Achieving wage parity between HCC and ILTC would require a funding increase of $6.23/hour for PSWs in HCC, including a 25% allowance for benefits. Wage parity would improve the relative attractiveness of working in HCC, create much-needed stability in the sector and enable increased capacity to provide HCC (Powers and Powers 2010; Zagrodney 2022). From an ethical and pay equity standpoint, it is concerning that the historically unrecognized and poorly valued HCC PSW workforce includes a higher proportion of women of older age and from visible minority groups, compared to other better-compensated sectors (Laporte et al. 2020).

With Wage Parity, Would HCC Still Be the Least Costly Location for Care?

The average cost to provide ILTC – $201/person/day as of 2017 – is approximately twice the average cost of providing HCC service, $103/person/day (as estimated by the ministry of health [Ontario Home and Community Care Branch 2018; Sinha and Nolan 2020]). Even with the investments in wage parity, HCC will continue to provide a significant cost advantage over ILTC (Figure 1).

FIGURE 1. Sector costs of care per person per day with wage parity: HCC vs. ILTC or hospital



HCC = home and community care; ILTC = institutional long-term care.

To estimate the impact of wage parity on the daily cost of care in HCC, we must make an assumption about the number of hours of care per person per day to which the increased personnel costs would be applied. Although it is far more than what most HCC clients currently receive, we have assumed four hours per person per day of care to match the government-mandated four hours of care per person per day required in ILTC and applied the hourly impact of wage parity accordingly. This conservative assumption helps to ensure that we do not inflate the potential cost-savings of HCC as compared to ILTC.

Inclusive of the costs required to achieve wage parity, the daily cost of HCC would be $127.90/person/day (Appendix 1: Equation #1 [Appendix 1 is available online at www.longwoods.com/content/27161]). If this additional investment can keep a patient out of ILTC, this saves the system $73.10/person/day.

Build Homecare Beds, Not ILTC Beds

In Ontario, meeting the projected increased ILTC demand (Deloitte 2021; OLTCA 2019) would require an estimated 46,985 new beds by 2031, costing $6.34 billion to build without accounting for the additional costs of operations and staffing. In addition to the expense, it will be time-consuming to construct these beds; therefore, more immediate strategies to address the demand are required.

Increasing HCC capacity is a viable strategy to mitigate pressures on ILTC. In HCC, the cost of care provision is lower than in ILTC (savings of $73.10/patient/day, inclusive of wage parity), and there is no capital infrastructure expense, whereas the government capital infrastructure cost for a new ILTC bed is $135,000 (FAO 2019).

To estimate the potential cost-savings from increasing HCC capacity to avoid premature ILTC admissions, we consider that – according to the Canadian Institute for Health Information – one in 13 newly admitted Ontario ILTC patients from 2019–2020 could have been cared for in HCC (CIHI n.d.b.). This means that approximately 2,574 of the 32,576 new ILTC admissions were avoidable if HCC had been available (CIHI n.d.b., 2020). If these 2,574 patients had been able to access HCC services through increased HCC capacity, the government would have saved an estimated $188,123 per day, or $68.66 million per year, without accounting for the cost to create a new ILTC bed (Appendix 1: Equation #2).

Including both the cost of care and the cost to build an ILTC bed – $135,000, or $20.53/bed/day, amortized over 20 years (FAO 2019) – would mean an estimated $240,957 per day, or $87.95 million per year, in government savings (Appendix 1: Equation #3). This equates to annual savings of $34,175 for each person who is not prematurely admitted to ILTC.

To minimize the need for new ILTC beds as demands for care increase (Deloitte 2021), we could "build" HCC beds by increasing health human resource capacity in HCC. While creating some new ILTC beds is necessary, only patients who need this level of care should be placed in these expensive ILTC beds. Investing in HCC PSWs will help stabilize the workforce, increase the availability of HCC for those who can be cared for safely at home and lead to substantial savings.

Build Homecare Capacity to Minimize ALC and Hallway Healthcare

The HCC sector not only helps ease the strain on ILTC but also on hospitals. Hospital care is far more expensive ($730/person/day [Ontario Home and Community Care Branch 2018; Sinha and Nolan 2020]) than wage parity–adjusted HCC ($127.90/person/day). However, in 2019, lack of HCC capacity left an estimated 5,428 Ontarians in the hospital longer than necessary while waiting for HCC services (CIHI n.d.a.). These patients spent a median of eight days waiting for HCC (CIHI n.d.a.). Caring for these ALC patients in hospital cost an estimated $31.9 million instead of the $5.6 million that would have been required to support these patients at home with wage parity–adjusted HCC. Compared to an appropriately timed transition to HCC, this ALC time resulted in unnecessary government expenditure of approximately $26.14 million (Appendix 1: Equation #4). Appropriate investment in wage parity–adjusted HCC to stabilize staffing and increase capacity can avoid such losses in the future.

What Would Additional HCC Capacity Mean for Patients and Families?

Investing in wage parity to improve capacity in HCC is not just a fiscally responsible option. It will also allow Ontarians to receive care when and where they want it. By providing support to seniors living at home and supplementing the efforts of family caregivers, HCC investment will enable seniors to age at home as most would prefer (Sinha and Nolan 2020), allowing them to reap the known health and social benefits of aging in place rather than in institutions (Lee et al. 2015).

Reducing ALC stays through improved access to HCC will lead to better outcomes for patients (Graf 2006) while allowing others to access the hospital-based care that they need. Existing health system capacity challenges coupled with the impacts of the COVID-19 pandemic have created a massive unmet need for hospital-based services, including elective surgeries, procedures and diagnostic imaging (Deloitte 2020). As is clearly demonstrated above, by far, the least expensive option for increasing health system capacity is investment in HCC.

For unpaid family caregivers, who provide 70–75% of all required care (Health Council of Canada 2012), valued at up to $72 billion annually (The Change Foundation 2019), the ability to access HCC services eases the extreme strain associated with transitions from hospital to home (McCusker et al. 2020) and makes it feasible to delay ILTC admission. Reducing caregiver burden through accessible HCC would contribute to improving the health of approximately 1.5 million Ontarians who provide care to older adult family members (The Change Foundation 2019).

Conclusion

Improving wages for PSWs is a promising policy option for stabilizing and expanding the homecare PSW workforce. Even with investments in wage parity, HCC remains the least expensive place to receive care, costing half as much as ILTC and one-seventh as much as

ALC hospital care. Supporting people who could safely receive care at home via HCC will yield better health and social outcomes and be more cost-efficient than higher-priced and less appropriate institutional care. Expansion of HCC capacity will also relieve the pressure on institutions, with timely transitions improving patient flow out of hospitals and preserving ILTC beds for those with the greatest need.

However, creating capacity to meet this demand requires investment to improve the working conditions of HCC workers to support stabilization of staffing in this sector. Home is where most Ontarians would prefer to live for as long as possible; we need to make sure it is also where healthcare workers would prefer and can afford to work. This requires a recognition that historical funding models undermine the stability of homecare staffing – they do not meet our current needs, nor will they meet future demands. Updating government funding models to invest in wage parity and stabilize the HCC workforce is a fiscally responsible policy option that sets the foundation for expanding this sector to address the current healthcare crisis and meet the future care needs of Ontarians more efficiently.

Correspondence may be directed to Katherine Zagrodney by e-mail at kzagrodney@vha.ca.

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DISCUSSION AND DEBATE

Commentary: Minding the Gap – Why Wage Parity Is Crucial for the Care of Older Canadians

Commentaire : Attention à l'écart – pourquoi la parité salariale est cruciale pour les soins aux aînés canadiens

KRISTINA M. KOKORELIAS, PhD
Assistant Professor
Department of Occupational Science and Occupational Therapy
Temerty Faculty of Medicine
University of Toronto
Associate Fellow
National Institute on Ageing
Toronto Metropolitan University
Toronto, ON

SAMIR K. SINHA, MD, DPhil
Professor
Institute of Health Policy, Management and Evaluation
Department of Medicine, Temerty Faculty of Medicine
University of Toronto
Director of Health Policy Research
National Institute on Ageing
Toronto Metropolitan University
Toronto, ON

Abstract

Zagrodney and colleagues (2023) have highlighted the pay differences that exist between those working in the home and community care (HCC) sector and other healthcare sectors. The authors argue that achieving wage parity could significantly mitigate the current HCC human resource crisis, support the overall sustainability of Ontario's healthcare system and improve patient outcomes. We build on their argument by highlighting issues that have contributed to wage disparities within healthcare systems and discuss how addressing them can create more equitable systems for both those receiving and those providing care. We further note how other healthcare systems that have wage parity have demonstrated that it is not a "nice to have" but an essential element of establishing a sustainable health human resources strategy. Finally, the new 10-year bilateral healthcare funding agreements that the federal, provincial and territorial governments are currently announcing will not only provide significant new funding but also an opportunity to decisively address the long-standing issue of wage parity in Canada, once and for all.

Résumé

Zagrodney et ses collègues (2023) soulignent les différences de rémunération qui existent entre ceux qui travaillent dans le secteur des soins à domicile et en milieu communautaire et ceux d'autres secteurs des soins de santé. Les auteurs soutiennent que l'atteinte de la parité salariale pourrait atténuer considérablement la crise actuelle en matière de ressources humaines en santé, en plus de favoriser la viabilité globale du système de santé ontarien et d'améliorer les résultats pour les patients. Nous nous appuyons sur leur argument en dégageant les problèmes qui ont contribué aux disparités salariales au sein des systèmes de soins de santé et en exposant comment la solution à ces problèmes peut donner lieu à des systèmes plus équitables, tant pour ceux qui reçoivent des soins que pour ceux qui les prodiguent. Nous soulignons également le fait que d'autres systèmes de soins de santé, où la parité salariale existe, ont démontré que la parité n'était pas une « chose intéressante à avoir » mais bien un élément essentiel pour l'établissement d'une stratégie durable en matière de ressources humaines en santé. Pour terminer, les nouveaux accords bilatéraux sur 10 ans, que les gouvernements fédéral, provinciaux et territoriaux annoncent actuellement pour les soins de santé, apporteront non seulement un nouveau financement substantiel, mais seront aussi l'occasion de prendre des mesures décisives pour la parité salariale au Canada, et ce, une fois pour toutes.

Introduction

There is growing recognition of the important role the adequate provision of high-quality home and community care (HCC) and long-term care (LTC) home services can play in creating a more sustainable healthcare system for our aging population. In 2021, approximately 420,000 Canadian households reported having unmet HCC needs, while at least 52,000 Canadians were on waiting lists to receive a place in an LTC home (Iciaszczyk et al. 2022). Zagrodney et al. (2023) have highlighted how the COVID-19 pandemic has only turned the long-standing health human resources challenges in Ontario's HCC sector into a full-blown crisis, principally driven by its inability to provide competitive wages to attract and retain workers (Barigozzi and Burani 2016; Fainman and Kucukyazici 2020). Before the pandemic, Ontario homecare providers fulfilled 95% of the nursing care requests; however, by the end of 2021, that number had dropped to 56%, largely owing to an estimated exodus of 4,000 nurses to other parts of the healthcare system since the beginning of the pandemic (Home Care Ontario 2022).

Zagrodney et al. (2023) report that the average hourly wage for personal support workers (PSWs) working in Ontario's HCC sector was at least 26% below the PSW hourly wage for those working in Ontario's publicly funded LTC homes. It is also well appreciated that PSWs earn the highest hourly wages when they work in Ontario's publicly funded hospitals (Zagrodney and Saks 2017). Furthermore, nurses (Mohammed et al. 2021) and other healthcare professionals, including social workers (Gibelman and Schervish 1995) and occupational therapists (Howe 2000), also currently experience significant wage disparities between these three sectors. These long-standing disparities have naturally led many HCC staff over time – and especially during the pandemic – to seek out employment opportunities in better paying parts of our publicly funded healthcare system, including LTC homes and hospitals, and even in non-healthcare occupations, such as the retail, service and manufacturing sectors (Denton et al. 2006).

To further stem the exodus of staff from the HCC sector, create much-needed stability and further grow this sector to meet the significant anticipated demands for LTC services from our rapidly aging population, Zagrodney et al. (2023) argue that wage parity between those working in the HCC and LTC home sectors needs to be the first step. We would go further and argue that wage parity across all parts of the publicly funded healthcare system needs to be achieved, especially when what often drives people from the HCC sector are better-paying employment opportunities in publicly funded LTC homes and hospitals and even in non–healthcare-related settings. Equal wage rates would not only improve the attractiveness of working in the LTC sector but also address long-standing ethical and pay equity issues among a workforce more highly composed of women and older, racialized and new Canadian workers compared to better-compensated sectors (Neysmith and Aronson 1997; Premji et al. 2014).

Ample literature exists suggesting that those working in the HCC sector are more likely to remain in their jobs if they perceive their compensation benefits as good (Dawson and Rodat 2014; Denton et al. 2005, 2006; Dromey and Hochlaf 2018; George 2015), and that providing them with wage parity to that of other equally qualified healthcare providers can help eliminate both real and perceived feelings of being treated inequitably. Wage parity, or wage equity, essentially ensures that healthcare professionals who have the same training and qualifications and perform the same or similar functions receive the same salary (Dawson and Rodat 2014), and this can help support both recruitment and retention efforts (Lilly 2008; Zagrodney et al. 2023). Indeed, pay inequities between healthcare professionals working in the same position but in different sectors suggests that a perceived difference exists in both employer and societal value for their role and skillsets (Foglesong et al. 2022; Olaniran et al. 2022; Stone et al. 2013), and can relay and reinforce a message that those working in LTC settings are of lower priority and even expendable (Devlin and McIlfatrick 2009; Mohammed et al. 2021). While there are often valid reasons for differences in the compensation of two employees working in the same position, such as differences in education or experience (Estlund 2014), the continuing pay discrepancies between the acute and LTC sectors and also within the overall LTC sector between institutional LTC and HCC providers fail to be seen as legitimate or justifiable.

Provinces, such as Ontario, continue to struggle with attracting new healthcare workers to the HCC sector, which recently reported an overall nursing and PSW staff vacancy rate of 17.4% (OCSA 2022). While existing ministry efforts, such as tuition support, have been made to alleviate the costs of training HCC sector healthcare workers across Ontario (Government of Ontario 2022), these recruitment tactics tend to focus on the ability to obtain certification and, in turn, employment quickly. However, acute recruitment efforts do not seem to be paired with the ongoing retention efforts that would better address the concerns of those working in the sector that cause them to leave.

International Perspectives

While much of the literature to date has focused on documenting the existence of wage inequities and their resulting consequences, less attention has been paid around how to fix these gaps. There are a few countries that, in order to strengthen their LTC systems, offer their HCC workers a living wage that takes into account a broader set of their basic needs by including their housing, transportation and health insurance requirements (Gardiner 2015). For example, Denmark's labour-market model, also known as "flexicurity," offers its workers both flexibility and security, such as fair wages, universal health insurance and paid sick leave (Kristensen et al. 2011: 87; Sampson 2022; Schulz 2010). Moreover, Danish HCC workers are trained to work to their full scope of practice (e.g., PSWs receiving training to provide physiotherapy), allowing them to provide more comprehensive care to their clients (Johnson et al. 2022). New Zealand implemented a 2017 Pay Equity Settlement for healthcare workers in its HCC sector, whereby the government committed NZ$2 billion to ensure that wage parity was achieved (McGregor and Davies 2019). In 2022, the Australian FairWork Commission (2022) granted an interim 15% wage increase for LTC workers in direct care roles, and deliberations are continuing into 2023 to try to increase it to 25% for all PSWs, regardless of their role in LTC. In Italy, healthcare professionals are paid in accordance with a national contract, with employers having limited flexibility in deviating from this contract, regardless of the practice setting (Tikkanen et al. 2020). Moreover, recent Italian legislation enforced a pay equity law to reduce and diminish the pay gap between men and women (Fulvi 2017). Finally, the Singapore government also recently intervened to raise the salary scales and job conditions of its HCC workers (Lai and Begum 2021; Ng and Sim 2012).

Across Canada, we are slowly starting to see wage parity issues addressed within its healthcare systems. British Columbia recently brought the employment of all homecare workers delivering publicly funded home care under the employment of its health authorities to ensure that wage parity and more full-time employment opportunities were achieved across this sector. In Nova Scotia, the health authorities are increasing funding allocations within its HCC sector to increase pay for their publicly funded workers (Premier's Office 2022) and maintain parity among different healthcare providers. This follows their previous efforts that equalized the pay rates for licensed practical nurses across the province

(Nova Scotia CUPE 2020). In Ontario, the COVID-19 pandemic spurred a provincial bill to increase the wages of eligible workers in LTC homes and its HCC sector by $3 per hour, while those in public hospitals received a $2 increase (DeClerq 2022). In the most recent federal election, the current governing party pledged that it would support all Canadian PSWs to be paid a minimum wage of $25 an hour, which would help to significantly achieve fairer wages for the largest elements of Canada's LTC workforce (CBC News 2021). The federal government recently announced that it would provide Canada's provinces and territories $1.7 billion over five years to support hourly wage increases for their PSWs in order to support their recruitment and retention efforts (Prime Minister of Canada 2023).

Our Path Forward

Achieving wage parity should be a starting point for meaningful and necessary reforms to better recruit and retain a strong LTC workforce. However, LTC sector jobs have long been prone to poor working conditions, including employment insecurity (Hapsari et al. 2022; Zeytinoglu et al. 2009, 2015), shortage of appropriately trained staff (Brooks et al. 2008), unstable hours (Hapsari et al. 2022), a lack of full-time employment opportunities and occupational burnout (Brooks et al. 2008). Indeed, as the conditions of work are the conditions of care, achieving wage parity without addressing the working conditions will hinder the transformation that we desperately need to achieve across the LTC sector.

Current healthcare transformation efforts are being guided by the Quadruple Aim, which is centred on four key and interrelated goals: improve the patient experience of care; improve the health of populations; improve the healthcare provider experience; and improve value for money (Olayiwola and Rastetter 2021). Zagrodney et al. (2023), in this regard, have helped to demonstrate how achieving wage parity can enable the achievement of these four aims. Indeed, enabling more people to receive the care they actually want and need to better enable aging in the right place will undoubtedly improve both the patient experience and the overall health of the population when more people can get the right care in the right place at the right time. They even demonstrate that at equal pay rates, supporting persons with HCC services, which can better alleviate pressure on hospitals and LTC, can deliver substantial cost-savings related to care delivery and help avoid infrastructure costs associated with having to provide more care in institutional care settings. Finally, healthcare providers who feel appropriately valued and respected and whose primary consideration, when deciding on the part of the healthcare system in which they want to work, is around their skills and interests – rather than on a position's rate of pay – will more likely remain engaged in their roles longer. This latter point is particularly important in the delivery of LTC, which is best delivered by staff who can get to know their care recipients, as well as how best to care for them through the provision of relationship-centred care, a foundational concept that forms the basis for Canada's new National LTC Standards (HSO 2023).

Ultimately, promoting better workforce equity through offering wage parity, living wages and greater job security – as many international jurisdictions are already doing – may become Canada's primary vehicle to achieving the Quadruple Aim and helping all of us achieve the healthcare system we both need and deserve.

Correspondence may be directed to Samir K. Sinha by e-mail at samir.sinha@sinaihealth.ca.

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DISCUSSION AND DEBATE

E-Mental Health Services in Canada: Can They Close the Access Gap?

Les services de santé mentale en ligne au Canada peuvent-ils combler les écarts en matière d'accès?

EVGENIA GATOV, MPH
PhD Candidate
Health Services Research – Health Informatics
Institute of Health Policy, Management and Evaluation
University of Toronto
Toronto, ON

GILLIAN STRUDWICK, PHD, RN
Associate Professor
Institute of Health Policy, Management and Evaluation
University of Toronto
Senior Scientist and Chief Clinical Informatics Officer
Centre for Addiction and Mental Health
Toronto, ON

DAVID WILJER, PHD
Professor
Institute of Health Policy, Management and Evaluation
University of Toronto
Executive Director
Education, Technology and Innovation
University Health Network
Toronto, ON

PAUL KURDYAK, MD, PHD
Medical Director
Performance Improvement
Centre for Addiction and Mental Health
Professor and Co-Director
Division of Adult Psychiatry and Health Systems
Department of Psychiatry
University of Toronto
Toronto, ON

Abstract

With significant unmet needs for mental healthcare in Canada, there is a growing interest in e-mental health (e-MH) services to meet gaps in access. While the policy window appears to be open, it is unclear how best to implement e-MH services due to health system barriers that create unmet needs in the first place. We explore the financing, organization and delivery of Canadian mental health services and discuss the promise of e-MH services for alleviating access barriers, highlighting increased policy attention during the COVID-19 pandemic. We consider how evidence-based e-MH services have successfully scaled in other publicly funded healthcare systems and note potential issues in the Canadian context.

Résumé

Compte tenu de la quantité de besoins non satisfaits en matière de soins de santé mentale au Canada, on s'intéresse de plus en plus aux services de santé mentale (SSM) en ligne afin de combler les lacunes en matière d'accès. Bien que la fenêtre politique semble ouverte, la façon de mettre en œuvre les SSM en ligne n'est pas claire en raison des obstacles du système de santé, lesquels donnent lieu à des besoins non comblés. Nous explorons le mode de financement, l'organisation et la prestation des SSM au Canada et nous discutons de la promesse des SSM en ligne visant à atténuer les obstacles à l'accès, en soulignant l'attention accrue accordée aux politiques de services de santé pendant la pandémie de COVID-19. Nous examinons comment les SSM en ligne fondés sur les données probantes ont réussi à s'adapter dans d'autres systèmes de soins de santé financés par l'État et nous prenons note des problèmes potentiels dans le contexte canadien.

Introduction

Mental health (MH) disorders are common, affecting up to one in five Canadians annually, causing substantial disability and economic burdens (Lim et al. 2008). Yet almost one-third of Canadians do not receive sufficient MH services to meet their needs (Moroz et al. 2020), facing long wait times and geographic variation in provider supply (Jaakkimainen et al. 2014). Underlying this access gap are the ways in which MH services are funded, organized and delivered. While evidence-based psychological interventions, such as cognitive behavioural therapy (CBT), are first-line treatments for the most prevalent MH disorders, access to these services through Canada's public healthcare system is limited owing to inadequate physician supply and paucity of coverage for non-physician services (Gratzer and Goldbloom 2016). Having been referred to as "the orphan of Medicare," MH services delivered by non-physicians fall outside the *Canada Health Act* (*CHA*) (1985) as the original intention to expand the *CHA* coverage was never fully realized (Romanow 2006: 1).

Discussion

Canada's health coverage is characterized by three layers of services (Martin et al. 2018). Physician care and acute care fall under public services, funded primarily through public taxation and delivered via the universal single-payer systems of the provinces and territories (PTs). Other MH service providers – including psychologists, therapists and social workers – fall under mixed services funded through public taxation, private insurance (primarily through employers) and out-of-pocket payments. Fully private services also include MH providers. In a highly decentralized health system, the exclusion of non-physicians from the *CHA* made the continuum of MH care the responsibility of PTs. PTs typically provide coverage for psychotherapist physicians (psychiatrists and family physicians who offer psychological therapies) but not for other health professionals. While some non-physician services are available in the community through public MH agencies and hospitals, non-physician services are primarily offered on a fee-for-service basis, covered by personal finances or private health insurance. For the latter, maximum coverages typically equate to approximately only two to eight sessions of therapy (CMHA 2018), while almost 30% of Canadians, predominantly the economically disadvantaged, lack private health insurance altogether (Martin et al. 2018). With MH having been referred to as "the orphan of Medicare" (Romanow 2006: 1), the *CHA*'s focus on physician and hospital-based care restricts the ability of the federal government to hold PTs accountable for MH spending and system performance outside these areas.

Despite many non-physicians being trained in delivering evidence-based psychological interventions to adult populations, individuals with mental illness continue to present to primary care providers, walk-in clinics and emergency departments (Cohen and Peachey 2014). General practitioners are typically the gate keepers for specialty physician services (Dyck 2018). It is estimated that almost 80% of Canadians rely on their family physician for MH care, though 15% report not having a regular healthcare provider (CMHA 2018). While some family physicians provide psychotherapy, Cohen and Peachey (2014) found that most are reluctant to do so, citing concerns around lack of experience. Adding to this complexity is the geographic availability of providers. While rural and northern locations have limited MH services (Moroz et al. 2020), a recent Ontario-based study found that even in high-supply areas, psychiatrists took on fewer new patients compared to low-supply areas (Kurdyak et al. 2014). This suggests that simply increasing physician supply may not suffice to improve access. Cohen and Peachey (2014) argue that physicians should target assessment, diagnosis and care for severe conditions, while middle-range needs should be filled by other appropriately trained providers.

While Canada devotes only about 7% of its public funding to MH (a decline from 11% in the 1980s), some Organisation for Economic Co-operation and Development countries devote as much as 18% (Bartram and Lurie 2017). In 2015, the Canadian government opened a window of opportunity by promising to improve access to MH services, offering $5 billion over 10 years to support PTs. This position had considerable support from professional associations and stakeholder organizations, as well as the public, with 90% of Canadians approving the transfer and 80% prioritizing MH services for a new Health Accord (Tuerk et al. 2018). Nonetheless, jurisdictional issues threatened to undermine meaningful progress (Bartram 2017). Interestingly, a recent modelling study estimated that every $1 invested in medicare coverage of psychological services would yield approximately $2 in societal savings, thus paying for itself (Moroz et al. 2020). However, a 2004 survey of policy elites found that while at least 50% desired full coverage for psychological counselling by physicians, only 30% wished for full non-physician MH coverage (Deber and Gamble 2004). The large proportion of providers opposing such coverage offers important insights. Wiktorowicz et al. (2020) observe path dependency in Canadian MH policy, noting that physicians advocating for hospital-based services – rather than community-based services –

have had a stronger policy influence than allied health professionals due to their direct access to ministries and suggesting that stigma around mental illness resulted in a weak political constituency for people with MH needs.

Given the growing demands, there is an urgent need to utilize cost-effective, sustainable and scalable solutions for delivering care. Technological innovation is a promising approach for alleviating access issues (Moroz et al. 2020). Through a variety of digital modalities (computer, web-based or mobile device applications), e-mental health (e-MH) services include self-management tools and therapist-supported psychological therapies (Lal 2019). Commonly cited strengths include the potential to reach not only individuals living in remote locations but also those in urban settings facing transportation, physical disability or scheduling barriers. Internet-delivered cognitive behavioural therapy (iCBT) is a notable example of an effective intervention for depression and anxiety that can be self-led, therapist-guided or both, with users navigating pre-set text and exercises aimed at modifying maladaptive thinking and behaviour patterns and developing coping skills. Targeted investments in e-MH services, including iCBT, have positively impacted patient access and outcomes in several countries where innovations scaled beyond pilot projects to become permanent services (Titov et al. 2018). Gratzer and Goldbloom (2016) offer the UK and Australia as prime examples of a strong policy push toward innovation, offering important learnings for Canada. Since 2008, the UK has been investing in publicly funded psychological interventions. The Improving Access to Psychological Therapies (IAPT) model (NCCMH 2018) entails stepped care whereby individuals can self-refer, and treatment intensity, expertise and frequency are assigned based on illness severity. With iCBT as one treatment modality, the IAPT model represents a monumental expansion of MH services in the UK, with over 6,000 therapists completing training and over two million people accessing care as of 2015, with high recovery rates leading to increased employment, showcasing both clinical and economic effectiveness (Gratzer and Goldbloom 2016; Titov et al. 2018). Australia has also expanded access to psychological services to address geographic and personal barriers to accessing care. Australia's government added psychologists and other MH providers to public health insurance coverage and implemented multiple iCBT programs within its stepped-care approach, yielding high treatment effectiveness and patient satisfaction (Gratzer and Goldbloom 2016). These substantial federal investments allowed e-MH services to scale and reach a large number of individuals by targeting mild concerns while focusing in-person resources on those requiring more intensive intervention (Lal and Adair 2014).

Along with the recent funding increases, there has been some movement toward e-MH innovation on the Canadian policy agenda. A review of policy documents published between 2011 and 2019 offers important insights into the pre-pandemic era, highlighting that technology had little strategic attention (Lal et al. 2021). Since 2014, the Mental Health Commission of Canada (MHCC) has been promoting evidence-based reviews and environmental scans of e-MH initiatives and has also released an implementation tool kit.

Federal funding for innovation has also increased, including the Canadian Institutes of Health Research's eHealth Innovation Partnership Program and strategic investments in e-MH researchers through the Canada Research Chairs programs. To use Ontario as a local example, in 2017, the province pledged $72.6 million over three years to improve access to psychotherapy for those with mild/moderate anxiety and depression (Vasiliadis et al. 2021). Consultations with Health Quality Ontario culminated in a decision to provide CBT via community-based therapists. Importantly, the online modality, iCBT, was scrutinized in 2019 by a health technology assessment committee that deemed it worthy of public funding (HQO 2019). In March 2020, Ontario announced its plan for improving its MH service continuum using the IAPT stepped-care model (Government of Ontario 2020a). Ontario's investment of $3.8 billion over 10 years included the launch of its Structured Psychotherapy Program, with no out-of-pocket costs for CBT and with two fully funded, self-guided, therapist-supported iCBT programs (Government of Ontario 2020a). Lal et al. (2021) caution, however, that despite these promising advancements, strategic and coordinated leadership is required to scale pilot initiatives. Reliance on e-MH services to bridge the access gap in other countries required substantial investments in the recruitment and training of non-physician staff, highlighting the importance of reaching the goal of spending 9% on MH set by the MHCC for 2022 (Gratzer and Goldbloom 2016).

The COVID-19 pandemic created another window of opportunity for healthcare reforms through the rapid adoption and routinization of digitalization. Wind et al. (2020) assert that COVID-19 was a turning point for e-health since services had to be provided online at a "warm" (p. 1) distance. This entailed increased development and use of e-MH services that reduced scarcity by substitution, such as with self-guided interventions, or by overcoming geographic barriers for therapist-guided e-interventions. Despite two decades of evidence on digital MH services, their implementation in routine care was continuously stalled until the pandemic accelerated adoption by both patients and providers. In May 2020, Prime Minister Justin Trudeau announced an investment of $240.5 million to develop, expand and launch e-MH initiatives (e.g., Wellness Together, which includes virtual access to peer support and professional counselling) to improve access (Government of Canada 2020). Several areas in Canada also responded to the COVID-19 pandemic by delivering e-MH services (e.g., Text4Hope, MindHealthBC, Be SaskWell), but the extent to which these initiatives curb access gaps is unclear. In May 2020, Ontario announced an expansion of iCBT and pledged $12 million to help MH agencies hire and train more staff and improve infrastructure for virtual supports (e.g., BounceBack) (Government of Ontario 2020b). While this overview focuses on e-MH services for adults, many innovations have also been developed specifically for children and youth (e.g., Kids Help Phone, Integrated Youth Services).

With fleeting policy windows, swift action is paramount, particularly since pandemic-related funding may not be sustained long term. Moroz et al. (2020), therefore, recommended that policy makers allocate funding support for scaling up service delivery. Considering the interest in and use of technology during the COVID-19 pandemic, Torous et al. (2020) argue that increased investments in the present will yield unprecedented access to high-quality e-MH services in the future. Ironically, the same system-level barriers that create unmet MH needs in the first place (limited physician capacity and scarce public coverage for non-physician providers) are the ones that may limit the ability of e-MH services to scale, sustain and tackle the access gap. Provider availability and capacity to use e-MH services are often unaddressed assumptions in existing literature (Tuerk et al. 2018). With the promise of overcoming geographic, scheduling- and stigma-related barriers to care, potentially widening the pool of patients utilizing e-MH services, if capacity is not increased (via hiring and/or training more therapists), unmet needs will remain. A recent *Canadian Medical Association Journal* news release (Vogel 2019) argued that "[v]irtual care can't fix physician shortages underlying access woes." Since e-MH services will not bridge access gaps without enough workers manning them, human resources remain a critical concern for policy makers.

Ontario's pandemic response further illustrates the importance of integrating non-physician MH providers into public health insurance. Scharf and Oinonen (2020) state that Ontario's physician-centric response, relying on publicly covered providers through enhanced billing codes is problematic, since overworked physicians who are typically not trained to provide psychotherapy are being pressured and incentivized to provide potentially suboptimal care. Gratzer (2020) suggests that even an enhanced complement of physicians would not suffice to close the gap. By failing to increase public access to non-physicians who can provide both effective and cost-effective care, the physician-centric approach puts patients at risk while increasing stress on the already overburdened providers. Other countries have successfully expanded coverage to psychologists and other licensed therapists. Ontario's IAPT–inspired Structured Psychotherapy Program is showing promise for e-MH scale up, illustrating that evidence-based treatment can be successfully delivered by non-physicians both in terms of effectiveness (achieving outcomes equivalent to services delivered by physicians [Stanley et al. 2014]), and efficiency (such as cost savings). iCBT further overcomes geographic access barriers and can be delivered asynchronously, with self-guided modalities reducing therapist time and associated costs. Nevertheless, Torous et al. (2020) remark on the importance of investing in not only hiring and training e-MH providers but also in ensuring that all patients have the digital literacy and competency to partake in services. When capitalizing on the COVID-19 pandemic as a window of opportunity for expanding access to services through e-MH care, digital equity must remain at the forefront (Rich et al. 2019), with additional considerations around risk mitigation (Stevens et al. 2021)

Conclusion

The system-level barriers underpinning Canada's unmet MH needs, including the scant coverage for non-physician services under the *CHA* and the limited availability and capacity of psychiatrists and primary care providers to deliver effective psychotherapy, have not been resolved despite recent funding increases. With the COVID-19 pandemic opening a policy window, the promise of e-MH services for efficiently overcoming geographic and personal access barriers is at the forefront. However, e-MH services are not a panacea. If the system-level factors underlying Canada's pervasive access issues are not addressed, it remains uncertain whether e-MH services can close the gap. A system-level, creative expansion of the publicly funded MH workforce that includes non-physician providers is warranted in order to close the access gap and meet the growing demand for MH services.

Acknowledgment

This work has won the doctoral award in the 2022 Jack Boan Student Essay Competition sponsored by the Justice Emmett Hall Memorial Foundation.

Funding

Evgenia Gatov is supported by the Ontario Graduate Scholarship.

Correspondence may be directed to Evgenia Gatov by e-mail at jenny.gatov@mail.utoronto.ca.

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Commentary: Minding the Gap in Access to Mental Health Services – Calling for Smart Funding, Not Just More Funding

Commentaire : Combler l'écart dans l'accès aux services de santé mentale – appel à un financement intelligent, pas seulement plus de financement

DAVID GOLDBLOOM, OC, MD, FRCPC
Professor
Department of Psychiatry
University of Toronto
Toronto, ON

DAVID GRATZER, MD, FRCPC
Attending Psychiatrist
Centre for Addiction and Mental Health
Associate Professor
Department of Psychiatry
University of Toronto
Toronto, ON

Abstract

In response to the paper by Gatov and colleagues (2023), the authors of this commentary, both psychiatrists, consider ways of addressing long-standing gaps in access to mental health services in Canada. They note the innovation seen during the COVID-19 pandemic with the rise of virtual care because of viral threat and economic imperative. Drawing on examples, including the UK-based experiment with publicly funded psychotherapy, they discuss the need for more flexible provider models of care (read: non-physician), better data collection and the potential of artificial intelligence. They conclude by calling for smarter funding, not just more funding.

Résumé

En réponse à l'article de Gatov et ses collègues (2023), les auteurs de ce commentaire, tous deux psychiatres, envisagent des façons de combler les lacunes de longue date dans l'accès aux services de santé mentale au Canada. Ils soulignent les innovations observées pendant la pandémie de COVID-19 avec l'augmentation des soins virtuels en raison de la menace virale et des impératifs économiques. En s'appuyant sur des exemples, notamment l'expérience britannique en matière de psychothérapie financée par le secteur public, ils discutent de la nécessité d'avoir des modèles de soins plus flexibles (comprendre : autre que par des médecins), préconisent une meilleure collecte de données et commentent le potentiel de l'intelligence artificielle. Ils concluent en demandant un financement plus intelligent, pas seulement plus de financement.

Introduction

We applaud the focus of Gatov et al. (2023) on addressing long-standing gaps in access to mental health services through innovations – and not (just) because they cited a previous publication of ours repeatedly!

If the COVID-19 pandemic was a great revealer of inequities in access to healthcare in general, it is also true that the same pandemic has appeared to be an accelerator of innovation from vaccines to virtual services. As Gatov et al. (2023) note, it has been "another window of opportunity for healthcare reforms through the rapid adoption and routinization of digitization" (p. 44). The reality is that in the same spirit that it takes years of work for something to become an overnight sensation in entertainment, many of these innovations had a pre-COVID genesis. Virtual psychiatry via television was first reported in the peer-reviewed literature in 1957 (Tucker at al. 1957). Prior to the pandemic, while only 7% of Ontario psychiatrists worked via that technology regularly (Serhal et al. 2017), many had been exposed to virtual care in their training or at points in their practice. Of course, the pandemic was transformative; virtually, all psychiatrists became virtual psychiatrists, for example, but the seeds of change were sown over the past decades.

This represents a significant turning point in patient-centred care, precipitated by both viral threat and economic imperative, that will endure longer than the pandemic as an enhanced menu of options and choices for patients to engage in healthcare. And, at the level of provinces and territories, there needs to be a commitment to continue public funding of this healthcare access option, as well as ensure broadband access across their jurisdictions to make it work properly.

Discussion

With regard to human mental health resources, Gatov et al. (2023) rightly point out the now-dated origins of the *Canada Health Act* (1985) that reflected the idea that healthcare was to be delivered primarily by physicians and in hospitals. Hospitals have largely become the last refuge of fully publicly funded, multidisciplinary mental healthcare, which includes nurses, psychologists, social workers, occupational therapists and others.

In March 2023, the Canadian Alliance on Mental Illness and Mental Health released its national survey of perceptions of access to mental healthcare in Canada during the pandemic

(Mental Health Research Canada 2023). Almost half of the Canadians gave their jurisdiction a failing grade in terms of access for all residents. Only one-third of those who did access services obtained publicly funded ones; for the remainder, it was a mix of out-of-pocket and privately insured services. They overwhelmingly endorsed expectations of reasonable wait times, something for which precious little data in Canada exist.

While Gatov et al. (2023) point to the reality that private insurance coverage often covers a minimal number of therapy sessions, there are examples of changes in the banking and telecommunication sectors, where unlimited mental health coverage for treatment with registered professionals is now being advertised for recruitment – secure in the evidence that this investment in the mental health of employees is associated with a reduction in workplace disability costs. What will it take to expand outpatient, publicly funded coverage of multidisciplinary, evidence-based mental healthcare with measurement of net cost, much as has been recently demonstrated with regard to the impact of free medicine distribution on reducing overall healthcare costs?

Our system is generally structured around primary care, itself a focus of concern given the significant number of people without access to this essential resource. In terms of mental health, there is a double barrier – not only in finding a primary care provider but also in that provider then being able to find mental health resources for referral if needed. One of the striking aspects of the Improving Access to Psychological Therapies (IAPT) program (NHS England n.d.) in England as a fully publicly funded psychotherapy initiative, which is mentioned by Gatov et al. (2023), is that self-referral is allowed, removing one of the barriers. It does not preclude primary care involvement, but it does not necessitate it either.

The other striking feature of the IAPT program is its use of a new cadre of providers called psychological well-being practitioners. They do not have the advanced training (or the years required to complete it) of the traditional mental health disciplines. They are trained intensively and rapidly. And unlike the traditional disciplines, they are closely supervised, monitored and evaluated with regard to clinical volumes and, importantly, clinical outcomes. The idea that there are standardized outcome data on 98.5% of clinical encounters in a national health initiative is currently unimaginable in Canada (Clark 2018). And then there is accountability. This aggregated information is publicly available on websites, from waiting times to measures of improvement and recovery.

In recent years, Ontario has moved to the regulation of psychotherapists through a provincial college. This change represents another public safeguard around standards and accountability beyond what is built into microsystems of care, such as the IAPT program. If provinces are open to the implementation of this proven model of improved access and care, they also need to fund it.

But even with training new providers, both traditional and novel, there will not be enough to meet clinical need. This is where digital interventions can play an important adjunctive role.

Self-help and bibliotherapy have a long pre-pandemic history. *Mind over Mood*, a depression self-help book (Greenberger and Padesky 2016), was in its second edition well before the COVID-19 virus was in its first edition. However, this reflects a one-size-fits-all approach that can now be tailored through the same digital technology that suggests shows for streaming based on what you have just watched.

Internet-delivered cognitive behavioural therapy (iCBT) began more than two decades ago, and a 2020 systematic review and meta-analysis demonstrated it to be as effective clinically as in-person cognitive behavioural therapy (CBT), with advantages in terms of accessibility, flexibility and potential cost-saving (Etzelmueller et al. 2020).

Given the ubiquity of smartphones globally (roughly 80% of the world's population have them), there is a need to leverage their potential. There are now over 10,000 mental health apps, most of which have been subject to little-to-no scrutiny in terms of efficacy, privacy and other concerns. Nevertheless, some apps have been evaluated and are either proven or promising, offering help for conditions where waitlists are long (post-traumatic stress disorder) or which cut across all mental health diagnoses (insomnia). Some of these apps employ artificial intelligence (AI), which allows for the ultimate digital customization of interventions to the individual.

These low-cost interventions can vault over many of the access hurdles, although there are caveats beyond concerns around efficacy and privacy. First, there are those people on the wrong side of the digital divide who do not have the hardware, software, technological skills, money or housing to use these services. Then there are the growing fears regarding AI in the ChatGPT (https://openai.com/blog/chatgpt) world; while the need for brakes on its evolution are important, it is clear that there will be no full stop in AI development, and even cautionary voices, such as Geoffrey Hinton, have endorsed its potential for healthcare benefit in a recent interview (Goodyear 2023).

These interventions do not replace human clinicians but rather provide another entry point in a stepped level of care, and may provide more contemporaneous monitoring of signs and symptoms than our expectation that patients accurately recall them at a subsequent appointment weeks or months later. With regard to guild-like fears of replacement, someone has noted that you cannot replace what does not exist for too many of us.

The need for Canada to increase its percentage of health funding that goes to mental health is emphasized by Gatov et al. (2023) and was part of the national mental health strategy created by the Mental Health Commission of Canada (MHCC) over a decade ago. It has not yet happened, and as Gatov and colleagues (2023) point out, mental health spending is about 7 cents on the healthcare dollar today. However, we add that for the desired improvements, this funding boost cannot be another Canadian example of just adding more money to the existing patchwork of services. It needs to be tied to meaningful measures of access (who is helped and how quickly), outcomes (standardized measures that are accountable publicly in aggregate form) and innovative approaches. Easier metrics to count – the number of hospital beds, the number of providers – are not sufficient. We need to know if people got help and got better, and we need innovative approaches beyond our existing resources.

Conclusion

The pandemic has presented healthcare delivery, in general, and mental healthcare delivery, in particular, with an opportunity to innovate and expand access. To fully capitalize on this moment, we need smarter funding, not just more funding. A first step is implementing the MHCC's recommendation of 9% of health funding (MHCC 2012). However, the past decades have been rich in examples of more funding not resulting in better care. Thus, we need to push further to fund evidence-based initiatives, with clear public accountability for that new funding. Gatov et al. (2023) note the need to address gaps in access with innovation. We believe that goal is possible, but there is work to do.

Correspondence may be directed to David Gratzer by e-mail at david.gratzer@camh.ca.

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DISCUSSION AND DEBATE

Reforming Paediatric Drug Regulations in Canada: A Clinical and an Access Imperative

Réforme du règlement sur les médicaments pédiatriques au Canada : un impératif clinique et un impératif d'accès

CHARLOTTE MOORE HEPBURN, MD, FRCPC, FAAP
Associate Professor
Division of Paediatric Medicine
The Hospital for Sick Children
Adjunct Professor
Institute of Health Policy, Management and Evaluation
University of Toronto
Toronto, ON

ALLISON A. CHANG, BA
BSW Candidate
Department of Social Work
King's University College
University of Western Ontario
London, ON

DEBORAH M. LEVY, MD, MS, FRCPC
Associate Professor
Department of Paediatrics
Temerty Faculty of Medicine
University of Toronto
Clinical Director
Division of Rheumatology
The Hospital for Sick Children
Toronto, ON

Abstract

Children deserve the same high standards for drug safety, efficacy and access as adults. Unfortunately, Canada lags behind leading international regulators in implementing reforms to ensure access to paediatric medications. Paediatric regulations, also known as paediatric rules in the US, include a mandate to submit paediatric data in all new drug applications when paediatric use can be anticipated. Absent paediatric regulations, many medications with paediatric-specific indications in other countries remain "off-label" for Canadian children. In addition to concerns related to off-label drug safety, the absence of paediatric indications prohibits appropriate paediatric-specific health technology assessments and limits the evidence-based listing of paediatric medications on public and private formularies.

Résumé

Les enfants méritent les mêmes normes élevées d'innocuité, d'efficacité et d'accès aux médicaments que les adultes. Malheureusement, le Canada accuse un retard par rapport aux principaux organismes de réglementation internationaux dans la mise en œuvre de réformes visant à assurer l'accès aux médicaments pédiatriques. Le règlement sur les médicaments pédiatriques comprend le mandat de soumettre des données pédiatriques dans toutes les nouvelles demandes d'approbation de médicaments lorsqu'une utilisation pédiatrique est prévue. En l'absence de règlements pédiatriques, plusieurs médicaments qui ont des indications pédiatriques particulières dans d'autres pays demeurent « non conformes » pour les enfants canadiens. En plus des préoccupations liées à l'innocuité des médicaments non indiquée sur l'étiquette, l'absence d'indications pédiatriques empêche l'évaluation appropriée des technologies de la santé pédiatriques et limite l'inscription des médicaments pédiatriques sur les formulaires publics et privés.

Introduction

Following a series of tragic events in the early 20th century, foundational drug regulatory frameworks were developed with an eye to protect children from both the real and perceived dangers associated with drug discovery and novel therapeutics (Moore Hepburn and Rieder 2022). The elixir of sulfanilamide tragedy – so named after multiple children died from exposure to diethylene glycol used to dissolve antibiotic tablets too large for paediatric patients to swallow – is credited with stimulating the passage of the *Federal Food, Drug, and Cosmetic Act* (US Congress 1934) in 1938 (Weinshilboum 1987). The thalidomide tragedy – another child health tragedy associated with global public outcry – was central to the passage of the Kefauver-Harris amendments to the *Federal Food, Drug, and Cosmetic Act* in the 1960s (US FDA 2023). While these important legislative achievements aimed to protect citizens from unproven and unsafe pharmaceuticals through research and regulatory oversight, they had the unintended consequence of excluding children, both formally and informally, from both the research and regulatory enterprise. In the subsequent half-century, as research and regulatory systems evolved to optimize the safety and efficacy of marketed therapies for adults, high-quality data informing the safe and effective use of medications in infants, children and youth were rarely generated (Bourgeois et al. 2012) and were even more rarely submitted to regulators for review (Carmack et al. 2020; Raja et al. 2020). This dearth of data led Harry Shirkey in the late 1960s to label children as "therapeutic orphans" (Shirkey 1968: 119).

In the 1990s, leading international regulators recognized the unique physiological and pharmacological needs of paediatric patients and acknowledged that children deserve the same regulatory protections as adults. They identified major weaknesses in existing drug development and regulatory systems and implemented comprehensive paediatric-focused reforms (Bourgeois and Kesselheim 2019). Unfortunately, Canada did not. As a result, more than two decades after the US, European Union (EU) and leading mid-sized market regulators modernized their paediatric drug approval process, Canada remains without key paediatric provisions now considered best practice. These deficiencies result in critical clinical knowledge gaps for Canadian clinicians and significant access barriers for Canadian patients. This paper highlights one key element necessary for successful paediatric drug regulatory reform and, using four descriptive clinical case studies, articulates the challenges that result from the absence of child-friendly drug review policies in Canada.

What is Paediatric Regulation?

Paediatric regulation, referred to as the paediatric rule in the US, is one of the fundamental provisions in all model paediatric regulatory reform packages. The paediatric rule is a regulatory mandate that requires the generation and submission of paediatric safety and efficacy data in all new drug submissions wherein paediatric use can reasonably be expected (IOM Forum on Drug Discovery, Development and Translation 2008). Now implemented in leading jurisdictions around the world, the paediatric rule is widely accepted as international regulatory best practice (Moore Hepburn et al. 2019).

Paediatric regulations recognize that children are not "small adults." Drug absorption, distribution, metabolism and elimination vary by age and by molecule. Changes in body size, proportion and composition accompany the growth and development of paediatric patients, ranging from premature infants (undergoing postnatal adaptation) to adolescents (undergoing puberty) (van den Anker et al. 2018). Acknowledging this significant physiologic variation to ensure safe, effective and cost-effective use, manufacturers must specifically study medicines in neonates, children and youth, and submit the relevant data to regulators for review. Moreover, as weight-based constraints demand dose flexibility and as age-appropriate administration requires child-friendly drug formulations, palatable liquids, mini-tabs and chewable solids designed to accommodate paediatric needs must be developed (Batchelor and Marriott 2015; van den Anker et al. 2018). Once developed, these child-friendly products must be evaluated according to the same quality standards that are in place for adult patients.

Paediatric regulation first emerged following global calls to governments and industry to ensure that children were not excluded from the potential benefits of drug research, and after recognizing that legislative levers were necessary to ensure that manufacturers pursued paediatric-specific labelling. To address the first issue – the long-standing marginalization of paediatric patients from clinical research – both the US and EU invested in programs to develop and sustain robust paediatric clinical trial ecosystems. In parallel, to address the issue of regulatory neglect, both jurisdictions implemented regulatory frameworks that mandated the submission of paediatric data with all new drug submissions (The Expert Panel on Therapeutic Products for Infants, Children, and Youth 2014). Specifically, in the US, the *Best Pharmaceuticals for Children Act* (US Congress 2002) and the *Pediatric Research Equity Act* (US Congress 2003) expanded funding for and the authorities of both the National Institutes of Health and the Food and Drug Administration (FDA) to facilitate the generation and mandate the submission of paediatric drug data to regulators. These two acts, together, are considered responsible for over 1,000 paediatric labelling changes in the US between 1998 and 2022 (Bourgeois and Kesselheim 2019; FDA 2022; US FDA 2023). Similarly, in the EU, Regulation (EC) 1902/2006 (EUR-Lex 2006) expanded the authority of the European Medicines Agency (EMA) to demand either paediatric data or a detailed plan to develop paediatric data in all new drug submissions, as well as in requests for new indications. From inception in 2007 to 2016, the EU authorized over 260 new medicines for children, most of them associated with the regulation's requirements (EMA 2017).

These reforms have resulted in robust paediatric research programs, higher-quality information for prescribers, enhanced regulatory support for paediatric-specific issues and more safe and effective "on label" medicines for children (EMA 2017). Based on the successes experienced by these leading regulators, many mid-sized market regulators have moved to implement similar regulatory frameworks.

Why is Off-Label Drug Use a Concern?

Health Canada–approved indications are specific to drug, condition and age and are designed to inform safe and effective use. In addition to guiding clinical care, these indications also serve as the basis for health technology assessments (HTAs) (evaluations of clinical and cost-effectiveness), thereby informing both listing and specific eligibility criteria on private and public formularies.

Off-label use occurs when a drug is given for a condition at a dose, by a route or to a population that has not been authorized by Health Canada (CADTH 2017), a practice that has long been associated with both efficacy and safety concerns (Guidi et al. 2022; Rawlence et al. 2018; Zito et al. 2008). The Adverse Drug Reactions In Children (ADRIC) study found that the odds ratio of an off-label and/or unlicensed drug being implicated in an adverse drug reaction compared with an authorized drug was 2.25 (Smyth et al. 2014). Moreover, given the relationship between population-specific indications and HTAs, off-label prescribing is not supported by formal cost-effectiveness review and is, therefore, often not eligible for public or private coverage. This creates critical access barriers for Canadian children, especially for those needing high-cost medications, and those medications listed on formularies with restrictions or covered only by limited use policies.

As therapeutic orphans and without modern regulatory protections, off-label prescribing in paediatrics in Canada is incredibly common. Up to 80% of all medications currently prescribed in Canadian paediatric hospitals are off-label (The Expert Panel on Therapeutic Products for Infants, Children, and Youth 2014), with neonates, children in intensive care and children being treated for mental illness being most at risk (Czaja et al. 2015; T Jong et al. 2002; Zito et al. 2008). Importantly, rates of off-label prescribing are significantly lower and rates of paediatric-specific approvals are significantly higher in jurisdictions where paediatric regulations are in force, meaning that the same medications approved by the US, the EU and other mid-market regulators *with* paediatric indications are approved in Canada *without* equivalent paediatric information.

Why is Paediatric Regulation in Canada an Imperative?

Paediatric regulation in Canada is imperative because:

- Canada lags behind the US, EU and other leading regulators in the implementation of paediatric-sensitive drug regulations. Without a mandate for manufacturers to submit paediatric data, many new medications are brought to the Canadian market without a paediatric indication, even when paediatric use can be anticipated and despite paediatric indications having been secured in comparable jurisdictions (Gilpin et al. 2022). Paediatric regulation is necessary to ensure children benefit from the same regulatory standards as adults.
- Without evidence-based paediatric indications, drugs for paediatric patients must be prescribed off label. Off-label drug use is associated with an increased risk of adverse events, precludes age-specific HTAs and often prevents the listing of the medication for paediatric populations on both private and public formularies.

The Impact of Regulatory Neglect: Clinical Case Studies

While all paediatric therapeutic areas have experienced the negative impact of regulatory neglect, the medications necessary to treat paediatric rheumatologic disease provide uniquely constructive case studies that demonstrate the impact of Canada's regulatory deficiencies on patients and families and highlight the critical relationship between Health Canada–approved indications and access.

Over the past two decades, the treatment landscape of paediatric rheumatology has expanded dramatically, with new therapeutic options allowing many affected children and youth to experience disease remission, normal growth and pain-free physical functioning. However, while the early initiation of biologics and newer small molecule drugs have fundamentally changed outcomes, they have also introduced significantly higher outpatient medication costs as compared with prior therapies (Grazziotin et al. 2021). In recent years, several biologics approved with paediatric-specific rheumatology indications in the US and the EU have either not entered the Canadian market at all or have been approved by Health Canada without paediatric indications. In the case of paediatric rheumatologic disease, off-label prescribing is generally not feasible as private and public payers will not cover the annual costs associated with these drugs (up to $25,000/year) and out-of-pocket costs are prohibitive.

Case #1

Belimumab (Benlysta) is a biologic drug approved by Health Canada to treat systemic lupus erythematosus and active lupus nephritis in adults (GlaxoSmithKline 2011). In 2019, in both the US and the EU, belimumab became the first drug ever to be approved with a specific paediatric indication (GlaxoSmithKline 2019). The Pediatric Lupus Trial of Belimumab Plus Background Standard Therapy (PLUTO) (US National Library of Medicine 2022) study – the study providing the data necessary to secure a paediatric indication in those jurisdictions – involved several Canadian investigators and many Canadian paediatric patients (Brunner et al. 2020). However, despite the engagement with Canadian patients and academics and despite peer-reviewed, clinical trial results demonstrating efficacy and safety in paediatrics patients, paediatric data were not submitted by the manufacturer to Health Canada – and this medication remains without a paediatric indication in Canada. Without paediatric-specific drug regulations, Canadian children will continue to participate in clinical trials and contribute to the evidence base enabling paediatric indications in other countries but will remain without access to essential drugs.

Case #2

Tofacitinib (Xeljanz) is approved in the US and the EU for the treatment of polyarticular juvenile idiopathic arthritis (JIA) and, similar to belimumab, Canadian centres participated in the clinical trials required by foreign regulators to secure a paediatric indication (Ruperto et al. 2021). The paediatric rheumatology community anxiously awaited the approval of this medication as it represented a new class of drugs with efficacy similar to the biologics (Machado et al. 2018) but in pill formulation (as opposed to injection). Tofacitinib has been approved by Health Canada for moderate to severe rheumatoid arthritis in adults but not for JIA. At present, without a paediatric-specific indication, this medication may only be accessed through the manufacturer's Patient Assistance Program for qualifying paediatric patients. Accessing necessary drugs through a compassionate program is time-consuming for providers and poses significant risks to the patient (as compassionate programs may end or qualifying criteria may change at any time).

Case #3

Abatacept (Orencia) highlights the important issue of paediatric-friendly formulations. Many paediatric formulations available in the US and the EU are not available to Canadian children (Litalien et al. 2020; Moore Hepburn and Rieder 2022) meaning that dispensing the appropriate dose in a form suitable for a child requires specialized pharmacy compounding or in-hospital administration. Abatacept is a biologic in a unique drug class, available in intravenous (IV) and subcutaneous (SC) injectable forms for adults with rheumatoid arthritis and other conditions (Bristol-Myers Squibb Canada 2006). However, Health Canada has approved the medication for paediatric JIA only in the IV formulation (Ruperto et al. 2008). This is despite research supporting the approval of the SC formulation for JIA patients in other jurisdictions (Brunner et al. 2018). An SC option would allow patients to administer this drug at home, reducing the cost and inconvenience associated with regular travel to an infusion site for medication administration. This highlights the fact that ensuring the availability of paediatric-friendly formulations in Canada is not only a quality, safety and equity issue, but also an issue with significant health system costs and impacts.

Case #4

Anakinra (Kineret) is an effective biologic for treating children with a rare but potentially life-threatening subtype of arthritis called systemic juvenile idiopathic arthritis (sJIA). Multiple small studies alongside years of global clinical experience have demonstrated its efficacy and safety in children (Giancane et al. 2022), and the EMA has formally approved anakinra for paediatric use. Unfortunately, anakinra does not have Health Canada's approval for sJIA, therefore, it remains off-formulary and out-of-reach for most Canadian children. In Ontario, successful physician advocacy led to public funding (via the Exceptional Access Program) for this medication. However, given the patchwork province-by-province approach to public formulary design, children outside Ontario remain without access (LeBlanc et al. 2012). Healthcare providers are instrumental in conducting clinical trials and are passionate advocates for patients, but they do not have the authority or mandate to petition for new indications. A paediatric regulation would ensure a systematic evidence-based approach to drug approval, including consideration of paediatric populations during both the new drug and new indications approval processes.

A Canadian Solution

The *Protecting Canadians from Unsafe Drugs Act (Vanessa's Law)* (2014) granted Health Canada additional authorities (including the authority to compel labelling changes in the face of serious drug safety signals), demonstrating that Canada's drug regulators may require additional powers to achieve their important mandate. Launched in 2018, the ongoing Regulatory Review of Drugs and Devices (R2D2) (Health Canada 2020) is a comprehensive plan to improve the efficiency and effectiveness of Health Canada's regulatory review process. Initiatives under R2D2 include generating novel priority review pathways for essential medications, renewing the Special Access Program and optimizing the use of real-world evidence to inform regulatory decision making. With Vanessa's Law demonstrating how expanding Health Canada's authorities can effectively address critical limitations in Canada's *Food and Drug Act* (1985), R2D2 provides a unique and time-sensitive opportunity to address the long-standing need for expanded Health Canada authorities to support safe, effective, on-label prescribing for paediatric patients.

At present, Health Canada does not have the authority to request paediatric-specific data if a manufacturer's submission does not include a specific paediatric indication. This is true even when paediatric use of the drug is expected, when paediatric data exist (including paediatric data generated by Canadian academics engaging Canadian patients in clinical trials) and when a paediatric indication has been applied for and/or secured in a trusted foreign jurisdiction. To address the long-standing regulatory neglect, the *Food and Drugs Act* (1985) and its associated regulations must be amended to expand the authorities of Health Canada by introducing measures that mandate manufacturers to provide paediatric data with all new drug submissions and with all applications associated with a request for expanded (adult) indications. In alignment with best practices and international standards, studies should use age-appropriate formulations in their design and execution. With an eye to minimizing the burden on manufacturers, adopting the internationally recognized International Council for Harmonisation/European guidelines concerning paediatric data generation and modelling paediatric drug data submission requirements on US or EU formats will eliminate the undue administrative burden. This will also ensure Canada does not unnecessarily discourage manufacturers from bringing new and important products to our market.

To ensure the effective implementation of a paediatric regulation, the Canadian Paediatric Society recommends that the federal government create an Expert Paediatric Advisory Board (EPAB) "to review, guide, and co-ordinate activities related to paediatric medication approvals, associated clinical research, and reimbursement activities" (Moore Hepburn et al. 2019: 333). The creation of an EPAB would allow for the introduction of paediatric expertise to the review process and enable Health Canada to develop and further paediatric-focused goals and objectives.

Conclusion

Evidence-based paediatric indications are essential to ensure safe and effective care for infants, children and youth and to facilitate the listing of essential paediatric medications on public and private formularies. Paediatric regulations that mandate the submission of paediatric data with new drug submissions and with applications for new indications have been successful in other leading jurisdictions and are considered international best practice. Although this prospective system would not address those medications already on the market without appropriate paediatric labelling, paediatric regulation is an important first step forward, and one that has been tested and proven efficient and effective in other jurisdictions. By implementing a Canadian paediatric rule, Health Canada will begin to address the long-standing regulatory neglect experienced by our youngest citizens.

Correspondence may be directed to Charlotte Moore Hepburn by e-mail at charlotte.moorehepburn@sickkids.ca.

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Commentary: The Injustice of Paediatric Drug Labelling in Canada – A Call to Action

Commentaire : L'injustice de l'étiquetage des médicaments pédiatriques au Canada – un appel à l'action

TAMORAH LEWIS, MD, PhD
Division Head
Clinical Pharmacology and Toxicology
Staff Neonatologist
Department of Paediatrics
The Hospital for Sick Children
Toronto, ON

Abstract

Building upon the article by Moore Hepburn et al. (2023), this rejoinder acts to reinforce the inadequacy of current drug labelling laws and the urgency of the need for improved paediatric drug regulation in Canada. To facilitate a path forward, specific examples of success in other trusted foreign jurisdictions are provided. A call to educate parents and the public about the current lack of paediatric drug labelling and the ways that multi-stakeholder groups can work together to ensure safe and effective pharmacotherapy for Canadian children are highlighted.

Résumé

Faisant fond sur l'article de Moore Hepburn et al. (2023), cette réplique insiste sur l'insuffisance des lois actuelles en matière d'étiquetage des médicaments et sur l'urgence d'améliorer la réglementation des médicaments pédiatriques au Canada. Pour faciliter la marche à suivre, des exemples précis de réussites dans d'autres pays de confiance sont fournis. L'auteure lance un appel à sensibiliser les parents et la population au manque d'étiquetage des médicaments pédiatriques et aux façons dont les groupes multipartites peuvent travailler ensemble pour assurer une pharmacothérapie sûre et efficace pour les enfants canadiens.

Introduction

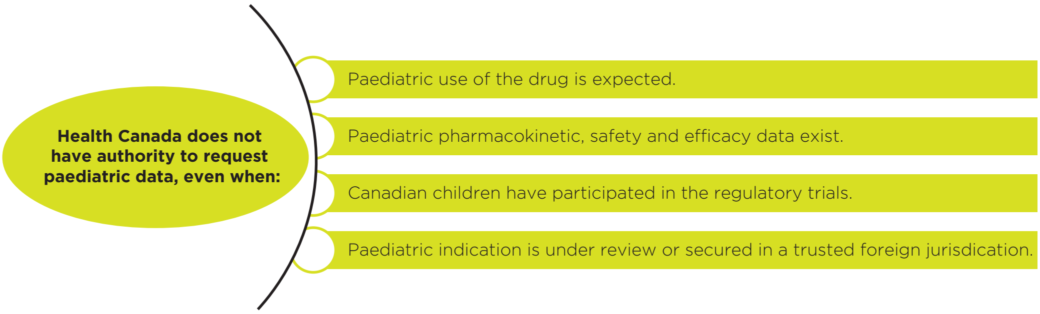
This author applauds the paediatric health advocacy efforts of providers Moore Hepburn, Chang and Levy: their paper entitled "Reforming Paediatric Drug Regulations in Canada: A Clinical and an Access Imperative" is a sweeping and comprehensive description of the state of drug regulation and labelling for children in Canada, with an important focus on current deficiencies (Moore Hepburn et al. 2023). This rejoinder serves to reinforce and amplify many of the topics discussed in their paper and also to give an example of how a trusted foreign jurisdiction (the US Food and Drug Administration [FDA]) has intentionally focused on paediatric regulatory science with great success.

Discussion

Children are a unique patient population that requires intentional drug regulatory attention. Children are an incredibly rapidly developing and changing patient population with times of extreme growth, ongoing maturation of organ function and, thus, an evolving drug toxicity and efficacy profile (van den Anker et al. 2018). Certain paediatric subpopulations (e.g., neonates) can be defined as orphans for drug development because drug labelling is so sparse and no new drugs have been developed to cater to these populations (Lewis et al. 2022). Because of varying body sizes and developmental stages, children have highly variable dosing needs requiring multiple different formulation types and dose strengths. Next, the diseases diagnosed in children may be similar to adult diseases or, in many cases, entirely distinct from adult diseases and require focused drug development efforts for paediatric indications. Given the unique paediatric issues described, regulatory attention and innovation are required for adequate drug labelling in children. The term "regulatory neglect" used by Moore Hepburn et al. (2023: 56) may seem like strong language but is, in fact, a very apt descriptor of the current state of paediatric drug regulation in Canada. Neglect is defined as leaving undone or unattended to especially through carelessness (Merriam-Webster 2023). While we cannot pinpoint the underlying source of current and ongoing regulatory neglect, we can work collectively to right this injustice.

There are many salient points made by Moore Hepburn et al. (2023) regarding paediatric drug labelling (see Figure 1). First, although other patient populations have benefited from regulatory reform, children have been functionally excluded from regulatory innovation in Canada. The enormity of this exclusion may not be known by many healthcare providers and parents. The current drug funding landscape of Canada, which includes variable provincial access and different formularies, makes federal guidance via comprehensive drug labelling uniquely important in this country. There is a clear injustice when Canadian children are enrolled and studied in international regulatory drug trials, yet do not benefit from eventual drug labelling and access. Finally, the examples of paediatric rheumatology therapies that were discussed showcasing different and overlapping barriers to drug access for children are current, ongoing and important. Inadequate or suboptimal treatment of paediatric rheumatic diseases (and many other paediatric onset diseases) has lifelong consequences including organ and joint damage, mental health implications, increased healthcare spending and shortened life span (Luca and Feldman 2014). As paediatric providers and advocates for paediatric health in 2023, we cannot remain passive or complacent in the current state of paediatric drug regulation.

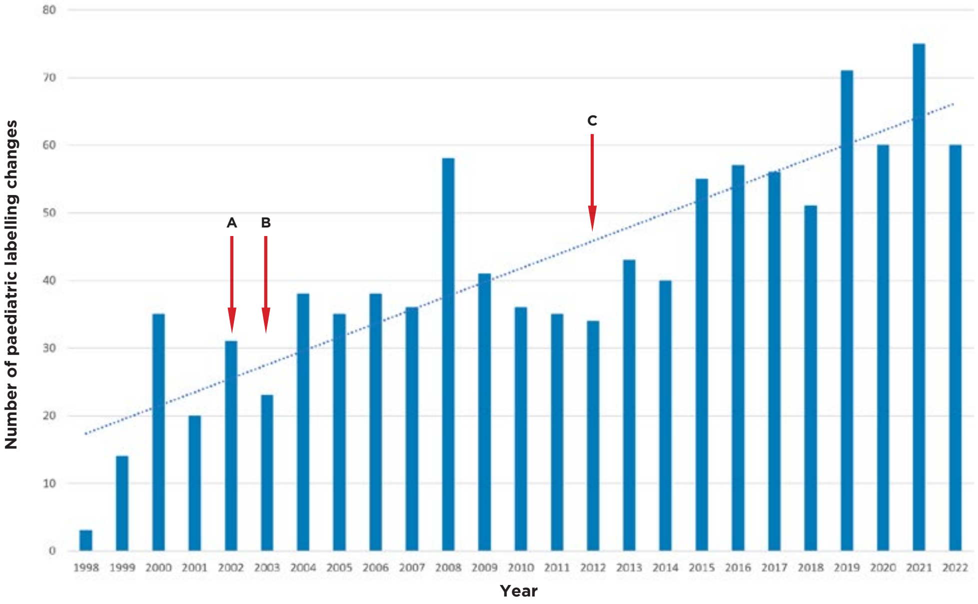
FIGURE 1. The lack of paediatric regulatory authority



The lack of intentional focus on paediatric drug labelling and regulatory sciences causes great harm. Firstly, when a drug undergoes regulatory review in Canada, the potential paediatric populations that might use or benefit from this drug are not considered. This leaves many paediatric patient populations without adequate pharmacokinetic, safety or efficacy data and results in widespread off-label drug use. This off-label use leaves prescribers to surmise the best indications and dosing and leaves parents worried about the adequacy of prescribing premise and safety. Secondly, because children are not considered in the Canadian regulatory review, the importance of the availability of diverse and appropriate drug formulations is not considered. Without access to liquid, minitab or dissolvable formulations for the youngest children and children with developmental differences, Canadian providers and pharmacists are forced to compound drugs. The common use of compounded formulations leads to unanswered questions in the bioavailability and consistency of drug dosing. Finally, and very importantly, Canadian drug labels increasingly do not match the drug labels of our peer countries. This mismatch leaves Canadian children uniquely vulnerable to drug efficacy and toxicity issues that are being actively addressed in trusted jurisdictions.

There are some positive stories from peer countries regarding paediatric regulation. The US FDA has experienced great success in increasing the number of paediatric drug labels in the past 20 years based on innovative congressional lawmaking and intentional collaboration between regulators, funders, scientists and sponsors. As displayed in Figure 2, there have been steady increases in the number of drugs with paediatric labelling in the US since 2002. The FDA has a strong and thriving Office of Pediatric Therapeutics and increasingly has paediatric expertise on each of its many review committees. In recognition that many off-label drugs commonly used on children are older and off-patent, the Eunice Kennedy Shriver National Institute of Child Health and Human Development funds the Pediatric Trials Network (PTN; https://pediatrictrials.org/), which started in 2010. The regulatory-ready clinical trials network uses the list of paediatric priority drugs identified through the *Best Pharmaceuticals for Children Act* (Ward 2023), and designs and executes clinical trials toward drug labelling. Since its inception, the PTN has submitted paediatric data for 26 products to the FDA and facilitated 18 paediatric label changes. The PTN uses key modern research approaches to facilitate paediatric drug research including advanced pharmacokinetic modelling methods, opportunistic sampling, real world data integration from electronic health records and pragmatic study designs.

FIGURE 2. Increasing paediatric drug labels by the FDA and the key regulatory landmarks that facilitated improved paediatric labelling



Arrow A: *Best Pharmaceuticals for Children Act (BPCA)* (2002) (NIH n.d.)
Arrow B: *Pediatric Research Equity Act (PREA)* (2003) (US FDA n.d.)
Arrow C: *The Food and Drug Administration Safety and Innovation Act (FDASIA)* (2012) (US FDA 2018) – permanently reauthorized BPCA and PREA

FDA = Food and Drug Administration.
Source: US FDA 2023.

Importantly, there are some deficiencies in current US paediatric regulations that are leading to the consideration of novel laws and approaches. For example, drugs that undergo FDA review in the category of orphan drug designation are exempt from the requirement of drug research plans in paediatric population. Specifically, the *Pediatric Research Equity Act* (Ward 2023) contains an exemption from paediatric research requirements for drugs for orphan diseases. This exemption was not problematic 10 years ago, but in the current drug approval landscape where approximately two-thirds of new drug approvals are through this orphan-drug-designation pathway, children are again increasingly left behind. In addition, although paediatric study plans are required at the time of new drug applications and new indication applications, there is no reliable consequence if sponsors do not actually complete the paediatric research plans as promised. Newer regulations that remove the paediatric exemption for orphan drug development and give the FDA more authority to enforce paediatric research plans are required.

Conclusion

Given the current landscape, what are the next steps to improve paediatric regulatory science in Canada? Public health officials and clinicians together can create social media campaigns to increase public awareness around the lack of paediatric drug labelling and its consequences. These social media and other media educational messages should be targeted toward Canadian parents, caregivers, patient advocacy groups and community-based organizations. Without adequate knowledge of the lack of current regulations in paediatric drug development, Canadian parents and caregivers are not empowered to advocate for change and to demand improved regulations to protect their children. A recent example of such an educational campaign is provided in the COVID-19 public health messaging. Funded through either the federal or provincial government, plain-language information can be co-developed by physicians, regulators and public health agencies and shared broadly across multiple platforms. With increased awareness, parent and community advocates can increase public dialogue around the importance of these issues during election cycles and other policy-making opportunities.

Next, the Canadian government can make investments in developing a robustly staffed and dedicated "Office of Paediatric Therapeutics" at Health Canada and develop partnerships with paediatricians across the country to provide expertise and guidance to this office. A key to success in advancing paediatric drug labelling will be the ability of this new office to identify key knowledge gaps and partner with research funders and the academic community to fill those gaps to facilitate paediatric drug labelling. For example, if there are certain paediatric populations where the trial methodology needs to be improved or if specific safety and efficacy data that are key to drug labelling are lacking, this office can partner with the Canadian Institutes of Health Research to create specific calls for research funding opportunities to address these gaps. Health Canada can develop or strengthen ongoing relationships with funders and academic scientists to intently focus on advancing regulatory science and innovative clinical trial design in paediatric drug development. The success of this office could be measured in multiple ways including its facilitation of new regulatory pathways for paediatric drug labelling, a quantifiable increase in drugs labelled for children in Canada and an increase in scientific grant funding earmarked for clinical trial innovation and regulatory-rigour paediatric drug trials.

Finally, Health Canada can continue international partnerships including participation in the "Paediatric Cluster," which includes regular international paediatric coordination calls, allowing drug regulators from the US, Europe, Japan and Canada to streamline and coordinate paediatric drug development plans (US FDA 2022). In this forum, regulators from the newly created Office of Paediatric Therapeutics will have up-to-date knowledge of international paediatric drug development programs that are under design or ongoing, and can understand what Canadian-specific issues will hinder or facilitate labelling of new products for children. Based on this knowledge of potential barriers for new drug classes or entities, regulators can partner with lawmakers to ensure adequate innovation in drug labelling pathways to keep Canadian paediatric drug labelling current with international peers.

It is possible to overcome injustice. Naming the problem and quantifying the impact is an important early step, and Health Canada has started doing so with ongoing efforts, such as creating a "National Priority List of Pediatric Drugs" (Government of Canada 2023). Parents, healthcare providers, child health advocates, medical societies, patient advocacy groups, regulators, funders and sponsors, all have an important role to play in improving the state of paediatric drug labelling regulations in Canada.

Correspondence may be directed to Tamorah Lewis by e-mail at tamorah.lewis@sickkids.ca.

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DATA MATTERS

Enterprise Healthcare Physician Services in Canada: An Environmental Scan

Les services médicaux d’entreprise au Canada : analyse de la conjoncture

SHERYL SPITHOFF, MD, MSc
Assistant Professor
Department of Family and Community Medicine
University of Toronto
Scientist
Women’s College Hospital Research Institute
Women’s College Hospital
Toronto, ON

LANA MOGIC, BSc
Research Assistant
Department of Family and Community Medicine
Women’s College Hospital
Toronto, ON

Abstract

Employers in Canada are increasingly offering physician services to their employees through third-party “enterprise” virtual care platforms. In our environmental scan, we identified nine enterprise healthcare companies offering physician services to millions of Canadian employees via enterprise platforms. All platforms offered rapid access to virtual physician services. Some offered in-person visits, access to specialists, health system navigation and sharing of information with an employee’s regular care provider. Almost half shared aggregate or de-identified health data with employers. These platforms provide rapid and convenient access to physician services but also disrupt the continuity of care, pose risks to employee privacy and expand two-tiered healthcare.

Résumé

Au Canada, les employeurs offrent de plus en plus de services médicaux à leurs employés au moyen de plateformes de soins virtuels « d'entreprise ». Dans notre analyse, nous avons identifié neuf entreprises de soins de santé qui offrent des services médicaux à des millions d'employés canadiens au moyen de ces plateformes. Toutes les plateformes offrent un accès rapide aux services médicaux virtuels. Certaines proposent des consultations en personne, l'accès à des spécialistes, la navigation dans le système de santé et le partage d'information avec le fournisseur de soins régulier de l'employé. Près de la moitié de ces plateformes partagent avec les employeurs des données agrégées ou dépersonnalisées. Ces plateformes offrent un accès rapide et pratique aux services médicaux, mais elles perturbent également la continuité des soins, posent des risques en matière de vie privée des employés et favorisent les soins de santé à deux vitesses.

Introduction

Employers in Canada are increasingly offering physician services to their employees through a third-party company in a business-to-business model (Baystreet 2021; GlobeNewswire 2021; Shoppers Drug Mart 2019; Teledact Inc. 2021). These third-party companies use a workplace – or "enterprise" – healthcare platform to provide the services. Physician services are generally virtual but some platforms also appear to facilitate in-person physician care (TELUS Health 2023a). The third-party companies claim that the platforms improve access to care leading to lower rates of employee absenteeism and provide a good return on investment for employers (Maple 2023; Normandeau 2021; TELUS Health 2023b). Employee health services for ill and injured workers are not new in Canada. Historically, however, only very large companies have offered physician services, generally by directly hiring or contracting individual physicians (Guidotti and Cowell 1997; Kraut et al. 2018; Lees 1980). Third-party platforms with virtual care services appear to have enabled the rapid expansion of enterprise healthcare to companies of all sizes (Gisby et al. 2022).

Enterprise healthcare also differs from the traditional model of healthcare in Canada. Most people receive care from self-employed physicians working independently or in small groups in community clinics (CFPC 2017; Martin et al. 2018; Peckham et al. 2018). These physicians either bill the provincial/territorial single-payer public health system – known as medicare – or, much less commonly, bill patients directly (Contandriopoulos and Law 2021; Flood 2021; Flood and Archibald 2001). In addition, until recently, physicians working in the traditional model of care rarely provided virtual care; only three percent of Canadians reported a virtual care physician visit in 2018 (Canada Health Infoway 2018). With the onset of the COVID-19 pandemic, and the introduction of public funding for virtual care, more physicians started offering these services (Bhatia et al. 2021; Burton et al. 2022; CMA 2020; Lapointe-Shaw et al. 2023). In the province of Ontario, virtual care visits increased 56-fold to comprise over 70% of all visits between March 2020 and July 2020 (Glazier et al. 2021).

Despite the apparent widespread access to enterprise healthcare in Canada, little work has been done to understand this approach to organizing and delivering physician services. Our research objective, therefore, was to gain an understanding of the nature and extent of enterprise healthcare in Canada and the implications for employees and the public health system, through a national environmental scan.

Methods

We conducted structured internet searches, using the Google search engine, between December 3, 2021, and April 1, 2022, to identify enterprise platforms that provide physician services to company employees in Canada. Search terms covered the topic areas of virtual care, enterprise and Canada. These included "virtual care," "virtual health care," "telemedicine," "enterprise," "employer," "employee," "business" and "Canada." For each search, we examined the first 50 results looking for relevant findings. We compared our findings to a list we compiled during a previous research study examining direct-to-patient virtual care in Canada (Spithoff et al. 2023).

Inclusion/exclusion criteria

We included third-party platforms that could be contracted by an employer to provide physician healthcare services through a proprietary software platform to employees living in Canada. We only included companies that provided physician services as, historically, these are part of Canadian medicare, whereas many other clinical services (e.g., counselling) are not. We included companies with platforms that provided physician visits through both synchronous (e.g., phone calls, video chat, in person) and asynchronous communication (e.g., text communication). We excluded companies if they provided services solely to employees living outside Canada or if they offered only non-physician services. We only included companies with platforms using the English language.

Identification of documents for extraction

For each enterprise healthcare platform that we included, we identified the platform's public website and any linked websites or documents. We also searched Mergent Intellect for information on the platform and the company owning the platform. Mergent Intellect is a publicly accessible, web-based application offering business data for US and Canadian private and public corporations (Toronto Public Library n.d.). This database contains company information, including corporate structures, a list of key executives and a complete company family tree.

Data extraction and analysis

Using these sources, we extracted information on the company's corporate structure; company headquarters; countries of operation; ownership (publicly traded or privately held); communication mode(s) for virtual services (e.g., in person, text, phone or video); access to services (e.g., same day); types of physician services (e.g., primary care, specialist services); in-person services; system navigator services; family coverage for services; payment for physician services (private or public); sharing of data with employers; and communication with an employee's regular primary care provider. Where available, we also collected information on company claims about the number of Canadian enterprise clients (employers) and the number of enterprise members (employees and their family members) in Canada.

Ethics

As we only used publicly available documents, we received a Research Ethics Board exemption from the Women's College Hospital.

Results

We identified nine companies offering enterprise physician services to employees in Canada via 11 enterprise software platforms. These enterprise care companies claimed to provide services to more than 44,000 companies and 4.5 million employees and their family members (Table 1). Seven of the 11 companies were publicly traded. Ten companies were based in Canada, and one was based in the US (Table 2). All companies offered virtual care physician services, and five companies also arranged in-person visits through their platform. Ten companies offered primary care, and one offered only addiction physician services. Seven companies provided coordinated access to specialist appointments, and six provided a system navigator to help employees navigate the health system. Four platforms offered to provide information to an employee's regular primary care provider and five stated that they provide employers with aggregated or de-identified employee health information.

Discussion

Our environmental scan provides insight into enterprise healthcare in Canada, which is available to millions of Canadian employees and their families. Enterprise healthcare provides employees with rapid access to physician services, but may also disrupt continuity of care (i.e., care by the same provider or team of providers over time) and pose risks to employee privacy. Furthermore, as many people living in Canada do not have access to these services, the model is also introducing a two-tiered healthcare system broadly across Canada.

TABLE 1. Companies providing enterprise physician services

Platform name	Parent company	Claims about services provided
ALAViDA	LifeSpeak Inc.	–
Appletree	Appletree Medical Group	–
CloudMD	CloudMD Software & Services Inc.	7,200 companies (employers)
Dialogue	Dialogue Health Technologies Inc.	25,000+ companies (employers), 1.8 million members (employees and family members)
JungoHR	JungoHR	–
Kii	CloudMD Software & Services Inc.	–
LifeWorks	TELUS	–
Maple	Maple Corporation	–
Meira Care	Meira Care	–
Teladoc	Teladoc Health	12,000+ companies (employers)
TELUS Health Virtual Care	TELUS	2.8 million members (employees and family members)

TABLE 2. Description of companies, enterprise physician services and data-sharing practices

Description		Number (%)
Ownership	Privately held	4 (36%)
	Publicly traded	7 (64%)
Headquarters	Canada	10 (91%)
	US	1 (9%)
Funding of physician services	Public	–
	Private	–
	Not stated	11 (100%)
Medical services	Primary care services	10 (91%)
	Addiction physician services only	1 (10%)
	Access to specialist care	7 (64%)
	System navigators	6 (55%)
	Family coverage	5 (45%)
Modality	Virtual care	11 (100%)
	In-person care	5 (45%)
Access	24/7	8 (73%)
	Same day	2 (22%)
Data sharing	With employee's regular primary care provider	4 (36%)
	With employers (aggregate or de-identified health data only)	5 (45%)

The widespread availability of these services indicates that they benefit employers, perhaps by increasing employee satisfaction and reducing workplace absenteeism (Maple 2023; Normandeau 2021; TELUS Health 2023b). Primary care is often difficult to access in Canada: about 15% of people do not have a primary care provider and, of those who do, many struggle to get timely access (CIHI 2020). Furthermore, the Canadian healthcare system is fragmented and difficult to navigate (Carter et al. 2017; Martin et al. 2018; Tang et al. 2021). Accordingly, surveys – commissioned by companies with enterprise healthcare platforms – report that employees value the rapid and convenient access to care and believe that the services reduce absenteeism (Dialogue 2021; TELUS Health 2019). There is a lack, however, of independent studies that evaluate the impact of enterprise healthcare on employee satisfaction, productivity, quality of care and health outcomes.

Our analysis also points to risks for employees. Less than half of the platforms enable in-person physician visits, implying that patients are expected to seek care from their regular care provider or the emergency department for complicated issues. This disrupts the continuity of care and poses a challenge for the effective management of chronic and complex health conditions (Davis et al. 2019; Li et al. 2021, 2022; Ray et al. 2019; Resneck et al. 2016; Schoenfeld et al. 2016; Shi et al. 2018; Uscher-Pines et al. 2016). As some of the enterprise care companies share de-identified or aggregate patient data with employers, enterprise care may create privacy-related ethical issues. Although the risk of re-identification is likely to be low if the data are de-identified or aggregated (Artemis Health Inc. 2020; CloudMD Software & Services Inc. 2021), sharing data with employers can enable surveillance and discrimination. For example, the data can be used to identify the characteristics of employees who are likely to have complex health conditions or who may have a high-risk pregnancy (Edwards 2016; Landi 2021; The New York Times Editorial Board 2016; Witte 2019). Companies may use this information to improve services for these employees. They may, however, also use this information in job recruitment algorithms to ensure that these individuals are not offered employment in the first place (Ebeling 2016; O'Neil 2016; Regan and Jesse 2019).

Enterprise healthcare affects the health system more broadly by introducing a two-tiered system, where millions of employees and family members have access to physician services and health system navigation not available to other Canadians. This may worsen health disparities (Zawacki et al. 2022). Employees of larger companies are often from a higher socio-economic stratum than other people living in Canada and are part of a group that already has better access to care (Martin et al. 2018) and better health outcomes (Bhatia et al. 2021; CMA 2020; Glazier et al. 2021; Lapointe-Shaw et al. 2023). Furthermore, studies show that a two-tiered system is likely to increase wait times for those in the public system by luring healthcare providers to the enterprise system (Cheng et al. 2018; Davidson 2006, 2008; Duckett 2005; Lee et al. 2021). The services may also lead to "cream skimming" of less complicated patients (Cheng et al. 2015: 1; Duckett 2020: 22). As many enterprise platforms do not offer in-person assessments, patients with complicated health issues are shunted to the emergency department or to their regular primary care provider, leading to a replication of services and potentially increasing health system costs (CMA 2020).

Limitations

Our study is limited by the fact that we relied on company documents to answer our research questions. In addition, we were not able to determine whether physicians billed the public system or if the services were paid privately.

Next steps

Researchers should seek to evaluate the quality, efficacy and usage of enterprise care and explore issues related to health system impacts and data privacy. They should determine whether physicians working for enterprise platforms bill privately or publicly. Private funding negatively affects equity, accessibility and quality of care without reducing healthcare costs (Bambra et al. 2014; Dahlgren et al. 2014; Gelormino et al. 2011; Hopkins and Cumming 2001; Lee et al. 2021; Tuohy et al. 2004). Furthermore, as private billing data are not collected by public systems, evaluating care is difficult. To address gaps in the public system, policy makers should improve access to primary care (Kiran 2022). They should take steps to address threats to the stability of the public health system from two-tiered care and create mechanisms to capture billing information on all physician health services – whether billed privately or publicly – in a public data trust (Expert Advisory Group 2021). Furthermore, policy makers should create legislation to protect employee privacy and prevent surveillance and discrimination.

Conclusion

Enterprise healthcare in Canada provides employees with rapid and convenient access to physician services and, perhaps, reduces workplace absenteeism. This approach to organizing and delivering care, however, may also expose employees to harms, as well as pose threats to the sustainability of the public healthcare systems. More research is needed to further explore how the system functions economically, who the system benefits and the implications for individuals and publicly funded health systems.

Funding

This project received funding from the Social Science and Humanities Council of Canada. Sheryl Spithoff received funding via a New Investigator Award from the Department of Family and Community Medicine, University of Toronto.

Correspondence may be directed to Sheryl Spithoff by e-mail at sheryl.spithoff@wchospital.ca.

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RESEARCH PAPER

How Timid or Bold Are Ministries of Health and Provincial Health Authorities in Canada in Planning for Healthcare Quality?

Dans quelle mesure les ministères canadiens de la Santé et les autorités sanitaires provinciales sont-ils timides ou audacieux dans la planification de la qualité des soins de santé?

BENJAMIN T.B. CHAN, MD, MPH, MPA
Assistant Professor
Institute for Health Policy, Management and Evaluation
University of Toronto
Toronto, ON
Assistant Professor
Clinical Sciences Division
Northern Ontario School of Medicine
Sudbury, ON

SUSMITHA RALLABANDI, MBBS, MPH, MPA
Research Coordinator
Independent Consultant
Toronto, ON

DAN FLORIZONE, MBA
Executive-in-Residence
Johnson Shoyama Graduate School of Public Policy
University of Regina and University of Saskatchewan
Saskatoon, SK

Abstract

Introduction: World Health Organization (WHO) guidelines recommend countries set quality plans for their health systems with clear priorities, indicators and targets. This paper examines whether Canada's federal, provincial and territorial governments are applying these principles.

Methods: We evaluated plans from 2010 to 2019 for 14 ministries of health and four health authorities in provinces with a single authority against a rubric that considered the existence of indicators, baselines, targets, time frames and progress reports.

Results: Ratings ranged from A+ to F with a median B/B-. Most jurisdictions had indicators, but only five of 18 jurisdictions had clear baselines, numeric targets and time frames. Irregularities were observed, such as vague indicators; setting goals to "improve" without targets; announcing targets only after plans had ended; setting minimal targets; removing targets after missing them previously; or inappropriate characterization of progress.

Discussion: Most Canadian governments are reluctant to set quality targets. We speculate there may be fear of criticism if targets are missed. However, several jurisdictions had clear, ambitious plans that may serve as examples for others.

Résumé

Introduction : Les lignes directrices de l'Organisation mondiale de la Santé (OMS) recommandent aux pays d'établir, pour leurs systèmes de santé, une planification de la qualité des soins qui comprend des priorités, des indicateurs et des objectifs clairs. Le présent document évalue dans quelle mesure les gouvernements fédéral, provinciaux et territoriaux du Canada appliquent ces principes.

Méthode : Nous avons évalué les plans, entre 2010 et 2019, de 14 ministères de la Santé, et quatre autorités sanitaires dans les provinces ayant une seule autorité, en fonction d'une grille qui tenait compte des indicateurs, des données de référence, des objectifs, des échéanciers et des rapports d'étape.

Résultats : Les cotes allaient de A+ à F avec un B/B- médian. Il y avait des indicateurs dans la plupart des administrations, mais seulement cinq des 18 administrations étudiées s'étaient dotées de bases de référence, d'objectifs numériques et d'échéanciers clairs. Des irrégularités ont été observées, comme des indicateurs vagues, l'établissement d'objectifs d'« amélioration » sans cibles, l'annonce de cibles seulement après la fin des plans, l'établissement de cibles minimales, l'élimination de cibles après les avoir ratées ou la caractérisation inappropriée des progrès.

Discussion : La plupart des gouvernements canadiens hésitent à fixer des objectifs pour la qualité. Nous supposons qu'il pourrait y avoir une crainte des critiques si les objectifs ne sont pas atteints. Cependant, plusieurs administrations se sont dotées de plans clairs et ambitieux qui pourraient servir d'exemples pour les autres.

Background

Governments in Canada have exhibited major interest in healthcare quality over the past two decades. During this period, seven ministries of health have established provincial health quality or patient safety councils to promote quality improvement. Multiple jurisdictions have legislated mandatory reporting of critical incidents (Milligan et al. 2021), and Ontario requires that healthcare organizations establish quality committees of boards and link executive compensation to quality results (*Excellent Care For All Act*, 2010). Governments have also invested in the measurement of quality; federal/provincial/territorial health ministers agreed to adopt common quality indicators in the 2003 Health Accords for strengthening the health system (Health Canada 2003), and subsequently, the Canadian Institute for Health Information (CIHI) expanded data collection to include wait times, patient experience, hospital safety and quality in long-term care and home care (CIHI n.d.a., 2019).

Another key role of governments is quality planning. The *Handbook for National Quality Policy and Strategy* of the World Health Organization (WHO) (2018) recommends setting goals that are "clear and meet a particular need, and should also be time bound, with a means to assess progress and achievement" (p. 22). Decades of psychology research show that organizations and individuals achieve better results when they set specific goals (Locke and Latham 2002). A clear goal directs attention to important tasks and wards off distractions. An ambitious goal has energizing effects, which stimulate effort and persistence. These findings are consistent with the SMART (Specific, Measurable, Achievable, Relevant and Time-Bound) goal framework in the management literature (Doran 1981), which states that goals should be specific, measurable and have a time limit for completion. According to the Country Planning Cycle Database of the WHO (WHO n.d.), which archives national plans of ministries of health, many countries have followed these principles by setting ambitious multi-year goals to reduce undesirable outcomes by 40% to 50% (Chan et al. 2019).

This paper explores whether governments in Canada have adopted key principles of good planning: the establishment of clear and measurable targets, timelines and progress reports. Within Canada, there has been interest in facility-level target setting. Ontario's *Excellent Care for All Act*, 2010, mandates that healthcare organizations establish annual quality improvement plans with targets, and academic health centres in Canada have published guidelines for quality plans emphasizing measurable goals, targets and annual evaluation (Collaborative for Excellence in Healthcare Quality 2012). What is not known is whether these principles have been applied to an entire federal/provincial/territorial jurisdiction. One possible reason why governments might avoid committing to clear goals is that they may risk criticism from the opposition and media if targets are missed.

Methods

This paper followed a qualitative research design using the historical method. We constructed an evaluation framework based on the above-mentioned principles of planning, searched for past examples of quality plans and rated them according to the framework.

Scope

This paper examined the planning principles of setting measurable targets with a clear time frame and regular monitoring. Other components of planning are also important, such as resource allocation, governance and accountabilities, but they are beyond the scope of this analysis.

Inclusion/exclusion criteria

The authors examined planning documents for each federal, provincial and territorial ministry of health in Canada and analyzed plans for health authorities managing healthcare for an entire province (i.e., Alberta, Saskatchewan, Nova Scotia, Prince Edward Island [PEI]) as these plans encompassed the entire health system. They also examined plans for the entire jurisdiction but within a specific sector (e.g., for long-term care, seniors, public health, cancer, mental health, etc.) issued either by the ministry or its designated planning bodies (e.g., provincial cancer or public health agencies).

Excluded from this study were regional health authorities for sub-regions within provinces/territories, health information agencies and research institutes. Provincial quality councils were also excluded; their role is to support quality improvement (*Excellent Care for All Act*, 2010; *Health Quality Council Act*, 2002; *Health Quality Council of Alberta Act* [2011]) and not target setting. The time period for inclusion of plans was from 2010 to 2019, inclusively. If an organization had plans for different time periods, only the most recent plan was evaluated. "Strategy" and "plan" were used interchangeably to allow for differences in definition between jurisdictions.

This article did not require ethics review as it examined only publicly available documents and no data on individual subjects were used.

Search strategy

The authors searched government websites using search engines, such as Google, employing the following search terms: [strategy; strategic plan; operational plan; development plan; plan; quality plan; annual report] in combination with [ministry of health, department of health, name of health authority] and [each province/territory, Canada].

Scoring algorithm

The authors developed a rubric for scoring system-level health plans based on recommended best practices underscored by WHO guidelines and other seminal research or frameworks (Appendix 1: Table A1, available online at longwoods.com/content/27154). Plans were scored from zero to seven, where one point was awarded for each of the seven criteria. Partial or minimal implementation of an item in the rubric was scored as a half or quarter point. Situations resulting in partial points included meeting the criteria for only a few of the priorities listed or major methodological flaws (e.g., setting targets, but announcing them only after the plan expires). Also, if the system-level plan of a jurisdiction failed to meet a particular criterion, partial points were awarded if at least some sector-specific plans met the criteria. Minimal scoring was awarded where only one narrowly defined example of the item was found. A letter grade was assigned based on the numeric score as follows: A (6.5), B (5), C (3.5), D (2) and F (1 or less), with a "plus" or "minus" for a half-point above or below these levels (e.g., A+ for a score of 7, A- for 6).

Planning information may appear in multiple documents; for example, priorities could be in a strategic plan, indicators and targets in an accompanying operational plan and progress in an annual report (Appendix 1: Table A2, available online at longwoods.com/content/27154). Scoring was based on the ensemble of such documents.

All three authors participated in the assessment of plans against the rubric. Each plan had at least two independent initial assessments, and discrepancies in scores were resolved in subsequent group discussions.

Validation

The authors prepared a detailed description of the justification for each criterion of the rubric for each jurisdiction (available upon request). This information and a draft of this manuscript were sent to each deputy minister of health and each provincial health authority's chief executive officer (CEO), with a request to identify missing plans or misinterpretations. Eight jurisdictions responded. Some additional documents were identified, but scores did not change.

One jurisdiction, however, challenged the validity of the criteria for stretch targets, arguing that achievability was critical and unrealistic goals would lead to demoralization. In response, we conducted a sensitivity analysis of the scoring with this item removed.

Results

There was wide variation in scores for clarity and in ambitiousness of planning, ranging from A to F with median B/B- (Table 1). Most jurisdictions had indicators, but only five of 18 fully met the criteria for clear baselines, numeric targets and time frames. Detailed footnotes in Table 1 describe the justification of partial or minimal scores.

Quebec's Ministry of Health and Social Services (MHSS), Nova Scotia Health Authority (NSHA) and Health PEI (the provincial health authority) received the highest scores (A or A+). Quebec's 2015–2020 strategic plan (Gouvernement du Québec 2015) was notable for having three main priorities, multiple objectives within each priority and at least one quality indicator for each objective. Annual reports described progress toward goals in each year, and targets remained consistent throughout the planning period (Gouvernement du Québec 2016, 2017, 2019a, 2019b).

Nunavut, Manitoba and Ontario had the lowest scores (F, F and D respectively), with almost no indicators or targets. In Manitoba, there was no system-wide plan; its cancer plan (CancerCare Manitoba 2016) mentioned some indicators, but no targets. *Patients First*, the system-wide plan of the Ontario Ministry of Health and Long-Term Care

TABLE 1. Scoring results by jurisdiction

Jurisdiction	Indicators	True quality indicators	Baseline	Targets	Stretch targets	Time frame	Progress report	Grade
Ministère de la Santé et des Services sociaux du Québec	●	●	◑[^]	●	●	●	●	6.5/A
Nova Scotia Health Authority	●	●	●	●	●	●	◑[^^]	6.5/A
Nova Scotia Department of Health and Wellness	◑[&]	◑[&]	◔[^]	◔[^]	◔[^]	◔[^]	◑[++]	2.5/D+
Health PEI	●	●	●	●	●	●	●	7/A+
PEI Department of Health and Wellness	◑[&&]	◑[&&]	○	○	○	○	○	1/F
Health Canada	●	◑[%]	●	●	◑[±]	●	●	6/A-
Alberta Health Services	●	●	●	●	○	●	●	6/A-
Alberta Ministry of Health	●	●	●	◑[‡]	○	●	●	5.5/B+
British Columbia Ministry of Health	●	◑[%]	●	●	○	●	●	5.5/B+
Saskatchewan Ministry of Health	●	●	◑[@]	◑[‡]	○	●	●	5/B
Saskatchewan Health Authority	●	●	◑[@]	●	○	◑[#]	◑[+]	4.5/B-
New Brunswick Department of Health	●	●	●	◑[‡]	○	◑[#]	●	5.0/B
Yukon Ministry of Health and Social Services	●	●	●	○	○	○	○	3/C-
NWT Department of Health and Social Services	●	●	●	○	○	○	○	3/C-
Newfoundland and Labrador Department of Health and Community Services	●	●	◔[##]	○	○	○	◑[++]	2.3/D+
Ontario Ministry of Health	◑[*]	◑[*]	◔[$]	◔[$]	◔[$]	◔[$]	○	2/D
Manitoba Ministry of Health, Seniors and Active Living	◑[**]	◑[**]	○	○	○	○	○	1/F
Nunavut[$$]	○	○	○	○	○	○	○	0/F

Legend: ● = yes; ◑ = partial; ◔ = minimal, ○ = none

[^] Baseline data are reported for some, but not all indicators.

[&] Business plan had no indicators; accountability report had structural indicators but only one quality indicator for wait times.

[^] One stretch goal for smoking with baseline and target in tobacco control plan; all other plans had no baseline, target, time frame.

[^^] Progress reports exist but cover some, not all indicators, and frequency of reporting is ad hoc.

[&&] Strategic plan had no indicators. Sector-specific plans for opioids, seniors, suicide prevention had no indicators; partial points awarded as plans for cancer, wellness and mental health have vague references to indicators.

[%] Partial score awarded; some true quality indicators exist, but the plan mainly contains structural measures.

[±] Partial score awarded as there is only one stretch goal.

[‡] Partial score given as some indicators have targets but majority do not.

[@] Partial score; target is reported as a percentage decrease, but actual baseline and target values not disclosed.

[#] Partial score; target was announced only after deadline had passed.

[+] SHA reported on progress annually in past years, but in 2019–2020 this info was removed; hence, partial score.

[##] Strategic plan has indicators but no targets or baseline. One of six sector-specific plans (joint replacement) had baseline but no targets.

[++] In annual report or accountability report, progress on structural indicators is reported but no data on quality.

[*] Score for Ontario's main plan "Patients First" is zero. Ten sector-specific plans were identified, of which eight had no indicators or targets. Two sector-specific plans (smoking and mental health) had indicators; partial points awarded.

[$] The smoking plan had baseline, targets, stretch targets and time frames; all ten other plans lacked these elements.

[**] No system-level plan identified for Manitoba. Sector-specific plans exist for cancer, Alzheimer's, mental health, falls and injury prevention. Cancer plan had indicators and partial points are awarded. No targets were identified.

[$$] No indicators or targets in business plan, nor in sector-specific plans for suicide prevention or continuing care.

NWT = Northwest Territories; PEI = Prince Edward Island.

(Ontario MOHLTC 2015), had no indicators or targets. Nine sector-specific plans were identified for cancer, access to care, public health (two plans), smoking reduction, renal care, mental health, critical care and planning at the regional level (i.e., local health integration network) (Cancer Care Ontario 2019a, 2019b; Public Health Ontario 2013; Ontario MOHLTC 2013; Ontario Ministry of Health and Ministry of Long-Term Care 2018; Ontario Renal Network 2019; Ontario's Mental Health & Addictions Leadership Advisory Council 2017; Critical Care Services Ontario 2018; Health Shared Services Ontario 2018). Among these, mental health had indicators but no targets while smoking reduction had indicators, stretch targets and time frames. All other plans had no indicators. In particular, Ontario's public health plan was boldly titled *Make No Little Plans* (Ontario MOHLTC 2013) but contained no indicators or targets.

Scores were higher for plans from the four province-wide health authorities compared to ministries of health (average, 6.0 vs. 3.5). In the two provinces with health authorities that achieved high scores (Nova Scotia and PEI), the ministry of health received very low scores.

Only Saskatchewan had a perfect match in priorities between its ministry and the health authority (Saskatchewan Ministry of Health (n.d.a.: 4, 7, 9, 10; SHA n.d.). For the other three provinces, the description of priorities was different between the two. For example, the business plans of the Nova Scotia Department of Health and Wellness (2018, 2019) listed six priorities: collaborative primary healthcare; continuing care; mental health and addictions; orthopedic surgeries; digitalization; and redevelopment of facilities in two sites. The priorities in the *2016–19 Strategic Plan* of NSHA (n.d.a.) were quality, workforce and citizen engagement.

Several provinces fulfilled the criteria for stretch targets. Examples include the following:

- Increase the proportion of residents with a family doctor from 66% (pre-2015) to 85% (Gouvernement du Quebec 2015: 10).
- Increase the proportion of cancer patients receiving surgery within 28 days from 60% (pre-2015) to 90% (Gouvernement du Quebec 2015: 11).
- Decrease the 90th percentile wait time for hospital beds for admitted emergency department patients from baseline 49.9 hours (2017–18) to 16 hours (2018–19) (Health PEI 2018: 16).
- Reduce the difference between the actual and expected length of stay from 2.4 to 1.67 days from 2017–18 to 2018–19 (Health PEI 2018: 16).
- Decrease hospital standardized mortality ratio from 112 (FY14/15) to 93 (NSHA 2017: 5).
- Improve patient experience from 81.9% (over multiple previous years) to 90% (NSHA 2017: 4).
- Decrease smoking prevalence to 5% by 2035, from 17.4% in 2015–16 (Health Canada 2019: 23).

There was variation between jurisdictions in time span of the plan, ranging from one, three and five years. In several cases, the annual reports of the ministry included results of indicators in the plan and hence were judged to be a progress report. Some jurisdictions (Alberta Health Services [AHS], Quebec) had standalone progress reports, which closely mirrored the structure of the plan, making it easier for the reader to evaluate progress.

Sensitivity analysis

There were only minor changes in relative rankings after removing stretch targets from the rubric. The lowest six jurisdictions scoring D or lower remained in the lowest six. The top five with A- or higher remained in the top five; however, British Columbia and Alberta ministries of health rose in relative ranking to join this top group. There were no changes in relative ranking for the middle group (B to C-). A complete table of these results is available on request.

Examples of irregularities in planning

VAGUE INDICATORS

The Ontario government's 2015 "Patients First" plan outlined four priorities: access, connect, inform and protect (Ontario MOHLTC 2015). Each priority had only vague descriptions of improvements, such as "see a specialist sooner," "more innovative approaches based on evidence" and "expand patient engagement" (Ontario MOHLTC 2015: 6–7). A one-page collage described past achievements for assorted indicators (e.g., increase in pharmacies offering flu shots from zero to 2,400) but there was no clear assignment of these indicators to a specific priority, nor was it clear whether these indicators were to be used for future monitoring (Ontario MOHLTC 2015: 8).

INTENDED DIRECTION WITHOUT NUMERIC TARGETS

The *Performance Measure Framework 2014–2019* (Yukon Department of Health and Social Services 2014: 3–5) specifies indicators for its strategic plan (e.g., *Chlamydia* incidence, smoking prevalence and vaccination rates). The framework contains baseline data, but the target is simply to "decrease" or "increase" these measures.

RETROSPECTIVE TARGETS

The New Brunswick Department of Health published information on whether the targets were met, but the target for a particular year was publicly disclosed in an annual report *after* the completion of the planning year (Government of New Brunswick 2015, 2016, 2017, 2018).

In contrast, *The 2017–2020 Health Plan and Business Plan* (AHS 2017: 15–18) contained targets for each of three future fiscal years, and its year two and year three progress reports describe whether these targets were met (AHS 2018: 15–18, 2019: 16–19). Quebec's

2015–2020 strategic plan (Gouvernement du Québec 2015) specified a completion date of 2020 for all targets, and each subsequent ministry annual report from 2015–16 to 2018–19 (Gouvernement du Québec 2016, 2017, 2019a, 2019b) consistently reported progress toward these targets.

CHANGE OR ELIMINATION OF TARGETS

In New Brunswick, some targets shifted from year to year for reasons that were not transparent. For hospitalizations for ambulatory-care sensitive conditions per 100,000 population where lower is better, the target as reported in the *Health Annual Report 2014–2015* was 535 in 2014/15 and the actual performance was 548 (Government of New Brunswick 2015: 7). The next year, a more ambitious target was reported (454) and the performance improved (477), although it was still short of the target (Government of New Brunswick 2016: 8). Without explanation in the subsequent year 2016–17, performance was much worse (542) and the reported target had been revised to 516 (Government of New Brunswick 2017: 9). After missing this target again in 2017–18 (Government of New Brunswick 2018: 7), the target was eliminated in 2018–19 and reported as "N/A" (Government of New Brunswick 2019: 7).

Similarly, the *Plan for 2018–19* of the Saskatchewan Ministry of Health (n.d.a.) proposed a "35% reduction in emergency department waits" (p. 5). The *Annual Report for 2018–19* noted that the target was missed and waits had actually increased (Saskatchewan Ministry of Health 2019: 8). In the *Plan for 2019–20*, the target became non-specific: "reduction in emergency department wait time…" in selected cities (Saskatchewan Ministry of Health n.d.b.: 4).

MINIMAL TARGETS

Some targets represented only minimal improvements, such as AHS's target to reduce unplanned hospitalization readmissions from 13.5% to 13.2% over three years (AHS 2017: 16).

NARROW REPRESENTATION OF OVERALL QUALITY

Targets were sometimes defined for a very narrow subset of activities within a sector or patient group. For example, the *2019/20–2021/22 Service Plan* of the British Columbia Ministry of Health (2019: 9) aims for "continued improvement of hospital services," but the sole indicator was the *Clostridium difficile* infection rate. There were no indicators for broader hospital issues, such as the rate of adoption of best practices or other adverse events.

MISREPORTING OF PROGRESS

In Ontario, the *Patients First: Action Plan for Health Care – Year-Two Results* report stated that "During the last two years, we've made great strides to improve the health care experience … For example: 94% of people in Ontario now have a family doctor or other primary healthcare provider" (Ontario Ministry of Health and Ministry of Long-Term

Care 2017: 1). However, in the original plan released two years previously, the same figure of 94% was quoted as the baseline (Ontario MOHLTC 2015: 8).

REDEFINING INDICATORS AND OBSCURING EVALUATION

NSHA set targets for primary care access – defined as the percentage of patients with a family doctor across multiple years (NSHA 2016: 3, 2017: 4). But later, it changed the definition to the number of persons who found a new doctor in its *Healthier Together 2016–19: Measuring Our Progress* report (NSHA n.d.b.: 9), making it impossible to ascertain if the original target was met.

UTILIZATION MEASURES INSTEAD OF INDICATORS

Many plans reported utilization measures instead of true quality indicators. There is no information on the percentage of persons who did not receive the services indicated for their condition. Examples include the following:

> ”Frail seniors will be provided with 10,000 more rehabilitation therapy visits”.
> *Patients First* (Ontario MOHLTC 2015: 11).
>
> “Number of patients being provided oral systemic therapy.”
> *2016–2021 Manitoba Cancer Plan* (CancerCare Manitoba 2016: 30).
>
> “Number of priority surgeries in targeted areas completed.”
> *2019/20–2021/22 Service Plan* (British Columbia Ministry of Health 2019: 5).

RELIANCE ON DESCRIBING STRUCTURE

Structural indicators describe milestones, such as the introduction of a program, new facilities or staffing increases. They can be useful for describing key investments needed for progress but should be complemented by process or outcome indicators describing adoption of best practices or achievement of a desired result. Nunavut’s *Business Plan 2018–2021* only described structural changes, such as “expand the use of Telehealth” and “incorporation of traditional knowledge in programs” (Government of Nunavut 2018: 137, 138). The *2016–2021 Manitoba Cancer Plan* monitored the number of “molecular tests made available” and “surgical leaders in the province” but had no process or outcome indicators (CancerCare Manitoba 2016: 31, 32). The *Strategic Plan 2019–2022* of PEI’s Department of Health and Wellness called for the “redevelopment of a provincial health plan” but had no quality indicators (PEI Department of Health and Wellness 2019: 7).

DATA AVAILABILITY

Some provinces acknowledged lack of data as a barrier to planning and aimed to address this gap. The *2016–2021 Manitoba Cancer Plan* identified “Enhanced Reporting on Performance, Quality and Safety” as one of its six strategic objectives (CancerCare Manitoba 2016: 7).

It proposed expanded health information system infrastructure, data collection on patient experience and public reporting of standardized indicators. Similarly, the *Strategic Plan 2017–20* of the Newfoundland and Labrador Department of Health and Community Services (2017: 14) specified using eHealth technology and evidence to improve healthcare as a priority to inform future health planning and policy development.

Elsewhere, however, plans lacked targets despite evidence of rich data sources. For example, the *Ontario Critical Care Plan 2018–2021* lists past accomplishments, such as an increase in the percentage of life-or-limb-threatening cases transported within four hours in one region or improved Intensive Care Unit-to-ward transfer times at one hospital (Critical Care Services Ontario 2018: 25). However, these indicators were not used for setting firm targets (Critical Care Services Ontario 2018: 22).

Discussion

This paper demonstrates wide variation between jurisdictions in Canada in planning for healthcare quality. Some jurisdictions had clear priorities, bold targets and a consistent method for reporting to the public on progress toward goals. In other jurisdictions, some or all of these elements were missing, resulting in plans that lacked clarity and ambition. We observed multiple examples of the lack of indicators, baselines and targets, as well as shifting or withdrawal of targets, minimal targets and targets announced only after the plan was complete.

Jurisdictions lacking a clear plan can still achieve improvement but must do so without the benefits of setting targets. Bold targets can mobilize the hearts and minds of workers within complex adaptive systems to move in the same direction. Don Berwick, former CEO of the Institute for Healthcare Improvement, used the phrase "some is not a number, soon is not a time" to launch the 100,000 Lives Campaign in 2004, aimed at recruiting American hospitals to implement six patient safety interventions to prevent this number of deaths within 18 months (Berwick et al. 2006: 325). Although the exact count of lives saved is disputed (Wachter and Pronovost 2006), even critics acknowledge the campaign's remarkable impact in galvanizing organizations toward a common goal.

Weak target setting is inconsistent with commonly used leadership frameworks. Kotter's "8 steps" for leading transformational change include "establishing a sense of urgency", which corresponds to having a clear baseline that highlights problems requiring attention, and "creating a vision," which corresponds to having bold targets (Kotter 1995: 61). Similarly, the Hoshin Kanri planning framework within Lean methodology (Zairi and Erskine 2015) emphasizes setting multi-year targets with yearly milestones and identifying actions at each organizational level to support the achievement of targets.

Our findings raise the question of why the clarity of planning varied widely. First, it is important to identify key actors involved in creating plans. Within governments, these include the ministers, senior civil servants and planning departments; within health authorities, these include the CEO, board, senior management and planners. One theory is that ministers are elected officials facing intense public scrutiny and may be more risk averse in planning. Risk aversion by the bureaucracy advising the minister may also be a contributing factor. Survey data demonstrate that public managers perceive a more risk-averse organizational culture compared with non-profit managers (Chen and Bozeman 2012) and that persons with low-risk tolerance are more likely to choose careers in government than in non-profit organizations or the private sector (Dong 2017). Higher job security may draw risk-averse individuals to the civil service (Lewis and Frank 2002) and rules-based processes may discourage risk-taking behaviour (Bozeman and Kingsley 1998). These factors could help explain why ministries had substantially lower scores than health authorities.

The government–media relationship may also contribute to risk aversion. Studies show that bad news predominates over good news (Stafford 2014; Vanderwicken 1995), likely due to greater consumer demand for negative stories (Trussler and Soroka 2014), which in turn is driven by the tendency of humans to pay more attention to negative events. This cognitive bias is believed to originate from a survival mechanism to quickly identify threats. Furthermore, when a negative event occurs, humans are more likely to attribute the outcome or "assign blame" to a particular actor compared with when a positive event occurs (Morewedge 2009). Hence, goal setting comes with high risk and low reward; failure generates more media attention, criticism from the opposition and blame on governments, but success is less likely to be noticed and attributed to government efforts.

Risk aversion theory, however, does not fully explain the observed variations and the reason why some jurisdictions, such as Quebec's MHSS, achieved high scores. Other explanations for variation include regional differences in political culture, government–media relations or communication strategies. One factor that may counter the negative impact of risk aversion is the well-documented intrinsic motivation of civil servants to serve the public good (Perry and Wise 1990). Future qualitative research should examine why some governments manage the risk of bold planning better than others.

The WHO's quality planning guidelines stipulate that governments should consult broadly with stakeholders in developing plans. It is not clear whether this has occurred in Canada; in all planning documents reviewed, there is no description of stakeholder consultations. Involving leaders of healthcare institutions, professional associations and patient groups increases support for the plan's goals and participation in its implementation. Furthermore, shared ownership of the plan could allow political risk to be shared, especially if the plan includes commitments by stakeholders to make measurable improvements that contribute to the plan. Future research should examine the degree of stakeholder input into planning and examine whether such input will lead to clearer, bolder plans.

The cause of the observed wide variation in scores is not known and warrants further investigation. One hypothesis is that Canada is a federation with limited ability to set national standards for quality planning. Another is that the larger and more complex the system, the more reluctant governments may be to set bold plans because complexity hinders the ability to influence actors and institutions. Although there is insufficient statistical power to test this hypothesis, it appears less likely as there are examples of large and small health systems within the highest and lowest rankings.

Another hypothesis is that some governments have chosen to delegate planning and target setting to health regions and consider this task to be operational. In two provinces with health authorities that achieved high scores, the ministry scored very low. Future research should explore this hypothesis. Even if policy makers believed that planning should be devolved to health regions, it would not explain the absence of targets in areas of the exclusive purview of the ministry.

Another potential cause of variation is that changes in government might lead to a ministry to stop progress reports until a new plan is released. There is insufficient data to examine this hypothesis because in most jurisdictions the political party did not change during the most recent plan. Future studies could examine changes in planning and reporting after elections with change in government.

One enabler of good planning is data, which requires significant investment. Lack of data was acknowledged in plans in Manitoba and Newfoundland, and both promised to establish measurement systems. Most jurisdictions participate in the National Ambulatory Care Reporting System and submit emergency department data allowing measurement of wait times but as of 2021/22, Newfoundland, New Brunswick and the Northwest Territories were not yet submitting data (CIHI n.d.b.). Similarly, PEI, Quebec, the Northwest Territories and Nunavut have not yet committed to measuring data using the Resident Assessment Instrument-Minimum Data Set in long-term care homes (CIHI n.d.a.). Investments to address these data gaps will require strong political will.

Few jurisdictions set stretch targets. One possible explanation is that planners are reluctant to commit to unrealistic targets, which could lead to the demotivation of staff. Another is a lack of knowledge on what constitutes an achievable stretch target. CIHI's *Your Health System* portal allows users to compare a hospital's results against averages for peer groups but does not report the best results attained by any institution (CIHI n.d.c.). Health Quality Ontario (n.d.) publicly reports which facilities have the lowest wait times. Such information could be used for target setting, but this information is subject to interpretation as superior results could be due to factors beyond the control of a health provider, such as differences in case-mix even after adjustment, available resources or geography. Ideally, research should be undertaken to determine if superior results obtained in some sites were due to skilful implementation of best practices or these other factors. If the former, then the result could serve as a benchmark.

Study Limitations

This study did not investigate the reasons why governments are reluctant to set targets. Future qualitative research using interviews with past and current public officials could provide insight.

Although the authors conducted an extensive search, it is possible that some plans were missed. This limitation was mitigated by asking the ministries of health and health authorities to identify missing sources or misinterpretations.

This paper only examined target setting. Other elements of good planning include the use of evidence to define priorities; the assignment of adequate resources; clear accountabilities for action; and stakeholder engagement. These items warrant further evaluation. Future research could also examine whether plans succeeded in their implementation.

Another limitation is that this paper is a cross-sectional analysis examining variations in planning based on the most recent plan. However, it is possible that scores may fluctuate over time, due to changes in risk-tolerance of government, technical knowledge of planners or other factors. Interestingly, while Nunavut had a score of zero, a previous public health plan developed in 2008 – before the study period – with multiple indicators and targets, would have scored highly (Government of Nunavut Department of Health and Social Services 2008). Future research could examine what factors lead to shifts in planning scores over time.

Conclusion

Governments and provincial health regions in Canada varied widely in the boldness and clarity of their plans for improving quality. Many jurisdictions appeared wary of setting targets for improvement, likely because of risk aversion to negative publicity if the target was missed. A few jurisdictions nonetheless developed bold plans. Future research should examine enabling factors for clear planning so that lessons can be shared with others.

Correspondence may be directed to Benjamin T.B. Chan by e-mail at drben.chan@utoronto.ca.

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RESEARCH PAPER

COVID-19 Vaccine's Speed to Market and Vaccine Hesitancy: A Cross-Sectional Survey Study

Rapidité de mise en marché du vaccin contre la COVID-19 et hésitation à se faire vacciner : une étude transversale

ALLY MEMEDOVICH, JD, BHSC
Research Analyst
Department of Community Health Sciences
Cumming School of Medicine
University of Calgary
Research Analyst
O'Brien Institute for Public Health
University of Calgary
Calgary, AB

BRENLEA FARKAS, MSc
Senior Research Associate
Department of Community Health Sciences
Cumming School of Medicine
University of Calgary
Senior Research Associate
O'Brien Institute for Public Health
University of Calgary
Calgary, AB

AIDAN HOLLIS, PhD
Professor
Department of Economics
University of Calgary
Calgary, AB

CHARLEEN SALMON, MD, MSc
Research Analyst
Department of Community Health Sciences
Cumming School of Medicine
University of Calgary
Research Analyst
O'Brien Institute of Public Health
University of Calgary
Calgary, AB

JIA HU, MD, MSc, CCFP, FRCPC
Medical Officer of Health
Alberta Health Services
Edmonton, AB

KATE ZINSZER, PhD
Associate Professor
Department of Social and Preventive Medicine
Université de Montréal
Montreal, QC

TYLER WILLIAMSON, PhD
Associate Professor
Department of Community Health Sciences
Cumming School of Medicine
University of Calgary
Associate Professor
O'Brien Institute of Public Health
University of Calgary
Calgary, AB

REED F. BEALL, PhD
Assistant Professor
Department of Community Health Sciences
Cumming School of Medicine
University of Calgary
Assistant Professor
O'Brien Institute of Public Health
University of Calgary
Calgary, AB

Abstract

Background: This paper aims to assess the extent to which the COVID-19 vaccine's speed to market affected Canadian residents' decision to remain unvaccinated.
Method: A cross-sectional survey conducted in late 2021 asked participants whether they had received the vaccine and their reasons for abstaining.
Results: Of the 2,712 participants who completed the survey, 8.9% remained unvaccinated. Unvaccinated respondents who selected "They made the vaccine too fast" (59.8%), were significantly more likely to identify as white, believe that the COVID-19 pandemic was not serious and have an unvaccinated social circle.
Conclusion: Should the COVID-19 vaccine rapid regulatory process be expanded, more patients may refuse treatment than if traditional timelines are followed.

Résumé

Contexte : Le présent document vise à évaluer dans quelle mesure la rapidité de mise en marché du vaccin contre la COVID-19 a influé sur la décision des résidents canadiens de ne pas se faire vacciner.
Méthode : Un sondage transversal mené à la fin de 2021 demandait aux répondants s'ils avaient reçu le vaccin et les raisons de leur abstention, le cas échéant.
Résultats : Parmi les 2 712 participants qui ont répondu au sondage, 8,9 % n'étaient pas vaccinés. Les répondants non vaccinés qui ont indiqué comme raison de leur refus que « le vaccin avait été fabriqué trop rapidement » (59,8 %), étaient beaucoup plus susceptibles de s'identifier comme étant blancs, de croire que la pandémie de COVID-19 n'était pas grave et d'avoir un cercle social non vacciné.
Conclusion : Un plus grand nombre de patients pourraient refuser un traitement, si le processus de réglementation rapide du vaccin contre la COVID-19 était largement adopté plutôt que de suivre les échéanciers traditionnels.

Introduction

Vaccine hesitancy is a critical issue for the control and mitigation of infectious diseases and was a point of controversy during the COVID-19 pandemic. Vaccine hesitancy has been defined as "the reluctance or refusal to vaccinate despite the availability of vaccines"

(WHO 2019) and presents as both an attitude (e.g., concerns about the safety of vaccines) and a behaviour (e.g., refusing to receive a vaccine) (Dubé et al. 2016). The causes of vaccine hesitancy are complex and in high-income countries, vaccine hesitancy is particularly impacted by social media, the spread of misinformation and changing attitudes regarding science (Dubé et al. 2013; Kennedy 2020). The main concern regarding vaccines in these countries is safety (Kennedy 2020).

An issue that began to arise in the media during the COVID-19 pandemic is the belief that the vaccine development was rushed. A narrative review published in 2021 noted that of those who refused to receive the COVID-19 vaccine, some believed that the vaccine development was hurried and, therefore, dangerous (Troiano and Nardi 2021). A Canadian survey conducted in December 2020 found that timing affects willingness to take the vaccine: the longer it takes for a vaccine to become available, the more likely people are to take it immediately (Kennedy et al. 2021). Yet another study conducted in May 2021 noted that in vaccine-hesitant Canadians, the most common concern was that the fast production of the vaccine compromised its safety (Piltch-Loeb et al. 2021).

Survey studies (Kennedy et al. 2021; Piltch-Loeb et al. 2021; Troiano and Nardi 2021) on COVID-19 vaccine hesitancy that assessed the speed-to-market concern were conducted in the Canadian population either prior to vaccine approval or prior to the vaccine being widely available, and no such surveys to our knowledge have been conducted after the COVID-19 vaccine became widely available. By November 2021, COVID-19 vaccines had been available for all Canadian adults for several months, yet uptake had begun to plateau following the introduction of vaccine mandates. This timing is important because individuals still abstaining at this point during the pandemic (November to December 2021) were likely committed to their position with their reasoning being top of mind. The motivation for the current study was to survey the Canadian population from November to December, 2021, to assess (i) the extent to which the vaccine's speed to market was still a persisting motivation for some Canadians to remain unvaccinated and (ii) whether there were any unique socio-demographic characteristics as compared with other unvaccinated individuals and survey respondents.

Methods

Study population

This cross-sectional study was conducted among residents of Canada between November 16, 2021, and December 23, 2021. AskingCanadians, an online data collection company, executed the survey (AskingCanadians 2023). AskingCanadians has more than one million Canadians in their panel who come from ranging socio-economic strata and are motivated to take part in AskingCanadians' surveys in order to earn rewards, such as Hudson's Bay Rewards, Aeroplan Miles, Petro-Points or VIA Préférence points (AskingCanadians 2023). The University of Calgary research team was not involved in compensating the AskingCanadians survey participants.

Potential participants were selected to be nationally representative based on province of residence, biological sex, income level and visible minority status. Study participants were 18 years and older. The cohort sample size aimed for 2,500 survey responses as this sample would provide sufficiently precise estimates while fitting within the practical considerations of this study.

Questionnaire

The survey asked participants whether they had received a COVID-19 vaccine and the reasons why or why not. Questions also assessed various beliefs, values and attitudes toward COVID-19 and the COVID-19 vaccine, such as how participants viewed the threat of COVID-19 and whether their social circle was vaccinated. Basic socio-demographic questions were also asked. The questionnaire was based upon similar questionnaires used in other survey studies regarding COVID vaccinations (Clarke et al. 2021; Merkley and Loewen 2022; Owen et al. 2020). The questionnaire was tested by the research team and translated into the French language. AskingCanadians provided the translation, which was not back translated.

Participants were asked, "Which of the following factors helped you decide to not get the COVID-19 vaccine?" They were asked to select all statements that applied from a list (for the full list of options, see Appendix 1: Table A1, available online at www.longwoods.com/content/27153). Statements were divided into different categories: accessibility; social factors; beliefs, values and experiences; marketing factors and others. All response choices within each category were visible on the same page in random order without scrolling. Respondents were able to see these categorizations. Options within each category and the order of categories were also randomized. Participants were able to select category titles, which would select all options in that category. One option in the "beliefs, values and experiences" category was "They made the vaccine too fast" (for the full list of options, see Appendix 1: Table A2, available online at www.longwoods.com/content/27153).

Participants were also asked two open-ended questions to which they were able to type their responses:

- Did any other factors not stated help you decide not to get partially or fully vaccinated against COVID-19 vaccine? Please explain.
- Do you have alternative ideas you would like to share on how access to COVID vaccines should have been organized when supply was limited?

For data quality purposes, all respondents who completed the survey faster than 30% of the median survey length were automatically excluded from the sample. In addition, open-ended questions were assessed, and the cases where respondents provided a low-quality answer were removed. This was conducted by the AskingCanadians team.

Data analysis

Data were collected directly in an online platform and exported as a CSV file. Descriptive statistics were reported with data visualization created in the ggplot package using R. Respondents were divided into two main groups: vaccinated and unvaccinated. Unvaccinated respondents were further divided into those who answered "Yes" to "They made the vaccine too fast" and those who did not. Socio-demographic factors were also divided into two categories to allow for Chi-squared testing (e.g., age was divided into "Under 65" and "65 years and older"). The socio-demographic factors we chose to assess were based on research about the COVID-19 vaccine and social networks and included ethnicity, age, education, income, rurality and immigration status (Al-Jayyousi et al. 2021).

Chi-squared tests were performed in Stata (version 15, 2017) to distinguish statistically significant differences ($p < 0.05$). Three main Chi-squared tests were performed: one to compare socio-demographic factors; second to compare participants' views on the threat of COVID-19; and third to compare the vaccination status of participants' social circles. Vaccinated and unvaccinated respondents were compared with each other; unvaccinated respondents who answered "Yes" to "They made the vaccine too fast" were compared with respondents who did not. Another Chi-squared analysis was done to determine whether "They made the vaccine too fast" was associated with any other possible responses.

Open-ended responses were read to see whether respondents commented on COVID-19 vaccine's speed to market.

Ethics

Ethics approval was obtained from the Conjoint Health Research Ethics Board at the University of Calgary (Ethics ID: REB21-1535). All data transferred by AskingCanadians were deidentified, anonymized and tokenized before being sent to the University of Calgary team for analysis.

Results

Between November 13, 2021 and December 23, 2021, a total of 4,445 potential participants accessed the survey and 2,712 (61%) participants completed the full questionnaire. Among the study participants, 8.9% ($n = 241$) were unvaccinated at the time of the study. Compared with vaccinated respondents, unvaccinated respondents were significantly more likely to identify as white (80.5% vs. 71.8%, $p = 0.004$), were younger than 65 years of age (78.4% vs. 70.8%, $p = 0.013$) and a Canadian citizen (95.0% vs. 91.3%, $p = 0.048$). They were also less likely to be college educated (49.8% vs. 61.8%, $p < 0.001$), have an annual income of more than \$50,000 (18.7% vs. 30.4%, $p < 0.001$) and be living in an urban location (70.5% vs. 82.6%, $p < 0.001$) (Table 1).

TABLE 1. Socio-demographic factors of unvaccinated vs. vaccinated respondents

Characteristic	Unvaccinated ($n = 241$)	Vaccinated ($n = 2,471$)	p-values
Ethnicity			
White	80.5% ($n = 194$)	71.8% ($n = 1,773$)	$p = 0.004$
Non-white	19.5% ($n = 47$)	28.2% ($n = 698$)	
Age			
Under 65 years of age	78.4% ($n = 189$)	70.8% ($n = 1,750$)	$p = 0.013$
65 years and older	21.6% ($n = 52$)	29.2% ($n = 721$)	
Education†			
High school or less	48.6% ($n = 117$)	37.7% ($n = 931$)	$p < 0.001$
College-educated	49.8% ($n = 120$)	61.8% ($n = 1,527$)	
Income†			
Less than $50,000	68.1% ($n = 164$)	57.6% ($n = 1,423$)	$p < 0.001$
More than $50,000	18.7% ($n = 45$)	30.4% ($n = 752$)	
Rurality			
Rural	29.5% ($n = 71$)	17.4% ($n = 430$)	$p < 0.001$
Urban	70.5% ($n = 170$)	82.6% ($n = 2,041$)	
Immigrant status			
Canadian citizen	95.0% ($n = 229$)	91.2% ($n = 2,253$)	$p = 0.048$
Permanent resident/ non-citizen	5.0% ($n = 12$)	8.7% ($n = 214$)	

† Some participants chose “prefer not to say.”

Characteristics of unvaccinated individuals who selected “They made the vaccine too fast”

Among unvaccinated individuals ($n = 241$), 59.8% ($n = 144$) selected “They made the vaccine too fast” as one of their reasons for being unvaccinated. There were no significant differences between those who answered “Yes” and those who did not, based on age, education, income, rurality and immigration status. However, significantly more unvaccinated individuals who identified as white selected “They made the vaccine too fast” as compared with other unvaccinated individuals (85.4% [$n = 123/144$] vs. 73.2% [$n = 71/97$], $p = 0.019$) (Table 2).

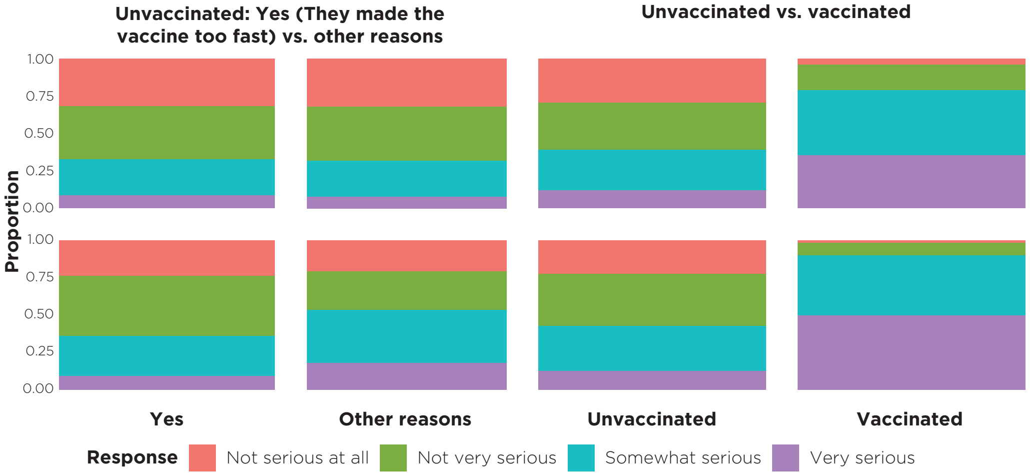
Respondents who were unvaccinated were significantly more likely to view the pandemic as a “Not very serious” or “Not serious at all” threat to themselves ($p < 0.001$) or to Canada ($p < 0.001$) as compared with their vaccinated peers (Figure 1; Table A3, available online at www.longwoods.com/content/27153). Those selecting “They made the vaccine too fast” as a reason for vaccine abstinence were also significantly more likely to report the view that the pandemic was a “Not very serious” or “Not serious at all” threat to themselves ($p = 0.023$) or to Canada ($p = 0.006$) as compared to all other unvaccinated respondents.

TABLE 2. Socio-demographic characteristics of unvaccinated respondents who selected "They made the vaccine too fast" vs. other reasons

Characteristic	"They made the vaccine too fast." Yes (*n* = 144)	Other reasons (*n* = 97)	*p*-values
Ethnicity			
White	85.4% (*n* = 123)	73.2% (*n* = 71)	*p* = 0.019
Non-white	14.6% (*n* = 21)	26.8% (*n* = 26)	
Age			
Under 65 years of age	77.8% (*n* = 112)	79.4% (*n* = 77)	*p* = 0.767
65 years and older	22.2% (*n* = 32)	20.6% (*n* = 20)	
Education†			
High school or less	47.2% (*n* = 68)	50.5% (*n* = 49)	*p* = 0.491
College-educated	52.1% (*n* = 75)	46.4% (*n* = 45)	
Income†			
Less than $50,000	68.1% (*n* = 98)	68.0% (*n* = 66)	*p* = 0.612
More than $50,000	17.4% (*n* = 25)	20.6% (*n* = 20)	
Rurality			
Rural	31.9% (*n* = 46)	25.8% (*n*= 25)	p *p* = 0.303
Urban	68.1% (*n* = 98)	74.2% (*n* = 72)	
Immigrant status			
Canadian citizen	97.2% (*n* = 140)	91.8% (*n* = 89)	*p* = 0.056
Permanent resident/ non-citizen	2.8% (*n* = 4)	8.2% (*n* = 8)	

† Some participants chose "prefer not to say.

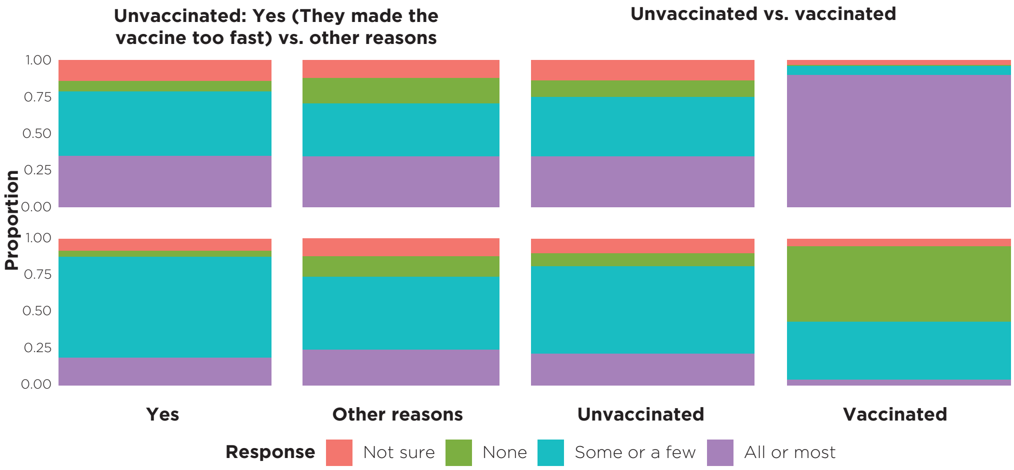
FIGURE 1. Respondents' views on the seriousness of the COVID-19 pandemic for themselves or for Canada



There was a considerable difference in the views between vaccinated and unvaccinated respondents on the seriousness of the COVID-19 pandemic for Canada (row 1) and for themselves (row 2). Far more unvaccinated respondents viewed the pandemic as either "Not serious at all" or "Not very serious" as compared to their vaccinated peers (right column). Among the unvaccinated, those who selected "They made the vaccine too fast," were also more likely to view the pandemic as either "Not serious at all" or "Not very serious" than those not selecting this factor as a reason for their choice to remain unvaccinated. The underlying data for Figure 1 is reported in Table A3.

Respondents' vaccination status was reflected in their social circles (Figure 2; Table A4, available online at www.longwoods.com/content/27153). The unvaccinated were significantly more likely to report that "All or most" or "Some or a few" in their social circles were also unvaccinated as compared to vaccinated respondents
($p < 0.001$). As compared to all other unvaccinated respondents, those indicating vaccine speed as a motivation for vaccine abstinence were significantly more likely to report that "All or most" or "Some or a few" in their social circles were also unvaccinated ($p = 0.007$).

FIGURE 2. Vaccinations among respondents' social networks



Whether respondents were vaccinated or unvaccinated themselves was somewhat reflective of their social circles. Far fewer unvaccinated respondents knew that "All or most" in their social circles had been vaccinated (right column). However, among the vaccinated, those who selected "They made the vaccine too fast," were also more likely to have reported that either "All or most" or "Some or a few" in their social circles were vaccinated. The underlying data for Figure 2 is reported in Table A4.

Other reasons for remaining unvaccinated

The median number of factors selected was seven. Nearly all participants who identified vaccine speed to market as a reason for remaining unvaccinated also selected other factors (only two selected vaccine speed to market as their only reason). "They made the vaccine too fast" was the third-most common reason for declining the vaccine (Table 3). Other reasons were "I am opposed to the government forcing us to get vaccinated" (63.1% of unvaccinated participants, $n = 152$), "I do not want to be a guinea pig" (60.6%, $n = 146$), "I don't trust the government" (55.6%, $n = 138$) and "The risk of side effects outweighs the risk of having COVID-19" (52.3%, $n = 126$). Answering "They made the vaccines too fast" was significantly associated with all four of these other reasons ($p < 0.001$).

Qualitative responses

Participants were also asked if there were any other factors that helped them decide not to get vaccinated. Of people who said the vaccine was made too quickly, one respondent wrote that the vaccine was "Too new." Of all unvaccinated participants, a few highlighted issues

TABLE 3. Other reasons for remaining unvaccinated selected by those who selected "They made the vaccine too fast"

Top five reasons for not receiving the vaccine (n = 241)	
Reasons for not receiving the vaccine	**Total**
I am opposed to the government forcing us to get vaccinated.	63.0% (n = 152)
I do not want to be a guinea pig.	60.6% (n = 146)
They made the vaccine too fast.	59.8% (n = 144)
I do not trust the government.	57.3% (n = 138)
The risk of side effects outweighs the risk of having COVID-19.	52.3% (n = 126)

Associations between "They made the vaccine too fast" and other top reasons for remaining unvaccinated			
They made the vaccine too fast	**Yes (n = 144)**	**No (n = 97)**	***p*-value**
I am opposed to the government forcing us to get vaccinated			
Yes	82.6% (n = 119)	34.0% (n = 33)	<0.001
No	17.4% (n = 25)	66.0% (n = 64)	
I do not want to be a guinea pig			
Yes	86.1% (n = 124)	22.7% (n = 22)	<0.001
No	13.9% (n = 20)	77.3% (n = 75)	
I do not trust the government			
Yes	79.2% (n = 114)	24.7% (n = 24)	<0.001
No	20.8% (n = 30)	75.3% (n = 73)	
The risk of side effects outweighs the risk of having COVID-19			
Yes	65.3% (n = 94)	33.0% (n = 32)	<0.001
No	34.8% (n = 50)	67.0% (n = 65)	

with the vaccine's speed to market. Different respondents wrote that it was "not developed and tested properly," there was "lack of full [disclosure] of the pros and cons of the vaccines" and "they do not tell the full truth about [vaccines]." One participant specifically mentioned that they "can't trust Health Canada."

Participants were also asked, "Do you have alternative ideas you would like to share on how access to COVID-19 vaccines should have been organized when supply was limited?" Of those who were unvaccinated and said the vaccine was made too quickly, three highlighted the vaccine's speed to market. Comments included: "[don't] roll out any vaccine until test and trials are public like vaccines in the past," "why the big pressure when the trial period does not end till 2023" and that the vaccine should not have been available "without research, proper development, testing and approval."

Of vaccinated respondents, none mentioned speed to market directly, though several comments implied discomfort with the level of clinical testing. One participant mentioned "waiting to see the side effects" before getting the vaccine. Another wrote, "Not [many] options, either way we are guinea pigs."

Discussion

This paper identified that the perceived rapid speed to market of the COVID-19 vaccine was a driver of vaccine hesitancy. Nearly 60% of unvaccinated participants highlighted speed to market as a reason for remaining unvaccinated even late into 2021 after most Canadians had safely received more than one vaccination, with only 0.056% of vaccinated Canadians (about 54,000 individuals) reporting an adverse event post-immunization (Government of Canada 2023a). Among the social characteristics associated with being unvaccinated (i.e., identifying as Canadian citizens, white, under 65 years of age, having an annual income of less than $50,000, rural-dwelling, having below university education and having unvaccinated peers), those identifying as a white Canadian with more unvaccinated peers were even more likely to indicate vaccine development speed when compared with all other unvaccinated individuals. The concern surrounding the vaccine's speed to market was also significantly associated with reservations surrounding vaccine mandates, government mistrust, ongoing testing outside the context of clinical trials and risk of side effects.

Our study found that the unvaccinated population most concerned with the vaccine's speed to market tended to identify as white and associate significantly more often with other unvaccinated persons, compared with vaccinated respondents and other unvaccinated respondents. This underscores the importance of this issue from an infectious diseases' perspective given that COVID-19 can cause serious cases, hospitalizations and death more often among unvaccinated individuals. To further put into perspective the scope and magnitude of this issue, as of February 2023, 9.5% of Canadians over 18 years of age had not received even one dose of the COVID-19 vaccine, a very similar proportion to our survey sample (8.9%); if nearly 60% of them avoided vaccination, in part, because of concerns about speed to market as in our survey, this would equate to nearly 3.6 million Canadians (Government of Canada 2023b). This is an important caution as policy makers weigh the trade-offs of accelerating clinical trials or regulatory approval processes.

Survey participants elaborating on their responses mentioned three aspects of the vaccine's speed to market that they perceived hurried: the speed of manufacturer development, clinical trials and regulatory approval. Regarding manufacturer development, survey participants noted that the vaccines lacked "proper development." The scientific communication from both manufacturers and the federal government comparing drug development timelines to other vaccines and drugs may have alleviated some of this concern. For example, one study found that pre-approval development timelines for the three most commonly used COVID-19 vaccines were within the range of other novel vaccine development timelines at around 10 years, a period longer than 98 other drug products in common use in the general population (Beall et al. 2022). However, while such evidence may have alleviated some concerns, it is important to acknowledge that increased scientific communication does not necessarily translate into increased uptake. In some instances, providing more information either has no impact with little public engagement or even increases vaccine hesitancy by adding confusion (Dubé et al. 2016; Merkley and Loewen 2022).

Regarding clinical trials, survey participants also mentioned a lack of "proper […] [clinical] testing" or being "a guinea pig." This may reflect a level of genuine public trust in the traditional, full, clinical testing process. The landmark manufacturer-sponsored clinical trials for the approved COVID-19 vaccines available at the time had scheduled completion dates in very late 2022 and well into 2023 (ClinicalTrials.gov 2023a, 2023c, 2023d, 2023e), including several authorized by Health Canada under the interim orders (ClinicalTrials.gov 2023b; Health Canada 2023). It is possible that acceptability may improve in this population when the full clinical trials end with favourable demonstrations of safety and efficacy. Therefore, manufacturers, public health authorities and regulators should consider carefully communicating news surrounding the finalization of these trials – informed by prior successes and failures of promoting COVID-19 vaccine clinical trial results to the public and popular media. That said, the same risks noted above remain regarding providing the right amount of information without introducing unnecessary confusion.

Regarding the regulatory approval process, survey participants additionally stated concerns about the lack of a "proper […] approval." The COVID-19 situation was unique and received significantly more press and media coverage than is typical for drug approvals. Throughout the COVID-19 pandemic, Canada's minister of health introduced several interim orders that allowed for flexible and rapid regulatory review of medical devices and drugs related to COVID-19, including one to expedite the approval process of COVID-19 vaccines by allowing Health Canada to accept submissions that were already in clinical trials, and allowed manufacturers to present submissions as a rolling submission (i.e., data are submitted as are collected during the phases of the clinical trials) (Government of Canada 2022b; Public Health Ontario 2022). In February 2022, the Clinical Trials for Medical Devices and Drugs Relating to COVID-19 Regulation (Governement of Canada 2022a) was introduced, which allowed for flexible authorization of clinical trials, reduced requirements for trials involving already marketed drugs and was flexible in how clinical trials may be run (Government of Canada 2022b; Public Health Ontario 2022).

The COVID-19 pathway came in addition to two other priority pathways that already existed in Canada: the first pathway ensures that submissions for new and supplemental drugs are reviewed by Health Canada within a shorter time frame, and the second pathway gives conditional approval based on limited evidence to a new drug, with the condition that the company continues clinical trials and submits the results of these to Health Canada (Lexchin 2015). There is comparatively little public knowledge and media coverage of these pathways or the drugs approved by them. Canadians may, therefore, be less bothered by the use of the currently existing priority pathways or may not have had the same hesitations as they did with the COVID-19 vaccine.

The continuing use or expansion of the COVID-19 vaccine regulatory approval pathway – an atypical process as compared to all other existing and established regulatory procedures – may be counterproductive to improving and maintaining public trust in any products approved to treat COVID-19. To address increasing concerns about product approval speeds, it may be advantageous to instead phase out the COVID-19 approval pathway going forward in favour of using the established priority pathways. However, even priority pathways should be used only when absolutely necessary, given that past research has demonstrated that drugs approved via Health Canada's priority regulatory pathways have a greater chance of being withdrawn from the market due to safety concerns (Lexchin 2012). A counterargument, however, is that faster regulatory approval may have led to more people being vaccinated more quickly, potentially leading to fewer deaths and long-term consequences from COVID-19 infection (Balch 2021; BBC News 2021). Regulators need to balance the concerns of those who want the vaccine as soon as possible with those who have concerns about speed to market while still maintaining public trust and confidence in the regulatory process. While survey participants citing the speed-to-market concern had additional reasons for their abstinence, phasing out the COVID-19 pathway may be the most concrete action in response to this study that regulators may consider, going forward, to restore confidence in the regulatory process.

There were several limitations to this study. The first is that "They made the vaccine too fast" was offered as an option for participants to choose from, rather than participants spontaneously noting that as a reason. However, participants were able to write other reasons and opinions in the survey, and several wrote the speed of vaccine development as one reason, which added a rich source of data for our study as discussed earlier. In addition, "They made the vaccine too fast" was only one option chosen among many for most respondents. Only two respondents selected speed to market as their only reason for remaining unvaccinated. Therefore, we cannot conclude that speed to market was the only reason, or even the main reason, for remaining unvaccinated but rather one reason among many. We also cannot know whether the concern about speed to market was the real underlying reason for vaccine hesitancy or whether it was, for at least some individuals, merely a socially acceptable justification for refusing the COVID-19 vaccines. As there are important policy implications to the reasons behind remaining unvaccinated, further research should be conducted to determine the relative strengths of the factors contributing to the ongoing vaccine hesitancy. Furthermore, "They made the vaccine too fast" may have been interpreted by respondents differently; some may have meant the manufacturers developed and tested the vaccine too quickly, whereas others may have meant the government approved the vaccine too quickly. These different views would have different policy implications, which we have attempted to outline earlier. Another limitation is that our survey was conducted after vaccine mandates had been applied – an extraordinary measure. Some respondents noted that mandates were the main driver behind their decision to get vaccinated, but our survey did not systematically ask such individuals whether speed to market was the reason for their reluctance. However, some vaccinated individuals did express concern with the level of clinical testing prior to market approval in the survey's open-ended question fields. Therefore, there is some risk that our estimate of the proportion of those who declined vaccination due to speed-to-market concerns does not capture the additional proportion of vaccinated individuals who would have otherwise abstained from vaccination under more typical conditions (i.e., without the imposition of vaccine mandates). Finally, only 144 out of 2,712 people in our study indicated that speed to market contributed to their reasons for refusing to be vaccinated. Basing public policy on such a small sample carries risk, so additional evidence and study is likely necessary and may illuminate other reasons for hesitancy aside from speed to market that may be more important to take into consideration.

Conclusion

The results of this survey demonstrate that almost a year after the first COVID-19 vaccines were approved, many Canadian residents believed that the development and approval process was rushed and that belief contributed, at least partially, to why they remained unvaccinated. Vaccine hesitancy is a serious problem for vaccine uptake and it appears that for some people, hesitancy may be increased when there are concerns that the approval was "too fast." This will be important for policy makers and regulators to keep in mind when deciding whether to expand the COVID-19 vaccine's rapid regulatory process or instead to phase it out and return to using a regular review process, reserving the general priority pathways for use only when necessary.

Funding

This work was supported by a Global 1 Health Network seed grant and priority funding from the Centre for Research on Pandemic Preparedness and Health Emergencies at the Canadian Institutes of Health Research.

Correspondence may be directed to Reed F. Beall by e-mail at reed.beall@ucalgary.ca.

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RESEARCH PAPER

Productivity Decline or Administrative Avalanche? Examining Factors That Shape Changing Workloads in Primary Care

Baisse de productivité ou avalanche administrative? Examen des facteurs qui façonnent l'évolution des charges de travail en soins primaires

RUTH LAVERGNE, PhD
Associate Professor
Tier II Canada Research Chair in Primary Care
Department of Family Medicine
Dalhousie University
Halifax, NS

SANDRA PETERSON, MSc
Research Analyst
Centre for Health Services and Policy Research
University of British Columbia
Vancouver, BC

DAVID RUDOLER, PhD
Associate Professor
Faculty of Health Sciences
Ontario Tech University
Oshawa, ON
Associate Professor
Ontario Shores Centre for Mental Health Sciences
Whitby, ON

IAN SCOTT, MBCHB, MSc
Professor
Department of Family Practice
University of British Columbia
Director
Centre for Health Education Scholarship
Vancouver, BC

RITA McCRACKEN, MD, PhD
Assistant Professor
Department of Family Practice
University of British Columbia
Vancouver, BC

GOLDIS MITRA, MD
Clinical Assistant Professor
Department of Family Practice
University of British Columbia
Vancouver, BC

ALAN KATZ, MBCHB, MSc
Professor
Department of Family Medicine
University of Manitoba
Professor
Department of Community Health Sciences
University of Manitoba
Winnipeg, MB

Abstract

Background: In Canada, family physicians (FPs) per capita have increased but so have access challenges. We explored changes in population characteristics, service delivery and FP practice that may help understand these trends.

Methods: We used linked administrative data in British Columbia to describe changes in patient ages and comorbidities, hospitalizations and receipt of services that may require FP coordination, review and/or follow-up: prescriptions dispensed, laboratory tests, diagnostic imaging (radiology and ultrasound), specialist visits and emergency department visits. We estimate the number of FPs delivering community-based comprehensive care and report changes in service volume per community-based FP visit.

Results: Between 1999/2000 and 2017/2018, people experienced fewer days in hospital, but the number of treated comorbidities, day surgeries and other services requiring FP coordination increased over and above the expected levels attributed to population aging. While the total number of FPs per capita have increased, numbers in community-based care have not and visits per physician have fallen. Increases in services that may involve FP coordination per community-based FP visit ranged from 32.2% for diagnostic radiology to 122.1% for lab tests.

Conclusion: Findings suggest substantially increased coordination workload per FP visit. Ongoing impacts of population aging and changing service delivery on primary care workload require further examination.

Résumé

Contexte : Au Canada, le nombre de médecins de famille (MF) par habitant a augmenté, mais il y a des problèmes d'accès. Nous avons examiné les changements dans les caractéristiques de la population, la prestation des services et les pratiques des MF qui pourraient aider à comprendre ces tendances.

Méthode : Nous avons utilisé des données administratives couplées en Colombie-Britannique pour décrire les changements dans l'âge et la comorbidité des patients, les hospitalisations et les services qui peuvent nécessiter une coordination, un examen ou un suivi de la part du MF, à savoir, les ordonnances, les tests de laboratoire, l'imagerie diagnostique (radiologie et échographie), les consultations auprès des spécialistes et les visites aux urgences. Nous estimons le nombre de MF qui offrent des soins communautaires complets et signalons les changements dans le volume de services par visite chez le MF communautaire.

Résultats : Entre 1999/2000 et 2017/2018, les personnes ont passé moins de jours à l'hôpital, mais le nombre de comorbidités traitées, de chirurgies d'un jour et d'autres services qui nécessitent une coordination de la part du MF a augmenté au-delà des niveaux prévus attribués au vieillissement de la population. Bien que le nombre total de MF par habitant ait augmenté, la quantité de soins communautaires n'a pas augmenté et le nombre de visites par médecin a diminué. L'augmentation des services pouvant nécessiter une coordination de la part du MF communautaire allait de 32,2 % pour la radiologie diagnostique à 122,1 % pour les tests de laboratoire.

Conclusion : Les constatations indiquent une augmentation substantielle de la charge de travail de coordination par visite chez le MF. Les répercussions continues du vieillissement de la population et de l'évolution de la prestation des services sur la charge de travail des soins primaires nécessitent un examen plus approfondi.

Introduction

Family physicians (FPs) and other primary care providers offer first-contact access to care and coordinate services received elsewhere. Despite an increasing per capita supply of FPs (CIHI 2021a), access to primary care remains a challenge for many patients (CIHI 2021b). This is, in part, explained by declining patient visits from FPs across all career stages (Rudoler et al. 2022). Declining visit volume has been observed in other specialties as well (Lee et al. 2021) and may reflect occupational and personal factors including changes in compensation, job satisfaction and responsibilities outside medicine. Yet, FPs are also reporting high levels of workplace stress (Sovran et al. 2020). Changes in the demands on FPs from patients and due to system factors could also be contributing to declining visits.

Population aging has been a topic of decades-long discussion in health services planning (Chappell and Hollander 2011). Due to the gradual nature of changes in population age, compression of morbidity and changes in care provision that reduce the length of resource-intensive hospital stays, it has largely been accepted that the impact of aging on health system demand may be modest relative to impacts of technologies and increased medical interventions (Barer et al. 1995; CIHI 2011; Chappell and Hollander 2011). However, a shift in services from hospital to the community may mean aging impacts primary care differently from the acute sector. While some related work has been done in other countries (Colwill et al. 2008; Petterson et al. 2012), there is a substantial gap in Canadian health workforce planning (Watson et al. 2005). In addition, changes in the medical management of chronic conditions that are more common in older ages may mean that the time and care processes (e.g., laboratory testing, prescribing, imaging and referrals) required to manage these chronic conditions have increased due to both aging and the increasing care interventions available for these chronic conditions (Adams et al. 2002; Korownyk et al. 2017; Mangin et al. 2007; Millar et al. 2018). Finally, FPs are playing new and needed roles within the health system, such as delivering hospitalist care, managing treatment for substance use disorders, working with mental health teams and filling other niches of focused practice (Kabir et al. 2021). These expanded roles for FPs outside of community-based comprehensive care have not yet been factored into primary care workforce planning.

The impact of population aging, complexity, the shift in care between hospital and the community, requirements for care coordination and new FP roles on visit volume at the population level have not been explored in previous analyses of changing physician practice patterns (Lee et al. 2021; Rudoler et al. 2022). To better understand observations of declining visit volume, we conducted this secondary analysis as part of a broader study of changing physician practice patterns (Lavergne et al. 2019; Rudoler et al. 2022). We use population-based linked data to describe aging, the complexity of care and changes in patterns of service use within age groups over time. Our goal is to understand how these factors may affect the availability of patient visits with FPs offering comprehensive care. We focus on changes in service volume between hospital and community and the processes of care that require coordination, review and/or administration on the part of FPs. These indirect patient care activities require actions or reviewing the actions of other providers in the service of care and include managing prescriptions, lab tests, specialist visits and emergency department (ED) visits (Lee et al. 2021). We then describe the FP population, estimate the number of FPs likely to be delivering community-based comprehensive care and report on changes in service volume per community-based FP visit.

Methods

Study setting

We used primary care administrative data in the province of British Columbia (BC). Though there have been efforts to include more nurse practitioners in primary care, over the study period, primary care was almost exclusively delivered by FPs. In 2017/2018, a total of 327 nurse practitioners submitted shadow billings, which may reflect activity in primary care, representing only 1.15% of recorded patient contacts. Unlike other provinces, remuneration to physicians in BC remains almost entirely fee for service, with a small number of practices on alternate payment plans required to submit complete shadow-billing information. It is also possible to track prescriptions dispensed and lab tests performed in the community, for the complete population. BC, therefore, offers a unique opportunity to explore factors that may be driving changes in primary care workload.

Data

We use linked data accessed through Population Data BC covering all people registered for BC's provincial health insurance (Medical Services Plan [MSP]) and all FPs who submitted claims to MSP in 1999/2000 and 2017/2018. This includes data on all people registered for provincial health insurance (BC Ministry of Health 2019a); MSP payments to primary care physicians and specialists (including laboratory tests) (BC Ministry of Health 2019b); records of hospitalizations (CIHI 2019a) and ED visits (CIHI 2019b); and records of all prescriptions dispensed (BC Ministry of Health 2019c). Physician demographic and training information were obtained from the College of Physicians and Surgeons of BC (BC Ministry of Health 2018). Access to data provided by the data steward(s) is subject to approval but can be requested for research projects through the data steward(s) or their designated service providers. All inferences, opinions and conclusions drawn in this publication are those of the author(s) and do not reflect the opinions or policies of the data steward(s).

Study population

We included all patients registered for MSP in the study years and all FPs licensed to bill under MSP. To include only fully trained FPs in active practice, we excluded those with fewer than 100 patient contacts within the year, who billed on fewer than 50 days, who had a missing year of graduation or who were less than two years from completing an MD.

PATIENT CHARACTERISTICS

Age was obtained from the BC MSP registration file. We used the Charlson Comorbidity Index (CCI) to measure the number of comorbidities (e.g., diabetes, heart failure, chronic obstructive pulmonary disease, liver disease, stroke, dementia) patients were treated for within each year. The CCI was generated using International Classification of Diseases [ICD]-9 and -10 CA codes from both outpatient and in-patient service use (Quan et al. 2011).

SERVICE USE

- *Hospitalizations*: We counted the number of discharges recorded in the discharge abstract database within each year for each patient, not counting hospital transfers. We also counted the number of days in hospital and the number of day surgery procedures.
- *Number of prescriptions dispensed*: We counted the number of different drugs dispensed per year, at the level of the first five digits of the Anatomical Therapeutic Chemical code. We excluded vaccines (J07), vitamins (A11), mineral supplements (A12), tonics (A13) and various (V) categories. We considered reporting both total prescriptions and only those ordered by FPs. We reported the total as FPs have a role in managing all prescriptions.
- *Laboratory tests*: We counted the lab tests ordered per patient (unique combinations of patient, fee item, date and ordering physician), excluding base fees, payable in addition to individual lab tests (MSP fee items 91000, 91005, 91010). As with prescriptions, we reported all laboratory tests as FPs have a role in monitoring results.
- *Imaging*: We counted imaging services per patient (unique combinations of patient, fee item and date) corresponding to diagnostic radiology (service code 90 excluding interventional radiology) and diagnostic ultrasound (service code 91). We excluded fee items billed on the same day as records of day surgeries. Imaging is not recorded in billing records if performed on in-patients.
- *Specialist physician visits*: We counted specialist visits as unique combinations of patient, provider and date, regardless of the number of fee items billed. We distinguish medical and surgical specialist visits based on claim specialty.
- *ED visits*: We counted MSP claims with a service location in the ED or corresponding to

fee items billed only in the ED (Peterson et al. 2021) or where a patient was hospitalized with entry via ED.

- *Ambulatory primary care visits:* We counted primary care visits as unique combinations of patient, provider and date, regardless of the number of fee items billed. We included visits in physicians' offices, homes, long-term care and synchronous virtual visits (available in BC since 2014). We excluded visits that took place in the ED or hospital, as well as visits related to opiate agonist treatment (fee item 00039) as these are high-frequency billings, and guidelines changed over the study period.

PHYSICIAN CHARACTERISTICS

We sought to distinguish between physicians in comprehensive community-based practice and those who practice mainly in other settings or focused practice areas. We classified physicians who had 80% or more of their visits in hospital or the ED or in specific service areas (surgical assistance, anesthesiology, perinatal care, mental health and substance use, cancer care and musculoskeletal/sports medicine) as *not* in comprehensive community practice. These physicians are described in the Appendix 1: Table A1 (available online at longwoods.com/content/27152). The choice of 80% was intended to reflect that FPs structure practice in different ways, and 80% allows for the situations where physicians practise a day or more per week in comprehensive care while doing other activities. To confirm this choice, we explored physician characteristics based on different thresholds (Appendix 1: Tables A2 and A3, available online at longwoods.com/content/27152). The majority of physicians classified as not in comprehensive community practice in our analysis actually have 90–100% of contacts in a focused practice setting or areas. This means changes in the threshold would not substantially change findings.

We described the characteristics of these two groups using data from the College of Physicians and Surgeons of BC and MSP billing data. Physician age, self-identified gender (though only binary options are provided), years since MD and location of MD training (Canadian vs. International Medical Graduate) were obtained from the College of Physicians and Surgeons of BC. An urban/rural practice setting was assigned based on the Statistics Canada metropolitan influence zone of residence for patients seen by an FP. Physicians are categorized as practising in an urban setting if the majority of their patient contacts were with patients from "zones 1–3" and in a "rural" setting if most contacts occurred in "zones 4–7" (Statistics Canada 2018).

ANALYSIS

We present mean services used and percentage changes between 1999/2000 and 2017/2018 by patient age group and summarize descriptive characteristics of community-based and other FPs in both years, reporting *n* (%) and mean (SD) as appropriate. We report changes in total service use across the whole population per capita and per community-based FP visit.

Results

The population has grown most rapidly in older age groups, with the percentage of the population ages 60 and older increasing by over 80% between 1999/2000 and 2017/2018 (Table 1). The average number of CCI comorbidities people are treated for increased over time in all age groups except for the age group of 0–19 years. The largest increase was among people aged 60–79 years (26.6%) and 80 years and older (58.7%). Both the number of hospitalizations and days in hospital declined over time across all age groups (Table 1).

TABLE 1. Percentage change in population and mean CCI comorbidities, hospitalizations and day surgeries between 1999/2000 and 2017/018 by age group

Population characteristics and service use	0–19	20–39	40–59	60–79	80+	Total
Population (*n*, %)						
1999/2000	1,059,509 (26.3)	1,172,139 (29.1)	1,108,947 (27.6)	554,617 (13.8)	126,217 (3.1)	4,021,429
2017/2018	1,060,012 (20.9)	1,378,338 (27.2)	1,401,213 (27.6)	1,007,383 (19.8)	228,405 (4.5)	5,075,351
Change %	0.0474%	17.6%	26.4%	81.6%	81.0%	26.2%
Comorbidities						
1999/2000	0.103	0.118	0.218	0.532	0.804	0.229
2017/2018	0.080	0.119	0.290	0.674	1.276	0.346
Change %	-21.8%	0.7%	33.0%	26.6%	58.7%	51.2%
Hospitalizations						
1999/2000	0.074	0.081	0.070	0.188	0.350	0.099
2017/2018	0.065	0.061	0.052	0.124	0.310	0.083
Change %	-12.3%	-24.7%	-24.9%	-33.8%	-11.4%	-16.1%
Days in hospital						
1999/2000	0.260	0.337	0.430	1.762	5.074	0.688
2017/2018	0.240	0.261	0.357	1.083	3.746	0.603
Change %	-7.5%	-22.8%	-17.2%	-38.6%	-26.2%	-12.3%
Day surgeries						
1999/2000	0.025	0.045	0.072	0.154	0.144	0.065
2017/2018	0.019	0.036	0.093	0.210	0.163	0.088
Change %	-21.5%	-19.8%	30.2%	35.7%	12.7%	35.8%

CCI = Charlson Comorbidity Index.

Day surgeries and prescriptions increased over time among people aged 40 years and older but declined among younger age groups (Table 2). Lab tests increased across all age groups but notably by 72.1% among people aged 40–59 years, 65.1% among people aged 60–79 years and 87.0% among people aged 80 years and older. Diagnostic radiology fell among people under 60 years, but increased by 33.8% among people aged 80 years and older. Diagnostic ultrasound increased among all age groups, but the greatest increases were among people aged 80 years and over (61.8%). Surgical specialist visits increased over time among people aged 40 years and older, and medical specialist and ED visits increased across all ages. Primary care visits have declined among all age groups, with the smallest declines among people aged 80 years and older (-3.7%).

TABLE 2. Mean service use and percentage change between 1999/2000 and 2017/2018 by age group

Service use	0–19	20–39	40–59	60–79	80+	Total
Prescriptions						
1999/2000	1.172	1.894	2.591	4.564	5.780	2.386
2017/2018	0.958	1.743	2.810	4.830	6.772	2.713
Change %	-18.3%	-8.0%	8.5%	5.8%	17.2%	13.7%
Lab tests						
1999/2000	1.338	3.665	5.487	10.234	10.446	4.673
2017/2018	1.787	5.624	9.441	16.897	19.536	8.740
Change %	33.6%	53.4%	72.1%	65.1%	87.0%	87.0%
Diagnostic radiology						
1999/2000	0.174	0.273	0.517	0.895	0.813	0.417
2017/2018	0.142	0.214	0.505	0.948	1.088	0.464
Change %	-18.8%	-21.6%	-2.4%	6.0%	33.8%	11.3%
Diagnostic ultrasound						
1999/2000	0.037	0.160	0.156	0.279	0.243	0.146
2017/2018	0.053	0.221	0.241	0.382	0.393	0.231
Change %	40.9%	38.1%	54.5%	36.7%	61.8%	58.6%
Medical specialist visits						
1999/2000	0.578	0.594	0.997	2.057	2.471	0.962
2017/2018	0.701	0.696	1.180	2.175	2.987	1.227
Change %	21.4%	17.1%	18.4%	5.7%	20.9%	27.7%
Surgical specialist visits						
1999/2000	0.280	0.614	0.786	1.777	2.041	0.779
2017/2018	0.242	0.581	0.858	1.933	2.415	0.938
Change %	-13.8%	-5.4%	9.1%	8.8%	18.3%	20.4%
ED visits						
1999/2000	0.320	0.287	0.229	0.336	0.677	0.299
2017/2018	0.339	0.361	0.341	0.444	0.860	0.390
Change %	6.0%	25.9%	48.7%	32.1%	27.1%	30.5%
FP visits						
1999/2000	3.131	4.158	4.635	7.033	8.246	4.544
2017/2018	2.150	2.967	3.847	5.706	7.945	3.807
Change %	-31.3%	-28.7%	-17.0%	-18.9%	-3.7%	-16.2%

ED = emergency department; FP = family physicians.

We identified a total of 4,330 FPs licensed to bill under MSP in 1999/2000 and 6,219 in 2017/2018. We excluded 529 in 1999/2000 (12.2%) and 578 (9.3%) in 2017/2018 because of exclusion criteria (low volume/missing year of graduation). Between 1999/2000 and 2017/2018, the total number of FPs per capita grew from 9.5 to 11.1 per 10,000 people in BC (Table 3).

TABLE 3. Characteristics of the BC FP workforce in 1999/2000 and 2017/2018

	Community-based physicians		**Other FPs**	
FP characteristics	**1999/2000**	**2017/2018**	**1999/2000**	**2017/2018**
Number of physicians (percentage of total within a year)	3,573 (94.0)	4,686 (83.1)	228 (6.0)	955 (16.9)
Physicians per 10,000 population	8.9	9.2	0.6	1.9
Physician characteristics (*n*, %)				
Years in practice				
<10	1,000 (28.0)	1,168 (24.9)	68 (29.8)	271 (28.4)
10–19	1,160 (32.5)	975 (20.8)	71 (31.1)	244 (25.5)
20–29	969 (27.1)	1,263 (27.0)	48 (21.1)	260 (27.2)
30+	444 (12.4)	1,280 (27.3)	41 (18.0)	180 (18.8)
Gender				
Women	1,081 (30.3)	2,072 (44.2)	43 (18.9)	336 (35.2)
Men	2,492 (69.7)	2,614 (55.8)	185 (81.1)	619 (64.8)
Urban/rural				
Urban (MIZ 1–3)	3,125 (87.5)	4,051 (86.4)	216 (94.7)	909 (95.2)
Rural (MIZ 4–7)	448 (12.5)	635 (13.6)	12 (5.3)	46 (4.8)
Location of MD				
Canada	2,675 (74.9)	2,939 (62.7)	188 (82.5)	778 (81.5)
International	837 (23.4)	1,635 (34.9)	33 (14.5)	154 (16.1)
Unknown location of MD	61 (1.7)	112 (2.4)	7 (3.1)	23 (2.4)
Service volume within year (mean [SD])				
Days billed	231.9 (64.3)	193.8 (62.7)	169.0 (60.8)	142.4 (47.6)
Unique patients seen in community	1,762.8 (1,086.0)	1,567.3 (1,196.1)	174.4 (328.9)	92.8 (265.4)
Community patient contacts	4,991.1 (2,679.8)	4,047.3 (2,752.5)	347.1 (959.6)	192.9 (662.7)
Community contacts per day billed*	23.0 (8.2)	21.5 (9.3)	5.3 (6.5)	7.9 (8.5)

BC = British Columbia; FP = family physician.
* Only days with community billings are included in the denominator.
Note: 69 other FPs in 1999/2000 and 555 other FPs in 2017/2018 have no days billed in the community and so are not included in this measure.

The number of comprehensive community-based physicians per capita increased only from 8.9 to 9.2 (as the percentage of total FPs fell from 94.0 to 83.1) (Table 3). The age distribution of FPs not working in comprehensive community-based practice also changed. In 2017/2018, a higher percentage of physicians who had been in practice for 20–29 years were not working in community-based practice, compared to 1999/2000. A higher percentage of physicians not in comprehensive community-based practice are men, though differences by physician gender narrowed over time as the percentage of women has increased in both groups. Over time, higher percentages of physicians in comprehensive community-based practice have had international medical degrees. The percentage of physicians in rural settings has been largely stable. Between 1999/2000 and 2017/2018, the number of days billed fell for both physician groups, as did contacts and patients seen in the community for community-based physicians (Table 3).

Over the period from 1999/2000 to 2017/2018, the number of prescriptions, lab tests, imaging, specialist visits and ED visits per capita have all increased (Table 4). This ranged from an 11.3% increase for diagnostic radiology to an 87.0% increase for lab tests. This corresponds to increases in the volume of care processes requiring coordination per visit with FPs in comprehensive community-based practice ranging from 32.2% for diagnostic radiology to 122.1% for lab tests.

TABLE 4. Changes in service use requiring FP coordination between 1999/2000 and 2017/2018

Service use	Per capita	Per community-based FP visit
Prescriptions		
1999/2000	2.39	0.54
2017/2018	2.71	0.73
Change %	13.7	35.0
Lab tests		
1999/2000	4.67	1.05
2017/2018	8.74	2.34
Change %	87.0	122.1
Diagnostic radiology		
1999/2000	0.417	0.094
2017/2018	0.464	0.124
Change %	11.3	32.2
Diagnostic ultrasound		
1999/2000	0.146	0.033
2017/2018	0.231	0.062
Change %	58.6	88.4
Medical specialist visits		
1999/2000	0.96	0.22
2017/2018	1.23	0.33
Change %	27.6	51.6
Surgical specialist visits		
1999/2000	0.78	0.18
2017/2018	0.94	0.25
Change %	20.4	42.9
ED visits		
1999/2000	0.30	0.07
2017/2018	0.39	0.10
Change %	30.5	55.0

ED = emergency department; FP = family physician.

Discussion

The present study found that, over two decades, the population in BC aged and was treated for more comorbid conditions, while all community-based services requiring FP coordination, such as prescriptions, diagnostic imaging, lab testing and specialist visits, increased. While FPs per capita grew, the proportion in community-based practice fell and measures of service volume decreased. This is consistent with observations of reduced service volume among Canadian physicians documented elsewhere (Lee et al. 2021).

Our observation that adults are being treated for more chronic conditions may be driven by multiple factors. Whether increases in the prevalence of chronic conditions treated reflect changes in true prevalence or health status is unclear (McGrail et al. 2016). It may also reflect that treatments are now available for conditions that were not previously actively managed in primary care (e.g., attention deficit/hyperactivity disorder, hepatitis C), care options have become more numerous and complex (e.g., diabetes care) or there is less stigma in seeking care and, therefore, increased treated prevalence of disease (e.g., mental health disorders) (Childs 2005; McGrail et al. 2016). It is also possible that codes for chronic conditions are being more consistently reported as financial incentives tied to them have been introduced (Lavergne et al. 2016, 2018; McGrail et al. 2016). In addition, our findings underscore a reorientation of the healthcare system toward outpatient care, with hospitalizations falling across all ages and medical specialist visits, ultrasound and ED visits increasing across all ages.

Our findings are also consistent with the phenomenon of increased medicalization of aging as people aged 80 years and older are being treated for over 50% more conditions and have experienced the largest increases in prescription drugs dispensed, lab tests, imaging and specialist visits that are consistent with earlier findings (McGrail et al. 2011). Day surgeries, prescriptions, lab tests and surgical specialist visits increased among people aged 40 years and older, which is also the fastest growing age group within the population. This increased service use is over and above expected levels attributed to population aging and must be considered in planning for system capacity.

Regardless of the drivers of changing service use, increases in services delivered within the community that require FP coordination, oversight or monitoring would be consistent with an increase in FP time spent on both direct and indirect patient care per visit (Ladouceur 2022). The time required for indirect patient care may also be changing. For example, electronic medical records (EMRs) are associated with increased patient care quality and safety, but they have also added data entry tasks for clinicians and increased time spent on indirect patient care (Lee et al. 2021; Payne et al. 2015).

Over the same period, the physician workforce has changed. The number of FPs in community-based practice has plateaued, and the number of FP visits per capita has fallen. Examining physician practice patterns more closely, between 1999/2000 and 2017/2018, the number of days billed fell for both physician groups (Table 3). This may reflect choosing to work fewer days. It may also reflect time spent in other roles, including administration, leadership and research, which would not be reflected in billing data. Community contacts billed per day increased slightly for physicians not in community practice, but this represents a small fraction of community contacts overall and likely reflects focused rather than comprehensive service delivery. We also note that the number of FPs in active practice based on our data (with 100+ patient contacts and 50+ billing days) is lower than the 6,721 FPs reported to be in BC according to data from the Canadian Institute for Health Information in 2018 (CIHI 2021a). This underscores the importance of analysis like this, which looks at the activity of FPs beyond head counts alone.

Falling visit volumes have previously been interpreted as declining productivity, pointing to evidence of a reverse wage-productivity gap because increasing compensation means physicians reduce service volume as they work to a target income (Lee et al. 2021). Our findings offer an additional explanation as changes in the population, patterns of service use and the FP workforce are consistent with increases in workload per primary care visit, including time spent on indirect patient care. Both explanations may operate simultaneously and are consistent with a shortage of primary care capacity.

Findings point to policy directions in the domains of primary care policy and workforce planning. Firstly, findings reinforce the need for primary care policies that ensure that capacity is aligned with population needs. This may include training more primary care providers, including FPs and nurse practitioners, but could also include organizational reforms that expand the implementation of team-based care models and interventions to streamline the administrative workload for primary care providers (The College of Family Physicians of Canada 2017). Of note, in BC, as in other jurisdictions, reforms described as team-based care include added additional providers (e.g., pharmacists or mental health service providers who can be referred to) within models where an FP still sees the patient, refers and receives reports (McKay et al. 2022). This may expand access to specific services, such as medication reviews or mental health services, but may not change the increasing work of indirect patient care or coordination within primary care. Models of care delivery that include team resources for coordination and indirect patient care are needed (Contandriopoulos et al. 2018). Others have also documented challenges in communication and patient information exchange with sites and providers outside their practices (Sovran et al. 2020). Strategies to both reduce workloads associated with patient coordination (i.e., streamlining specialist referrals and reporting of laboratory results) and develop systems of care where additional personnel support coordination work should be considered.

Secondly, findings underscore a need for more proactive and nuanced workforce planning that includes population aging, patient complexity and changing intensity of service use (over and above expected levels attributed to population aging) alongside physician practice patterns and workforce demographics to provide more accurate estimates of future need and capacity. Projections on the impact of population aging that do not take into account changing patterns of service use among older adults may dramatically underestimate future needs (Colwill et al. 2008; Madsen et al. 2002). The findings also point to the need to include information on the range of roles FPs are playing within health systems, beyond community-based services. Many physicians may be working as hospitalists, in EDs or in providing care related to mental health and substance use, which respond to system and population needs. Redeploying this workforce would have consequences elsewhere, but these roles for FPs need to be planned proactively. This study complements other research pointing to the need to consider workforce demographics in planning (Rudoler et al. 2022). Taken together, the findings reinforce that provider-to-population ratios alone, particularly when limited to specialty designation without information on the type of practice, are flawed measures of workforce capacity.

A central limitation in this work is that we have no measures for hours worked related to coordination or indirect patient care or for other administrative processes, including practice management and documentation in EMRs. Regardless of the ability to measure time directly, given the substantial increase in the volume of these care processes, our findings underscore the point that strategies that streamline processes and reduce the time required for these activities will likely positively impact the time available for other primary care services. While we only examine two points in time, research examining shifts in visit volume reported elsewhere shows stable and consistent changes over this period (Rudoler et al. 2022). Changes in the compensation model recently announced in BC include an hourly payment, which if applied judiciously, offers new opportunities for future research that examines both work hours and visit volume.

Our data are limited to BC. However, the factors explored, notably population aging, changing comorbidity and changes in how medical care is delivered between hospital and community are not unique to BC. We expect findings to be transferrable to other jurisdictions in Canada and internationally. Our data do not include the COVID-19 pandemic and the accompanying widespread shift to virtual care. These have further strained primary care resources, and future research should examine workload changes in the context of the COVID-19 pandemic and ongoing mitigation. Our data include only FPs as nurse practitioners had limited roles in BC primary care within the study period. As findings describe changes in total primary care workload, they likely also apply to primary care providers without an FP designation. An 80% threshold for identifying physicians in community practice is arbitrary but is consistently applied in both years and does not impact observations of changes over time. This work does not directly estimate likely shortfalls in workforce capacity. Further research should explore how physician demographics, the range of roles FPs now play and changes to population service use can be included in health workforce planning.

Conclusion

Although visits per FP are falling, our observations of an aging population and a shift in service delivery from hospital to the community are consistent with increased workload per FP visit. Efforts to improve the efficiency of coordination work are needed. The future impacts of population aging on primary care workload may be substantial and require further examination.

Correspondence may be directed to Ruth Lavergne by e-mail at ruth.lavergne@dal.ca.

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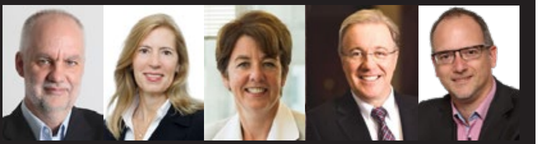

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