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

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

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

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

* * *

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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EDITORIAL

Post-Pandemic Transformation of Healthcare Delivery in Provinces and Territories

As I write this, positive signs regarding the pandemic are beginning to affect our daily lives. We are now able to meet with our extended families, friends and neighbours. For many people, these changes signal the end of isolation, fear and loneliness and harken a return to normal life and behaviours.

Changes are now also appearing in the healthcare sector. Long-term care homes have been reopened to families and visitors. Homecare visits are returning to their pre-pandemic levels, and hospitals have restarted all elective surgeries.

We should celebrate the fact that the delivery of acute and emergency healthcare carried on throughout the pandemic. With some exceptions, cancer-related care continued throughout, trauma care was available and dialysis continued. This occurred even as the focus of governments, organizations and individual providers shifted to the pandemic's effects on physical and mental health.

Many new policies, procedures and physical spaces were used to deliver healthcare during the COVID-19 pandemic in order to provide critical care and lessen the risks of transmission within healthcare organizations and among providers, patients, their families and the community. As reopening unfolds, some of the significant challenges facing the federal government, provinces and territories are these: What new practices and behaviours should be retained in the post-pandemic era? How will the changes be paid for?

Competing Options for Healthcare Delivery

It is not yet clear how the pandemic has impacted current federal, provincial and territorial healthcare budgets. While healthcare is already a significant component of provinces' and territories' economies, the guess is that healthcare spending has jumped substantively.

For the healthcare sector, the short-term focus will be on provincial and territorial governments' actions and what they signal as their new-normal state for healthcare delivery.-

I think that the policy-making window is open and many important decisions regarding healthcare delivery are going to be made in the near-term. In the interim, provincial and territorial governments, their ministers and deputy ministers of health will be the recipients of competing views on healthcare policy from the public, advocacy groups, government experts and health system researchers. For instance, one policy trade-off for which provincial governments could solicit input includes the following: Should long-term care be redesigned or should provinces and territories focus on reducing surgical backlogs caused by the COVID-19 pandemic? Both options are important, very expensive and compete for the same healthcare budget.

Emerging from a pandemic, the public voice will be particularly raw. This includes long-term care residents and families that have endured exceptionally difficult circumstances. The voices of patients and families should, and will, shape some governments' budgetary priorities for healthcare services.

Advocacy groups also provide provincial and territorial governments with input into potential changes in healthcare services and policy. Many advocacy groups play an important role in the health sector by representing oft-overlooked subgroups particularly disadvantaged by the pandemic. Their input ranges from minor policies – such as proposing new physician billing codes – to more major and expensive policies, such as staff's skill sets and scopes of practice in long-term care homes.

In some provinces, governments have nurtured in-house expertise in health system analyses. This pool of expertise will be critical in providing governments with spending and utilization models and projections. These outputs will constitute options for post-pandemic health policies. However, provinces or territories that have hollowed their internal expertise over the years will find themselves needing help and will need to either hire consultancy services or risk making expensive mistakes.

Lastly, health systems research is also used as one input into the government's healthcare policy options. However, careful research often requires years of data collection and interpretation – a lag that is too long to inform contemporaneous post-pandemic policy making and spending decisions. Complicating this perspective is that many health systems researchers have followed the money and pivoted to COVID-related research themes, thereby lessening the pool of available talent to generate non–COVID-related policy research.

Strengthening Long-Term Outcomes

New post-pandemic healthcare policies will have important consequences for healthcare delivery and spending. For each change in healthcare delivery models, the federal, provincial or territorial governments will have to pay for new treatment modalities and healthcare facilities or codify COVID-induced changes to practice. Good spending decisions by governments will maximize the value of new spending each policy generates. Poor investments may saddle provinces and territories with legacy programs and services that they cannot rid themselves of, thereby robbing value from future healthcare services.

To reduce the risk of poor investments, there are practical – and relatively inexpensive – steps that can be taken. Comparative data regarding the value of competing policies are needed: What is the health and quality of life that will be generated? Whom do the benefits go to? What are the costs and what other contextual information is needed to inform the government's decisions? This information may transcend traditional age- and sex-based analyses and encompass new budgetary analyses that include gains in employment status or situational vulnerability.

To generate these key insights to inform government policy makers, two key ingredients are needed: data and expertise. When it comes to the former, comprehensive health and social care data should be made more available as soon as possible with fewer encumbrances as currently exist. Regarding the latter, federal, provincial and territorial governments should target funding to policy-relevant health systems research as soon as possible.

The availability of comprehensive and timely data and the engagement of experts are needed to provide evidence-informed options for governments and complement other channels of input. As the window for policy change is at least partially open, this is the time for federal and provincial government action. Federal, provincial and territorial government investments are needed to support health systems research whose objectives are to provide policy options that avoid costly mistakes.

In This Issue

This issue of *Healthcare Policy* is led by a Discussion and Debate article addressing the COVID-19-induced challenges of engaging with patients. The article by Sayani et al. (2021) describes how the pandemic put a halt to the health system's engagement with patients, arguing that the health system's reopening provides an opportunity to focus on patient-identified priorities and a diversity of perspectives. For researchers and policy makers, the authors conclude by listing a number of attributes to use for engaging with socially marginalized groups and reducing health inequalities.

The Discussion and Debate article is followed by a rejoinder enhancing the discussion of the role of patients in engagement and partnership. Shaw et al. (2021) contend that the perspective of patients alone is not sufficient; the article posits that the perspectives of local communities are needed to provide input into the structure and processes of their health systems. The rejoinder concludes by advocating that "communities" should co-lead health system design in order to reduce inequities in health.

A second Discussion and Debate article focuses on the issue of medical malpractice insurance in provinces and territories. The article explains that the Canadian Medical Protective Association (CMPA) is a fund primarily dedicated to defending physicians against patients' and their families' lawsuits. Describing how the provinces and territories subsidize the CMPA premiums used to defend physicians, Lee et al. (2021) note that less than 0.3% of claimants have ever received compensation. The article concludes by advocating for significant reforms to the tort-based medical malpractice system.

Echoing the structural inefficiencies and expenses of the current system articulated by Lee et al. (2021), the rejoinder authored by Nelson (2021) adds to the topic of medical malpractice reform. This article argues that a no-fault system as a replacement would likely improve access to compensation, but would not address underlying issues of safety, appropriateness or accountability in healthcare, which are important to many patients. The article concludes that the current tort-based system needs reform, though further exploration of incentives including blended models may lead to a preferable balance between patient compensation and physician accountability.

In a Data Matters article, Aggarwal et al. (2021) describe the attributes of family physician data across provinces and territories. The authors detail that there is no national source of family physician data that includes the distribution of or comprehensively describes the practice characteristics of family physicians. The authors note that while there are over 20 sources of information on family physicians, none are sufficiently comprehensive or granular to support detailed workforce planning or detailed health systems research. The article concludes that strong federal leadership, support and funding are needed to develop a reliable data infrastructure for family physicians, complementary to other pan-Canadian data standards.

In Research Papers, Ogundeji et al. (2021) present the results of an Alberta-based, qualitative study of specialist physician incentives and payment models. As physician compensation models have remained static for decades, with some minor exceptions, this study reported on respondents' perspectives regarding alternative models. The results showed that blended fee-for-service and salary-based models may be more preferable to the health system in order to improve the value of physician services – when accompanied with suitable accountability mechanisms to measure value and quality. The study concludes that blended remuneration models are feasible for specialist physicians, and possibly preferred by specialists; however, legislative changes and new partnerships are required.

The next article in Research Papers presents the results and implications of the rapid adoption of telehealth in primary care clinics in Quebec during the COVID-19 pandemic. Based on an anonymous cross-sectional survey of teaching primary care clinics, Breton et al. (2021) reported that telephone-based consultations experienced the most significant increases in utilization, exceeding video consultations. The authors also reported that telephone- and video-based consultations limited the ability to collect relevant clinical information, potentially causing duplication of tests or services. The article concludes by identifying a number of important issues left to be addressed by policy makers, including telehealth training for physicians or allied healthcare providers and potential inequities in patients' access to technologies.

The focus of the third article in Research Papers is alternative level of care in Ontario. Alternative level of care is a perennial problem for all provinces' hospitals, with many hospitalized patients occupying beds that do not need the technologies or skilled care provided in acute care. Written by Nauenberg (2021), the article discusses the feasibility of Ontario following other jurisdictions in making use of empty residential spaces to temporarily house alternative level of care patients. Describing Ontario's regulatory, training and policy barriers to moving in this direction, the article concludes that novel health services and policy approaches are needed for the serious problem of alternative level of care.

The final article of this issue describes the implementation of the hub-and-spoke model for coordinated and integrated care for medically complex children in Ontario. Authored by Lin et al. (2021), this qualitative study of an implementation model reported strengthened communication between acute, specialty and community care, and improved family relationships. However, the study also reported challenges in overcoming fragmentation and resourcing dedicated social care workers, nursing support or mental health providers. The article concludes with a number of recommendations for other provinces to improve health and social care for medically complex children.

JASON M. SUTHERLAND, PhD
Editor-in-Chief

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ÉDITORIAL

Transformation de la prestation des soins de santé dans les provinces et les territoires après la pandémie

Au moment d'écrire ces lignes, les signes positifs concernant la pandémie commencent à se faire sentir sur notre quotidien. Nous pouvons maintenant visiter famille élargie, amis et voisins. Pour plusieurs, ces changements marquent la fin de l'isolement, de la peur et de la solitude et annoncent un retour à une vie plus normale.

Des changements se font aussi voir dans le secteur de la santé. Les foyers de soins de longue durée sont rouverts aux familles et aux visiteurs. La prestation de soins à domicile revient au niveau qui prévalait avant la pandémie et les hôpitaux ont repris toutes les chirurgies non urgentes.

Il faut souligner le fait que la prestation de soins de courte durée et de soins d'urgence se soit poursuivie tout au long de la pandémie. À quelques exceptions près, on a pu maintenir en place les soins liés au cancer, les soins de traumatologie et la dialyse. Tout cela alors même que les gouvernements, les organisations et les travailleurs de la santé devaient affronter les effets de la pandémie sur la santé physique et mentale.

Plusieurs nouvelles politiques, procédures et lieux ont été mis à contribution pour fournir des soins intensifs et réduire les risques de transmission au sein des organisations de soins de santé et parmi les prestataires, les patients, leurs familles et la communauté. Avec la réouverture en cours, le gouvernement fédéral, les provinces et les territoires font face à d'importants défis. Quelles nouvelles pratiques et comportements devraient être conservés après la pandémie? Comment ces changements seront-ils payés?

Choix concurrents pour la prestation des services de santé

On ne sait pas encore clairement quel est l'impact de la pandémie sur les budgets de santé fédéraux, provinciaux et territoriaux. Bien que les soins de santé constituent déjà une composante importante de l'économie des provinces et territoires, on suppose que les dépenses en santé ont considérablement augmenté.

Dans le secteur de la santé, l'accent à court terme sera mis sur l'action des gouvernements provinciaux et territoriaux et ce qu'ils indiquent comme la nouvelle normalité dans la prestation des soins de santé.

Je pense qu'une fenêtre s'ouvre pour l'élaboration de politiques et que de nombreuses décisions importantes concernant la prestation des soins de santé seront prises à court terme. Dans l'intervalle, les gouvernements provinciaux et territoriaux ainsi que les ministres et sous-ministres de la Santé devront faire face à des points de vue divergents de la part de la population, des groupes de défense, des experts gouvernementaux et des chercheurs du système de santé. Les gouvernements provinciaux pourraient solliciter des commentaires sur la question politique suivante : les provinces et territoires doivent-ils repenser les soins de longue durée ou plutôt se concentrer sur la réduction des retards chirurgicaux causés par la pandémie de COVID-19? Les deux points de la question sont importants, très coûteux et se disputent le même budget de santé.

Au sortir de la pandémie, la voix de la population sera particulièrement acerbe. Pensons notamment aux résidents des foyers de soins de longue durée et aux familles qui ont enduré des circonstances particulièrement difficiles. Leur voix devrait éclairer les priorités budgétaires en matière de santé chez certains gouvernements.

Les groupes de défense fournissent également aux gouvernements provinciaux et territoriaux des commentaires sur les changements potentiels dans les services et les politiques de santé. De nombreux groupes jouent un rôle important dans le secteur de la santé en représentant des sous-groupes souvent négligés et particulièrement défavorisés par la pandémie. Leurs commentaires vont de politiques secondaires – telles que la proposition de nouveaux codes de facturation des médecins – à des politiques plus importantes et coûteuses, telles que l'ensemble des compétences du personnel ou les champs d'exercice des foyers de soins de longue durée.

Les gouvernements de certaines provinces ont développé une expertise interne pour les analyses du système de santé. Ce bassin d'expertise sera essentiel pour fournir aux gouvernements des modèles et des projections de dépenses et d'utilisation. Ces extrants peuvent éclairer les choix de politiques dans la foulée de la pandémie. Cependant, les provinces ou les territoires qui ont épuisé leur expertise interne au fil des ans auront besoin d'aide et devront avoir recours à des services de consultation, sans quoi ils risquent de commettre des erreurs coûteuses.

La recherche sur les systèmes de santé peut aussi contribuer à l'élaboration des politiques de santé. Cependant, une recherche minutieuse nécessite souvent des années de collecte et d'interprétation de données – un délai trop long pour éclairer l'élaboration de politiques et les décisions de dépenses après la pandémie. Pour compliquer le tout, de nombreux chercheurs ont suivi l'argent et se sont tournés vers des thèmes de recherche liés à la COVID-19, réduisant ainsi le bassin de talents disponibles pour mener des recherches sur les politiques non liées à la pandémie.

Renforcement des résultats dans le long terme

Les nouvelles politiques de santé auront des conséquences importantes sur la prestation des services et les dépenses de santé. Pour chaque changement dans le modèle de prestation des soins de santé, les gouvernements fédéral, provinciaux ou territoriaux devront payer pour de nouvelles modalités de traitement et de nouveaux établissements de santé, ou devront codifier les changements de pratique induits par la COVID-19. Les bonnes décisions de dépenses maximiseront la valeur des nouvelles dépenses générées par chaque politique. De mauvais investissements peuvent accabler les provinces et les territoires de programmes et de services hérités dont ils ne peuvent se débarrasser, diminuant ainsi le poids d'éventuels services de santé.

Des mesures pratiques et relativement peu coûteuses peuvent être prises pour réduire le risque de mauvais investissements. Des données comparatives concernant la valeur des politiques concurrentes sont nécessaires : quelles type de santé et de qualité de vie seront générées? Qui en bénéficiera? Quels en seront les coûts et quelles informations contextuelles seront nécessaires pour éclairer les décisions du gouvernement? Ces informations peuvent transcender les analyses traditionnelles fondées sur l'âge et le sexe pour englober de nouvelles analyses budgétaires qui incluent des gains de statut d'emploi ou de vulnérabilité situationnelle.

Pour générer ces informations afin d'informer les décideurs, deux ingrédients clés sont nécessaires : les données et l'expertise. En effet, des données complètes sur la santé et les services sociaux devraient être disponibles le plus tôt possible avec moins de charges qu'en l'état actuel. Pour ce qui est de l'expertise, les gouvernements fédéral, provinciaux et territoriaux devraient cibler le plus tôt possible le financement de recherches pertinentes pour l'élaboration de politiques.

La disponibilité de données complètes et opportunes ainsi que l'engagement d'experts sont nécessaires pour fournir aux gouvernements des choix fondés sur les données probantes et pour compléter d'autres canaux de contribution. Puisque la fenêtre du changement est au moins partiellement ouverte, c'est le moment d'agir. Les investissements des gouvernements fédéral, provinciaux et territoriaux sont nécessaires pour soutenir la recherche sur les systèmes de santé, recherche dont l'objectif est d'apporter des choix stratégiques qui permettront d'éviter les erreurs coûteuses.

Dans le présent numéro

Ce numéro de *Politiques de Santé* s'ouvre avec un article de la section Discussions et débats qui aborde les défis en matière d'engagement avec les patients dans le contexte de la COVID-19. L'article de Sayani et al. (2021) décrit comment la pandémie a mis un terme à l'engagement du système de santé auprès des patients et affirme que la réouverture du système offre l'occasion de se concentrer sur les priorités identifiées par les patients et sur la diversité des points de vue. Pour les chercheurs et les décideurs, les auteurs concluent en énumérant un certain nombre de caractéristiques dont il faut tenir compte pour s'engager auprès des groupes socialement marginalisés et pour réduire les inégalités en matière de santé.

Cet article est suivi d'une réplique qui vient appuyer la discussion sur le rôle des patients dans l'engagement et les partenariats. Shaw et al. (2021) soutiennent que le seul point de vue des patients n'est pas suffisant. L'article postule que le point de vue des communautés locales est nécessaire pour contribuer à la structure et aux processus des systèmes de santé. La réplique conclut en préconisant que les « communautés » devraient codiriger la conception du système de santé afin de réduire les inégalités en matière de santé.

Un deuxième article de la section Discussions et débats porte sur la question de l'assurance contre la faute professionnelle médicale dans les provinces et les territoires. L'article explique que l'Association canadienne de protection médicale (ACPM) est un fonds principalement dédié à la défense des médecins contre les poursuites judiciaires des patients et de leurs familles. En décrivant comment les provinces et les territoires subventionnent les primes de l'ACPM utilisées pour défendre les médecins, Lee et al. (2021) constatent que moins de 0,3 % des demandeurs reçoivent une indemnisation. L'article conclut en plaidant pour une réforme importante du système de faute professionnelle médicale fondée sur la responsabilité délictuelle.

Faisant écho aux inefficacités structurelles et aux dépenses du système décrites par Lee et al. (2021), la réplique rédigée par Nelson (2021) concerne aussi la réforme au sujet des fautes professionnelles médicales. Cet article postule qu'un système de remplacement sans égard à la responsabilité améliorerait probablement l'accès à l'indemnisation, mais ne résoudrait pas les problèmes sous-jacents en matière de sécurité, de pertinence ou de responsabilité des soins de santé, lesquels sont importants pour de nombreux patients. L'article conclut que le système actuel fondé sur la responsabilité délictuelle doit être réformé, bien qu'une exploration plus poussée des incitatifs, y compris les modèles mixtes, puisse conduire à un équilibre souhaitable entre l'indemnisation des patients et la responsabilité des médecins.

Dans un article de la section Questions de données, Aggarwal et al. (2021) décrivent la nature des données sur les médecins de famille dans les provinces et les territoires. Les auteurs précisent qu'il n'existe pas de source nationale de données qui comprend la distribution ou qui décrit de manière exhaustive les caractéristiques de la pratique des médecins de famille. Les auteurs notent que bien qu'il existe plus de 20 sources d'information sur les médecins de famille, aucune n'est suffisamment complète ou précise pour soutenir une planification détaillée de la main-d'œuvre ou une recherche détaillée sur les systèmes de santé. L'article conclut qu'un leadership, un soutien et un financement vigoureux de la part du gouvernement fédéral seront nécessaires pour développer une infrastructure de données fiables, complémentaire aux autres normes de données pancanadiennes.

Dans la section Rapports de recherche, Ogundeji et al. (2021) présentent les résultats d'une étude qualitative sur les incitatifs et les modèles de rémunération des médecins spécialistes en Alberta. Puisque les modèles de rémunération des médecins sont demeurés statiques pendant des décennies, à quelques petites exceptions près, cette étude rend compte du point de vue des répondants concernant les modèles alternatifs. Les résultats ont montré que les modèles mixtes de rémunération à l'acte et de salaire peuvent être préférables pour le système de santé afin d'améliorer la valeur des services médicaux, lorsqu'ils s'accompagnent de mécanismes de responsabilisation appropriés pour en mesurer la valeur et la qualité. L'étude conclut que les modèles de rémunération mixte sont réalisables, et possiblement préférés, par les spécialistes; cependant, des modifications législatives et de nouveaux partenariats sont nécessaires.

L'article suivant dans la section Rapports de recherche présente les résultats et les répercussions de l'adoption rapide de la téléconsultation dans les cliniques de soins primaires au Québec pendant la pandémie de COVID-19. Sur la base d'une enquête transversale anonyme auprès de cliniques universitaires de soins primaires, Breton et al. (2021) signalent que les consultations par téléphone ont connu l'augmentation la plus importante, dépassant les consultations par vidéo. Les auteurs signalent aussi que les consultations par téléphone et par vidéo limitent la capacité de collecter des informations cliniques pertinentes, ce qui peut entraîner une duplication des tests ou des services. L'article conclut en identifiant un certain nombre de problèmes importants que les décideurs doivent aborder, notamment la formation en télésanté pour les médecins et les prestataires de soins ainsi que les inégalités potentielles concernant l'accès aux technologies pour les patients.

Le troisième article de la section Rapports de recherche met l'accent sur les autres niveaux de soins en Ontario. Les jours d'autres niveaux de soins constituent un problème permanent pour les hôpitaux de toutes les provinces, avec de nombreux patients hospitalisés occupant des lits, mais qui n'ont pas besoin des technologies ou des soins qualifiés fournis en courte durée. Rédigé par Nauenberg (2021), l'article examine la possibilité que l'Ontario suive l'exemple d'autres autorités sanitaires en utilisant des espaces résidentiels vacants pour héberger temporairement les patients d'un autre niveau de soins. Tout en décrivant les obstacles en matière de réglementation, de formation ou de politique qui empêchent l'Ontario d'aller en ce sens, l'article conclut que des services de santé novateurs et de nouvelles approches politiques seront nécessaires pour résoudre le grave problème des autres niveaux de soins.

Le dernier article de ce numéro décrit la mise en œuvre du modèle en étoile pour des soins coordonnés et intégrés pour les enfants qui nécessitent des soins complexes en Ontario. Rédigé par Lin et al. (2021), cette étude qualitative d'un modèle de mise en œuvre fait état d'une communication renforcée entre les soins de courte durée, les soins spécialisés et les services communautaires. L'étude signale aussi une amélioration des relations familiales. Cependant, l'étude fait aussi état de difficultés à surmonter la fragmentation et à trouver des ressources pour les travailleurs sociaux, le soutien infirmier ou les prestataires de soins de santé mentale. L'article se termine par un certain nombre de recommandations à l'intention des autres provinces qui souhaitent améliorer les soins de santé et les services sociaux pour les enfants qui présentent une complexité médicale.

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DISCUSSION AND DEBATE

Building Equitable Patient Partnerships during the COVID-19 Pandemic: Challenges and Key Considerations for Research and Policy

Mise en place de partenariats équitables avec les patients pendant la pandémie de COVID-19 : défis et considérations pour la recherche et l'élaboration de politiques

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Abstract

The unequal social and economic burden of the COVID-19 pandemic is evident in racialized and low-income communities across Canada. Importantly, social inequities have not been adequately addressed and current public policies are not reflective of the needs of diverse populations. Public participation in decision-making is crucial and there is, therefore, a pressing need to increase diversity of representation in patient partnerships in order to prevent the further exclusion of socially marginalized groups from research and policy making. Deliberate effort and affirmative action are needed to meaningfully engage and nurture diverse patient partnerships by broadening the scope of the patient community to include excluded or underrepresented individuals or groups. This will help us co-develop ways to enhance access and equity in healthcare and prevent the systematic reproduction of structural inequalities that have already been heightened by the COVID-19 pandemic.

Résumé

Le fardeau socioéconomique inégal de la pandémie de COVID-19 est manifeste dans les communautés racialisées et à faible revenu du Canada. Il y a donc un besoin urgent d'accroître la diversité de la représentation dans les partenariats avec les patients afin d'éviter que les groupes socialement marginalisés se trouvent exclus de la recherche et de l'élaboration des politiques. Des efforts délibérés et une action positive sont nécessaires pour entretenir de manière significative les partenariats avec la diversité, et ce, en élargissant la communauté des patients pour y inclure des individus ou des groupes exclus ou sous-représentés. Cela aidera à développer conjointement des moyens pour améliorer l'équité et l'accès aux soins de santé. Cet engagement garantira que la réponse du système de santé canadien à la pandémie reflète une représentation inclusive et équitable des voix des patients, tout en empêchant la reproduction systématique des inégalités structurelles déjà exacerbées par la pandémie de COVID-19.

Background

The Canadian healthcare system has demonstrated agility and innovativeness in its response to the COVID-19 crisis (Bernardo et al. 2021; Brunet et al. 2020; Hall 2021). As we move into the next stage of preparedness planning and strategize on ways to deal with the massive backlog of chronic care cases created by the pandemic response, policy makers and researchers must ensure that the needs of patients, as identified by patients, are met. Prioritizing the needs of patients will be necessary in mitigating the long-term adverse effects of the COVID-19 pandemic and promoting equitable health outcomes across the population. To succeed at this, it will be important to deliberately include diverse patient communities in shaping research and influencing public policy in order to prevent a widening of health inequities that are rooted in social inequalities.

In this paper, we discuss how the first wave of COVID-19 brought efforts to actively engage patients in research and policy making to a near halt. We emphasize the need to integrate diverse patient voices into the health system's pandemic response and describe ways in which policy makers and researchers can build inclusive patient partnerships by applying an equity lens (Nasser et al. 2013).

COVID-19's Impact on Patient Engagement and Its Implications for Health Services Research and Policy

The Canadian Strategy for Patient-Oriented Research (CIHR 2011) defines patient engagement (PE) as an active collaboration with patients to establish governance structures, identify research priorities and co-create knowledge in order to influence organizational structures and policy making. PE can improve health outcomes by promoting the use of quality-of-life metrics that match patient-identified needs, increasing access to the healthcare system and improving overall cost-effectiveness (Manafo et al. 2018). The spectrum of PE ranges from tokenistic consultation to active participation in the design and conduct of research (Manafo et al. 2018). Few initiatives have high levels of PE in which patients partner as co-leads and decision makers in organizational processes and policy making (Carman et al. 2013).

PE is an area of increasing interest and research investments in Canada (Manafo et al. 2018). Prior to the COVID-19 pandemic, patient partnerships were rapidly growing across all areas of research, although almost exclusively by invitation from academic institutions. The result was a unidirectional approach to PE in which patient partners (PPs) at the table were those most accessible to research teams and often reflective of their own social identity: white, well-educated and well-resourced. As the pandemic pushed the health system into an emergency-response mode, PE came to a near halt similar to other health services considered "non-essential." The health system, thereafter, was operating in a crisis mode with no regard for patient-identified priorities; this was despite the fact that patients suffering from chronic illnesses were the most impacted by a disruption to their routine of care (Immonen 2020), and socially marginalized patients were the most negatively impacted by the pandemic and the resulting health and social system responses. Since then, efforts have been made to reintegrate PE into research, policy and practice. However, representation at research and policy tables continues to be by invitation only, with participation almost exclusive to PPs who are most easily accessible.

Seldom-Heard Patient Voices and the Need for Inclusive Representation

An important, but commonly challenging, aspect of PE is to include a spectrum of patient voices to prevent tokenism and/or the exclusion of individuals from diverse communities whose voices have been typically left out of decision-making processes. Increasing the diversity of representation in patient partnerships is an essential step in preventing future exclusion of groups who experience marginalizing societal conditions that have been created through historical and systematic discrimination (i.e., low income, gender, sexual orientation, racialization, Indigenous identity and ancestry, disability and housing insecurity or homelessness). PE with seldom-heard and hard-to-reach patient communities is rarely carried out in a meaningful way due to a lack of material resources, exclusionary institutional practices

(Ní Shé et al. 2019) and engagement processes that are not inclusive in design and implementation (Brackertz 2007).

During a global pandemic in which the disproportionate social, economic and health burden experienced by racialized and low-income communities is heightened, it is important to acknowledge how our traditional methods of PE are likely to further exclude communities unless deliberate action is taken. For example, the life cycles of research funding and expected deliverables frequently do not allow for meaningful partnerships to be nurtured with seldom-heard populations for whom stigma, disenfranchisement, differences in lived experience or mistrust of the health system amplify the need for prolonged engagement. In such instances, it is important to initiate PE and build patient partnerships on solid foundations of pre-existing long-term relationships with individuals, advocacy groups and community-led organizations. This outreach outside of research can facilitate the identification of common stakeholder goals prior to the commencement of research and considerations for policy design.

Effective Engagement of Diverse and Inclusive Patient Communities for Equitable Patient Partnerships

Critical self-reflection and conscientious decision making are central to the work of a patient-oriented practitioner who is defined as someone who carries out patient-oriented research (POR) or patient-oriented policy development and who is engaged with groups experiencing social marginalization. Denzin and Lincoln (2011) described this as "telos," or the "willingness to disassemble self, to deconstruct one's world … [in order] to avoid construction of power over individuals or groups" (p. 87). This process is needed in order to challenge personal assumptions, consider issues of representation and envision broader ways to engage diverse groups. For POR, this implies a reflexive examination of one's own beliefs, judgments and actions (Macbeth 2001). Ultimately, researchers must explore the inclusiveness of their own work and be willing to critically reflect upon it as part of the reported study process and/or scope.

The same principles for POR could be meaningfully used to include patient voices in public policy development – where long-term partnerships should be formed with communities with clear goals explicitly stated and where policy makers are willing to critically reflect on who is left at the margins of existing and planned public policies. The exclusion of patient voices, particularly of those who experience marginalization, likely plays a role in some of the policy failures we have seen in the COVID-19 pandemic response, such as the neglect of long-term care homes, the lack of protections for essential low-wage workers and the delay in or resistance to collecting race-based data.

To prevent tokenism, to centre the voices of socially marginalised groups whose perspectives are often excluded and to recognize the reality of the current COVID-19 challenges in Canada, we offer five key considerations for putting "telos" into action and building inclusive and diverse patient partnerships:

1. USE AN EQUITY-ORIENTED APPROACH TO PATIENT ENGAGEMENT.

An equity-oriented approach (EOA) recognizes that health inequities have been created by the historical and systematic disempowerment of communities through interlocking structures of sexism, colonialism and racism. This has resulted in the unjust and unfair distribution of power, privilege and prestige, which determine health outcomes and access to healthcare (Sayani 2019). An EOA, therefore, considers the systems of oppression that are at play and aims to understand which specific patient population groups are most likely to experience that oppression if the policy or intervention is enacted. These groups must then be the priority when it comes to partnering for knowledge co-creation, which will likely mean outreach and engagement with those communities.

2. CO-BUILD SUSTAINABLE SAFE SPACES.

A respectful partnership with communities that have experienced structural oppression requires a sustainable engagement plan beyond the life cycle of any single healthcare project or research study. A trauma-informed (Government of Canada 2018) way to PE recognizes that cumulative disadvantages over the life course have shaped opportunities to seek and benefit from healthcare and that these cannot be solved by shifting the responsibility for change onto individuals. Rather, an authentic commitment to listen and learn from diverse patient communities on what works for them for the PE process, and how they wish to be engaged and for which goals, is needed. This will enable the creation of a culturally safe (Williams 1999) space where PPs can feel comfortable speaking up and expressing views that challenge the status quo and persons in position of power and authority.

3. CONSIDER ISSUES OF ACCESSIBILITY.

PPs experiencing social marginalization may need to overcome multiple barriers to participation. For individuals living on low incomes, financial honoraria upfront can promote participation and reduce attrition over the course of a project (Gross and Bettencourt 2019). A patient-oriented project is emergent by design; however, patient partnerships in the middle of a pandemic require an even greater degree of flexibility and agility in order to engage with marginalized populations. This may require researchers and policy makers to arrange additional resources such as tablets (as well as arranging internet access) or digital recorders to promote virtual and physically distanced group participation from individuals who may not have regular access to the internet and other online tools. Ethical considerations must be given to privacy issues during online interactions, and care must be taken to protect the confidentiality of PPs who may already be facing issues of stigma and social isolation. Consideration of additional barriers to participation, such as working conditions and home and child care responsibilities, will enable researchers to remain dynamic and responsive to the needs of patients in a way that will facilitate diverse participation.

4. BUILD CAPACITY ONE RELATIONSHIP AT A TIME.

In order to meaningfully conduct PE and develop capacity for a robust patient partnership (CIHR 2015), patient-oriented practitioners must prioritize community engagement and relationship building. At a policy level, this means that all projects that seek to engage patients must receive adequate resources (sufficient funds, appropriate time allocation and human capital). Sustainable funding in particular may require innovative methods to support PE, such as a designated institutional fund or bridge funding between projects. It is important that sufficient opportunities exist for practitioners and PPs to learn from each other and to conduct collaborative exercises that help identify real-world problems and seek plausible solutions. Furthermore, inclusive capacity building will require a communication plan that includes details of the proposed work, time commitments required by PPs, expected deliverables, reimbursement for expenses and financial compensation for time. This plan must be clearly laid out and revisited regularly throughout the project. Ethically, it is the responsibility of the researcher or policy maker to set clear expectations about the anticipated timelines and possible outcomes in order to avoid disappointment, loss of interest and a general mistrust of the process.

5. DO NO HARM.

Of all of the strategies listed above, "do no harm" is the most important consideration when engaging with diverse patient communities. This includes the use of language that can convey judgment and elicit power. A variety of vague terminologies are used in the literature to describe individuals experiencing social marginalization. Examples of these terms include the following: vulnerable, disadvantaged, oppressed, excluded and underserved (Katz et al. 2020). Researchers and policy makers must not simply seek "vulnerable" PPs but must go beyond the vagueness of these terms when defining with precision who the PPs are that should be at the table. Also, the terminology used for any identified group must ultimately be decided by PPs who should be able to define for themselves the attributes and labels used in the dissemination of findings. This will prevent token involvement of patients, avoid mistrust of PE and prevent the production of knowledge and policies that are acritical of the systemic and structural inequities that underpin differences in risk and disease profile.

Conclusion

The COVID-19 pandemic has laid bare gross health and social inequities that current public policies have not yet adequately addressed. PE in both research and policy creation has proven itself to be crucial, and innovative ways are needed to meaningfully engage and nurture relationships for successful long-term patient partnerships with populations experiencing social marginalization and for whom these issues are intensified. As health systems continue to shape their response to the COVID-19 pandemic, it will be important to include patient-identified priorities in the research and policies that guide the redesign and restructuring of healthcare services. In addition, greater effort must be taken by everyone involved in health services research and public health policy to take steps to include a diverse representation of patient voices through equity-focused PE.

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DISCUSSION AND DEBATE

Commentary: Community Knowledge for Equity in Healthcare

Commentaire : connaissances communautaires pour l'équité dans les soins de santé

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Abstract

In their insightful article, Sayani et al. (2021) provide five considerations for developing patient partnerships that are meaningful and inclusive. In this brief rejoinder, we outline three points that push the boundaries of the discussion on diverse patient partnerships and represent challenges faced by our own research team as we aim to build and deepen our approach to community engagement. Firstly, we suggest a shift from patient engagement to community engagement; secondly, we propose a shift from engaging various communities together by labelling them as "underserved" or "structurally marginalized" to engaging specific cultural or geographic communities at specific times; and finally, we suggest deferring to community knowledge.

Résumé

Dans leur article inspirant, Sayani et al. (2021) présentent cinq points à considérer pour l'établissement de partenariats significatifs et inclusifs avec les patients. Dans cette brève réplique, nous abordons trois points qui repoussent les limites de la discussion sur divers types de partenariats avec les patients et qui représentent les défis auxquels notre propre équipe de recherche s'est confrontée au moment d'approfondir la démarche concernant l'engagement communautaire. Premièrement, nous suggérons de passer de l'engagement avec les patients à un engagement communautaire; deuxièmement, nous proposons de passer de l'engagement amalgamé de diverses communautés qualifiées de « mal desservies » ou « structurellement marginalisées » à un engagement culturel ou géographique, à des moments définis; et enfin, nous suggérons de s'en remettre davantage aux connaissances de la communauté.

Introduction

Events during the COVID-19 pandemic have awakened many people in positions of privilege to the realities of those living in circumstances of unearned and unjustifiable disadvantage. Although some of these realities are linked, perhaps indirectly, to the spread of the virus, issues such as systemic racism, ageism and the ongoing effects of colonialism seem to have become a more prominent part of public discussion. If growing awareness about these issues is going to lead to actual change, then privileged stakeholders in institutions of research and policy, such as ourselves, must help make it happen.

In the realm of public health and healthcare, it is not just disparities in access to and outcomes of health interventions between groups that are significant – although they are persistent and extremely problematic. It is also the outright risks to personal safety faced by Black, Indigenous and other Peoples of Colour during encounters with healthcare that must be addressed. In this context, Sayani et al. (2021) emphasize that redressing these injustices in health systems requires the collaboration and leadership of those people who are the most affected by institutionalized forms of oppression. They clarify the importance of centring diverse patient perspectives in research and policy that is oriented toward enhancing health equity. They provide five considerations for developing meaningful inclusive patient partnerships, each of which is framed in practical ways for health leaders to understand and adopt. In this brief rejoinder, we highlight three points that push the boundaries of the discussion on diverse patient partnerships and represent challenges faced by our own research team as we aim to build and deepen our approach to community engagement in our work.

Shifting from Patients to Communities

The concept of the "patient" in the phrase "patient engagement" is problematic. The assumption made in healthcare is that when viewed from a vantage point of the health professions, a *person* is transformed into something new: a *patient*. In a commentary, Neuberger (1999) advocated for a shift away from the term "patient". She explained that the word "patient" comes from the Latin word *patior*, which means to passively suffer or bear the weight of a given burden (Neuberger 1999). This legacy of the term "patient" has remained salient throughout the history of healthcare and medicine, creating a foundation for healthcare paternalism that characterizes contemporary health-related education and practice.

The attention to patient engagement in research and policy in recent years has undoubtedly shifted emphasis from the expertise of the healthcare provider to the needs, wishes and experiences of people seeking care. While this has meant that some people have been able to provide input into the organization and delivery of healthcare, this opportunity has not been equally available to all patients. As Sayani et al. (2021) clearly articulate, those who have had the opportunity to participate in this way have tended to be "white, well-educated and well-resourced" (p. 19), leading to a very narrow set of insights about patients' experiences with healthcare.

However, beyond the unequal distribution of opportunity, other foundational assumptions regarding patient engagement and partnership should also be questioned. Perhaps the most important one is the assumption that the voices of individuals already labelled as passive patients – with no insider knowledge of how the system works – can compete against the deeply entrenched hierarchies through which decisions in healthcare are made. Can individual people providing independent input to committees otherwise dominated by powerful insiders really produce systematic and meaningful change in healthcare?

Through the extraordinary action of some individuals, the answer is, sometimes, yes. But as Sayani et al. (2021) propose, the engagement of community perspectives over individual viewpoints enables a more robust approach to understanding and acting on peoples' perspectives of healthcare. Community engagement and partnership refers to a diverse collection of practices oriented toward involving community members in projects and services that affect them (Wallerstein et al. 2017). This can mean having community members as co-leaders on a given project, or creating a process of systematically gaining insights from a variety of community members and synthesizing them into overarching implications for an initiative. The central point of our discussion here is that community engagement and partnership refers to the systematic collaboration with several members of a given community affected by the structure and delivery of health services, as opposed to individual people on an ad hoc basis.

From the perspective of some Anishinaabe Peoples, a request for partnership and the sharing of oral history implies the involvement of an entire community. When one asks for collaboration with an Anishinaabe person, they are not just asking for their individual experiences but, rather, the expertise of that person and the history, relations and "community knowledge" of their Anishinaabe worldview. In our own research, we aspire to carry this sentiment forward and embrace the worldviews of the communities affected by the health services on which we are focused. In relation to partnership with Indigenous communities, this has been referred to as "two-eyed seeing" (Bartlett et al. 2012), wherein research teams embrace both settler and Indigenous ways of understanding. We are not good at this yet. This is an aspirational goal – one that could help us push the boundaries of what can be accomplished for health equity in research and policy.

Shifting from General to Specific Communities

In a crucial paper for advancing our understanding of research on health equity, Katz et al. (2020) examined how using the phrase "vulnerable populations" can inadvertently obscure more effective approaches to enhancing health equity. In our own work, we have moved between various labels for the diverse group of community members we intend to partner with. For example, we have relied on the phrase "underserved communities" to place emphasis on the effort and capability of healthcare systems to adequately serve everyone. Based on feedback from community partners, we shifted to "structurally marginalized communities" to emphasize the active processes of marginalization due to intersecting and institutionalized forms of oppression. But the incisive analysis from Katz et al. (2020) clearly shows that such labels create spaces that people will fill with their own assumptions about what makes people "vulnerable", "underserved", or "structurally marginalized". The vagueness of these terms might do more harm than good as echoed by Sayani et al. (2021).

Relying on such all-encompassing terms conveys an assumption that there is a set of commonalities between specific communities, which might not be so common on a close, second look. Certainly, solidarity between communities facing circumstances of structural disadvantage is important but, as researchers and other health leaders, we probably would do better by focusing on the needs and experiences of specific communities at specific times. For example, one would need to emphasize very different things when promoting cultural safety for First Nations communities in Northern British Columbia than for French-speaking refugee communities in downtown Toronto. We suggest that focusing on specific communities at specific times is an important complement to the diverse patient engagement outlined by Sayani et al. (2021).

Deferring to Community Knowledge

One of the most challenging elements of adopting a community-engagement mindset must be about shifting from a model of scientific expertise to one of community expertise. Sayani et al. (2021) have addressed this in a highly insightful way, outlining the importance of deep reflection about the assumptions we, as researchers and health leaders, bring to our work in healthcare. For example, we have deeply entrenched assumptions about what counts as "real knowledge", and when we have "enough" knowledge to act. For many of us, the answers to these questions tend to rest on an epidemiological paradigm. Unless something has been demonstrated as existing through a large-scale study – or so the logic goes – it cannot form an evidentiary foundation for making real change in healthcare. However, such a logic relies on what scientists of the past and present have chosen to study. Are they studying the right things?

This scientific humility is at the central core of the effort to shift from a paternalistic, system-centered approach to one that truly respects and reflects the experiences and perspectives of individual communities. Researchers and other health leaders have the means to listen to communities and examine how and why community members have been made to think and feel about the system in particular ways. This is a crucial way in which those of us in privileged positions in public health and healthcare can more adequately co-develop the necessary system changes to enhance health equity. Meaningful partnerships demand scientific humility.

Conclusion

Carrying forward the lessons learned during the COVID-19 pandemic about the importance of partnering with communities in support of health equity will not be easy. Systems of research, health leadership and health policy are structured on a model of expertise that places community knowledge at the bottom of the hierarchy (Cann and DeMeulenaere 2020). This has allowed conventional practices of patient engagement and partnership to be superficial and sometimes harmful. While we work to bring community members in as co-leaders of research and policy initiatives, we also need to work to change the structures and incentives that reinforce this hierarchy. Expanding the conversation to include diverse patient voices and community partnerships is one way of doing so, and we are grateful to Sayani et al. (2021) for getting us started.

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DISCUSSION AND DEBATE

Canada's System of Liability Coverage in the Event of Medical Harm: Is It Time for No-Fault Reform?

Système canadien de couverture de responsabilité en cas de préjudice médical : le temps est-il venu de procéder à une réforme sans égard à la responsabilité?

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Abstract

Many Canadians believe that physicians have malpractice insurance via the Canadian Medical Protective Association (CMPA). However, the CMPA is not an insurance company; it is a defence fund for physicians and has no obligation to compensate all claimants. CMPA expenses have increased nearly tenfold in 30 years and although public budgets support the majority of CMPA fees, less than 0.3% of injured patients receive compensation. A reform of the system is vital. Several developed countries have adopted a "no-fault" system to provide more equity and transparency and to ensure that the majority of funds go directly to injured patients rather than toward the payment of legal and administrative fees.

Résumé

De nombreux Canadiens croient que les médecins bénéficient d'une assurance contre la faute professionnelle par l'entremise de l'Association canadienne de protection médicale (ACPM). Cependant, l'ACPM n'est pas une compagnie d'assurances; il s'agit d'un fonds de défense pour les médecins et il n'y a aucune obligation d'indemniser tous les demandeurs. Les dépenses de l'ACPM ont presque décuplé en 30 ans. Et bien que les budgets publics soutiennent la majorité des frais de l'ACPM, moins de 0,3 % des patients blessés reçoivent une indemnisation. Une réforme du système est indispensable. Plusieurs pays développés ont adopté un système « sans égard à la responsabilité » pour offrir davantage d'équité et de transparence et pour garantir que la majorité des fonds aillent directement aux patients blessés plutôt qu'au paiement de frais juridiques et administratifs.

Introduction

Most physicians in Canada are members of the Canadian Medical Protective Association (CMPA) and believe that this provides them with malpractice insurance. But this is not the case: the CMPA is not an insurance company; their assistance to physicians is available strictly on a discretionary basis (*Shannon v. Canadian Medical Protective Association* 2016). The CMPA Council has full discretion to limit, decline or terminate assistance without reason. Essentially, neither does the CMPA provide a contract of indemnity for physicians, nor does it provide certainty of coverage for patients injured as a result of medical error. Regulatory colleges have voiced concern that the public may not be adequately protected and have stated there is a "tension between the coverage provided by the CMPA and the fact that there is no direct or legal obligation that the CMPA respond to claims" (*Shannon v. Canadian Medical Protective Association* 2016). Given that 95% of Canadian physicians are CMPA members – a defence fund, not an insurance company – and that only a small fraction of injured patients ever receive compensation, is it time to reform medical malpractice insurance in Canada?

The Canadian Medical Malpractice System

Health outcomes are affected by many factors, and even with the best medical care, unexpected adverse outcomes can occur. Baker et al. (2004) estimated that in Canada, 7.5% of adult patients (185,000 per year) in acute care settings suffered a serious adverse event (AE), of which 37% were highly preventable and 20% of overall AEs resulted in death. Because psychiatric, obstetric, chronic care and long-term care patients were not examined, the number of incidents is likely much higher. In Canada, the only way for patients to seek compensation is through the courts.

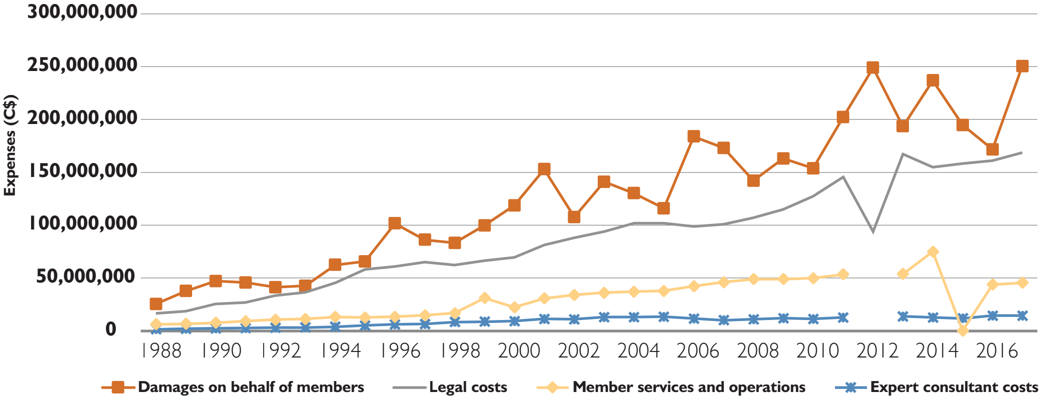
Patients face an uphill battle in seeking compensation for injuries caused by medical error. First, they must pay the high cost of legal representation, which most cannot afford. Second, they also face the challenge of proving to a court that the physician failed to meet the general standard of care and that this failure was the cause of the harm they suffered (as opposed to, for example, a co-morbidity). The burden to establish the medical error is on the patient with whatever evidence she/he/they can furnish. Finally, the delays in court action mean that compensation, if awarded, will be delayed.

In order to ensure that injured patients are justly compensated and to protect physicians, the Colleges of Physicians and Surgeons in each province and territory require practising physicians to carry medical malpractice liability coverage or insurance. Most physicians believe that they are purchasing insurance through the CMPA; however, the CMPA declares itself as a "mutual defence" organization, meaning that they are not required to indemnify physicians, unlike an insurance company (*Shannon v. Canadian Medical Protective Association* 2016). The current system leaves "gaps" in coverage for physicians and, as this article describes, provides almost no coverage for patients injured as a result of medical error. The ideal system would ensure social justice, equity and transparency for both patients and physicians, wherein proving fault would not be a pre-requisite to accessing compensation for medical injuries. Making matters worse, the CMPA's membership premiums are heavily subsidized by the government, and the sustainability of the system is questionable.

Is the current system sustainable?

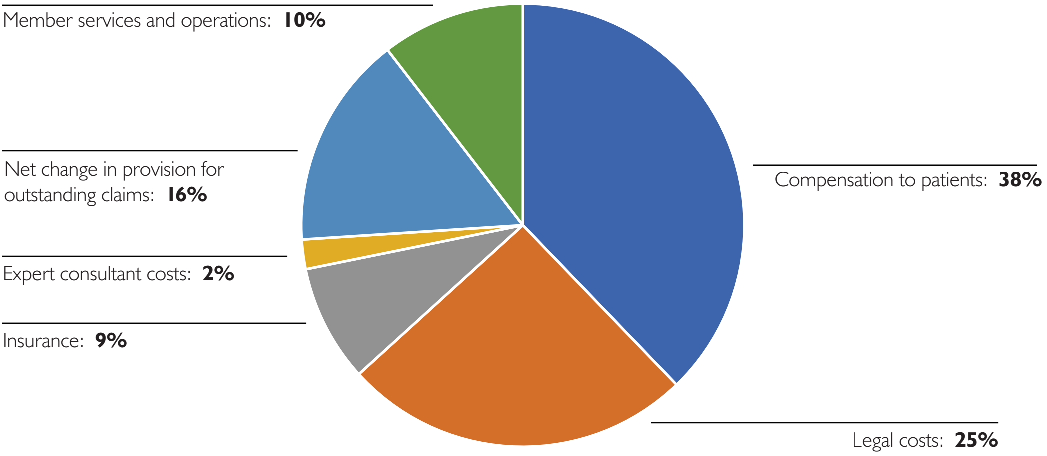
The CMPA annual reports between 1987 and 2017 showed that their membership nearly doubled from 50,261 in 1987 to 97,688 in 2017, while CMPA expenses (and consequently premiums) increased more than tenfold. While the largest CMPA expenses are damages paid to patients, the second largest expense is legal costs, which increased from $16 million in 1988 to $168 million in 2017 – an increase of 950% (CMPA, personal communication, August 2018) (Figures 1 and 2). This increase in expenses is well beyond the inflationary rate of 87% for the same period.

FIGURE 1. CMPA expenses from 1988 to 2017



Across the board, CMPA expenses have increased significantly, raising questions about the sustainability of the system and how resources are allocated between payment of patient claims and the legal costs of defending those claims. Indeed, given that the majority of CMPA funding comes from the taxpayers, many believe that the majority of funds should be used to compensate injured patients rather than pay legal fees to defend against patient claims.

FIGURE 2. CMPA expenses in 2017



Have the number of civil cases increased?

A common misconception is that court actions against physicians have increased over time, which if true, would provide some explanation for the rising CMPA costs. However, CMPA records show that the number of cases commenced annually has changed negligibly and remains close to 900 per year since 1988 (CMPA, personal communication, August 2018). Given that membership has doubled over the last 30 years, this means that the number of cases commenced per capita has actually halved. A more recent estimate by Taylor (2013) than the one by Baker et al. (2004) approximates that 100,000 provider-error injuries occur per annum. With only 900 malpractice lawsuits brought forward each year (0.9% of the 100,000 injuries), and a success rate at trial or settlement of only 38% (Nosheen and Culbert 2019), the percentage of cases compensated in which patients were harmed in avoidable error is an abysmal 0.34%. Although 38% of all formal legal claims being compensated may appear to be a reasonable compensation rate, one must keep in mind that the number of cases brought forward represents less than 1% of all the medical injuries estimated to be occurring across Canada. Medical malpractice legal claims are brought forward so rarely, in part, due to the CMPA policies that deter injured patients from seeking compensation, such as mounting an aggressive defence or the prolonged nature of most litigation that few patients have the means to compete with (Gibson 2016). Furthermore, malpractice lawyers are less likely to take on cases in the first place due to the costs associated with litigation against such a well-financed defendant as the CMPA, tending only to accept cases with a high likelihood of success and a high payout (Nosheen and Culbert 2019). Some patients may not have the financial wherewithal to consider litigation; may be too sick to initiate a claim; may, in fact, not be aware of their right to sue; and/or may not be sure of how their injury was caused (as a fault of the physician or not). Unfortunately, many of those deterred by the strength and financial capacity of the CMPA are those that are most likely in need, which raises questions of equity and justice.

Inequity and social justice

In 2004, the CMPA and the provinces struck a deal allowing CMPA premiums to be subsidized by taxpayer money. Since then, provinces have provided subsidies ranging from 80% to 100% of premiums for all physicians. In data published by the CBC, provincial governments (except Nunavut and Northwest Territories where data were unavailable) have allocated $1.85 billion in payment to the CMPA from 2014/15 to 2017/18 (Nosheen and Culbert 2019). The result is that when an injured patient files a lawsuit against a physician, the taxpayer is funding one side of that legal dispute leaving the patient to single-handedly fund the other side. The CMPA is known to have considerable resources and uses its financial capacity to robustly defend claims and avoid paying compensation to patients (Gibson 2016). An Ontario superior court judge commented in a ruling that the CMPA-funded lawyers in a court case had pursued a "scorched earth policy," challenging the plaintiff on every aspect of his case and making the trial unnecessarily lengthy (Gibson 2016: 313). Consequently, the current system creates major barriers to justice for patients who are harmed and discourages them from pursuing legal remedies or financial compensation. Hence, the question of equity and social justice must be raised. If the CMPA exists to protect physicians and does not compensate the majority of the public who suffer from medical error or injury, why is the public paying the costs? Arguably, the funding being devoted to the CMPA would be more efficiently utilized if redirected to injured patients rather than being consumed by legal and administrative costs.

Is everyone satisfied with the status quo?

Criticisms regarding the system abound from all sides. Patients feel that the system takes too long to compensate the injured and costs taxpayers too much (Nosheen and Culbert 2019). There have also been repeated calls for system reform from various levels of government, resulting in numerous recommendations and reports (Gilmour 2006; Goudge 2017; Prichard and Robert 1990). In the 1997 and 2000 *Ontario Physician Services Agreements*, the Ministry of Health and the Ontario Medical Association agreed on the urgent need to examine all available alternatives for liability protection coverage (Ontario Ministry of Health and Long-Term Care 2016). Similar issues were discussed in the 2004, 2009 and 2012 *Ontario Physician Services Agreements* (Ontario Ministry of Health and Long-Term Care 2016). At the Canadian Medical Association's 2017 annual general council meeting, physicians themselves voted 79% in favour of a review of Canada's medical liability system and an exploration of other more affordable models for protecting patients and physicians (Collier 2017). Furthermore, in 2019, the Quebec College of Physicians released a statement calling for no-fault insurance for patients in order to guarantee compensation to victims of malpractice. They proposed a no-fault malpractice system similar to the province's no-fault automobile insurance (Gilmour and Luft 2019). Several developed countries have evolved to use a "no-fault" malpractice system in an effort to provide a more equitable and transparent system for patients impacted by AEs.

A No-Fault Compensation System

A major no-fault scheme for compensation has existed in Canada for over 100 years in the form of Workers' Compensation and, likewise, the province of Quebec has had a no-fault compensation scheme for vaccine injuries since 1986. In the medical world, no-fault systems have existed in countries such as New Zealand and Sweden for over 40 years and in Finland, Norway and Denmark for over two decades (Studdert and Brennan 2001a). The United States operates state-based no-fault systems for specific injury types (Horwitz and Brennan 1995). In Canada, a no-fault system was used to compensate victims of the tainted blood scandal in the 1980s and '90s (Gilmour 2006). A no-fault system is able to compensate injured patients quickly and equitably while minimizing court time and legal costs. It also removes the requirement that compensation only be provided once blame has been assigned. In most countries that have adopted no-fault systems, physician malpractice is separately handled by regulators, as is the case for Sweden where complaints and disciplinary issues of medical providers are handled by the Medical Responsibility Board (World Bank 2013). Disciplinary action is kept entirely separate from the no-fault scheme.

In the current malpractice system, the majority of CMPA membership dues are paid by provinces using taxpayer money. In turn, only 38% of CMPA expenses, or \$250 million of \$662 million in 2017, went to patients harmed while receiving medical care (CMPA, personal communication, August 2018). The intent behind funding medical malpractice coverage is to both protect physicians and compensate injured patients, but funds are skewed heavily to the former rather than the latter. A no-fault compensation system has the potential to compensate more patients than a tort-based system by vastly reducing legal fees, expert witness fees and much of the administrative costs.

Are no-fault systems efficient and affordable?

The administration of a no-fault system has been found to be highly cost-effective, although this may vary depending on implementation. It is instructive to consider the cost efficiencies achieved by comparative countries. Bismark and Paterson (2006) studied New Zealand's no-fault system and found administrative costs absorbed only 10% of total expenditures, with the remaining 90% available to compensate patients. Bovbjerg et al. (1997) found that Florida's no-fault system for newborns with severe birth-related neurological impairments incurred administrative costs of 10% compared with 47% under Florida's ordinary tort system for obstetrical cases, and awards were received more expeditiously in the former. Barringer (2006) reported similar findings, with administrative costs for the Florida and Virginia no-fault system ranging between 8% and 10%. Sloan et al. (1998) also studied the Florida no-fault system and showed that families received a larger share of the money and paid less for lawyers' fees in the no-fault system. Similarly, the World Bank (2013) examined the medical malpractice systems in the US (tort) and Sweden (no-fault) and found that overhead administrative costs accounted for 60% of expenses in the US as compared to only 18% in Sweden.

Another concern with a change to a no-fault approach may be that liability and compensation costs would increase, given the increase in the number of claims; however, the evidence shows otherwise. Studdert et al. (1997) concluded that a no-fault system in Colorado or Utah could compensate four to six times more victims than the court system at the same cost as the existing tort system. One reason for these findings is that legal and administrative fees are greatly reduced in no-fault systems, allowing for a greater portion of premiums to go directly to claimants, as was found in a report comparing fault and no-fault systems internationally (Armstrong and Tess 2008). Furthermore, the report found that the total costs in fault versus no-fault systems are similar. It has been reported that the New Zealand no-fault system performs well at providing compensation; while awards are not as high as in the tort system, it is considered a fairer system and is similar to Canada's Workers' Compensation Board, with its ability to compensate far more people (Gibson 2016).

Do defensive medicine costs play a role?

Defensive medicine and no-fault systems are heavily debated issues on the national and international stage (Di Gregorio et al. 2015; Marchisio 2020; Saks and Landsman 2020). Literature from the US shows that medical civil liability spurs the adoption of "defensive strategies" (i.e., defensive medicine) (Marchisio 2020). Notwithstanding Canada's low rates – and low *success* rates – of medical malpractice litigation (Flood and Thomas 2011), the stress and fear of a complaint or lawsuit appears to cause some physicians to practise defensive medicine by overprescribing tests, procedures and treatments (Nash et al. 2004). Indeed, a US study found that medical students are exposed to malpractice concerns and taught considerable defensive medicine from faculty at an early stage (Johnston et al. 2014). Although estimates of the costs of defensive medicine are scarce in Canada, evidence suggests that such practices do influence physician activity, with studies finding that some Canadian physicians feel the need to practise defensive medicine (Smith et al. 2016). Research from the US suggests that defensive medicine costs account for anywhere from 2% to 10% of the total national healthcare bill (Antoci et al. 2016). Cunningham and Dovey (2006) showed that no-fault systems reduced medicolegal pressure on physicians and resulted in cost savings.

A converse concern is that shifting to a no-fault system will lead physicians to undervalue patient safety. Without the deterrent threat of medical malpractice litigation, physicians may encourage shortcuts to enhance speed and increase income. This concern, however, was not borne out in the evaluation of New Zealand's no-fault system (Wallis 2013). Moreover, some authors have suggested that the current system creates barriers to reporting of error but a no-fault scheme may increase reporting and improve care through transparency and education (Studdert and Brennan 2001b).

Is a no-fault system right for Canada?

By using the 2017 CMPA budget of $662 million and upper limit estimates of 18% for administrative costs, a no-fault system in Canada could cost up to $119 million to administer and result in at least $543 million awarded directly to patients compared to the $250 million awarded in 2017 in the current system. Armstrong and Tess (2008) also found that claimants have better health outcomes in no-fault systems due to the shorter times to compensation, which leads to faster access to treatment and a focus on rehabilitation and return to work. In Canada, many rehabilitation services (i.e., physical, occupational and speech therapy-related) are outside the purview of the publicly paid healthcare system. In their evaluation, no-fault schemes come out ahead, with an increased portion of claimants covered, improved claimant outcomes, an increased portion of costs going directly to claimants, a more equitable distribution of claimant outcomes and a similar level of system costs when compared to tort systems (Armstrong and Tess 2008).

The implications of a Canadian no-fault system

A move from a tort-based to a no-fault compensation system would impact many stakeholders – from physicians and patients in the foreground to funders, such as the CMPA, malpractice litigators and provincial governments in the background. A no-fault system would be more transparent and more equitable for patients, allowing for a greater number of injured patients to be compensated. Physicians would also benefit from such a system, with reduced medicolegal pressures and decreased impetus to practise defensive medicine.

Governments and the public would benefit from reduced administrative costs in the new system and more funding flowing directly to patients in need. Despite the interests in the legal and insurance communities who understandably will oppose medical malpractice reform, there has been increasing interest from physician groups, patients and governments to consider reform options. Illuminating the financial facts of tort and no-fault systems may help galvanize policy actions. The policy change required may come about at the provincial level, for example, with one provincial government taking the leap required, which may inspire other provinces to follow suit. In such a scenario, the province should proceed to implement a no-fault plan instead of conducting more consultations as there have already been many reports and studies on this topic (Gilmour 2006; Goudge 2017; Pritchard 1990). Such a province may choose to look at the workers' compensation system as an example – another no-fault system that was successfully implemented despite opposition from vested interest groups.

Alternatively, a province may choose to implement more drastic measures. For example, as part of their efforts to curb healthcare costs, in early 2020, Alberta's Ministry of Health cancelled their contract with physicians and indicated that they will limit medical liability insurance reimbursement. Although this may reduce the public subsidy for medical liability insurance, it is not a solution that works to provide better compensation to injured patients. It could provoke physicians, however, to advocate for adoption of a no-fault medical malpractice system, which in turn will help shift the political imperative toward action for reform.

Conclusion

There have been many calls over the years for reform of our medical malpractice system. At stake are serious questions regarding ethics, social justice, equity and efficiency. The lion's share of CMPA funding comes from taxpayers – the patients themselves – and should rightly be used to compensate injured patients instead of paying for legal and administrative costs. The time has come for significant reform of this sector, and we argue that evidence from around the world strongly suggests a Canadian version of a no-fault scheme would benefit physicians and their patients alike and, from a public policy perspective, provide a far better return on investment.

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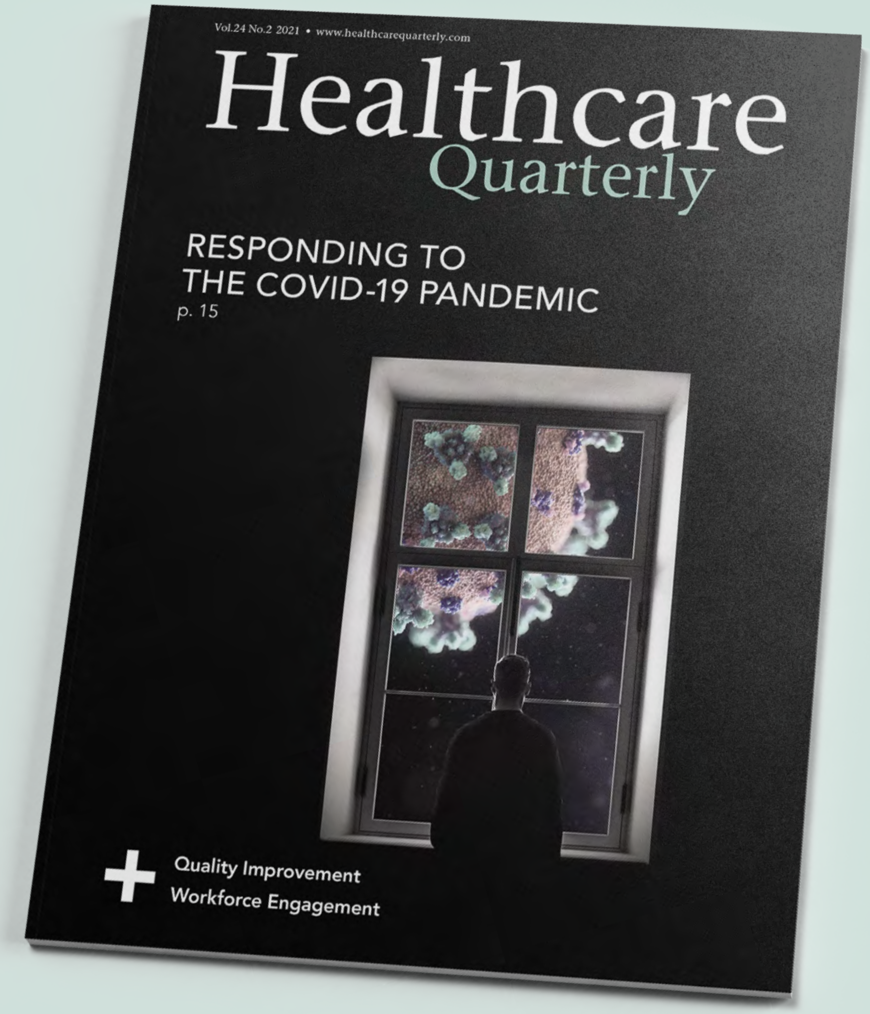

Commentary: Some Questions about No-Fault Reform of the Medical Liability System

Commentaire : quelques questions sur la réforme sans égard à la responsabilité dans le régime de responsabilité médicale

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Abstract

No-fault reform has been highlighted as a solution to a pressing problem in the context of Canadian medical malpractice claims: less than 1% of those harmed in the course of medical care receive any compensation for their injuries. Lee et al. (2021) suggest that a shift to a no-fault system is the answer for Canada's malpractice system. No-fault reform would certainly improve access to compensation but compensation is not the only reason to pursue a malpractice claim. Accountability and safety are important considerations that are not addressed by a move to a no-fault system.

Résumé

La réforme sans égard à la responsabilité a été présentée comme solution à un problème urgent dans le contexte des réclamations pour faute professionnelle médicale au Canada : moins de 1 % des personnes qui ont subi un préjudice dans le cadre de soins médicaux reçoivent une indemnisation. Lee et al. (2021) suggèrent que le passage à un système sans faute est la solution pour le système canadien concernant les fautes professionnelles. Une réforme sans égard à la responsabilité améliorerait certainement l'accès à l'indemnisation. Mais l'indemnisation n'est pas la seule raison d'intenter une action en justice pour faute professionnelle. La responsabilité et la sécurité sont des points importants qui ne sont pas abordés dans le passage à un système sans faute.

Introduction

The central question raised by Lee et al. (2021) is whether it is time to reform medical malpractice insurance in Canada. The authors make the case for reform of the malpractice system via the adoption of a "no-fault" compensation scheme. Their argument is based on several facts: (1) the Canadian Medical Protective Association (CMPA) is not an insurer, but a defence fund (*Shannon v. Canadian Medical Protective Association* 2016); (2) almost all (95%) Canadian physicians are members of the CMPA (Flood and Thomas 2011); (3) only a small fraction of those injured in the course of receiving medical care are compensated for their injuries; and (4) Canadian taxpayers subsidize physicians' CMPA fees. These facts are not in dispute, although it is not clear whether or how all of the facts connect with one another. More precisely, it is not clear whether the structure of the CMPA as a mutual defence organization is connected to the challenge in obtaining compensation by those injured as a result of medical malpractice. Leaving that question to another day, I will focus on some fundamental questions that must be addressed if we are to contemplate implementing a no-fault medical malpractice compensation scheme.

Discussion

I agree with Lee et al. (2021) that the medical malpractice system is overdue for reform (Prichard 1990). The current system requires the injured party to initiate a tort claim in order to be compensated for their injuries. It is an expensive and slow process (Gilmour 2006; Prichard 1990). It is also inefficient (Mello et al. 2011) and ineffective, at least, insofar as we measure efficacy as being related to the proportion of claimants who receive any compensation for their injuries (Gibson 2016). The estimate provided by Lee et al. (2021) indicates that less than 1% of injured patients receive compensation in our current system. Several factors tilt the balance in favour of malpractice defendants. Many injured patients lack the financial means to initiate a tort claim. Those who are able to initiate a claim will face considerable expense in proving it or wind up paying a significant proportion of their damages award in legal fees and related expenses. In addition, claimants face a formidable and well-resourced opponent in the CMPA (Nosheen and Culbert 2019). To add insult to injury, physicians' CMPA membership fees are subsidized by provincial governments, meaning that taxpayers pay for a considerable portion of these fees (Flood and Thomas 2011).

The solution proposed by Lee et al. (2021) is a no-fault compensation scheme for medical malpractice claims. They suggest that adopting a no-fault system will allow for a much higher proportion of injured patients to receive compensation at a cost to Canadian governments that may not be much higher than the amounts currently being paid to subsidize CMPA dues. I think it is important to acknowledge that while the Canadian public might be more receptive to a shift to a no-fault system in a context where they are paying a sizable proportion of CMPA fees, there is no guarantee that governments will be prepared to commit stable, ongoing funding for such a system. The provinces could, in theory, cease or reduce payments for CMPA dues at any point as Alberta has threatened to do (Schuster et al. 2020).

A no-fault system is feasible only with a commitment to ongoing funding, which, in all likelihood, will need to be increased over time. This funding question is a question that goes to the design of the healthcare system, rather than to the reform of the malpractice system.

It is clear from other jurisdictions where no-fault systems have been implemented that such a system would create significant administrative cost savings and improve the likelihood that those injured by medical error will receive some compensation for their injuries (Mello et al. 2011). These are both goals worth pursuing. But compensation is not the only reason why a person might wish to pursue a malpractice claim. In some cases, the motivation for pursuing a claim has more to do with the desire to see providers held accountable, and to prevent similar conduct and outcomes in the future (Vincent et al. 1994). Any approach we take to dealing with medical malpractice should not only provide compensation for injured patients but also incentivize safe and appropriate care, and ensure that there is some mechanism for accountability. A no-fault system cannot address these concerns.

Given that compensation is not the only rationale for a malpractice system, it is essential to consider how physician negligence will be addressed in a no-fault context. As Lee et al. (2021) note, some jurisdictions that have adopted no-fault compensation models leave the issue of physician negligence to regulators as part of the professional discipline role (Lee et al. 2021). Though not a focus of their argument, the authors seem to view this as a plausible method to deal with provider negligence.

In Canada, the medical profession is self-regulating (Epps 2011). It is well known that professional self-regulation involves an inherent conflict of interest arising out of the dual mandate to promote the public interest and, at the same time, safeguard the interests of the profession (Collier 2012; Zarzeczny 2017). The system of professional self-regulation is increasingly being questioned, with critics arguing that regulatory bodies are biased in favour of the professions they govern (Dhillon and Burns-Pieper 2018; Epps 2011). Indeed, governments in several jurisdictions have contemplated (or acted on) moving away from self-regulation owing to the perceived inability of regulatory bodies to respond effectively to professional misconduct. In the UK, the medical profession no longer has the privilege of self-regulation (Dixon-Woods et al. 2011). The Alberta government recently passed legislation specifying penalties for sexual abuse or misconduct by healthcare providers in the wake of news about a physician having his medical licence reinstated after being convicted for sexually assaulting a patient and a nurse (Gerein 2018; *Health Professions Act* 2000). Is professional self-regulation the right place to situate responsibility for professional negligence?

Even if we can overcome conflict of interest–related concerns, I am not sure that it is wise to leave the profession to define for itself what kind of conduct constitutes negligence or malpractice. The current tort-based malpractice system requires the court to assess the standard of care that providers must meet in assessing, treating and counselling patients (Nelson and Ogbogu 2018; Robertson and Picard 2017). Within the judicial approach, there is considerable deference to medical expertise when adjudicating negligence claims (Foster 2018). There is a risk that this concern will be intensified if we grant complete control over what constitutes appropriate patient care to the providers of that care. Discipline for provider misconduct might make sense as the responsibility of the regulator but that does not necessarily mean that the regulator is best placed to deal with negligence. To elaborate, most providers can likely imagine themselves making a careless error in the provision of medical treatment, and that might lead to considerable reluctance to conclude that a colleague has acted negligently.

Conclusion

In view of these considerations, how should we handle medical malpractice claims? This is a complex topic and one that cannot be fully addressed in a short commentary. That said, it is essential to highlight the need to consider malpractice reform beyond the compensation-related benefits of a no-fault system. One option is to adopt a blended tort/no-fault system. In a pure no-fault system, the claimants' right to pursue a tort claim is extinguished, as is the case with Canadian workers' compensation schemes. But there are variations on the no-fault theme that could be explored, including leaving open the option to sue for malpractice in at least some cases. For example, Ontario's motor vehicle accident compensation system combines tort and no-fault, whereby a party that is injured in a motor vehicle accident, for which he or she is not at fault, may pursue a tort claim against the at-fault driver if the injuries cause "permanent serious disfigurement or permanent serious impairment of an important physical, mental or psychological function" (Marshall 2017: 15). A blended tort/no-fault approach does not address the concern raised by Lee et al. (2021) about taxpayer-borne costs of CMPA membership dues in that the costs might actually increase due to such a system rather than decrease. Another approach might be to hand over professional negligence claims to physician regulators but with meaningful oversight from outside the profession to ensure some degree of accountability (Cayton 2018).

To be sure, these concerns about how to ensure accountability in circumstances in which physicians are at fault may not be compelling when weighed against a system that will see far more claimants compensated at a far lower cost. This is particularly true if, as Lee et al. (2021) suggest, additional benefits also flow from the adoption of a no-fault system. But it is also important to note that injured patients will have to be prepared to accept that along with a much higher likelihood of receiving some compensation for their injuries, the amount they would receive would be far less in a no-fault system than if they were to succeed in a tort claim (Mello et al. 2011).

Lee et al. (2021) may be correct – it may be the case that the time has come that Canadian providers, patients and governments are ready to shift to no-fault malpractice compensation schemes. But there remain some key questions to consider before we take this leap.

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DATA MATTERS

Current State of Quantitative Data Available for Examining the Work of Family Physicians in Canada

État actuel des données quantitatives disponibles pour examiner le travail des médecins de famille au Canada

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Abstract

In Canada, there is no single source of data describing the number, distribution and work of family physicians (FPs). This study examines the state of national and provincial/territorial data sources for FPs in comparison with the College of Family Physicians of Canada's Family Medicine Professional Profile. Data sources were assessed through key informant interviews and document analysis. Findings indicate that there is significant variability on what is measured across jurisdictions, resulting in comparability challenges. A measurement framework that accurately describes the number, distribution and work of FPs with a pan-Canadian data collection strategy is urgently needed for effective health human resource planning.

Résumé

Au Canada, il n'y a pas de source unique de données qui décrivent le nombre, la répartition et le travail des médecins de famille (MF). Cette étude examine l'état des sources de données nationales et provinciales ou territoriales pour les MF, comparativement au profil professionnel en médecine de famille du Collège des médecins de famille du Canada. Les sources de données ont été évaluées au moyen d'entrevues avec des informateurs clés et d'une analyse de documents. Les résultats indiquent qu'il existe une importante variabilité entre les autorités en ce qui concerne les indices mesurés, ce qui entraîne des problèmes de comparabilité. Un cadre de mesure qui décrit avec précision le nombre, la répartition et le travail des MF – avec une stratégie pancanadienne pour la collecte des données – est nécessaire de toute urgence pour assurer une planification efficace des ressources humaines en santé.

Introduction

Universal healthcare is a source of pride for Canadians. With evidence that countries with strong primary healthcare systems have better health outcomes and health equity, lower mortality rates and lower costs (Macinko et al. 2003; Starfield and Shi 2002; Starfield 2012), access to a family physician (FP) and/or primary care (PC) team has been an ongoing governmental priority (First Ministers of Canada 2003). FPs represent approximately half of the physician workforce in Canada (CIHI 2019). But access to an FP does not guarantee that each patient will receive the same breadth of clinical care. Understanding the scope of work that FPs choose to include in their clinical practices is crucial for physician workforce planning.

In 2019, the College of Family Physicians of Canada (CFPC) released the Family Medicine Professional Profile (FMPP), a position statement that describes the scope of practice and training for FPs (CFPC 2021). The FMPP provides a framework that could be used for FP resource analysis and planning. The framework recognizes that FPs are capable of providing comprehensive medical care for people of all ages, life stages and clinical problems. They can provide both acute and chronic care, from preventive to palliative care. FPs work across care settings and regulatory environments including PC, emergency care, home and long-term care, hospital care and maternal and newborn care.

In Canada, there are numerous national and provincial/territorial (P/T) data sources that collect information on FPs, used by P/T governments to make important policy decisions about workforce planning and healthcare delivery. Unfortunately, these data lack the necessary information on the right number and mix of health workers (Bourgeault et al. 2019). In order to effectively plan for Canadians to have access to FPs, it is important to have an accurate understanding of not only the number of FPs but also where they are working and their scope of practice.

Based on the authors' knowledge, this is the first study that comprehensively explores the current state of national and P/T quantitative data describing the characteristics (demographics and education), practice location and scope of practice of FPs using the FMPP as a framework for comparison. This study also examines data accessibility and limitations to assess the feasibility of using the data. The findings are important for P/T policy makers as they provide a detailed assessment of the content, limitations and accessibility of quantitative data and highlight opportunities to improve the data needed to inform effective physician workforce planning and delivery in Canada.

Method

This study combined the analysis of key informant interviews and a document review.

To identify the data sources with information on the number, distribution, mix and activities of FPs in Canada, we conducted a Google and Google Scholar search and identified key reports and publications. Keyword search terms included combinations of "family medicine" or "family physicians" or "primary care" and "data" or "data sources" and "Canada." Of the 114 reports and publications reviewed, 67 assisted with the identification of potential data sources with relevant information. The data sources were further augmented through key informant interviews (Appendix 1, available online at longwoods.com/content/26578, identifies the data sources included in this study).

All data sources with information on number, distribution and scope of practice of FPs, except P/T administrative and electronic medical record (EMR) data sets, were included.

A list of key informants for each data source was derived for the interviews based on the informants' expert knowledge and position in the organization. These interviews aimed to collect information on the purpose of the organization, its reasons for data collection, the collection method, the data elements, availability of data, access, linkage and limitations. The interviews also permitted the identification of additional data sources. About 30- to 60-minute telephonic and in-person interviews were conducted. The interview guide was tested with a quantitative subject matter expert (Appendix 2, available online at longwoods.com/content/26578). The interviewer took detailed notes at each interview. With the exception of two potential respondents, all key informants participated. In total, 66 interviews were completed. Information on data content, accessibility, linkages and limitations, as well as potential data sources, was extracted from the interview notes. Ethics approval was not required for this study because an ethics exemption was obtained from the University of Toronto.

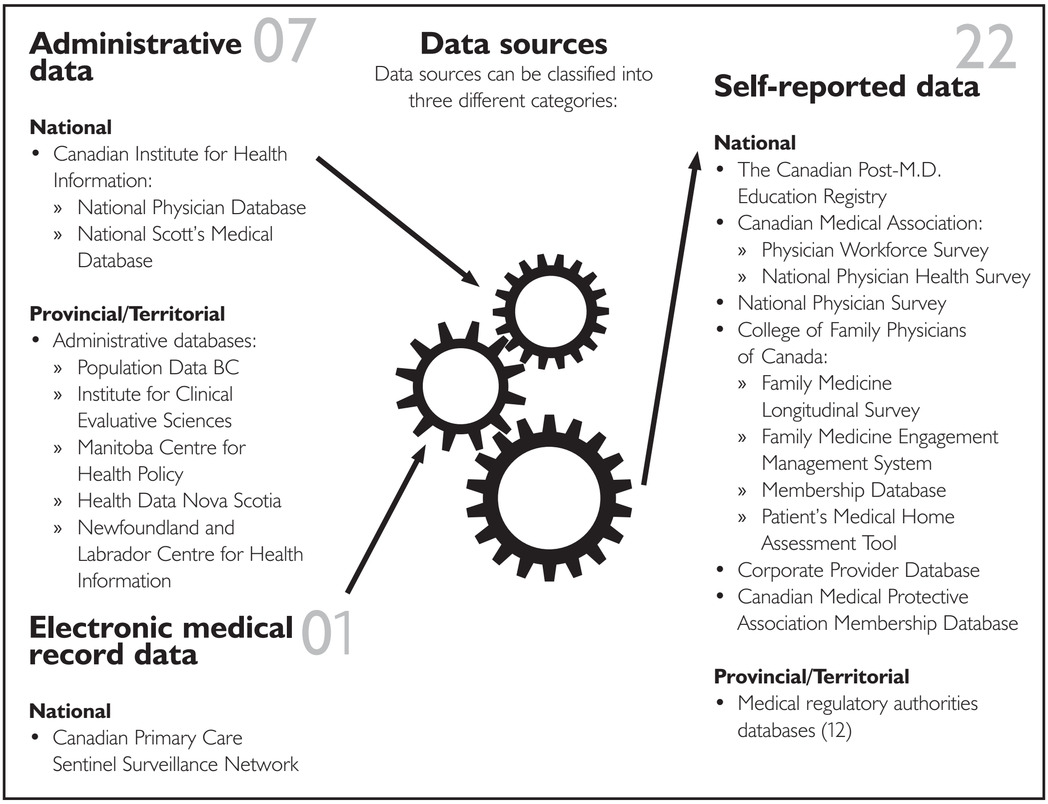
Data elements relevant to the composition and location of FPs and relevant measures of scope of practice in relation to the FMPP were abstracted for each data source. Each data element was mapped in relation to source, physician characteristics, geography and the FMPP. We also analyzed data gaps, limitations and feasibility of accessing data.

Results

We identified 25 data sources with relevant data on FP characteristics, geography and the FMPP domains (Figure 1). There were three main types of data sources:

- 10 national and 12 P/T databases that collected self-reported data (forms, questionnaires);
- two national administrative databases; and
- one national database that had EMRs comprising patient and population-level data.

FIGURE 1. Quantitative data sources



Data sources

Data sources can be classified into three different categories:

Administrative data 07

National

- Canadian Institute for Health Information:
  - » National Physician Database
  - » National Scott's Medical Database

Provincial/Territorial

- Administrative databases:
  - » Population Data BC
  - » Institute for Clinical Evaluative Sciences
  - » Manitoba Centre for Health Policy
  - » Health Data Nova Scotia
  - » Newfoundland and Labrador Centre for Health Information

Electronic medical record data 01

National

- Canadian Primary Care Sentinel Surveillance Network

Self-reported data 22

National

- The Canadian Post-M.D. Education Registry
- Canadian Medical Association:
  - » Physician Workforce Survey
  - » National Physician Health Survey
- National Physician Survey
- College of Family Physicians of Canada:
  - » Family Medicine Longitudinal Survey
  - » Family Medicine Engagement Management System
  - » Membership Database
  - » Patient's Medical Home Assessment Tool
- Corporate Provider Database
- Canadian Medical Protective Association Membership Database

Provincial/Territorial

- Medical regulatory authorities databases (12)

We found that there is no single national database that can provide all the information related to the characteristics, geography and scope of practice of FPs in relation to the FMPP. Table 1 shows that there is significant variation in the data elements that are being collected in each database. Information on the number of FPs (certified, non-certified and graduates) can be found in the Canadian Post-M.D. Education Registry (CAPER), the CFPC Member Engagement Management System (CMEMS), the CFPC membership database, the Canadian Medical Protective Association (CMPA), 12 medical regulatory authorities (MRA) databases, the National Physician Database (NPDB) and Scott's Medical Database (SMDB). The Canadian Medical Association (CMA) Workforce Survey (WFS), the

National Physician Health Survey, the National Physician Survey (NPS), the Corporate Provider Database (CPDB), the Family Medicine Longitudinal Survey (FMLS), the CMEMS, the CMPA, the 12 MRAs and the NPDB have some information on physician activity.

Overall, the CMA WFS, the CMEMS, the Patient's Medical Home (PMH) Assessment Tool, the CMPA database and the 12 MRA databases have the most information related to physician characteristics, geography and the FMPP. Because the goal of family medicine training is to encourage a broad scope of practice, the data sources with this information would be of utmost importance to workforce planners.

TABLE 1. National data in relation to physician characteristics, geography and FMPP

	FMPP Domains												
National data sources	**Physician characteristics**	**Physician geography**	**Comprehensive care**	**Leadership**	**Advocacy**	**Scholarship**	**Work setting and arrangements**	**Patient's Medical Home**	**Community-adaptive**	**Continuity of care**	**Collaboration**	**Relationship and patient-centred**	**Professionalism**
Canadian Post-M.D. Education Registry	✓	✓											
Canadian Medical Association (CMA) Workforce Survey	✓	✓	✓	✓		✓	✓	✓					✓
CMA National Physician Health Survey			✓	✓		✓	✓				✓		✓
Family Medicine Longitudinal Survey	✓	✓	✓				✓			✓			
College of Family Physicians Membership Database	✓	✓				✓							
Family Medicine Engagement Management System	✓	✓	✓	✓	✓	✓	✓	✓					
National Physician Survey	✓	✓	✓			✓	✓	✓					
Patient's Medical Home Assessment Tool			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Corporate Provider Database	✓	✓	✓				✓	✓					
Canadian Medical Protective Association Membership Database	✓	✓	✓	✓		✓							✓
Canadian Institute for Health Information (CIHI) National Physician Database	✓	✓	✓							✓			
CIHI Scott's Medical Database	✓	✓											
Canadian Primary Care Sentinel Surveillance Network	✓	✓	✓							✓			

FMPP = Family Medicine Professional Profile

TABLE 2. Limitations of data sources

	Limitations										
National data sources	**Gaps with respect to FMPP content**	**Data collection varies with organizational priorities**	**Data elements are not standardized**	**Low response rate**	**Physicians cannot be identified**	**All jurisdictions are not participating**	**Data collection is variable**	**Data collection is based on physicians' utilization of tools or services**	**Database is currently unavailable**	**Data collection is based mainly on FFS-based billings**	**Physician participation is limited**
Canadian Post-M.D. Education Registry	✓										
Canadian Medical Association (CMA) Workforce Survey	✓	✓		✓							
CMA National Physician Health Survey	✓	✓		✓							
Family Medicine Longitudinal Survey	✓			✓							
College of Family Physicians Membership Database	✓										
Family Medicine Engagement Management System	✓								✓		
National Physician Survey	✓			✓							
Patient's Medical Home Assessment Tool	✓				✓			✓			
Corporate Provider Database	✓		✓			✓			✓		
Canadian Medical Protective Association Membership Database	✓							✓			
Canadian Institute for Health Information (CIHI) National Physician Database	✓				✓	✓				✓	
CIHI Scott's Medical Database	✓										
Canadian Primary Care Sentinel Surveillance Network	✓										✓

FMPP = Family Medicine Professional Profile

All 11 MRAs collect information on physician characteristics, physician geography and professionalism. The latter is defined as a physician's commitment to the health and well-being of patients and society through ethical practice and adherence to a set of personal standards and code of conduct (Royal College of Physicians and Surgeons of Canada 2021).

However, there is significant variation in the type of data collected as compared to the descriptors used in the FMPP. In summary:

- Six MRAs collect data on comprehensive care and leadership.
- Five MRAs collect data on scholarship.
- Four MRAs collect data on work settings.
- Three MRAs collect data on the Patient's Medical Home.
- One MRA collects data on advocacy and continuity of care.
- No MRA collects data on the parameters community-adaptive and relationship and patient-centred.

There are several data limitations. First, the source of data has limitations. Self-reported data can result in social desirability bias and overestimate findings (O'Malley and Rich 2015). Administrative data can underestimate findings because billing codes identify one problem in a patient–physician visit versus multiple problems (Katz et al. 2012; O'Malley and Rich 2015). EMR data are limited by low physician participation in the Canadian Primary Care Sentinel Surveillance Network (CPCSSN) (Queenan et al. 2016). Table 2 details the limitations of national data.

The degree of data accessibility for relevant data sources is crucial to its use. Aggregate-level data from CAPER, CMA surveys, NPS, NPDB, the CMPA database and all the MRA databases are accessible, and record-level data requests require approvals and data sharing or legal agreements. Aggregate and/or record-level data from the CFPC membership database, FMLS, CPCSSN and one MRA require approvals and data sharing or legal agreements. Aggregate-level and record-level data from SMDB are accessible but can require approvals and legal agreements depending on the nature of the data request. Data from the PMH Assessment Tool are not available for external use. CMEMS and CPDB are under development.

There is potential for linkages between data sources because the majority of the organizations are using the Medical Identification Numbers for Canada (MINC) supported by the Medical Council of Canada and the Federation of Medical Regulatory Authorities of Canada. The MINC is a unique identifier assigned to each individual entering the Canadian medical education or practice system (Medical Council of Canada 2021). The MINC can only be shared with organizations that are licensed users in Canada. Currently, the FMLS and SMDB can be linked using probabilistic linkage (i.e., name, date of birth/age and sex) and the CFPC membership database can be linked using the MRA registration number. The NPDB, NPS, PMH Assessment Tool and CPCSSN cannot be linked with other data sources.

Limitations

A limitation of this study was that some organizations did not have or were unwilling to provide data dictionaries. This resulted in the derivation of those data elements, the unavailability of which could have restricted the collection of all data elements. Documentation on processes and policies with respect to data sharing was not always available. P/T administrative and EMR data were not examined. In addition, several databases contained data from samples that could have been unrepresentative or biased.

Discussion and Policy Implications

The Canadian federal government and multiple P/T jurisdictions have indicated that access to PC by Canadians is a key priority. Currently, access to an FP does not ensure access to the same range of clinical services because FPs can choose to provide a broad or narrow range of PC services to their patient population either individually or in team-based settings. To ensure that the right mix and number of FPs are available to offer care at the right time and place, it is crucial that policy makers responsible for decisions about FP distribution and supply are provided with data that accurately reflect the scope of practice of FPs.

Our study found that there is no single national data source that can be used to describe the work of FPs, and already existing sources lack comprehensive data. In the absence of data sources with consistent and reliable data across jurisdictions, policy makers are making decisions that have the potential to create inequitable outcomes for patients. The situation is similar in other countries. Australia recently announced the development of a National Medical Workforce Strategy to guide medical workforce planning activities at all levels of government to enable better population health planning, help identify gaps in primary healthcare services and ultimately improve patient health outcomes (Australian Government Department of Health 2020). In Australia and England, the lack of standardized definitions on service delivery and outcomes and data limitations across jurisdictions have resulted in calls for the development of a national primary healthcare data source that will produce reliable and high-quality data for service planning, thus resulting in optimal healthcare delivery for patients (Bradley et al. 2018; Thorpe and Sweeney 2019). Similar to other jurisdictions, there is an urgent need for the development of a physician workforce strategy that includes a consensus-driven measurement framework that accurately describes the number, distribution and scope of practice of FPs in Canada. This framework should be situated within a comprehensive health human resource data strategy.

A successful physician workforce strategy that will significantly improve health human resources and healthcare planning requires collaboration among P/T governments, regulatory authorities and academics including researchers and data holding organizations. In Canada, FPs are often the point of entry into the healthcare system and because their roles extend beyond PC including intrapartum care, hospitalist care, the need to define and document the scope of practice of FPs is imperative to enable effective physician workforce planning. Based on previous recommendations (Fooks et al. 2002) and the current call to action from the Canadian Health Workforce Network (CHWN 2021) and multiple organizations, we support the establishment of a national dedicated task force led by the federal government, with an explicit mandate to enhance health workforce data infrastructure across health professions in Canada (Bourgeault and Silas 2021). The mandate of the national body would be to help coordinate, monitor, evaluate and guide workforce policy and planning activities across the country (Bourgeault et al. 2015) and facilitate the alignment of policies and regulations for implementation across federal and P/T governments. The Canadian Medical Forum, in which the CFPC is a partner, is well positioned to represent physician groups on the task force. A specific contribution of this initiative from the CFPC could be to develop a national measurement framework for family medicine guided by the FMPP. The task force should be funded by the federal government, and its mandate would include addressing the issues of data ownership and control. The success of this initiative will depend on effective leadership, adequate resourcing, establishment of accountability mechanisms, and, the commitment of and endorsement by all partners to build a vision that will foster the development of a reliable and accurate data infrastructure (Bourgeault et al. 2015; Federal/Provincial/Territorial ACHDHR 2007). Some of the key challenges will be obtaining consensus from all stakeholders as well as addressing any privacy issues related to collection and sharing of personal data. However, the growing recognition that a national physician workforce strategy is needed will serve as a facilitator for stakeholder participation.

This paper illuminates the extent of the challenges related to the availability of consistent data describing the work of FPs. Data that matter are key to effective healthcare planning. The time is now for the development of a consensus-based measurement framework with an effective data collection strategy leveraging the FMPP developed by the CFPC. Canada needs quality and comparable data on all healthcare providers, as demonstrated by this case study of FPs, to support better healthcare policy decisions for patients and their families.

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RESEARCH PAPER

Optimizing Physician Payment Models to Address Health System Priorities: Perspectives from Specialist Physicians

Optimiser les modèles de rémunération des médecins pour répondre aux priorités du système de santé : point de vue des médecins spécialistes

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Abstract

Objective: Despite well-documented data on the mixed impact of physician payment models, there is limited evidence on how to enhance existing payment model designs. This study examines the approaches to optimizing payment models from the perspective of specialist physicians to better support patient and physician experience and other health system objectives.

Method: Semi-structured interviews were conducted with 32 specialist physicians across Alberta, Canada. Data from the interviews were analyzed using a framework approach.

Results: Respondents emphasized the need to incentivize physicians with the right blend of financial and non-financial incentives, including physician wellness. Respondents also highlighted the need for physician involvement and accountability to optimize the value of physician payment models.

Conclusion: To optimize physician payment models, it may be useful to include a blend of financial and non-financial incentives with clear accountability measures as this may better align physician practice with health system priorities.

Résumé

Objectif : Malgré des données bien documentées sur l'impact mixte des modèles de rémunération des médecins, il existe peu de données sur la façon d'améliorer les modèles existants. Cette étude examine l'optimisation des modèles de paiement du point de vue des médecins spécialistes afin de mieux soutenir l'expérience des patients et des médecins ainsi que d'autres objectifs du système de santé.

Méthode : Des entrevues semi-structurées ont été menées auprès de 32 médecins spécialistes de l'Alberta, au Canada. Les données des entretiens ont été analysées à l'aide d'une approche cadre.

Résultats : Les répondants ont souligné la nécessité de persuader les médecins avec le bon mélange d'incitatifs financiers et non financiers, notamment des incitatifs concernant leur bien-être. Les répondants ont également souligné la nécessité de la participation et de la responsabilisation des médecins pour optimiser la valeur des modèles de rémunération des médecins.

Conclusion : Afin d'optimiser les modèles de rémunération des médecins, il peut être utile de prévoir un mélange d'incitatifs financiers et non financiers avec des mesures de responsabilisation claires, car cela peut permettre de mieux aligner la pratique des médecins sur les priorités du système de santé.

Introduction

The way specialist physicians are paid (among other factors) has implications for the quality, quantity and cost of healthcare provided to patients requiring specialist care (Friedberg et al. 2018). Globally, there is a high reliance on fee for service (FFS) models, and it remains the predominant physician payment model in Canada (CIHI 2020).

In recent times, governments have emphasized a shift from FFS to alternative payment strategies such as capitation, episode-based payments, salaries and blends of these models including FFS. For example, in 2019, the Alberta government announced its intention to increase the proportion of physicians who are paid through alternate (non-FFS) payment mechanisms to facilitate health system priorities of high-value, team-based care and to allow for more prudent use of limited health care resources (Alberta Government 2019). Similarly, many developed health systems across the world have implemented and evaluated non-FFS models especially in primary care settings (Carter et al. 2016; Dumont et al. 2008). In contrast, specialists in many developed health systems have historically been remunerated through a pure FFS mechanism with only very recent, limited introduction of alternative payment models such as episode-based and salary-based payments.

Evaluations of payment models in different health systems and a recent systematic review focused on the impact of payment models on specialist physician care provide mixed results on the impact of these payment models on physician practice and health outcomes (Mosqueira et al. 2019; Ogundeji et al. 2016; Quinn et al. 2020). In addition, a recent evaluation of payment models in Alberta by Quinn et al. (2019) suggests that there were no significant differences in the quality of care or costs of services provided by FFS-based specialist physicians compared to salary-based physicians who cared for patients with diabetes or chronic kidney diseases (Quinn et al. 2019). However, significant practice variation in care was observed across physicians irrespective of payment model, which implied that other unobserved factors apart from payment models were important (Quinn et al. 2019).

Different payment models have inherent incentives and disincentives and may be suited to different health system priorities or policy goals. For example, while alternate payment models based on performance have been shown in some situations to increase high-value care, performance may be difficult and expensive to measure. Similarly, FFS has been shown to increase utilization of health services by vulnerable populations but may significantly impact overall healthcare spending (Deber et al. 2008; Quinn et al. 2020; Sutherland et al. 2013). Furthermore, the impact of physician payment models on physician practice is dependent upon both the financial and non-financial components, as well as interactions between individual preferences and practice patterns. In addition, unintended consequences have been reported (Ogundeji et al. 2016; Quinn et al. 2019; Van Herck et al. 2010).

However, there is limited research on how to enhance existing payment model designs to align physician practice with various health system priorities. Available research has more commonly focused on primary care payment reforms, but literature suggests that primary care practice may not be impacted by payment models in the same way as medical specialties due to their unique needs and differences in their practice patterns (Rutten et al. 2003). As different health systems seek to pursue the varying aims of improving patient experience and safety, health outcomes and financial sustainability, understanding and enhancing the link between physician compensation models and the delivery of high-value care is an important knowledge gap to address.

In this study, we sought to understand the perspectives and experiences of specialist physicians on how existing specialist payment models (FFS and alternate payment models) in Alberta, Canada, can be better designed to support high-quality, accessible care that leads to a high level of both physician and patient satisfaction while optimizing value for money. These data will ultimately inform the design of an optimal specialist payment model that is attractive to physicians, with incentives aligned to engage the physician as a willing partner in the achievement of health system priorities.

Method

Study design

We conducted semi-structured qualitative interviews with specialist physicians across Alberta between July and October 2019 as part of a larger qualitative program of research described in an earlier publication (Ogundeji et al. 2021). This study was approved by the Conjoint Health Research Ethics Board at the University of Calgary (REB # 19-0725).

Context

Specialist physicians in Alberta are paid either through FFS or the Academic Medicine and Health Services Program (AMHSP). The AMHSP provides fixed contracts, whereby physicians remain independent contractors and not government employees. In addition, within the AMHSP model, remuneration for clinical work is consistent regardless of volume, similar to a salary (or salary-based payment model). The specialist salary-based payment models are offered primarily in the large urban centres either in Calgary or in Edmonton, Alberta. The salary-based payment model in Calgary includes specialist physicians who are either full-time clinicians or clinicians with teaching or research responsibilities. In general, the salary-based model in Edmonton comprises only clinicians with teaching or research responsibilities.

Participants

A purposive sample of 32 specialist physicians was interviewed. This method of sampling allowed us to obtain heterogeneous participants who (a) maximize diversity of characteristics (Palys 2008), such as gender, payment model, specialty and experience with the payment models, and (b) reflect different practice patterns, views and perspectives across different physician groups. To select potential participants, members of a physician payment research advisory group (consisting of four FFS- and five salary-based specialist physicians in Alberta) were asked to suggest potential participants.

Potential participants were contacted via e-mail, provided information about the study and invited to participate. Among the 43 specialist physicians, 10 did not respond, and one physician responded to say they were not interested in the study. No participant dropped out of the study.

Data collection

Our sample size (32 interviews) is in line with recommendations in the literature on descriptive qualitative studies (Sandelowski 2000). In-depth one-on-one interviews were conducted by the first author (YKO) who is trained in qualitative research and had no prior relationship with any of the participants. Explicit informed verbal consent was obtained from all participants.

The interview guide (Appendix 1, available online at longwoods.com/content/26577) included semi-structured open-ended questions, which were informed by existing literature, developed iteratively and then refined by the physician payment advisory group. The interview guide was piloted with three specialist physicians and further refined to enhance comprehension. The interviews were conducted both face-to-face and over the telephone, accompanied by field notes that were collated during and after the interviews. The interviews were audio-recorded and transcribed verbatim. Interviews lasted an average of 50 minutes.

Data analysis

Data from the interview were analyzed using the framework devised by Ritchie and Spencer (1994). This framework also allowed for a transparent audit trail by which the results were obtained from the data, and which enhanced the rigor of the analytical processes (Gale et al. 2013). Data were organized and managed using the data analysis software NVivo Version 12. The first author (YKO), supported by two independent coders, analyzed the data. The data analysis consisted of five stages: familiarization with the data, development of the thematic framework, coding, charting and mapping and interpretation. Following familiarization with the data, the thematic framework was developed, which involved discussions with the coders to refine initial themes, identify emergent themes and group codes into meaningful conceptual categories. Two coders who were trained in qualitative research (CC and ML) independently coded each transcript. In addition, at least 25% of coded transcripts were reviewed by YKO as a validity check. The coders and reviewer met together regularly to ensure that consensus was achieved. This helped to minimize the subjectivity of the researchers and improve the credibility of the research (Creswell 2009). We validated findings with members of the physician payment advisory group.

Findings

Participants

A total of 32 participants, 18 men and 14 women specialist physicians, were interviewed. FFS-based physicians comprised 60% and salary-based physicians comprised about 40% of the interviewed physicians. About 20% of the FFS-based physicians had been in the salary-based model but had switched to FFS. Table 1 shows the characteristics of the sample.

TABLE 1. Participant characteristics

Characteristics	Salary-based model (*N* = 13)	FFS (*N* = 19)
Gender		
Men	6 (19%)	12 (37%)
Women	7 (22%)	7 (22%)
Location		
Calgary	10 (30%)	11 (36%)
Edmonton	3 (9%)	8 (25%)
Specialty		
Cardiology	1 (3%)	3 (12.5%)
Endocrinology	6 (18%)	3 (9%)
Nephrology	2 (6%)	3 (9%)
General internist and gastroenterologists	4 (12%)	7 (21.5%)
Other	0 (0%)	3 (9%)
Career stage		
In early-mid career (up to 15 years in practice)	8 (25%)	7 (22%)
In late career (more than 15 years in practice)	5 (16%)	12 (37%)
Primary practice site (where physicians spend over 70% of their time)		
Hospital	13 (40%)	5 (16%)
Community	0	14 (44%)

The percentages presented are of the total sample illustrated for each characteristic (e.g., gender).

Themes

Three themes provided a framework for understanding perspectives of specialist physicians on how to optimize payment models to better support patient care in Alberta. Study findings have been presented by themes and corresponding codes (Table 2). A descriptive summary of the themes has been presented with verbatim quotes as identified by the type of physician payment model.

TABLE 2. Themes and sub-themes emerging from the thematic analysis

Themes	Categories
Accountability	The need for physician accountability
	Difficulty in developing accountability metrics
Payment model incentives and funding solutions	Blended models as an option to optimize physician practice and patient care
	Better incentives for "good" clinical practice
	Revisit FFS fee codes
	Other funding solutions
Opportunities not related to payment	Promoting physician wellness and fulfillment

ACCOUNTABILITY

Participants thought that developing and implementing accountability mechanisms within both the FFS- and salary-based payment models was a key component for optimizing existing specialist payment models in Alberta. Twenty-three participants emphasized the need for accountability, and 14 participants addressed the potential difficulties in developing standardized metrics. On the need for accountability, FFS- and salary-based physicians' perspectives were somewhat aligned.

The need for physician accountability

A majority of the physicians interviewed emphasized that it was important to be transparent about expectations and what they needed to do to meet the expectations of the payment models. Participants stressed that holding physicians accountable discourages poor practice patterns.

> It cannot simply be [that] I pay you a flat fee, and I really don't care how many patients you see, how many referrals you do and you continue to get paid. … No system works like that. (FFS physician)

> The problem is not the fee code or how we are paid, the problem is [that] [if] there [is] no accountability, [then] the fee codes [and the way] we are paid, incentivizes bad behaviour on both sides [FFS and salary]. … It has everything to do with the fact that there is no accountability. (Salary-based physician)

Difficulty in developing accountability metrics

Though physicians emphasized the need for accountability, some stated that developing standardized metrics could be a difficult task that requires careful deliberation and experimentation because different specialists see different types of patients with varying needs and/or procedures. Some physicians further stressed that the starting point to developing accountability metrics could be some basic, simple indicators that most specialists could agree upon.

> The types of patients we all see are all very different. So, if you were doing a lot of procedures, then your productivity is going to be quite high, but that doesn't necessarily mean you are doing a better-quality job in terms of managing patients. I think we need to be more cognizant and look to better ways for understanding whether your clinical productivity in the salary-based model is adequately being adjudicated. (Salary-based physician)

> Start simple with a few things that we can all agree [up]on. I think we can all agree on some basic quality indicators. [L]et's pick, maybe, three or four things that I think most physicians can agree [up]on, let's put a premium [on them and] let's incentivize that in a meaningful way. (FFS-based physician)

PAYMENT MODEL INCENTIVES AND OTHER FUNDING SOLUTIONS

About half the number of participants stressed on the need to consider alternative funding models, such as blended payment models where physicians are offered a baseline salary plus top-ups for additional work or targets met. Twenty participants (both FFS- and salary-based physicians) stated that revisiting FFS fee codes and providing incentives for good clinical practice might better support patient care. Eight participants also suggested other funding solutions including envelope funding and providing additional financial incentives to primary care physicians.

Blended models as an option to optimize physician practice and patient care

Participants articulated that blended payment models would provide the right mix of incentives that would be attractive to most specialist physicians and support the achievement of health system objectives to enhance care quality as well as maintain adequate volume of care. More salary-based physicians expressed these perspectives compared to FFS-based physicians:

> I think a blended model offers the best chance in incentivized behaviours that you would want to see. It's hard to do, but you know, with leadership it can be done. (Salary-based physician)
>
> I think that AMHSP [salary-based model] is as flawed as fee-for-service, and I think there has to be [the] sort of model that [is] a bit of a hybrid of the two where physicians get a sort of a base salary. We'll give you this much, and if you want to make this much, you've got to do all these other things. That would be a better system than [what] we have now. (Salary-based physician)

Better incentives for good clinical practice

As explained by the participants, providing the right incentives to encourage change in physician behaviour is important to optimize both the FFS- and salary-based models in Alberta. For example, participants described that incentives were not well aligned with health system priorities, and if certain behavioural changes were desirable, such as reduction in unnecessary tests or care or improvement in certain aspects of practice, there should be an incentive tied to it. Participants further alluded that these incentives could either be financial (such as additional fee codes) or non-financial (such as acknowledgment or recognition). Both FFS- and salary-based physicians almost equally expressed these views:

> I think what's missing in both systems is the ability to incentivize the behaviour that you are seeking and so you know we can name any number of things. (Salary-based physician)

> Everybody's personality is a little different, you know, but for the most part, I think doctors tend to be overachieving types that like praise. So sometimes even nonmonetary acknowledgment can be a good motivator. (FFS-based physician)

Revisit FFS fee codes

Study participants stressed that fee codes for FFS-based physicians needed to be revised to incentivize good practice. For example, they expressed that the current fee codes for procedures should be updated to reflect current time/skills required to complete such procedures as opposed to following the fee structures that were specified years ago before such procedures became less complex. Additionally, participants also alluded that new fee codes that focus on changing patient behaviour (i.e., encouraging no-smoking) or leadership duties should be created. More salary-based physicians expressed the opinion of revisiting fee codes compared to FFS-based physicians. For example, a salary-based physician (formerly FFS-based) stated the following:

> When I worked [for] fee-for-service, I used to resent the non-paid work [that] I did. So, you know, if I am sitting on committees or participating in things or doing things for patients where there was no billing code to get remunerated for [the service], it bothered me. (Salary-based physician [formerly FFS-based]).

Other funding solutions

Five participants recommended considering other funding solutions, such as envelope funding, whereby practices are given a budget for all operations including physician payments or private healthcare to help contain rising costs of physician services. An FFS-based physician explained the following:

> I actually approached Alberta Health to see about [the] development of an alternate payment funding model for cardiac care where you have a funding envelope, and it wouldn't just be for physician fees. It would have included nursing salaries. It might have included other technical aspects. (FFS-based physician)

Three participants also suggested providing increased remuneration to primary care physicians because they thought that they were the core of the health system, and better incentivizing them to work collaboratively with specialists could help contain the rising costs of the health system in the long run. This view is illustrated by the following quote from an FFS-based physician:

> The reason why specialists get paid well, in my mind, is because of the extra training and expertise. But you only need specialists for the 20% of the hard stuff that [as] primary care physicians [you] can't figure out on your own. The other 80% they could probably figure out on their own. If primary care physicians were better incentivized to work collaboratively with specialists to deliver a team-based approach, if you [were to] change payment models to incentivize group practices like that, I think it would save the system money. (FFS-based physician)

NONPAYMENT-RELATED SOLUTIONS (PROMOTING PHYSICIAN WELLNESS)

Five FFS- and salary-based physicians stressed that an additional way to optimize current specialist payment models was to consider the role of physician wellness within both payment models. They felt that payment models that offer flexibility, part-time working arrangements and the ability to take vacations were important factors in reducing physician burnout. They emphasized that these factors had an impact on patient care or practice patterns. A salary-based physician said the following:

> There [are] two sides [to] it. I think we want to put the patient first, but we also need to make sure that our physician population is healthy. (Salary-based physician)

Discussion

Shortcomings were identified in both payment models available to specialist physicians (FFS- and salary-based). Our in-depth interviews noted the need to consider blended payment models that included accountability metrics and combined incentives to improve physician practice patterns and physician wellness, fulfillment and engagement when designing specialist payment models.

Many study participants emphasized the importance of accountability to optimize specialist payment models. While there is limited evidence regarding specialist payment models in general, other studies that focused on primary care payment models in other provinces in Canada and other high-income countries found accountability to be an important requirement for successful implementation of payment model reforms (Health Quality Ontario 2014; Mukhi et al. 2014). Accountability is one of the many ways to encourage best practice, and it can be implemented as part of a payment model reform (for eg., in value-based payment models) or as a standalone mechanism. This is consistent with evidence that suggests that the health system may be optimized through other non-payment or non-financial incentive mechanisms, including regulation and oversight, establishing professional standards and peer reporting (Kreindler et al. 2019; Ryan et al. 2015). It may be important to use a combination of these approaches (with consideration of local context to determine the right combinations) to maximize their impact on the healthcare system.

Study participants also acknowledged that implementing accountability mechanisms to measure performance might be difficult and that there may be a need to create indicators that are specific to different specialties. While study participants expressed that physicians should be engaged in their development, they also noted that their creation would be complex and other experts would be needed. This affirms the need for physicians to be a part of the process of transformation in healthcare systems, which has been identified as an important opportunity to improve physician payment reforms (Ein and Foggs 2014). Furthermore, Huynh and colleagues (2014) recommended that a number of factors must be considered when designing effective accountability frameworks. These include: (1) considerations for accountability or measurement at either the level of the group practice and/or of the individual physician; 2) determining "value" through standardized scores on clinical quality and resource use; and 3) extensive and ongoing physician engagement to reach consensus and regularly review performance indicators (Huynh et al. 2014).

Many physicians in our study noted that a blended model (that retains aspects of both salary- and FFS-based components) might be ideal, as it may offer the right mix of incentives to many physicians. This is consistent with the shift toward blended payment systems in many developed health systems across the world (Quentin et al. 2018). Blended payment models can take on different forms, wherein usually two types of payment models are variably combined into one to pay physicians (e.g., FFS plus capitation, capitation plus pay for performance). A few healthcare jurisdictions have experimented with variants of blended payment models. For example, in the province of Quebec, the government introduced a blended payment model for specialist physicians that combined a base wage (independent of actual patient encounter volume) and FFS (pro-rated fees for services provided) (Dumont et al. 2008).

However, blended payment models may have limited impact without strong accountability mechanisms in place to provide physicians with additional incentives to consider the costs and benefits of different treatment options thereby leading to an efficient level and quality of care (Carter et al. 2016; Scott et al. 2011). For example, in Ontario, blended payment models have been extensively piloted and implemented in primary care; but it was noted that although these "incentive blends" contributed to recruitment, retention and team-based care, the overall lack of accountability undermined other health system goals such as cost containment and quality. In addition, blended payment models were found to increase physician income in Quebec (Carter et al. 2016; Mattison and Wilson 2017). This suggests that blended payment models might require further investigation to better understand potential cost savings that may be related to more prudent physician stewardship of healthcare resources within such models.

Finally, there is substantial evidence that suggests an association between physicians' wellness and the care provided by physicians (Dewa et al. 2017). Lemaire and colleagues argued that physician wellness is a missing quality indicator and that patients' perception of the wellness of their treating physician has important implications on their likelihood to follow advice, seek a second opinion and/or be forthcoming with concerns, which subsequently impacts efficiency and cost (Lemaire et al. 2018; Wallace et al. 2009). Consequently, it is important to recognize the impact of investing in physician wellness on patients and the overall effectiveness, efficiency and cost of the healthcare system. While physician wellness may not be directly related to payment models, components of the payment model can be designed in a way to support thriving physicians. This includes opportunities to select or choose payment models that offer flexibility, autonomy and other benefits.

Limitations

One limitation of our study is that the perception of specialist physicians who were interviewed may not represent specialists more broadly as there was a lack of representation from surgical specialties. In addition, the study sample was limited to large urban areas with academic medical centres in Edmonton and Calgary. Further research might be required to generalize these results to a broader specialist population beyond major urban centres in Alberta. Furthermore, this study was limited to the perspectives of specialist physicians only and did not include the voices of either patients or policy makers, whose perspectives may differ.

Conclusion

Our findings have important implications for health system funding policies. Insights from our study suggest that there might be a need to incentivize physicians with the right mix of financial and non-financial incentives as a part of their payment models. Our results suggest that this might be achieved through a blended payment model that maximizes the advantages of each while minimizing each model's weaknesses as well as facilitating physician wellness, which will positively impact high-value care. To optimize payment models, study participants also noted the need for clear accountability measures across both the FFS- and salary-based models and suggested that it would be important for physicians to be involved in developing these measures, including those that are relevant to different groups of specialists. Although performance indicators generally require health system data from the ministry or provincial health authorities, ministries are often unable to review accountability metrics and recommend the changes required to improve performance; hence, collaborating with physician groups and health authorities will be critical.

In general, developing new payment models will need to be led by the payers – usually the ministries of health. Depending on the province, legislative change may be required by the ministries to roll out alternate payment models, particularly if the ministry wishes to delegate the authority to create and implement physician payment models through a provincial health authority. Our results, which would seem to be generalizable across Canada, suggest it would be important for provincial health ministries to partner with physician leaders in designing and negotiating payment model contracts to offer a more holistic approach that incorporates financial and non-financial incentives and accountability mechanisms.

These recommendations present an opportunity for policy makers in countries, such as the US and Canada, who are looking for ways to solve problems related to the cost of, access to and quality of healthcare in order to support health system transformation through the optimization of existing physician payment models. There is a need for additional research to support the development of an accountability framework and/or a blended payment model that will be attractive to specialist physicians and lead to the provision of efficient high-value care. Exploration of other factors that influence physician practice beyond payment models and how they interact with each other should also be considered.

Conflict of interest

Braden Manns, Glen Sumner and Peter Senior are compensated under the Academic Medicine and Health Services Program (by a salary-based payment model). The Government of Alberta provided support for Gareth Hopkin's involvement in the study through a grant to the Network of Alberta Health Economists. The terms of this grant mean that it is unrestricted and there was no oversight from the Government of Alberta on the topic, methods, results or interpretation of the study. There was no involvement from the Government of Alberta in the decision to publish. None of the authors has any conflict to declare.

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RESEARCH PAPER

Telehealth in Primary Healthcare: A Portrait of its Rapid Implementation during the COVID-19 Pandemic

Téléconsultations de première ligne : portrait d'une mise en œuvre rapide pendant la pandémie de COVID-19

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Abstract

Objective: This study documents the adoption of telehealth by various types of primary healthcare (PHC) providers working in teaching PHC clinics in Quebec during the COVID-19 pandemic. It also identifies the perceived advantages and disadvantages of telehealth.

Method: A cross-sectional study was conducted between May and August 2020. The e-survey was completed by 48/50 teaching primary care clinics representing 603/1,357 (44%) PHC providers.

Results: Telephone use increased the most, becoming the principal virtual modality of consultation, during the pandemic. Video consultations increased, with variations by type of PHC provider: between 2% and 16% reported using it "sometimes." The main perceived advantages of telehealth were minimizing the patient's need to travel, improved efficiency and reduction in infection transmission risk. The main disadvantages were the lack of physical exam and difficulties connecting with some patients.

Conclusion: The variation in telehealth adoption by type of PHC provider may inform strategies to maximize the potential of telehealth and help create guidelines for its use in more normal times.

Résumé

Objectif : Cette étude explore et documente l'adoption rapide des téléconsultations par différents types de de professionnels de première ligne travaillant dans des groupes de médecine familiale universitaires au Québec pendant la pandémie de COVID-19. Elle identifie également les avantages et les inconvénients perçus de la téléconsultation.

Méthode : Une étude transversale a été menée entre mai et août 2020. Le sondage électronique a été complété dans 48/50 cliniques par 603/1,357 professionnels de première ligne (44 %).

Résultats : L'utilisation du téléphone a le plus augmenté, devenant la principale modalité de consultation virtuelle pendant la pandémie. Les consultations par vidéo ont également augmenté, avec des variations selon le type de professionnel; entre 2 % et 16 % des répondants ont déclaré l'utiliser « parfois ». Les principaux avantages perçus de la téléconsultation étaient la réduction des déplacements des patients, l'amélioration de l'efficacité et la réduction du risque de transmission des infections. Les principaux inconvénients étaient l'absence d'examen physique et les difficultés de connexion avec certains patients.

Conclusion : La variation de l'adoption des téléconsultations selon le type de professionnel de première ligne nous permet de prévoir des stratégies visant à maximiser le potentiel de la télésanté et d'élaborer des lignes directrices pour son utilisation en temps normal.

Introduction

Before the COVID-19 pandemic, telehealth implementation in most countries was very limited (Smith et al. 2020). Telehealth is defined as synchronous or asynchronous consultations at distance between healthcare providers and patients with the help of information and communication technologies (Deldar et al. 2016) such as telephone, video conference or secure messaging (CMA 2020). Canada lags behind other Organisation for Economic Co-operation and Development (OECD) countries in the adoption of telehealth (CMA 2020). In countries participating in a Commonwealth Fund survey in 2019, an average 65% of medical clinics reported interacting with patients online (via e-mail or secure website), compared to only 23% in Canada and 17% in Quebec (CIHI 2020). While an average 4.2% of healthcare professionals across Canada reported frequently using video consultations, in Quebec the average was around 0.6%. A recent survey conducted before the pandemic by the Canadian Medical Association found that only 8% of Canadians were able to consult their physicians remotely, though 69% would have liked to do so (CMA 2019).

Advantages of telehealth identified before and during the pandemic include improved access, remote triage of patients, routine follow-up care (especially for managing chronic conditions), remote diagnosis and remote patient care (Breton et al. 2021; Kichloo et al. 2020; Smith et al. 2020; Srinivasan et al. 2020; Wijesooriya et al. 2020). Disadvantages relate mainly to changes in the therapeutic relationship, which make it more difficult to establish trust and can depersonalize care (Bergman et al. 2020; Shankar et al. 2020; Srinivasan et al. 2020). These disadvantages suggest that certain professional activities may be less compatible with telehealth than others (Donnelly et al. 2021), especially when patients need psychosocial support (Bergman et al. 2020; Shankar et al. 2020; Srinivasan et al. 2020). Some studies report confidentiality issues and inequities based on access to or ability to use technology, which poses a risk of excluding certain groups, such as the elderly (Shankar et al. 2020; Srinivasan et al. 2020; Wijesooriya et al. 2020) and vulnerable populations (e.g., people living in rural areas or with low income, linguistic or ethnic minorities, etc.) (Crawford and Serhal 2020; Fujioka et al. 2020; Nouri et al. 2020). Establishing a reliable diagnosis is also challenging due to limitations on the information that can be gathered, including the lack of physical examination during a telehealth consultation (Srinivasan et al. 2020).

Before the COVID-19 pandemic, the use of telehealth varied widely between jurisdictions depending on healthcare policies, financial incentives, acceptance by healthcare workers and patients and integration with in-person healthcare services (Hashiguchi 2020). Governments around the world introduced temporary measures to remove barriers to telehealth during the pandemic. In Quebec's universal publicly funded healthcare system, family physicians (FPs) are remunerated predominantly on a fee-for-service basis, although some new modes of mixed remuneration are also available to encourage the follow-up of patients in the community (Breton et al. 2014). Because FPs were not remunerated for telehealth before March 16, 2020, the province authorized a temporary billing code for telephone or video consultations at the same rate as an in-person consultation. The Ministry of Health and Social Services also approved a list of platforms providers could use (e.g., Teams, Health Zoom, REACTS, EMR platforms) that ensured safety and confidentiality during telehealth consultation (Gouvernement du Québec 2020).

The COVID-19 pandemic revealed the critical importance of being able to provide telehealth effectively to meet patient's needs while reducing the risk of infection from SARS-CoV-2 (Bloem et al. 2020; McMahon et al. 2020; Smith et al. 2020; Srinivasan et al. 2020). Healthcare providers were compelled to adapt rapidly in a context where they and their patients had little prior experience with virtual consultations. The whirlwind speed of change provided a unique opportunity to find out how primary healthcare (PHC) providers adapted their practices to integrate regular telehealth use.

To our knowledge, this is among the first studies to explore the adoption of telehealth by PHC providers in Canada since the beginning of the pandemic (Glazier et al. 2021). It documents the transition – achieved over a few months – to telehealth across the province of Quebec (603 respondents) by various types of PHC providers working in university-affiliated (teaching) family medicine groups (U-FMGs). It also identifies the perceived advantages and disadvantages of telehealth in the Quebec context.

Method

Design and setting

A cross-sectional study was conducted based on an open e-survey hosted on a web platform and distributed between May and August 2020 to all U-FMGs in Quebec (n = 50). The U-FMG model involves interdisciplinary teams with a teaching mission for family medicine residents (Breton et al. 2020). An FMG is a group of physicians working closely with nurses, social workers, pharmacists and other professionals in the provision of services to enrolled patients on a non-geographic basis (Breton et al. 2011). The number of accredited FMG practices has steadily increased since the FMG model was inaugurated in 2002, and the FMG is now the predominant model of PHC in Quebec (Breton et al. 2013). There are more than 330 accredited FMGs, of which 50 are U-FMGs. Located in both urban and rural settings, each U-FMG is linked to one of the province's four faculties of medicine.

The self-administered e-survey included 20 open-ended and closed questions, which took about 10 minutes to complete. The survey (Appendix 1, available online at longwoods.com/content/26576) was inspired by a "Together for Better Telehealth" pilot survey developed by the Massachusetts Health Quality Partners (2020) and was adapted to the Quebec context. The survey was pre-tested with four PHC providers using cognitive testing (Levine et al. 2005).

Participants

All healthcare providers working in U-FMGs were invited to complete the anonymous online survey on a voluntary basis.

Recruitment process and survey administration

The research team worked in close collaboration with the province's four practice-based research networks (PBRNs). Each PBRN includes a network of U-FMGs, is linked to a faculty of medicine and has an organizational structure that enables rapid communication with U-FMG members. A personalized approach was developed with the research facilitators of each PBRN to encourage participation in the study. Information sessions were organized to present the research project (the research team and the purpose of the study) to U-FMG directors and explain the involvement required from participants (i.e., length of survey, confidentiality, opportunity to withdraw, etc.).

The research team prepared an e-mail message, which included a hyperlink to the e-survey, inviting PHC providers to participate. This was forwarded to the facilitators in each U-FMG. The Dillman method (Dillman et al. 2014), based on three reminders, was used to maximize the response rate. Participation rates of U-FMGs were communicated to the designated PBRN representative following each reminder.

ANALYSIS

Statistical analysis

Descriptive analyses by type of provider, along with Wilcoxon tests, were conducted with IBM SPSS, Version 26. Descriptive statistics were used to summarize socio-demographic variables (gender and years in practice) and response frequencies (percentage, valid percent) by type of provider. Wilcoxon tests were used to detect significant differences between telehealth use before and during the first few months of the pandemic. Incomplete responses were excluded from the analyses. To clarify the presentation of results on use of telephone, video, e-mail or text message consultations, the categories "never" and "rarely" were merged, as were categories "often" and "most of the time."

Qualitative data analysis

Inductive thematic analysis (Miles et al. 2014) using the NVivo software explored responses to open-ended questions about advantages and disadvantages of using telehealth along with general comments. Key themes were identified and coded. To ensure the quality of the analysis, two researchers regularly reviewed their coding and discussed emerging themes with a third researcher on the team. The Results section presents the main sub-themes that emerged from this exploratory analysis.

ETHICS APPROVAL

This study was approved by the Research Ethics Committee of Centre de recherche – Hôpital Charles-Le Moyne of the CISSS de la Montérégie-Centre (MP-04-2019-368). Participants were provided with information on the study, and they consented to participate before completing the survey.

Results

Across the province, 48 of 50 U-FMGs participated in the study. A total of 603 out of a potential 1,357 PHC providers responded to the survey, including 405 FPs, 81 nurses, 34 nurse practitioners (NPs), 27 social workers, 13 psychologists and 43 other professionals including pharmacists, nutritionists, physiotherapists and respiratory therapists. The overall response rate was above 44%, with the denominator (1,357) based on the number of PHC provider positions assigned in the administrative database of the Ministry of Health and Social Services to the 48 U-FMGs participating in the study. This denominator included PHC providers on sick or maternity leave, unfilled positions and providers reallocated to other settings during the pandemic. Among those who participated, the completion rate was 87%.

Respondents were mostly women. FPs had been in practice an average of 10 years, while the range for NPs, nurses, psychologists and social workers was between 11 and 14 years. Between 83% and 100% of providers in each U-FMG rated their computer skills as above average (Table 1).

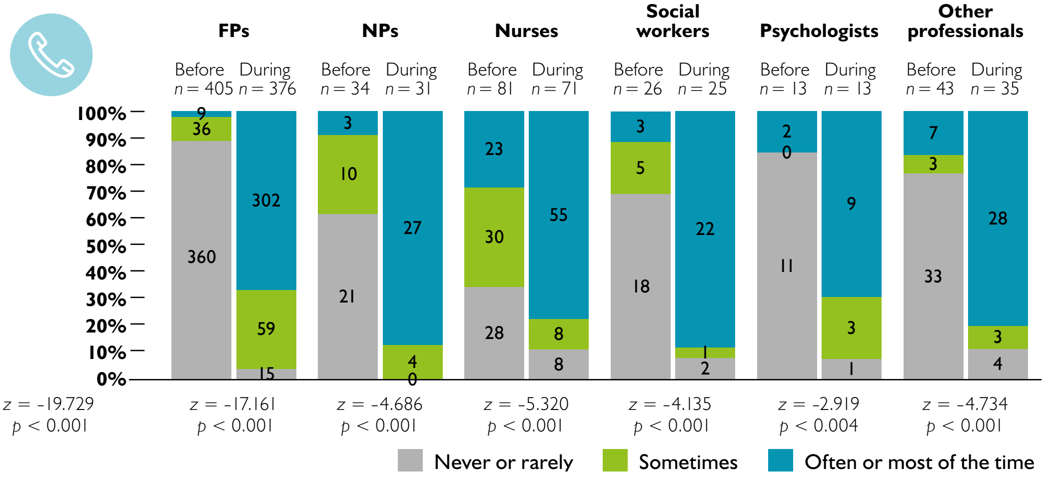
TABLE 1. Respondents' identification

Characteristics	Profession (number of respondents – *n*)					
	FPs (*n* = 405)	**NPs (*n* = 34)**	**Nurses (*n* = 81)**	**Social Workers (*n* = 27)**	**Psychologists (*n* = 13)**	**Other professionals (*n* = 43)**
Women % (*n*)	71% (256)	93% (26)	94% (63)	83% (20)	92% (11)	84% (26)
Computer skills above average % (*n*)	92% (334)	100% (29)	93% (62)	88% (21)	83% (10)	94% (30)
Years of practice Mean [min., max.]	8.9 [1, 15]	10.5 [3, 15]	13.4 [3, 15]	10.7 [3, 15]	14 [7, 15]	8.1 [3, 15]

Quantitative results

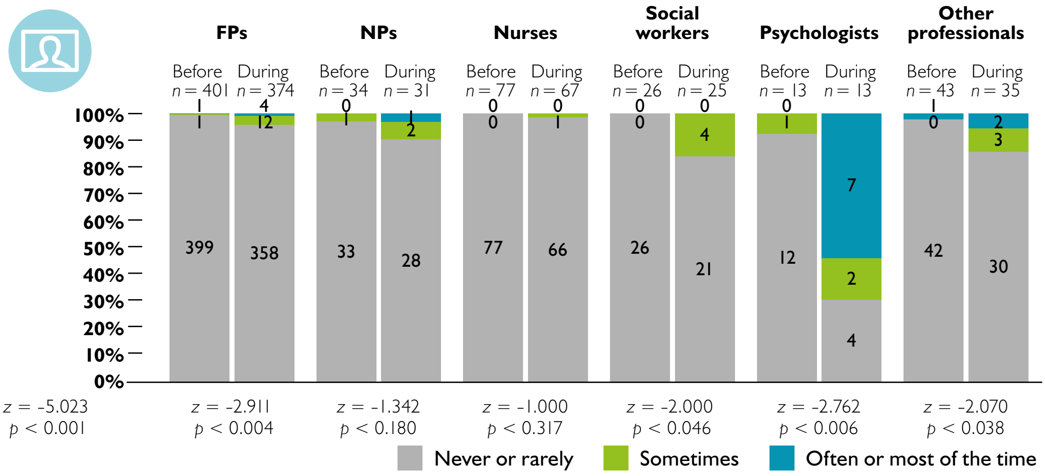
Results show a clear increase in use of telephone consultations during the COVID-19 pandemic. Telephone use went from "never" or "rarely" being used before the pandemic to becoming the principal consultation modality during the pandemic. The percentage of PHC providers using telephone consultations "often" or "most of the time" was 80% for FPs, 87% for NPs, 76% for nurses, 88% for social workers, 69% for psychologists and 80% for other professionals. Use of telephone consultations by all PHC providers during the first three months of the pandemic was statistically significantly higher than before the pandemic ($z = -19.729$, $p < 0.001$) (Figure 1).

FIGURE 1. Proportion of respondents using the telephone for patient consultations before and during the pandemic, by type of PHC provider



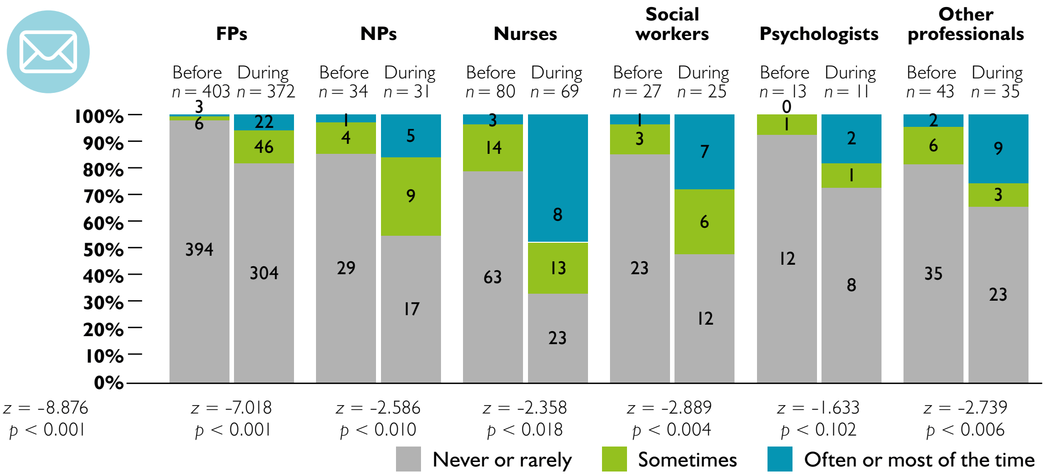
The use of video consultations (Figure 2) also slightly increased, but these were used by fewer providers and less frequently than the telephone. Before the COVID-19 pandemic, providers rarely used video consultations. During the pandemic, between 2% and 15% of professionals used video "sometimes" ($p < 0.001$), except for over half of psychologists who used video "often" or "most of the time" ($z = -2,762$, $p = 0.006$).

FIGURE 2. Proportion of respondents using video consultations before and during the pandemic, by type of PHC provider



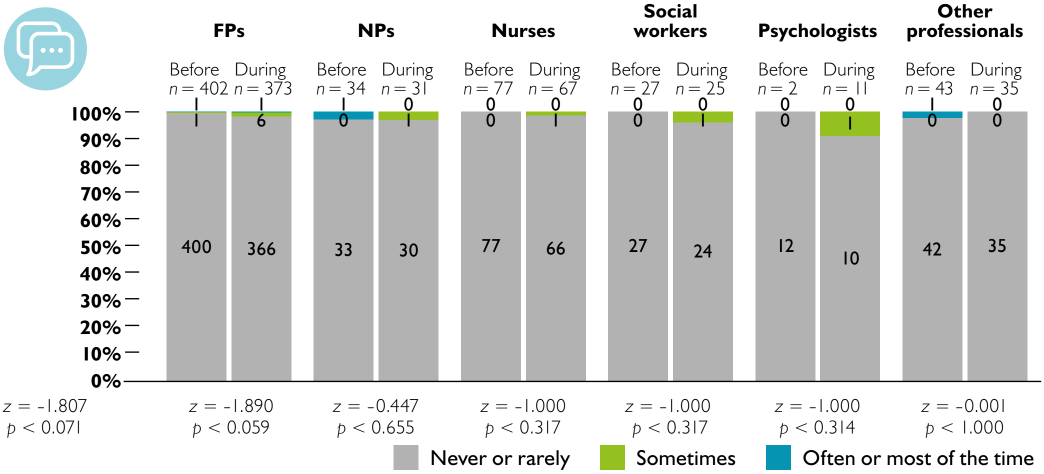
The use of e-mail (Figure 3) with patients before the pandemic varied among PHC providers – 65% of FPs, 32% of NPs, 30% of nurses, 4% of social workers, 31% of psychologists and 46% of other providers "never" or "rarely" used e-mail before the pandemic. During the first three months of the pandemic, use of e-mail by all PHC providers was statistically significantly higher than before ($z = -8.876$, $p < 0.001$).

FIGURE 3. Proportion of respondents using e-mail before and during the pandemic, by type of PHC provider



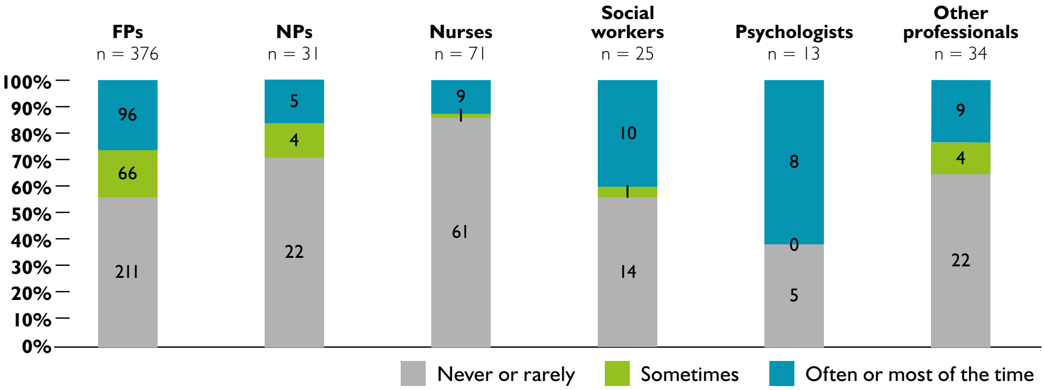
During the pandemic, use of text messages increased between 3% and 10% for FPs, NPs, nurses, social workers and psychologists. No increase was observed among the other providers, including pharmacists, nutritionists, physiotherapists and respiratory therapists ($z < 0.001$, $p = 1.000$) (Figure 4).

FIGURE 4. Proportion of respondents using text messages before and during the pandemic, by type of PHC provider



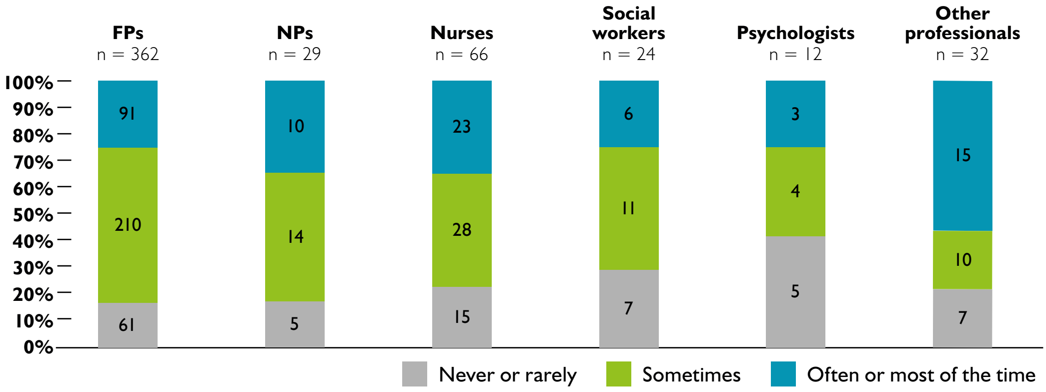
Telehealth consultations were conducted from home by 44% of FPs, 29% of NPs, 44% of social workers, 62% of psychologists, 37% of other professionals and just 15% of nurses (Figure 5).

FIGURE 5. Proportion of respondents conducting telehealth from home, by type of PHC provider



Regarding intent to use telehealth in future practice, between 90% and 100% of PHC providers intended to continue using telehealth post-pandemic. As shown in Figure 6, 83% of FPs and NPs, 77% of nurses, 71% of social workers and 58% of psychologists thought they would use it "sometimes," "often" or "most of the time" after the pandemic.

FIGURE 6. Intent to use telehealth in post-pandemic practice



Qualitative results

Table 2 presents the most frequently mentioned advantages and limitations of telehealth, as reported in participants' responses to open-ended questions.

TABLE 2. Most frequently reported advantages and limitations of telehealth over in-person visits

Advantages	Limitations
> 400 respondents ✓ Less travelling for patients and professionals (159) ✓ Faster appointments, less waste of time (124) ✓ More efficient (78) ✓ Availability and flexibility (78) ✓ Facilitates access (78) ✓ Less risk of infection (69) ✓ Ideal for chronic illness follow-ups, prescription renewals or compliance follow-up (56) ✓ Easier to organize (54)	> 396 respondents ✗ Lack of physical exam (179) ✗ More complicated for some patients (e.g., those with technical barriers; the elderly population; allophones; new patients; patients with visual, auditory or cognitive impairment; the vulnerable population; etc.) (135) ✗ Harder to establish a diagnosis (96) ✗ Duplication of consultations with an appointment in-person (82) ✗ Lack of non-verbal information (74) ✗ Longer, more complicated (72) ✗ Difficulties regarding technology (58) ✗ Not appropriate for certain cases (58)

ADVANTAGES

Responses from 400 participants pointed to advantages, including eliminating the need for patients to travel to appointments; this was mentioned especially with regard to vulnerable patients, patients with mobility issues and patients living in remote areas.

> Now it seems to benefit mostly patients with limited mobility and may eventually provide a more patient-centred model of care for certain situations. (FP)

> It makes life easier for patients who are vulnerable or lack means of transportation. (Nurse)

Along with reducing the risk of COVID-19, telehealth was also seen as an efficient means of conducting follow-up visits for prescription renewals and requests for tests or specialist consultations for patients with chronic illnesses.

> Very useful for certain mental health and chronic disease follow-up visits that do not require a physical examination. (FP)

LIMITATIONS

Responses from 396 participants mentioned a number of limitations with telehealth consultations including limited ability to collect clinical information.

> Telemedicine visits decrease the amount of information available to make clinical decisions. (FP)

Responses also mentioned that telehealth consultations did not allow for physical examinations, which could lead to additional in-person consultations and risk of errors.

> The physical examination remains an essential element to evaluate a more complex problem. (FP).
>
> [There is d]uplication of consultation when the teleconsultation reveals that a physical examination is needed and a second in-person appointment must be scheduled. (FP)
>
> Complaints are more difficult to assess especially when you don't know the patient, increasing the risk of making diagnostic errors. (FP)

Several providers also reported challenges in establishing trust with new patients, particularly through telephone consultation, including the missing human contact and the non-verbal communication that is essential to building a therapeutic relationship and establishing an appropriate diagnosis.

> [I have d]ifficulty connecting, especially [on] sensitive topics or [with] patients less known to me. (FP)
>
> [There is d]ecreased human contact [crucial in psychotherapy or psychosocial support]. (FP)
>
> [We d]o not see the non-verbal … [We d]o not see the physical signs [gait, general state, face] … (FP)

Technological limitations on both patient and provider ends were also mentioned, and some participants reported not having video conferencing capabilities (e.g., lack of equipment, insufficient bandwidth, etc.).

> Video [is] not suitable for use in institutions with slow internet networks. (FP)

> Certain clienteles have limited access to or understanding of technology. (Nurse)

Many PHC providers were concerned that the lack of visual contact with phone consultation limited the possibility of collecting physical and non-verbal information and risked affecting the quality of diagnosis.

> Consultations on the phone do not allow us to see the person and [the] signs that guide us to a diagnosis or the cause of a problem. Video also limits what we can get as information. (NP)

Discussion

First and foremost, this study shows a dramatic shift toward telehealth in primary care settings in the early months of the COVID-19 pandemic when physical distancing directives required changing the way healthcare was delivered. The rapid implementation of telehealth early in the pandemic echoes results of other recent studies in Canada (Bhatia et al. 2021; CMA 2020; Glazier et al. 2021). Results also concur with findings that for most PHC providers the main modality for delivering care during the pandemic was the telephone (CMA 2020). Compared with studies conducted across Canada and in other countries (Bhatia et al. 2021; CMA 2020; Jaklevic 2020), adoption of video consultation by PHC providers in Quebec was limited before the pandemic. While it increased slightly during the pandemic, respondents reported technical barriers such as access to secure online platforms (including equipment and bandwidth) in their U-FMG as well as patients' barriers to video consultation, which could explain this difference. This was also reported in another Canadian study (Bhatia et al. 2021).

Results indicate that a large proportion of PHC providers conducted telehealth consultations from their homes with nurses being the least likely to do so and psychologists the most. Use of the telephone requires no bandwidth or special skills, it is inexpensive and was already common in virtual care practice before the pandemic (Bhatia et al. 2021). In addition, the fact that fees for telephone consultations were the same as for video visits (Gouvernement du Québec 2020) may have influenced their widespread use in Quebec during the pandemic; this was also reported in Ontario (Bhatia et al. 2021).

Variation in the use of video consultations between PHC providers suggests differences in the compatibility of certain professional activities with telehealth as recently highlighted by Donnelly et al. (2021). Psychologists are the PHC providers who used video the most for consultations. Several studies have found telehealth less suitable for psychosocial support (Bergman et al. 2020; Shankar et al. 2020; Srinivasan et al. 2020), but the pandemic context may have made it more relevant as a way to meet psychosocial needs in a crisis (Bhatia et al. 2021).

Results reveal an increase in the use of e-mail to communicate with patients, especially among NPs, nurses, social workers and other professionals. They also indicate that these types of providers already used this modality before the pandemic. E-mail appeared as an obvious asynchronous communication tool in 2020, and the appearance of the pandemic accelerated its use by all PHC providers.

Some of the advantages of telehealth reported by providers in this study may influence post-pandemic practice and improve the quality of healthcare services. These include facilitating access for patients who are vulnerable, have limited mobility, are at risk of infection or live in remote areas. This survey found that most PHC providers appreciated the efficiency and possibilities offered by virtual consultations especially for addressing relatively minor problems, reducing wait times and providing follow-up for patients with chronic health problems, such as prescription renewals, monitoring adherence to therapy or providing mental health/psychosocial support. Similar results about telehealth benefits for access and follow-up care have been reported in other studies (Kichloo et al. 2020; Smith et al. 2020; Srinivasan et al. 2020; Wijesooriya et al. 2020).

Participants expressed concerns about the limited possibilities for vulnerable populations to access some digital divide tools (e.g., video conferences, pictures, prescriptions by e-mail, etc.). Post-pandemic, barriers to equitable access will need to be considered to preserve the universality of the healthcare system. Research on health informatics and digital health have documented risks to health equity associated with virtual care initiatives (Anderson-Lewis et al. 2018; SPOR PIHCI Canada n.d.; Veinot et al. 2018, 2019). It is essential that the pandemic response and any subsequent reorganization of PHC do not exacerbate already significant health disparities between privileged and underserved patients. Telehealth has the potential to improve effectiveness and efficiency, but it can also introduce new risks and amplify existing inequalities (SPOR PIHCI Canada n.d.; Crawford and Serhal 2020; Fujioka et al. 2020; Hashiguchi 2020; Nouri et al. 2020; Srinivasan et al. 2020; Wijesooriya et al. 2020). Since the beginning of the pandemic, follow-up protocols for patients with chronic diseases, such as diabetes, and hypertension, have been developed by experts to secure telecare practices (Kiran et al. 2020; Omboni et al. 2020).

Many of the limitations reported in the present study relate to difficulties in establishing a reliable diagnosis using telehealth due to limited information gathered during the telehealth consultation, risk of errors and difficulty establishing trust relationships; these have also been reported in other studies (Bergman et al. 2020; Shankar et al. 2020; Srinivasan et al. 2020). Telehealth mainly involved using the telephone during the early months of the pandemic. Widespread use of telephone consultations may reflect ease of access to this technology, which makes it a practical choice for most patients. Although a telephone conversation may be appropriate for some consultations, additional visual cues or physical information are necessary for others (Hollander and Carr 2020; Nangalia et al. 2010). While video consultations can provide important additional information, providers and patients may require support to use them efficiently and effectively (Shankar et al. 2020). Recommendations are needed about what conditions can be addressed using virtual versus in-person visits and about practices to make video consultations more accessible.

Telehealth has changed PHC providers' use of their senses to gather the information needed to assess a patient's health status (Kelly and Gormley 2020). New knowledge and skills have to be developed to deliver quality telehealth. Before the pandemic, there was no mandatory academic training in the use of information and communication technologies in medical practice in Quebec (Bourassa Forcier et al. 2021). Since the beginning of the pandemic, the Collège des médecins du Québec (CMQ) has offered elective training (Bourassa Forcier et al. 2021; Collège des médecins du Québec 2021) focused on rules to be respected during telehealth consultations. The European Association for Communication in Healthcare (EACH n.d.) as well as the Academy of Communication in Healthcare (ACH 2021) have developed resources, e-learning courses, webinars and documents to help healthcare professionals provide quality telehealth consultations. Beyond the pandemic context, guidelines for prescribing telehealth are needed to standardize practices and achieve complementarity with in-person consultations (McMahon et al. 2020; Richard and Lussier 2015).

Finally, the use of telehealth modalities is greatly affected by the policies, regulations and funding models in place in a given jurisdiction (Hashiguchi 2020). It also hinges on factors such as technical capabilities, legitimacy as a new consultation practice (which suffers from concerns around safety or clinician training and preparation), remuneration and organization of the health system to enable appropriate staffing and support (Kho et al. 2020; Smith et al. 2020). After the outbreak of the pandemic in Quebec, several barriers to telehealth adoption were quickly removed; a new policy to facilitate sharing clinical information and a new fee code to allow physicians to bill for telehealth activities were established. A list of acceptable platforms as well as guides to safe and confidential use of these platforms were produced by the CMQ and Ministry of Health and Social Services (Collège des médecins du Québec 2020; Gouvernement du Québec 2020). While these key measures facilitated the rapid adoption of telehealth during the pandemic, technical, financial, human and organizational challenges still need to be addressed to ensure optimal use of video consultation in the future (Kho et al. 2020).

The rapid deployment of telehealth allowed little time to plan implementation strategies. However, it creates an enormous opportunity to share lessons learned across disparate settings, with the collective goal of improving the use of telehealth and identifying promising practices that can be scaled up for widespread use. Almost all PHC providers intend to continue using telehealth after the pandemic. This presents a unique opportunity to facilitate the spread of local and emergent best practices, and create a policy environment to support knowledge transfer and dissemination (Hashiguchi 2020). We will also need to pay special attention to train patients in the use of these new modalities and the appropriateness of the reason for telehealth consultations.

Limitations of the study

Almost 45% of PHC provider responses to the e-survey were received in the summer of 2020, when rates of COVID-19 infection were especially high (Audibert et al. 2020). Particular aspects of this study may limit the generalizability of findings. Firstly, it was conducted in teaching PHC clinics in Quebec that have certain characteristics – notably their teaching mission and the broad range of PHC providers working alongside physicians – that distinguish them from other clinical settings (Abou Malham et al. 2018). Secondly, the participating U-FMGs were located in both rural and urban areas, but information was not collected to enable analysis of the differences between these settings. Although these were teaching settings, no information was collected from family medicine residents or other students in these U-FMGs, and no information was available on the challenges of supervising residents conducting virtual consultations.

Conclusion

This study shows significant differences in the use of telehealth by all PHC providers before and during the first few months of the COVID-19 pandemic. The pandemic poses an enormous challenge for health services, but it also represents an opportunity to thoroughly integrate telehealth into teaching and other primary healthcare clinics. This study describes the swift implementation of telehealth in U-FMGs at the beginning of the pandemic, providing a baseline that will facilitate the transformation to be tracked over time. This rapid deployment has enabled providers to assess ways in which virtual consultations can make their everyday practice safer and better, and has led to an increased awareness of their limitations. It now seems clear that telehealth has a place in U-FMGs in Quebec and beyond and that much can be done to maximize its potential.

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RESEARCH PAPER

Personal Support Homes: An Innovative Approach to Reduce the Alternative Level of Care Population in Ontario Hospitals

Foyers de soins personnels : une approche novatrice pour réduire la population d'autres niveaux de soins dans les hôpitaux ontariens

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Abstract

Objective: This study investigates the viability of personal support homes – a policy concept that reduces alternative level of care (ALC) days in Ontario hospitals. It allows people to leverage their empty bedrooms to temporarily house patients awaiting hospital discharge.
Method: Data from the Municipal Property Assessment Corporation are used to map geographic supply of empty bedrooms, and Ontario Ministry of Health administrative data are used to assess potential demand.
Results: By remunerating certified homeowners $120–150/day, this concept could help decrease ALC patient days by 20% and save the province $1.13–1.95 billion in foregone hospital construction along with relieving current system pressures.
Conclusion: As part of a multifaceted policy solution to ALC, this concept is particularly suited for rural/remote locations where excess bedroom supply per capita is the highest.

Résumé

Objectif : Cette étude examine la viabilité des foyers de soins personnels – un concept de politique qui vise à réduire les jours d'autres niveaux de soins (ANS) dans les hôpitaux ontarien. Il permet de tirer parti des chambres vacantes pour héberger temporairement des patients en attente d'une sortie de l'hôpital.

Méthode : Les données de la Société d'évaluation foncière des municipalités ont été utilisées pour cartographier l'offre de chambres vacantes alors que les données administratives du ministère de la Santé de l'Ontario ont été utilisées pour évaluer la demande potentielle. *Résultats :* En rémunérant les propriétaires certifiés de 120 à 150 $/jour, le concept pourrait réduire les jours-patients ANS de 20 % et économiser à la province de 1,13 à 1,95 milliard de dollars en constructions d'hôpitaux, tout en soulageant les pressions actuelles sur le système. *Conclusion :* Dans le cadre d'une solution politique multidimensionnelle à l'ANS, ce concept est particulièrement adapté aux régions rurales et éloignées où l'offre excédentaire de chambres par habitant est plus élevé.

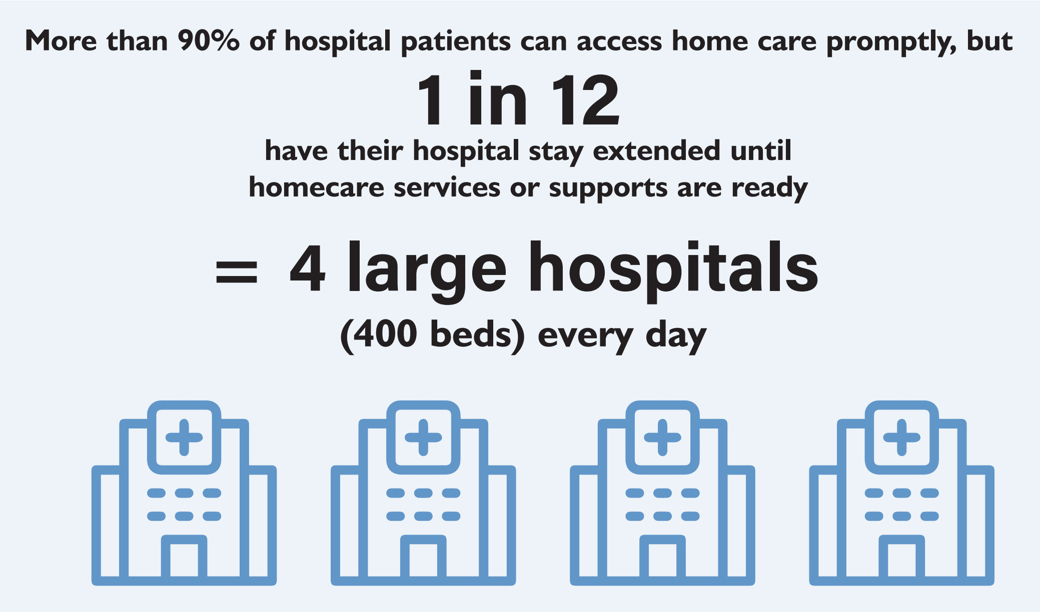
Introduction

A white paper from 2007 first identified optimizing patient throughput as a key operations strategy to ensure future supply of hospital services (The Chartis Group 2007). Efficient flow through a hospital's fixed bed supply, diagnostic and imaging centres and procedure rooms allows hospitals to focus on taking care of acute care patients rather than on discharging the backlog. This has become an evermore critical issue with the baby boomer generation imminently turning 75 years old when there is a noted increase in demand for hospital services (CIHI 2019). Furthermore, the percentage of the Ontario population that is older than 75 years is expected to be 20.3% by 2031 (Ontario Ministry of Finance 2019). Hospital volumes in Ontario dramatically decreased during the COVID-19 pandemic due to cancellation of elective surgeries to ensure surge capacity (Government of Ontario 2020). As the second wave of the virus emerged in the fall of 2020, and the third wave in the spring of 2021, hospital volumes continued to fluctuate; however, the issue of hospital overcrowding will likely re-emerge as common elective surgeries such as hip and knee replacements resume fully (OHA 2020).

In Canada, throughput issues in hospitals have focussed on two critical areas: 1) the emergency department where patients are waiting to be admitted and 2) discharge when patients – particularly older, frail patients – cannot be discharged without support. As a result, emergency department patients are waiting to be admitted or are occupying a bed beyond clinical necessity (Sutherland and Crump 2013). The second of these two sets of patients are designated as alternate level of care (ALC) patients – a term used to describe patients who do not necessarily require the acuity of hospital service delivery (CIHI 2016). These two critical areas are only somewhat interrelated as many beds occupied by ALC patients – for example, surgical recovery beds – are not necessarily the same hospital beds needed for admission directly from the emergency department. Hence, both these issues require somewhat separate solutions. This paper will focus on the second (ALC) issue, offering a partial solution for Ontario along with implications for other provinces.

As of November 2018, there were approximately 4,500 ALC patients in Ontario occupying approximately 16% of relatively expensive hospital beds (CCO 2020). ALC stays are associated with adverse health outcomes for patients due to accelerated functional decline, social isolation and loss of independence, as seen across Ontario and throughout the country (Petch 2012). During the fiscal year (FY) 2018, the province expended $650 million on ALC patients at an average of approximately $560 daily – nearly fourfold and fivefold the daily cost of long-term care and home care, respectively (MOH 2020a, 2020b). A 34.4% increase in direct hospital expenditures for ALC from FY 2013 to FY 2018 was driven by price inflation, population growth, aging and general increases in volume and changes in service mix (CIHI 2019; MOH 2020a). Furthermore, the percentage of in-patient bed-days in Ontario hospitals attributable to ALC grew from 14.0% in FY 2015 to approximately 17.0% by FY 2019 (CCO 2021). Continuing this trend, the ALC patient population is expected to grow from 3.1% to 3.7% annually by 2036, with an upturn expected in 2021 as baby boomers exceed the age of 75 years (Hermus et al. 2015). While ALC remains a growing problem, it is currently acute, as illustrated in Figure 1.

FIGURE 1. The magnitude of the ALC issue



More than 90% of hospital patients can access home care promptly, but

1 in 12

have their hospital stay extended until homecare services or supports are ready

= 4 large hospitals

(400 beds) every day

Source: CIHI 2021.
Reproduced with permission from CIHI.

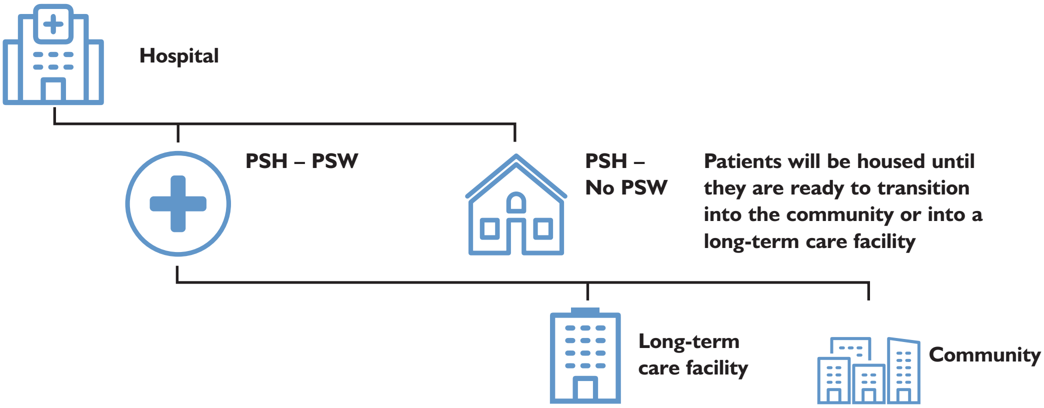
Given the status quo regarding alternatives to ALC care, and an ongoing shortage of labour in the community care sector limiting its potential expansion, Ontario will require new hospital construction to care for ALC patients in the near future, beyond that required for acute care services. Recent pan-Canadian research suggests that in-patient capacity can be increased by up to 11% if the ALC patient load is eliminated; therefore, given approximately 1.2 million in-patient stays in Ontario annually, it is estimated that Ontario's capacity might be increased by 132,000 in-patient stays if the ALC problem is totally alleviated (Basu et al. 2016; CIHI 2020).

Community-based care provides a less expensive alternative to ALC. However, growth in the senior population combined with both the shortage of community care nurses and poor retention of personal support workers (PSWs)[1] make it challenging to meet the growing demand for such services (Ontario Health Coalition 2019). Thus, reducing reliance on ALC will require other alternatives to sufficiently relieve hospital overcrowding. One option involves allowing homeowners who wish to leverage their homes as a source of income to get certified either as a PSW or with a lower level of certification with outside PSW support.[2] By doing so, they would engage in a public–private partnership with the provincial government to provide temporary personal support to selected discharged patients who would be waiting in hospitals as ALC patients. The basic idea is that patients would be discharged to the home of trained personnel rather than trained personnel travelling to clients' homes. Similar in structure to Ontario's Foster Care program for children or the LifeShare/Host Family program for adults with cognitive challenges, the suggested program could substitute for ALC, often allowing patients to recuperate nearer to their own community (Ontario MCCSS 2018a, 2018b). The program could further provide efficiencies by eliminating travel time for PSWs and/or community care nurses, and the province could save large sums in future hospital construction. This paper will explore the viability of a personal support home (PSH) initiative in Ontario.

Program Details

This program would provide care for the ALC population that is classified as not requiring any specialized needs or supports (non-SNS),[3] which, as of the end of November 2019, comprised almost 35% of 1,655 ALC patients (CCO 2020). This equates to a total of 322,793 ALC days (CCO 2020). The two levels of care under this scheme can be best summarized as seen in Figure 2.

FIGURE 2. Two levels of care within the proposed PSH program



Some patients will be able to go to homes that provide more of a hotelling function plus food services, while others requiring greater support will be assigned homes with embedded PSWs. In general, the expected stay will be between three weeks and two months – based on current wait times in ALC beds – until a homecare or long-term care slot becomes available (CCO 2020).

Supply and Potential Demand for PSHs

A heatmap by census division (*n* = 49) of Ontario's spare bedroom supply in single-storey detached homes is shown (Figure 3) based on data provided by the Municipal Property Assessment Corporation (MPAC n.d.). Spare bedrooms are those that exceed the difference between the number of bedrooms and the number of permanent residents; thus, a residence with four bedrooms and three residents would have one extra bedroom, with one bedroom conservatively considered a home office and another bedroom considered as a shared bedroom.

Although the supply of spare bedrooms is known to be the greatest in rural and remote areas, spare bedrooms are also in sufficient supply in many urban and suburban areas with, perhaps, 20 residents in the census division per spare bedroom at the most. The four Ontario regions – defined by the now defunct Local Health Integration Networks (LHINs) – with the highest percentage of hospital days defined as ALC in FY 2019–20 are all considered rural or remote regions, and these regions have maintained this relative ranking over the past decade (Intellihealth 2015).[4] That is, the highest ALC rates occur in those regions with the lowest rates of population per spare bedroom or, inversely, the highest number of spare bedrooms per person. According to the MPAC data, there were 997,123 spare bedrooms in one-storey detached homes in Ontario as of 2019. If just 0.1% (1 out of 1,000) of spare bedrooms in single-storey detached homes in Ontario became PSH beds (approximately 1,000 beds in 890 homes), 365,000 ALC bed-days[5] could be made available. In terms of demand, if it is assumed that half of all non-SNS (i.e., eligible) ALC days (13.9% of total ALC days) were transferred to the PSH and that ALC bed-days (1.16 million) are uniformly distributed across all ALC categories, then approximately 161,396 (13.9%) bed-days (13.9% × 1.16 million) could be transferred (CCO 2020; MOH Health Data Branch 2020). This would result in an average PSH-bed occupancy rate of approximately 44.2% (which is equal to 161,396 bed-days expected in PSH/365,000 total bed-days potentially available under PSH).

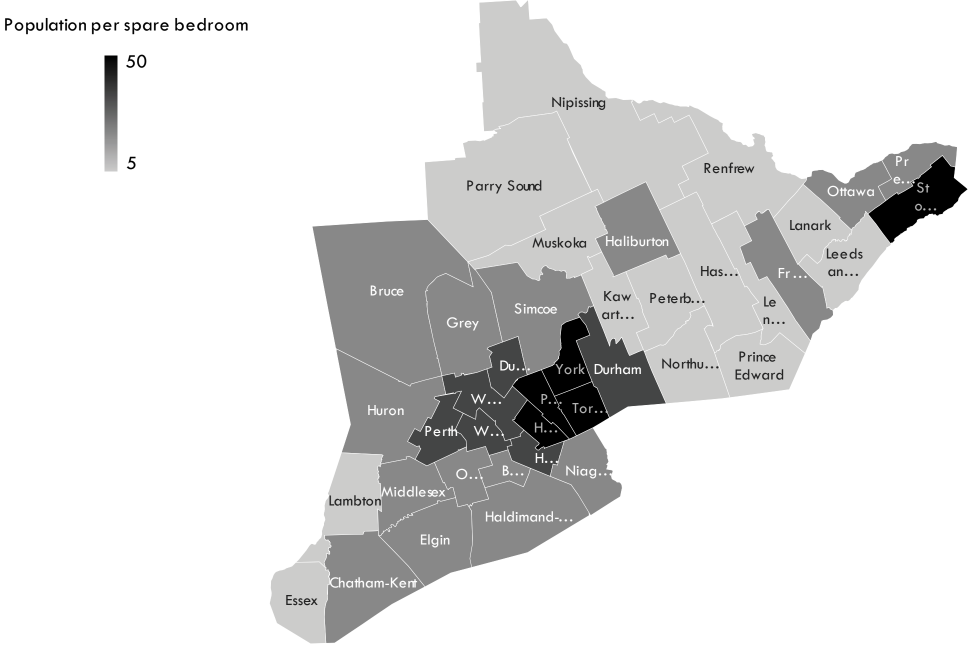
Remuneration and Estimated PSH Program Savings

Remuneration could be set so that per diems would lie between the daily cost of home care (low) and long-term care (high) so as to incentivize discharge from the program toward the former.[6] The relative costs, including ALC, are summarized in Figure 4.

The proposed remuneration would be between $120 and $150 per day, such that somebody who has two spare bedrooms and fills them 250 days per year with PSH clients – approximating a full-time endeavour – could earn an annual income ranging from $60,000 to $75,000.[7]

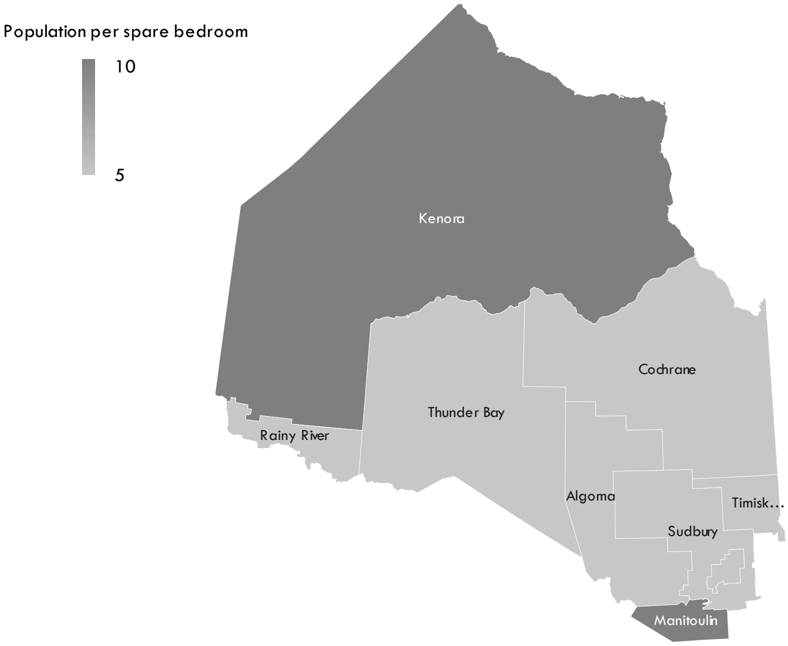
FIGURE 3. Heatmaps for supply of spare bedrooms in Ontario

Southern Ontario



Spare bedroom supply is the greatest in rural/remote areas

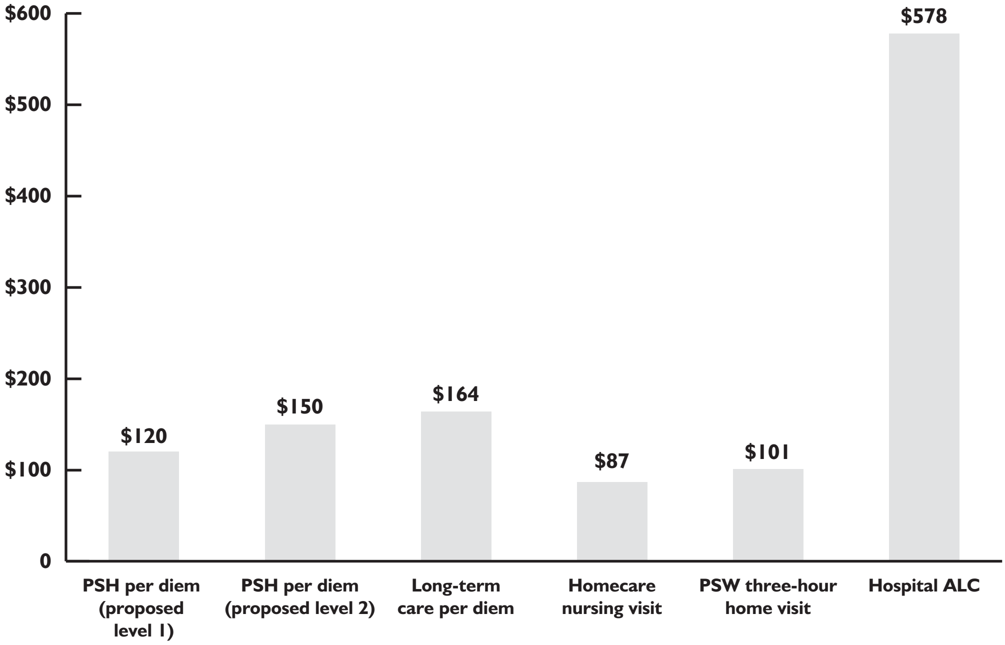
Northern Ontario



Source: MPAC n.d.

Regarding potential savings, a PSH initiative could save the province between $1.13 and $1.95 billion[8] from future hospital construction (Infrastructure Ontario 2007; see Table 1 and Appendix 1, available online at longwoods.com/content/26575). Beyond these benefits, this initiative could also free up hospital capacity to serve other patients. The cost savings calculations are summarized in Table 1.

FIGURE 4. Daily cost comparison: PSHs, home care and long-term care



Sources: Ontario Healthcare Financial and Statistical Database (OHFS); Ontario Ministry of Health and Long-Term Care 2015.

TABLE 1. Potential cost savings to the province

Measure	Calculation	Figure
Bed-days from ALC to PSH		161,396
Foregone beds	161,396/365	442
Construction cost per bed		$2.56 million/bed to $4.42 million/bed
Savings from foregone hospital construction	$2.56 million/bed to $4.42 million/bed × 442 beds	$1.13 billion to $1.95 billion

The PSH program is expected to relieve current hospital system pressures.

Discussion

PSHs would partially address two health policy problems: reducing the large number of ALC patients straining hospital beds and attracting new PSWs, who are increasingly in short-supply. The first has been the focus of this paper, but the second is no less important. By allowing people to leverage their homes, this initiative provides a new service model for

PSWs that has the clients come to the PSW rather than the other way around. This not only eliminates PSWs' commute time but also potentially allows PSWs to care for two clients simultaneously.

There are a number of challenges associated with decentralized programs such as the PSH. One of these regards accountability and client safety, which requires amending the *Regulated Health Professions Act, 1991*; the *Medicine Act, 1991*; and associated regulations dealing with scope of practice for both PSWs and community care nurses (Hamilton 2018). The residential aspect of the PSH may require new regulations to ensure adequate homeowner and potential client selection/matching criteria, oversight and accountability of PSWs and others who register to provide such services. Currently, the regulations are quite limited with regard to both delegated and exempted acts that unregulated PSWs may perform, and these may need better delineation for those who provide residential services; furthermore, community care nurses are not generally placed in an oversight capacity, requiring changes to scope of practice through legislative and/or regulatory amendments (Hamilton 2018).

A potential platform for establishing accountability and oversight might come from a policy directive issued in 2016 aimed at Ontario's LifeShare/Host Family Program under the auspices of Ontario's Ministry of Children, Community and Social Services (MCCSS). Due to several reports of maltreatment and a sentinel event involving the death of a resident, this directive provided new safeguards for clients, strengthening the process for screening, selecting and evaluating host families alongside ensuring consistent service delivery (Ontario MCCSS 2016; Riordon 2017).

A second challenge involves the potential to crowd out other provincial programs that depend on community members to participate by offering their residences to house others. The two current programs in competition with the PSH for homeowners are the already mentioned Foster Care program for children and the LifeShare/Host Family Program. With regard to the first, most foster care families tend to be younger (aged 30–50 years) with children of their own still at home, while the PSH would target older Ontarians with grown children leaving behind spare bedrooms; thus, the pool of families or individuals from which these programs would draw are unlikely to intersect (Rodger et al. 2006). With regard to the LifeShare/Host Family program, the families participate under the guise of a long-term obligation, while PSH registrants would understand that they would be entering into shorter term relationships. This allows PSH families greater flexibility in hosting clients at any particular time. In essence, preferences for length of commitment would allow families to self-select themselves into two mutually separate groups, minimizing the possibility that PSH would negatively impact the pool of families available for the other programs. Finally, PSHs may potentially compete somewhat with Airbnbs as people try to leverage their residences to generate income, and this may be a welcome development for many who complain about the negative effects of Airbnbs on their neighbourhoods (Maclaren Municipal Consulting, Inc. 2019).

A third challenge arises from difficulties in establishing certification and training. For instance, establishing what constitutes a "hotelling" function that is separate from a PSW function may not always be clear as these may not be mutually exclusive roles. Furthermore, it is not clear what proportion of PSHs will opt for either certification, perhaps leading to a maldistribution of the two levels of homes offered. A potential solution is to vary the level of remuneration offered to the two levels of care to incent the proper distribution of homes between them.

Initiatives similar to the PSH have been initiated with varying degrees of success in the UK and the US and in British Columbia, Canada. In the UK, there was a short-lived initiative of an Airbnb-style scheme in which homeowners were paid the equivalent of C$1,700 per month to house patients clinically appropriate for hospital discharge (Clarke 2017). While the intention was to limit hospitalizations to clinically appropriate periods, the initiative was poorly explained to the public, with the optics suggesting that the program was a privatization scheme supplanting the British National Health Service; thus, the ensuing political backlash forced the government to abandon this initiative (Clarke 2017). First established in Florida in 2015, the private online platform room2care.com established a marketplace for individuals to find a place to recuperate after a hospital stay (Room2Care 2015). The program makes recommendations to seniors regarding housing options, but seniors negotiate directly with hosts regarding the price and services delivered. The goal of the program is to provide care for 50% of the prevailing rates for other housing options (e.g., assisted living) that have a median price of the equivalent of approximately C$4,000 per month (Room2Care 2015). In British Columbia, the Family Care Homes program provides services in unlicensed single-family residences that accommodate up to two clients – down from four clients during the early 2000s – with supportive accommodation post-hospitalization (J. Zhang, personal communication, July 17, 2020). Services include meals, laundry, housekeeping services and supervision, along with any assistance with daily living activities such as bathing, grooming and dressing, with clients expected to pay out of pocket the same rate that is assessed for long-term care (British Columbia n.d.). Focusing on serving sparsely populated areas rather than on reducing ALC days *per se*, the program was designed to provide a long-term residence in lieu of placement in a standard long-term care facility; however, the program could potentially assist with lessening ALC days (British Columbia n.d.). To date, there are no evaluations assessing the impact of this program on ALC rates, the potential for crowding out Airbnb and the rate of uptake and relative cost to other options (J. Zhang, personal communication, July 17, 2020).

One other prominent program is the Medical Foster Homes program run by the US Department of Veterans Affairs (2020). These are private homes in which a licensed homeowner/caregiver provides services to a few other residents, some of whom are service veterans. The US Department of Veterans Affairs is responsible for oversight by inspecting and approving these homes designed to serve as an alternative to a long-term care facility (US Department of Veterans Affairs 2020). The licensed caregivers assist with carrying out activities of daily living, such as bathing and dressing, and the US Department of Veterans Affairs (2020) also ensures that residents receive home-based primary care. Of noted importance is that the program provides housing and care for more than 1,000 veterans in 42 states and Puerto Rico at an annual cost of $20.7 million (Kime 2018). Veterans pay between US$1,500 and US$3,000 a month to live in such a home, and by doing so, they save the Veterans Affairs an estimated US$10,000 a month in long-term care expenses over a traditional long-term care setting (Kime 2018). Yet, the strict qualifications that such homes must meet have impeded growth, and it still remains a niche program (Kime 2018).

A careful roll-out of the PSH program would help to avoid the pitfalls experienced by similar initiatives in other jurisdictions. In particular, a slow initiation with perhaps a few pilot programs in rural and remote areas where the needs are high, quaternary and tertiary care is received at the greatest distances from home and the spare bed supply is the greatest might be a prudent approach.

Although insufficient to solve the ALC problem in itself, the PSH initiative could be part of a multi-pronged approach to alleviating this growing pressure. More funding for home care by increasing the remuneration for community care nurses alongside funding for more training slots and retention programs for both nurses and PSWs is another prong. Still another strategy is increased funding for assisted living facilities as well as various short-term transitional care facilities designed to provide domicile space alternative to ALC beds in hospitals. Bundling payments to hospitals for patient care that includes the post-hospitalization recuperation period may provide financial incentives for hospitals to find placements for recuperating patients in the community. Finally, increased tax deduction/credits for caregiving by family members may increase family involvement in caring for sick family members.

In other provinces, the policy options and challenges faced are similar to those in Ontario; however, there are some important exceptions (Basu et al. 2016). While over 5% of discharged patients need ALC in Ontario, at the most, approximately 2.5% of patients are ALC in other provinces. This suggests that Ontario has the most urgent problem (Basu et al. 2016). Nevertheless, there are provinces with average stays that are longer than that in Ontario, such as Nova Scotia, and the mortality rate under ALC designation is higher in other provinces as well (Basu et al. 2016). This suggests that although some provinces have not nearly the patient load dedicated to ALC, they are experiencing more acute problems in discharging the ALC patients they do have. In terms of policy instruments, some regions of Ontario, Alberta, New Brunswick and Nova Scotia have instituted regulations that make ALC a chargeable-to-patient hospital service on a sliding scale according to income; thereby, patients may not find it financially favourable to stay in ALC, making patient decision-making more incentive-neutral (Basu et al. 2016; Hamilton Health Sciences 2019). All of this suggests that no single solution such as adding long-term care beds or providing more homecare slots would be sufficient to match the exact fluctuating needs and preferences for ALC patient discharge at any particular point in time (Hermus et al. 2015). Even PSHs may only be partially helpful as the business model is often not viable where real estate prices are excessive and remuneration may be insufficient to cover mortgage or rent expenses (J. Zhang, personal communication, July 17, 2020).

Conclusion

A PSH program would allow many Ontarians to recuperate post-hospitalization nearer to their community of residence with greater dignity than in a hospital at less than a third of the daily cost without risking further exposure to hospital-based infections. With the impending uptick in the frail elderly as the baby boomer generation ages beyond 75 years, time is of the essence. The most recent Ontario provincial budget calls for $30.9 billion for new hospital infrastructure over the next decade, with an ever-growing demand for such infrastructure (Government of Ontario 2021). This money could be more optimally spent freeing up hospital capacity to serve greater numbers of acute care patients – for which there is a growing demand. The future is now, and innovative approaches to impending health policy dilemmas need to be considered alongside more conventional approaches to solve these problems.

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Notes

1. PSWs are unregulated professionals who care for people who are ill, elderly or need help with daily tasks.
2. The notion under this concept is that existing PSWs would not be eligible to participate in this program; only new applicants desiring to obtain this training would be eligible so as not to crowd out existing PSW capacity.
3. Non-SNS patients are those without dementia, complex medical needs or impaired mobility issues.
4. These LHIN regions include Central East LHIN, North Simcoe-Muskoka LHIN, Northeast LHIN and Northwest LHIN.
5. 1,000 beds × 365 days/year = 365,000 bed-days.
6. A handful of non-SNS ALC patients have been destined for other destinations including mental health, rehabilitation centres, palliative care, etc., but these account for less than 3% of such discharges (15 out of 575 non-SNS ALC patients) (CCO 2020).
7. $120 per day × 250 days × 2 clients = $60,000.
   $150 per day × 250 days × 2 clients = $75,000 annually.
8. It should be noted that some hospitals are constructed without any new in-patient beds (e.g., the new Women's College Hospital in Toronto, ON, is an ambulatory care hospital), and there are other purposes for hospital expansion beyond growth in bed capacity that include capital-intensive innovations involving new types of surgery, imaging, etc.). Thus, the cost per bed does factor in these complementary indirect costs as well as the direct costs of providing added bed capacity.

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RESEARCH PAPER

Process Evaluation of a Hub-and-Spoke Model to Deliver Coordinated Care for Children with Medical Complexity across Ontario: Facilitators, Barriers and Lessons Learned

Évaluation du processus d'un modèle en étoile pour offrir des soins coordonnés aux enfants présentant une complexité médicale en Ontario : facilitateurs, obstacles et leçons apprises

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Process Evaluation of a Hub-and-Spoke Model to Deliver Coordinated Care for Children with Medical Complexity

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Abstract

Background: Complex Care for Kids Ontario (CCKO) is a multi-year strategy aimed at expanding a hub-and-spoke model to deliver coordinated care for children with medical complexity (CMC) across Ontario.
Objective: This paper aims to identify the facilitators, barriers and lessons learned from the implementation of the Ontario CCKO strategy.
Method: Alongside an outcome evaluation of the CCKO strategy, we conducted a process evaluation to understand the implementation context, process and mechanisms. Semi-structured interviews were conducted with 38 healthcare leaders, clinicians and support staff from four regions involved in CCKO care delivery and/or governance.
Results: Facilitators to CCKO implementation were sustained engagement of system-wide stakeholders, inter-organizational partnerships, knowledge sharing and family engagement. Barriers to CCKO implementation were resources and funding, fragmentation of care, aligning perspectives between providers and clinical staff recruitment and retention.
Conclusion: A flexible approach is required to implement a complex, multi-centre policy strategy. Other jurisdictions considering such a model of care delivery would benefit from attention to contextual variations in implementation setting, building cross-sector engagement and buy-in, and offering continuous support for modifications to the intervention as and when required.

Résumé

Contexte : La stratégie pluriannuelle Complex Care for Kids Ontario (CCKO) vise la diffusion d'un modèle en étoile pour offrir des soins coordonnés aux enfants présentant une complexité médicale en Ontario.
Objectif : Ce document vise à identifier les facilitateurs, les obstacles et les leçons apprises de la mise en œuvre de la stratégie du CCKO en Ontario.
Méthode : Parallèlement à une évaluation des résultats de la stratégie du CCKO, nous avons mené une évaluation du processus pour en comprendre le contexte, les procédés et les mécanismes de mise en œuvre. Des entretiens semi-structurés ont été menés auprès de 38 dirigeants, cliniciens et personnel de soutien de quatre régions impliquées dans la prestation des soins ou la gouvernance du CCKO.
Résultats : Les facilitateurs de la mise en œuvre du CCKO étaient l'engagement soutenu des intervenants à l'échelle du système, les partenariats interorganisationnels, le partage des connaissances et l'engagement des familles. Les obstacles à la mise en œuvre du CCKO étaient les ressources et le financement, la fragmentation des soins, l'harmonisation des perspectives entre les prestataires ainsi que le recrutement et la rétention du personnel clinique.
Conclusion : Une approche flexible est nécessaire pour mettre en œuvre une stratégie politique complexe et multicentrique. D'autres autorités qui envisagent un tel modèle de prestation de soins bénéficieraient d'une attention accrue aux variations contextuelles de la mise en œuvre, notamment en renforçant l'engagement et l'adhésion intersectoriels et en offrant un soutien continu pour les modifications de l'intervention au besoin.

Introduction

Children with medical complexity (CMC) are characterized by chronic medical conditions, technology dependence, functional limitations and high healthcare utilization with multiple care providers from hospital to home (Cohen et al. 2011b). CMC account for less than 1% of Canada's children but a strikingly disproportionate use of healthcare across sectors of care, including 57% of all paediatric hospital costs (CIHI 2020). CMC may have substantial benefits from targeted and structured complex care interventions that aim to integrate care by providing a dedicated care coordinator, team-based care or shared plans of care (Berry et al. 2014; Cohen et al. 2012; Kuo et al. 2016). Building upon locally existing best practice models for CMC (Cohen et al. 2011a; Major-Cook et al. 2014), a provincial policy strategy known as Complex Care for Kids Ontario (CCKO) was launched in 2015 to expand integrated care for CMC across Ontario.

Advancements in medical technology, the growing burden of chronic diseases and fiscal constraints are putting immense pressure on health systems to restructure service delivery to reduce inefficiencies and improve quality of care (Goodwin et al. 2012; Valentijn et al. 2013). As the optimal care of patients with complex care needs requires a comprehensive understanding of the multi-system factors contributing to their well-being and a dedicated interprofessional team to monitor and address concerns, a variety of care delivery models have been developed and tested to support patients with complex needs (Coleman et al. 2017; Frankel and Bourgeois 2018; Poot et al. 2017). These complex interventions may contain many interconnected parts, target more than one group or organizational level, address multiple outcomes and work best when tailored to local contexts (Campbell et al. 2000; Craig et al. 2008). Process evaluations assessing the conditions of implementation and how delivery is achieved can shed important light on why an intervention was effective or ineffective, how the intervention works in practice and how a future design of similar families of interventions can be improved (Craig et al. 2008). To date, little is known about how context influences the implementation of multi-centre care integration interventions that have locally tailored activities targeting multiple professional groups and healthcare organizations (French et al. 2020; O'Cathain et al. 2013).

This paper presents a process evaluation conducted alongside a pragmatic randomized controlled trial of CCKO. It describes the contextual facilitators and barriers shaping intervention delivery and discusses the learnings for real-world implementation of population-level integrated care strategies. The findings of this study address current knowledge gaps around evaluating complex integrated care interventions, and offer insights and guidance for future design, implementation and evaluation of similar interventions – not just for CMC, but also for other complex patient populations whose care needs span multiple life domains and systems of care.

Background: CCKO Provincial Strategy

The CCKO strategy is based on a hub-and-spoke care delivery model for CMC, whereby each of the four tertiary paediatric hospitals ("hubs") in Ontario are responsible for both running an ambulatory complex care program within their centre and working collaboratively with care providers in the community to establish tertiary-integrated complex care clinics ("spokes") in different parts of their defined region (Major et al. 2018; Rosenbaum 2008). Northern Ontario is a dedicated region, which is a shared responsibility between the four regional hub sites.

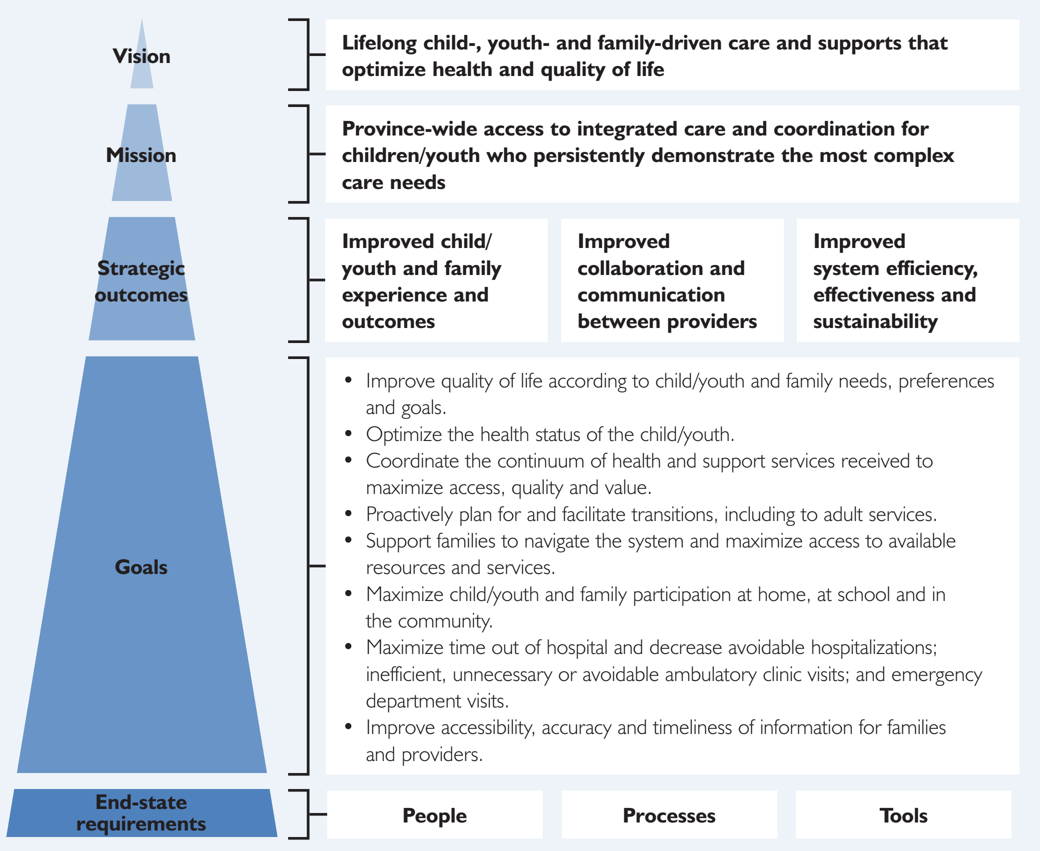
CCKO clinics aim to improve care continuity and coordination, facilitate communication between the patient's family and members of the care team and reduce health system costs (Orkin et al. 2019; PCMCH 2017). In active partnership with the children, their family and multidisciplinary providers, a tertiary-care-based nurse practitioner (NP) functions as a clinical key worker coordinating services in concert with medical specialists, allied health professionals, home and community care coordinators and community hospital physicians (Orkin et al. 2019). The NP develops and manages another important feature of the strategy – an individualized medical care plan that is used to facilitate care coordination among providers in multiple settings by streamlining information sharing and consolidating clinical visits (Gresley-Jones et al. 2015).

Setting for CCKO Implementation

The Provincial Council for Maternal and Child Health (PCMCH) is accountable to the Ontario Ministry of Health in leading the maternal-child healthcare system (Hepburn and Booth 2012). PCMCH oversees the implementation of the CCKO strategy by engaging and collaborating with the four regional hub sites, community partners and representatives from other sectors that deliver essential care to CMC.

The CCKO strategy was launched in 2015 as a five-year demonstration project based on cumulative recommendations from key stakeholders (PCMCH 2013) that were consolidated into a strategic framework (Figure 1). Funding has been allocated to each region according to the proportion of eligible children. All regions used the bulk of the funds to support the role of the NP.

FIGURE 1. CCKO strategic framework



Vision

Lifelong child-, youth- and family-driven care and supports that optimize health and quality of life

Mission

Province-wide access to integrated care and coordination for children/youth who persistently demonstrate the most complex care needs

Strategic outcomes

Improved child/youth and family experience and outcomes

Improved collaboration and communication between providers

Improved system efficiency, effectiveness and sustainability

Goals

- Improve quality of life according to child/youth and family needs, preferences and goals.
- Optimize the health status of the child/youth.
- Coordinate the continuum of health and support services received to maximize access, quality and value.
- Proactively plan for and facilitate transitions, including to adult services.
- Support families to navigate the system and maximize access to available resources and services.
- Maximize child/youth and family participation at home, at school and in the community.
- Maximize time out of hospital and decrease avoidable hospitalizations; inefficient, unnecessary or avoidable ambulatory clinic visits; and emergency department visits.
- Improve accessibility, accuracy and timeliness of information for families and providers.

End-state requirements

People

Processes

Tools

Provincial Policy Context

The CCKO strategy was developed in alignment with larger government-funded programs, including Health Links (2012) and the Ontario Special Needs Strategy (2014) designed to support people with chronic complex conditions and their families (Government of Ontario

2012, 2014). The CCKO strategy also aligned with Ontario's health system transformations, including the Patients First Strategy (2015), aimed at improving patient-centredness and health system accountability for important outcomes (Ontario Ministry of Health and Long-Term Care 2015).

CCKO Project Governance

Within its mandate as a provincial program, the PCMCH provides project oversight and implementation support for the CCKO strategy. PCMCH has convened a CCKO-focused Leadership Table that provides strategic oversight and shared accountability for the planning and implementation of the CCKO strategy (Box 1).

BOX 1. CCKO Leadership Table

Mandate

Meet at least quarterly and provide strategic direction for the following:

- Setting consistent program standards
- Implementation oversight and monitoring
- Removing barriers and mitigating risks
- Establishing and achieving annual goals in alignment with commitments
- Developing recommendations for resource allocation and future direction

Composition

PCMCH project lead
PCMCH executive director
Senior leaders (administrative and clinical) from the four tertiary care hub sites (Children's Hospital – London Health Sciences Centre, McMaster Children's Hospital – Hamilton Health Sciences, The Hospital for Sick Children and CHEO)
Children's treatment centre partners
Family partners
Local Health Integration Network partners
Home and community care sector partners
Community hospital partners

Evaluation of the CCKO Strategy

PRAGMATIC TRIAL

An outcome evaluation of the CCKO strategy is being conducted using a pragmatic, randomized, waitlist control trial that compares the effectiveness of the CCKO model to usual, uncoordinated care for CMC in Ontario. A detailed protocol for the outcome evaluation of CCKO has been reported elsewhere (Orkin et al. 2019), and results will be published separately (anticipated in 2022).

PROCESS EVALUATION

A process evaluation of the CCKO strategy reported in this paper was conducted in the final year of the demonstration project to understand how implementation was achieved across the regions and to identify contextual issues necessary for implementation success. Findings will help determine the best approach for stabilizing and expanding paediatric ambulatory complex care programs in Ontario.

Method

This is a qualitative study with healthcare leaders, clinicians and support staff from healthcare delivery and policy/planning organizations involved in CCKO implementation. Administrative and program monitoring data collected and maintained by the PCMCH from 2015 to 2019 were used to corroborate and augment the interview data. This work was guided by the UK Medical Research Council (MRC) process evaluation framework, which includes three major domains: (1) implementation (how the intervention is implemented); (2) mechanisms of impact (intermediate mechanisms by which the intervention generates its outcomes); and (3) context (facilitators and barriers that affect an intervention's implementation or its effects) (Moore et al. 2015). This study was approved by The Hospital for Sick Children Research Ethics Board (REB number: 1000062809). All participants provided written informed consent.

Participants and recruitment

Regional hub sites based in tertiary paediatric hospitals (*n* = 4) and complex care clinics (*n* = 10) based either in a community hospital or a children's treatment centre that implemented the CCKO strategy were identified for study inclusion. The administrative lead at each regional hub site facilitated access to eligible participants from their region. In May 2019, we used purposive sampling to recruit medical and administrative leads, front-line healthcare providers and support staff and Leadership Table *ex officio* members involved in CCKO implementation between October 2015 and May 2019. A maximum variation sampling approach guided the selection of participants with heterogeneity in their professions, care settings and sectors, level and region of CCKO implementation. We reached theoretical saturation of perspectives that reflect the experiences of diverse individuals involved in CCKO. Potential participants were recruited via e-mail invitation letters.

Data collection

Between June and August 2019, we conducted semi-structured interviews with 38 participants who provided informed written consent to participate. Open-ended interview questions (Appendix 1, available online at longwoods.com/content/26574) informed by the MRC process evaluation components explored the processes entailed in implementing the CCKO strategy from the perspectives of healthcare leaders, clinicians and support staff. The interview questions also focused on how participants responded to and interacted with the CCKO strategy, and the facilitators and barriers that influenced the CCKO's delivery. Interviews were audio-recorded, transcribed verbatim and checked for accuracy.

Data analysis

Coding of the interview transcripts was conducted by three members of the research team (Samantha Quartarone, Jia Lu Lilian Lin and Carol Y. Chan). Interpretive description analysis was performed to make sense of participants' experiences related to CCKO implementation in the context of the practice setting (Thorne 2008; Thorne et al. 1998). Interview transcripts were organized and coded using the qualitative data analysis software NVivo 12. High-level codes were developed deductively from the MRC framework (Moore et al. 2014). Sub-codes were generated inductively through repeated data immersion and iterative coding based on "emergent" themes (Thorne et al. 1998). The codebook was continually refined through the addition, grouping and regrouping of codes and team discussions to develop and refine context-sensitive interpretations and explanations.

Results

Table 1 provides a detailed breakdown of study participants according to their role in implementing the CCKO strategy. Among the 38 participants, 11 (29%) were members of the CCKO Leadership Table and included clinical and administrative leads of regional hub sites and *ex officio* members, 23 (61%) were front-line healthcare providers and the remaining four (11%) were involved in CCKO delivery in an administrative role within a complex care clinic.

TABLE 1. Participant breakdown by CCKO role

CCKO role	*n* (%)
Leadership Table member	11 (29)
Clinical lead of regional hub site	4 (11)
Administrative lead of regional hub site	4 (11)
Ex officio member*	3 (8)
Healthcare provider (not on Leadership Table)	23 (61)
Nurse practitioner	8 (21)
Physician	6 (16)
Allied health professional	4 (11)
Home and community care coordinator	5 (13)
Administrative staff (not on Leadership Table)	4 (11)
Program manager	2 (5)
Administrative coordinator†	2 (5)
Total	38 (100)

* Members of the CCKO Leadership Table who had no direct involvement in care delivery at any CCKO clinic

† Individuals responsible for scheduling and coordinating patient appointments and other nonmedical matters

The CCKO strategy was implemented via a low-to-high fidelity approach, encouraging regions at various levels of paediatric complex care development to use their dedicated funding to stimulate start-up as they best saw fit. Newer regions were supported to gradually increase fidelity to the CCKO model by adhering to the core components of CCKO (i.e., clinical key worker, complex care plan and care coordination). This paper reports on the contextual influences on CCKO's implementation as this understanding will be crucial for explaining potential variation in intervention effects and identifying optimal approaches for scaling up and adapting the CCKO to other settings or populations (Craig et al. 2018).

Facilitators and barriers to CCKO implementation

Table 2 summarizes the facilitators and barriers to implementing the CCKO strategy.

FACILITATORS

Provincial project governance and community of practice

Participants described how the provincial project governance, including convening a CCKO-specific Leadership Table, facilitated implementation. Context-specific challenges and gaps in the provincial service delivery system for CMC were voiced. For instance, the CCKO standardized enrollment criteria were liberalized to include rurality as a criterion to promote equitable access to care. Leadership Table members appreciated the opportunity to share and learn about practices for creatively implementing CCKO locally. One Leadership Table member recalled the following:

> I really liked the creativity of some of the sites. [F]or example, in the … region, they had their complex care clinic … embedded in their children's treatment centre… We thought that was really innovative in that region [be]cause it was getting closer to home and was putting less of a burden on families to come to a more urbanized bigger city. … Each region came up with their own interesting approaches to what was best for their geography and their resources.

TABLE 2. Facilitators and barriers to CCKO implementation

Facilitators	Barriers
i. Provincial project governance and community of practice ii. Inter-organizational partnerships iii. Knowledge sharing between tertiary hub sites and complex care clinics iv. Family engagement in care delivery, program design and governance	i. Resources and funding ii. A fragmented system of healthcare delivery iii. Disconnect in perspectives between providers in different settings of care iv. Limitations in clinical infrastructure v. Challenges with recruitment and retention of healthcare professionals

Moreover, through the work of the Leadership Table in fostering stronger cross-regional relationships, the more established regions hosted multiple site visits for clinicians and administrators from newer regions to gain a thorough understanding of how the complex care program operates. This community of practice furthered the capacity of newer regions to build their own complex care delivery model based on local conditions.

The Leadership Table promoted the exchange and integration of perspectives between hospital and non-hospital actors. Healthcare leaders from community and rehabilitation care saw CCKO as "the biggest opportunity to build relationships, and essentially establish the credibility of community-based providers."

Inter-organizational partnerships

Local Health Integration Networks (LHINs) are Ontario's regional health authorities that plan, fund and integrate local healthcare services (Ronson 2006). The 14 geographically defined LHINs are important system partners in the CCKO strategy, with LHIN care coordinators providing case management and coordination of home and community services for CMC (Cohen et al. 2011a). Given the sustained relationships that LHIN care coordinators establish with families, and CMC's almost universal need for LHIN-based resources (e.g., home care), strong partnerships between complex care clinics and LHINs is essential for delivering holistic care and bridging the gaps between the medical and community service sectors. Since the initiation of the CCKO strategy, LHIN care coordinators have attended complex care clinic visits more consistently. LHINs that were well integrated with complex care clinics tended to have a longer history of collaboration with complex care; LHIN-initiated care coordination services targeting CMC; and/or dedicated LHIN care coordinators to attend complex care clinic visits.

Despite the separate funding streams for tertiary hub sites and children's developmental and rehabilitation services (e.g., children's treatment centres in Ontario), novel partnerships occurred through the CCKO strategy, whereby healthcare providers from tertiary hub sites ran collaborative clinics at children's treatment centres in smaller, less urbanized communities. A CCKO Leadership Table member described this innovative adaptation to the CCKO model as demonstrating

> the capacity and expertise that lives within the community [and providing] the opportunity to deliver care close to home, enable a better care experience and bring a hospital team and a community team together around the family.

Stronger relationships between complex care teams and rehabilitation providers streamlined information sharing and increased the frequency of co-located appointments.

Knowledge sharing between tertiary hub sites and complex care clinics

The CCKO's hub-and-spoke care delivery model – whereby NPs from tertiary complex care teams travelled to community clinics to work in collaboration with the local care team – enabled cross-site knowledge sharing, which was instrumental in the expansion of complex care clinics. The NPs brought specialized paediatric complex care knowledge and logistics experience for new clinics. In one CCKO region, the tertiary hub site had a centralized referral system to triage new patient referrals, which lessened the administrative burdens on community clinics.

Family engagement in care delivery, program design and governance

Family engagement occurred on three levels of the CCKO strategy: (1) at the clinical level as a key member of the multidisciplinary complex care team; (2) at the regional level on the tertiary care centre's complex care family advisory council; and (3) at the provincial level as a member of the CCKO Leadership Table.

Some regions had established strong partnerships with family advisors in developing new complex care clinics by involving families of CMC in program co-design and advocacy for clinic funding alongside clinical leaders. At the provincial level, family advisors sat on the Leadership Table, and families from across the province participated in annual CCKO symposia and contributed to CCKO strategic planning.

BARRIERS

Resources and funding

The common Canadian challenge with scaling up innovative healthcare practices was reflected in the CCKO strategy, which was created as a demonstration project with concurrent evaluation of its effectiveness (Bégin et al. 2009; Health Canada 2015). This *pilot project status* created a sense of uncertainty about sustainability. Disparities in resourcing and access to specialized healthcare services across Ontario complicated the CCKO strategy's goal of delivering consistent access to and quality of complex care services regardless of geographic location. The greatest disparities in resource availability, provider expertise and service system capacity were seen between urban centres and Northern Ontario, which is a large and dispersed region. A disjointed funding structure that requires both provincial and federal funding streams in some Northern Ontario communities was another barrier to CCKO's consistent care delivery.

Social workers played an integral role in helping families access counselling, social supports and funding. However, most CCKO clinics functioned without a dedicated complex care social worker and often had to "borrow" social workers from other departments. For families, a lack of nursing care and mental health support were among their biggest challenges. As discussed by several complex care providers,

> these families are some of the most complex, stressed families [that] need a very specialized type of support.

The legislated service maximums exacerbated families' struggles when their care needs exceeded the amount of nursing and personal support services for which they qualified. Although funding for the CCKO strategy began to encompass allied health professionals in the strategy's later years, it remained insufficient to sustain dedicated allied health professionals (e.g., dietitians, social workers) who were endorsed as critical members of complex care teams.

A fragmented system of healthcare delivery

A lack of policy-level integration of the service sectors that CMC and their families depend on hindered complex care providers' ability to provide continuity of care using a provincially standardized approach. One such example highlighted in the interviews was the disconnect between ambulatory complex care programs and primary care. A complex care provider described the situation:

> We need to better formalize those partnerships with the family physicians and primary care to work together. … [T]hat's something that has to happen in the future to really provide the wraparound services for these kids so that they have good community care in addition to the complex care in the hospital or in their local hospital or community.

Moreover, the gaps in social and mental health supports for family caregivers of CMC were evident in the pervasiveness of parental burnout, which was beyond the CCKO strategy's capacity to target and support. A healthcare provider stated the following:

> I think these children are well looked after from a medical perspective … but the bigger gap that I'm seeing is that these families are struggling from a mental health perspective. A lot of them have severe fatigue, possibly diagnosed mental illness [and] post-traumatic stress syndrome.

Disconnect in perspectives between providers in different settings of care

A misalignment in perspectives was found between hospital and community providers regarding which resources can be provided in a community setting. From the perspectives of LHIN care coordinators, their role was not fully understood by some members of the hospital-based complex care team, and this created challenges for LHINs to become fully integrated into complex care programs. One LHIN care coordinator said:

> One of the things that we do struggle with a lot of times is the assumption that it's just a one-stop shop with the LHIN, and that we have this abundant amount of money that we can just [use to] provide nursing support to every child in the same amount or the maximum amount. And that's not always the case. … We're continuing to work with the complex care team to ensure that families [understand the LHIN's limitations], and to find other options that might be out there to fill in the gaps.

Inconsistencies in organizational policies, standards and health information platforms further challenged interagency providers' ability to collaborate as an "integrated team."

Although a lack of alignment in perspectives discouraged information sharing between sites, LHIN care coordinators felt optimistic because communication between the hospital and community providers has been steadily improving as complex care programs become more established.

Limitations in clinical infrastructure

Shortage of available clinic space made it necessary to limit the frequency of clinic days and appointment length at sites. For example, one complex care clinic could only allot two hours for each intake appointment and 45 minutes for each follow-up. The NP shared the following:

> [T]hat puts a lot of pressure [on] the appointments. … 45 minutes is not enough time to have a dietitian see them and do a comprehensive history, do a full med[ication] reconciliation, do a systems review, talk about the issues, do a physical exam and have a multidisciplinary team approach. [I]t becomes even more challenging when you have an interpreter and communication takes a little bit longer.

The lack of clinic space with specialized equipment and medical technology was a barrier for clinics to accommodate highly medically complex or acutely unwell patients.

Challenges with recruitment and retention of healthcare professionals

During the CCKO expansion, clinics farther away from urban centres encountered serious workforce shortages – particularly regarding NP hiring and retention – that slowed down the establishment of new complex care clinics. Some regions were impacted by a shortage of bilingual healthcare providers to serve francophone communities.

Shortages of administrative staff sometimes pushed complex care NPs to assume additional administrative tasks related to appointment coordination, which diminished the clinics' ability to attract and retain NPs. At one site, the high provider turnover made families reluctant to enroll in the program and weakened their trust in the clinic.

Conversely, clinical staff recruitment was less challenging in clinics based in urban centres, where most of Ontario's specialized training programs in paediatric complex care are offered, enabling these complex care clinics to hire more NPs with a high level of expertise.

Across the province, especially in rural and remote communities, engaging community paediatricians to support care for CMC was difficult due to fee-for-service billing structures and the need for longer appointments. Suboptimal engagement from community paediatricians in one region led to the adoption of an adapted model whereby the entire tertiary complex care team travelled to community clinics to provide comprehensive care. While this was beneficial for some families, it incurred additional costs and burden to the tertiary centre, was unsustainable in the long term and likely did not help empower local communities in caring for CMC.

Discussion

The CCKO strategy's strong engagement of cross-disciplinary stakeholders – underpinned by consistent alignment with Ontario's healthcare policy priorities throughout project establishment and implementation – made it a unique case study of the influence of context on a large-scale complex policy strategy. The MRC framework, which recognizes that complex interventions may work better if they are sensitive and tailored to the local context and culture, helped understand how contextual factors facilitated or hindered the implementation of CCKO (Craig et al. 2018; Craig et al. 2019).

The use of a low-to-high fidelity approach to CCKO implementation allowed regions that had more established complex care programs to share their expertise and experience with newer regions by hosting site visits and engaging in ongoing knowledge exchange. Newer regions were supported to gradually adopt components of the CCKO model in line with regional capacity, resources and circumstances. However, this flexible implementation approach has likely contributed to variations in CCKO impact across regions, based on interactions between the intervention components and differential regional contexts. Our results demonstrated that the geographical, cultural, organizational and financial domains of the context from a recent MRC framework played predominant roles in CCKO implementation (Craig et al. 2018). In expanding the CCKO strategy, greater attention to the provisions that already exist in each region and assessment of these key domains of context is needed to avoid reinforcing inequitable access to care across Ontario.

The fragmentation of the healthcare system and compartmentalization of services across sectors are known barriers to complex care program implementation (Altman et al. 2018; Foster et al. 2017; Miller et al. 2009). In our study, healthcare professionals voiced concerns that the disjointed healthcare system with siloed funding streams impeded their capacity to provide continuous and holistic care to families. These findings echo those of an Ontario study of health systems integration, which showed that complex rules, top-down control and rigid structures constrained integrated care development (Tsasis et al. 2012). Healthcare professionals in our study sometimes needed to use ad hoc approaches to bridge cross-sectoral services for CMC. Similar to Tsasis et al. (2012), we observed a disconnect in perspectives and communication difficulties among providers from different care settings.

Extending prior research on the influence of geographic factors on care coordination for CMC (Cady and Belew 2017; Miller et al. 2009), we found the geographical context to be a strong determinant for other implementation barriers and facilitators, including health system structure, resources and funding, cross-sector partnerships and provider recruitment and retention. For example, the costs of scaling up CCKO was likely higher in a region with a more dispersed population, as was the difficulty in recruiting and retaining providers with specialized paediatric expertise.

Based on team discussions of study findings grounded in the complex intervention implementation literature, we present the following recommendations for stabilizing and expanding paediatric ambulatory complex care programs in Ontario as the CCKO strategy moves from a demonstration project to an annually funded initiative:

a. A collaborative governance structure with representation from a wide array of stakeholders is essential for implementing large-scale initiatives that require cross-discipline and cross-sector partnerships (Suter et al. 2009). The PCMCH should continue to serve as the oversight organization for CCKO to facilitate the engagement of system-wide stakeholders, co-development of provincial care delivery standards and inter-organizational partnerships.
b. Considerable asymmetries in access to resources between CCKO regions due to geographical factors warrant an adaptable approach to expanding complex care programs in each region. Stable funding support is needed for tailoring the intervention to address the unique social, cultural, organizational and financial barriers to care integration in each region. This implementation approach should be fluid as needs change in each region.
c. Finally, complex care scaling-up efforts should prioritize the building of local capacity by strengthening partnerships between tertiary hub sites and community partners, such as the 26 children's treatment centres in Ontario, to operate complex care clinics. Strategic partnerships will nurture a holistic understanding and shared vision for systems integration (Humowiecki et al. 2018) and enable optimal leveraging of existing human resources, clinic space and remote care technologies in the community to provide high-quality care closer to home.

The findings from this process evaluation of CCKO will enrich our interpretation of the pragmatic trial results in three key ways. First, a nuanced understanding of the differential contexts across implementing regions will allow us to draw links between issues in the external environment and possible variation in CCKO effectiveness between regions. Second, mapping out how CCKO implementation was tailored to meet the needs of local context will help us identify potential reasons that the intervention's actual impact may have differed from its expected impact. Finally, we will be able to contextualize the pragmatic trial results to generate new learnings about the transferability of the CCKO strategy to other jurisdictions that have a different set of implementation circumstances.

Future research on large-scale implementation of complex interventions may explore how domains of context shape intervention modifications and shed light on key considerations when developing intervention modifications tailored to local context. Process evaluation frameworks for complex interventions should incorporate clearer guidance that accounts for variations in the context of implementation and intervention modifications, particularly for multi-site interventions (Evans et al. 2019). Future research on paediatric complex care should build on current knowledge of its theoretical active ingredients, and investigate how contextual variables could be systematically incorporated into intervention design to achieve intervention effectiveness in adapted settings (Feudtner and Hogan 2021).

Limitations

This multi-centre study included a heterogeneous sample of healthcare leaders, clinicians and support staff from diverse care delivery settings serving CMC. Recruiting a maximum variation sample enabled the collection of rich data. While almost one third of participants were members of the CCKO Leadership Table, the remaining participants held mostly clinical roles. The heavy representation of healthcare providers in our sample may have led the perspectives of clinicians to dominate in our findings. This study did not report on implementation fidelity, reach or process, or family member perspectives. These will be reported in ongoing research assessing the outcomes of CCKO.

Conclusion

This study provided insights into the barriers and facilitators to implementing a provincial policy strategy for improving system-wide care delivery for CMC. Contextual factors are found to be interconnected but varied across regions, highlighting the significant role played by context on implementation and program effectiveness (Craig et al. 2018). A flexible approach to CCKO implementation was welcomed by regions that tailored the program to meet local resources and circumstances. Other jurisdictions considering such a model of care delivery would benefit from attention to contextual variations in implementation setting, building engagement and buy-in from cross-sector stakeholders and offering continuous support for modifications to the intervention as and when required.

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