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Politiques de Santé

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

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HEALTHCARE
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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

Beyond Pilots: Scaling and Spreading Innovation in Healthcare

LONG AFTER MONIQUE BÉGIN FIRST REMARKED THAT CANADA IS A COUNTRY OF pilot projects (Bégin et al. 2009), health leaders continue to debate how best to scale, spread and sustain innovations that deliver value. This test has proven to be one of the core challenges – and opportunities – of modern health systems. Great ideas don't always make it beyond local pilots and can fizzle over time as champions move on. In fact, the idea for this editorial came from a meeting where several leaders argued that innovations never spread – that the health system was, in fact, incapable of achieving change at scale.

There are definitely times when change in the health sector is frustratingly slow, with promising innovations getting mired in a variety of roadblocks or stuck as local gems that fail to benefit those in other services or regions. It is clearly important to study and learn why this happens. *Healthcare Policy/Politiques de santé* has published research and commentaries with many examples of this phenomenon over the years and will continue to do so. In fact, you will find several related articles in this issue of the journal alone.

But it is not true that all innovations fail to grow and deliver value beyond the context in which they were first introduced. Studying these successful experiences can be at least as instructive as learning from the failures, just as it is important to understand why not all individuals with what appear to be similar risk factors develop health problems. In fact, this resilience may provide important clues about how to improve health more broadly.

With this in mind, I started scribbling a list of innovations that had scaled and spread, from electronic medical records (EMRs) in primary care to programs that are eliminating polio and other communicable diseases on a global scale. Take the former as an example – according to the National Physician Survey, 77% of primary care physicians now report using EMRs, up from 37% five years ago, and rates continue to grow, with many of today's paper practices indicating that they plan to use EMRs within the next two years (NPS 2015). In a few minutes, I had a list of innovations that had outgrown the small pad of paper provided by the hotel and at the break my table companions added many more examples to the tally.

For further inspiration, I turned to social media. Perhaps the most pervasive – and still growing and evolving – innovation of recent years, it is also a fast way to crowdsource a range of ideas and perspectives from a diverse global community. Since I am connected via LinkedIn, Twitter, and other networks to a number of people who care about improving healthcare, I posted a request to help identify successful innovations from the last 10 to 15 years, whether from nearby or far away, resource rich or resource poor settings. I asked those responding to focus on changes that represented a substantive shift in health services delivery or organization, rather than in the use of particular drugs or specific techniques.

The result was a generous outpouring of ideas, with examples from around the world, ranging from guinea worm eradication efforts and mortality-reducing transformations in maternity care in Sri Lanka to care bundles that improve surgical safety and organizations/jurisdictions that have introduced systematic initiatives to foster change. There were both high- and low-tech innovations, ones whose primary goal was to change culture and ones focused on very specific changes in clinical practice. I am also grateful for the new contacts and resources that I learned about as part of this process.

So what did the successful innovations have in common? Most were complex interventions that reflected best practices in change management. They were about transforming cultures as much as changing technologies or techniques, about making the right thing to do the easy thing to do. Which doesn't mean that healthcare transformation is easy. The examples identified tended to reflect an understanding that for a new approach to become the accepted 'way we do things around here' involves a collective effort with thought to governance and leadership, stakeholder engagement, communications, training and education, workflow analysis and integration, and monitoring and evaluation.

Want to join the discussion? I invite you to do so via social media or by submitting research or evidence-informed discussion and debate articles to *Healthcare Policy/Politiques de santé*. In doing so, you will join a diverse community of authors writing about a wide range of health policy questions. For instance, this issue of the journal addresses enablers and barriers to the reform of primary care, regulation of health professions, advancing care for individuals with cancer, substance use challenges, and much more. I hope that these articles will stimulate your thinking about healthcare transformation, whether at a local or global level.

JENNIFER ZELMER, PHD
Editor-in-chief

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ÉDITORIAL

Au-delà des projets pilotes : la diffusion des innovations dans les services de santé

Bien après que Monique Bégin eut remarqué que le Canada était un pays de projets pilotes (Bégin et al. 2009), les leaders de la santé débattent encore sur les meilleures façons d'appliquer à plus grande échelle, de diffuser et de soutenir les innovations qui portent fruits. Cette question est l'un des plus grands défis – et par le fait même une des plus grandes opportunités – pour les systèmes de santé d'aujourd'hui. Parfois, les meilleures idées ne dépassent pas l'étape du projet pilote et s'étiolent avec le temps, alors que leurs défenseurs passent à autre chose. En fait, l'idée derrière cet éditorial m'est venue lors d'une réunion où plusieurs leaders affirmaient que les innovations ne se propageaient jamais, qu'il était pratiquement impossible d'apporter des changements à grande échelle dans les systèmes de santé.

Il est vrai qu'à l'occasion, la lenteur des changements dans le secteur de la santé est source de frustration. Les innovations prometteuses se heurtent souvent à une infinité d'obstacles ou restent figées à l'échelle locale, sans que leurs bénéfices ne s'étendent à d'autres services ou régions. Il ne fait aucun doute qu'il faille étudier les raisons derrière ce phénomène. *Politiques de santé/Healthcare Policy* a d'ailleurs publié plusieurs recherches et commentaires sur ce sujet, et continuera de le faire. Le présent numéro de la revue présente, en effet, de nombreux articles liés à cette question.

Il est faux, cependant, de croire que toutes les innovations sont vouées à l'échec ou qu'elles ne peuvent apporter leurs bienfaits au-delà du contexte dans lesquelles elles ont été mises au point. L'étude de ces réussites peut être aussi enrichissante que l'étude des échecs; autant qu'il est important de comprendre pourquoi toutes les personnes qui présentent des facteurs de risques similaires ne développeront pas nécessairement des problèmes de santé. En fait, cette résilience peut donner d'importantes pistes sur les façons d'améliorer la santé dans son ensemble.

C'est avec cette idée en tête que j'ai commencé à dresser une liste d'innovations qui se sont diffusées à plus grande échelle. Les projets sur ma liste allaient des dossiers médicaux électroniques (DME) aux programmes qui ont permis l'éradication de la poliomyélite ou d'autres maladies contagieuses dans le monde. Pour en revenir aux DME : selon le Sondage national des médecins, 77 % des médecins de première ligne indiquent qu'ils utilisent les DME, contre 37 % il y a cinq ans. Et les taux continuent de croître puisque plusieurs cliniques qui emploient encore des dossiers papier prévoient utiliser les DME d'ici à deux ans (SNM 2015). En quelques minutes, j'avais déjà devant les yeux une liste d'innovations qui débordait du petit bloc-notes fourni par l'hôtel. Pendant la pause, mes collègues avaient ajouté plusieurs autres exemples à l'inventaire.

Pour trouver d'autres idées, je me suis tournée vers les médias sociaux. Il s'agit sans doute de l'innovation la plus répandue des dernières années, qui continue toujours de croître et d'évoluer. C'est aussi une façon rapide de glaner des idées et des points de vue provenant de diverses parties du monde. Puisque je suis connectée (par LinkedIn, Twitter et autres réseaux) à plusieurs personnes qui s'intéressent aux systèmes de santé, je leur ai demandé d'identifier les réussites en matière d'innovations pour les 10 ou 15 dernières années, qu'elles proviennent d'établissements proches ou éloignés, riches ou pauvres en ressources. Je leur ai demandé de penser à des changements qui avaient donné lieu à une transformation substantielle dans la prestation ou l'organisation des services de santé, plutôt que de se centrer sur l'utilisation d'un médicament précis ou d'une intervention particulière.

J'ai ainsi recueilli une myriade d'idées provenant de partout sur la planète, allant des efforts visant l'éradication de l'infestation par le ver de Guinée aux modifications des soins de maternité au Sri Lanka afin de réduire la mortalité, en passant par les ensembles de soins pour la sécurité chirurgicale ou encore la mise en place d'initiatives pour favoriser les changements au niveau des systèmes. La liste recensait autant des innovations de haute technologie que des innovations plus rudimentaires. Certaines avaient comme objectif de transformer la culture, d'autres visaient un changement précis dans la pratique clinique. Je dois ajouter, entre nous, que je suis ravie des nouveaux contacts que j'ai établis et des nouvelles ressources dont j'ai appris l'existence au cours de l'exercice.

Alors, qu'ont en commun les réussites en matière d'innovations? La plupart consistent en des interventions complexes qui emploient les pratiques exemplaires de la gestion des changements. Elles ont trait à la transformation de la culture aussi bien qu'aux changements technologiques ou techniques; souvent il s'agit simplement de faire les choses correctement pour les simplifier. Cela ne veut pas dire pour autant que la transformation des services de santé est chose facile. Les exemples recueillis semblent démontrer que pour qu'une nouvelle démarche proposée devienne « la façon de faire », il faut conjuguer les efforts collectifs à un solide leadership de gouvernance, à l'engagement des diverses parties prenantes, à la communication, à la formation, à l'analyse des étapes de traitement, au suivi et à l'évaluation.

Cette discussion vous intéresse? Je vous invite à y participer en visitant les réseaux sociaux ou en soumettant un rapport de recherche ou un article de discussion éclairé par les données probantes à *Politiques de santé/Healthcare Policy*. Ce faisant, vous vous joindrez à une riche communauté d'auteurs qui s'intéressent à une vaste gamme de questions touchant aux politiques de santé. À titre d'exemple, le présent numéro de la revue porte, entre autre, sur les obstacles et les facteurs favorables à la réforme des soins de santé primaires, sur la réglementation des professionnels de la santé, sur l'avancement des soins pour les personnes atteintes du cancer et sur les défis liés aux problèmes de dépendance. J'espère que ces articles stimuleront votre réflexion sur la transformation des services de santé, que ce soit à l'échelle locale ou mondiale.

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JENNIFER ZELMER, PhD
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Migrants, Manpower and Math in the Coming Europe

Migrants, main-d'œuvre et mathématiques dans l'Europe de demain

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Abstract

"A dead child" said Stalin "is a tragedy. Two million are a statistic." A single photograph of a beach riveted world attention, converting Syrian refugees from statistics to tragedy. But the statistics remain.

Three Canadian columnists have offered contrasting interpretations. Eric Reguly argues that a static and aging Europe needs more manpower to sustain its economy. Margaret Wente, however, observes the failure of integration of migrants in Sweden. Migrants are drawn by open borders and a generous welfare state, but do not fit an advanced, high-skill economy. Gwynne Dyer notes that current inflows, IF evenly distributed, are a tiny proportion of the overall European Union. But economic migrants from Africa are a much larger issue. Their numbers are effectively inexhaustible.

Résumé

« Une mort est une tragédie, disait Staline, un million de morts est une statistique. » La photographie prise sur une plage a captivé l'attention du monde entier, faisant passer de statistique à tragédie le sort des réfugiés syriens. Mais la statistique demeure une réalité.

Trois chroniqueurs canadiens ont présenté des interprétations divergentes. Eric Reguly affirme qu'une Europe statique et vieillissante a besoin de plus de main-d'œuvre pour soutenir son économie. Margaret Wente, par contre, rappelle l'échec de l'intégration des migrants en Suède. Les migrants sont attirés par les frontières ouvertes et l'État providence, mais ne trouvent pas facilement leur place dans une économie hautement développée et spécialisée. Gwyn Dyer, pour sa part, fait remarquer que le nombre actuel de migrants ne représente qu'une infime proportion de l'ensemble de l'Union européenne, si on les distribue uniformément. Mais les migrants économiques provenant d'Afrique représentent un enjeu beaucoup plus important. En effet, leur nombre est incommensurable.

Manpower: It's Not What You Thought

> Let me begin … by saying that I find the whole manpower concept repulsive, disgusting, dangerous, fascistic, communistic, incompatible with the ideals of liberal democracy, and unsuitable company for the minds of the young. … The manpower concept is basically, I suspect, an engineering concept … and one of the main problems of society is to keep engineers in a decently subordinate position. … It contemplates society as having a single well-defined end [SWED] … which is to be pursued with *efficiency*. … I suspect, however, that the ardent proponents of manpower… actually want to maximize … the output of SWED. … The only trouble with SWED is there is no Single Well-Defined End of society. Different people have different objectives. Moreover, there is no such thing as manpower … . [There are only] men … (Boulding 1953)

Don't hold back, Ken! Tell 'em what you *really* think.

Kenneth Boulding was one of the most original minds among the previous generation of American economists. He also commanded a pretty decent prose style. In this early broadside against the concept of manpower, Boulding is not foreshadowing the politically correct emasculation of the English language that lumbers us with such infelicitudes as "human resources." (We are not even tonnes of steel, but potential iron mines.) Sixty years ago that enlightenment was not even on the horizon. Rather, he was objecting – strenuously – to the practice of creating pseudo-concepts by aggregating the un-aggregatable. For some purposes it may be legitimate to add up apples and oranges (or lawyers, nurses and jet pilots) and treat the sum as a homogenous entity. For others, it can be seriously misleading.

In Boulding's view, the concept of "manpower" commits the sin of aggregation twice, first in aggregating all the different forms of human capacity – effort, skill and thought – into a single homogenous form of raw material, similar to steel or potash, and second, by evaluating the efficiency of its use against some imaginary single well-defined social objective. Both forms of aggregation generate concepts that can be readily quantified and manipulated mathematically, uninhibited by the fact that they are meaningless.

In 1953, of course, Boulding was still writing in the shadow of the Second World War. Then, postulating a single well-defined social objective was not unreasonable. And men and women were, in fact, pretty much classes of manpower.

But that was then, this is now. Freed of the exigencies of total war, the various members of our societies are able to choose among a wide variety of different ends and negotiate in various ways whose objectives shall have what degree of priority. These people are not raw material for some overriding end.

From Manpower to Migrants

Boulding's old rant came to mind as I was reading two recent articles in the *Globe and Mail*, both stimulated by the migrant crisis in Europe, but with sharply contrasting implications for how to think about it (and by extension, respond to it). Eric Reguly (2015) takes a very positive view of the newcomers, summarized in his title: "Ignore the Fear Mongers, Europe's Economy Needs Migrants." Margaret Wente (2015) draws on the Swedish experience to offer a considerably darker picture, concluding: "They [the Swedes] cannot afford it."

Reguly's view, it seems to me, arises from treating the migrants as "manpower," or if you prefer, "human resources," that can support renewed growth in Europe's gross domestic product (GDP) – too often, today's single well-defined social objective. Wente takes a much more highly differentiated view of the migrants, and of the prospects for turning them into national income.

What relevance does this have for a journal on healthcare policy? Well, Reguly argues that renewed economic growth is essential to preserve the European "welfare states." Wente suggests that they will be weakened, if not bankrupted, as the migrants bring costs without commensurate benefits. For Reguly, migrants are manpower. Wente emphasizes their diversity, and particularly their differences from the host populations.

Note that Wente says "they can't afford it" – presumably, the present residents of Sweden, i.e., people. Reguly refers to "Europe's economy," which "needs migrants." But an economy is not a big person or even a big group of people. It is an abstract idea referring to a vast range of human activities and as such cannot have needs. Only people have needs. The common shorthand that reifies the abstract concept of an economy presumably stands for the people who in various ways participate in and benefit from the economic activity that takes place in a geographic or political region called "Europe." Reguly's affirmation that Europe needs migrants presumably means that Europeans would be better off, at least in economic terms, as a result of the influx of migrants.

Moreover, since it seems self-evident that successful migrants are better off for reaching Europe, Reguly must, I think, mean that non- or pre-migrant Europeans will, at least on average, benefit from the arrival of a large number of newcomers. Wente is suggesting the reverse.

Yet in the longer perspective of history and demography, both arguments may be beside the point. Gwynne Dyer (2015) weighs in with a commentary that seems to undercut both Reguly and Wente. In the short run, the rate of arrival of migrants is very small relative to the whole European Union (EU). Dyer thus sidesteps the economic issues and advocates a more open Europe on moral grounds. But over the long run, if the current rate of influx continues – or, more likely, increases – Europe will become a very different place.

Reguly: Migrants Will Save Europe's Bacon

Interestingly, Reguly actually begins on a similar note, quoting a speech by Moammar Gadhafi in which he threatened to send fleets of migrant ships across the Mediterranean unless he was paid to keep them out: "Tomorrow, Europe might no longer be European, and even black, as there are millions who want to come in." (As this is being written, the EU has pledged $1.5 billion to support keeping Syrian refugees in the Middle East.)

Gadhafi is gone; the migrants have come without his help.

Ghadhafi's statement is notable because he said this in mid-2010, before the Syrian civil war – and its consequent stream of refugees – had begun. The "migrant" issue for Europe is in fact older, and far bigger, than the Syrian refugees.

Reguly's pro-migrant argument tills familiar ground. At root it is very simple. Birth rates in Europe (as in Canada and the United States) crashed in the 1960s. It turned out that when women have the means and the freedom to control their own fertility, they choose to have fewer babies. Without powerful social sanctions (mostly male-enforced) to "encourage" them to reproduce – as there are in many less-developed societies – net reproduction rates drop below unity and population trajectories turn down.

Obviously this reduces the long-term rate of economic growth, though not necessarily the growth of per capita income. In a world increasingly overburdened with people and the consequences of their activities, this would not be a bad thing. (Ask the other species on the planet!) It has been estimated that the carrying capacity of the planet, if all humans were to share average North American living standards, would be perhaps half the present 7.5 billion. Current projections indicate that we are on our way to 11 billion before, perhaps, topping out.

But stable or declining populations are typically perceived, by a country's rulers, as a "manpower shortage." That shortage will place upward pressure on wages, lowering the return on capital and further threatening economic growth by shifting the distribution of income between workers and capitalists or rentiers. (Compare the experience of China and India.)

A sudden drop in birth rates does create a "temporary" bulge in the population pyramid, the famous Pig in the Python. There is an overhang of the previous generation that takes some decades to work through – but it *will* work through. (The baby boomers will eventually die off.) During the process, however, dependency ratios rise – more consumers, fewer producers. The rising proportion of elderly is placing increasing strain on our health and welfare systems, etc., etc. So why not import a whole lot more labour from countries whose populations are spilling out (to feed us and look after us in our old age)?

The pro-migrant argument thus links up with the egregiously false claims in Canada that the aging of the population is bankrupting our healthcare system. Import more manpower – younger, more energetic workers – stimulate economic growth, and collect the taxes required to support our health and welfare systems.

Wente: Migrants Will Eat Europe's Lunch

Wente tells a very different story, based on the Swedish experience. Her principal informant is Tino Sanandaji, a Kurdish-Swedish economist born in Iran who specializes in immigration issues.

Among all the countries of Europe, Sweden is the most open to and welcoming of refugees/immigrants. (It does not distinguish between them.) Migrants now make up about 16% of the population. Sweden also makes the greatest efforts to assist newcomers in integrating into Swedish society, including economic support, language training, and cultural familiarization. But, according to Sanandaji, and as reported by Wente, this is not working very well:

> "There has been a lack of integration among non-European refugees," [Sanandaji] told me. Forty-eight per cent of immigrants of working age don't work, he said. Even after 15 years in Sweden, their employment rates reach only about 60 per cent. … [I]nequality is now entrenched. … Forty-two per cent of the long-term unemployed are immigrants, Mr. Sanandaji said. Fifty-eight per cent of welfare payments go to immigrants. Forty-five per cent of children with low test scores are immigrants. Immigrants on average earn less than 40 per cent of Swedes. The majority of people charged with murder, rape and robbery are either first- or second-generation immigrants. "Since the 1980s, Sweden has had the largest increase in inequality of any country in the OECD. … The argument that [hundreds of thousands, or millions of migrants] are vital to boost the economy – that they will magically create economic growth and bail the Europeans out of their demographic decline – is a fantasy… It's really very simple," Mr. Sanandaji explained. You can't combine open borders with a welfare state. (Wente 2015) Sweden is a highly skills-intensive economy. When even low-skilled Swedes have trouble finding work, what chance has a forty-year-old woman from Africa? (Wente 2015)

That is also Boulding's point. "Manpower" is not a form of homogenous raw material, feeding into the production of GDP.

Not much doubt about where Wente stands.

Dyer: Whatever; There's More Where That Came From

In a somewhat cooler tone, Dyer (2015) provides a broader statistical context: "Refugees from the wars of the Middle East are pouring into the European Union at an unprecedented rate. So are economic migrants from Africa and non-EU countries in the Balkans… ."

A single photograph of a dead child, however, has focused world attention almost exclusively on the Syrian dimension of the crisis. "A dead child," said Stalin, "is a tragedy. Two million are a statistic." But as Gadhafi's remarks made clear, the problem is much bigger than Syria. If a single photograph has pried open the world's conscience, there are some very large statistics to follow.

As Dyer points out, however, the EU is also a very big place, with a total population of about 500 million. Refugees and/or economic migrants are currently coming in at about 3,000 per day, or a million per year. One-fifth of one per cent of the EU population is not a very large number. The migrants might easily be absorbed if each EU country took a "fair share," presumably based on population and perhaps adjusted for wealth or land area. On that basis, Dyer sidesteps both Reguly and Wente – economic productivity versus affordability – and appears to take a strong pro-migrant stand on moral grounds.

But the EU member states are not taking "fair shares." Instead they are responding in very different ways, characterized by Dyer as "the Good, the Bad and the Ugly." The Good are relatively welcoming to the refugees, and best of all is Germany. To France, Italy and the Netherlands, he gives a B+. The Bad, such as the United Kingdom, are going out of their way to avoid accepting a fair share, while the Ugly set up razor-wire fences and threaten to call out the army. These last, all in eastern Europe, are fiercely resisting EU efforts to establish even country quotas that would be just "a drop in the bucket."

The burden thus falls disproportionately on the willing. This is not too onerous for Germany, but Wente's informant describes what can happen in a small country with a very generous welfare system and wide-open borders.

Moreover, the numbers now under discussion in the EU are merely a drop in the bucket. And the bucket is in the process of becoming very much bigger. There are three main forces in play.

First, there is a very large backlog of Syrian refugees in the surrounding Middle Eastern countries, which are already doing much more than their "fair share." But second, Dyer predicts that the Syrian conflict appears to be getting very much worse. If the (brutal and nasty) Assad regime collapses, Islamic State (IS) will overrun all or most of Syria. It is the declared intention of the caliphate to treat conquered (non-Sunni) populations "as it was in the time of the Prophet," i.e., kill the men, rape the women, and sell the survivors into slavery. The Alawite minority in particular are marked for death as apostates. An IS victory over Assad will create a further flood of desperate refugees with no hope of return.

But Dyer also points out that a large proportion of the "refugees" beating at the doors of the EU are in fact economic migrants, being pulled, not pushed, and over the longer term these are in virtually infinite supply: "[T]here is every reason to believe that there will be another million people risking everything to make it across the EU's borders next year, and probably for many years thereafter. It may even get worse." (Dyer 2015)

Population growth rates in the central African states have been running at 3% or more for decades, with little sign of slackening. Pakistan, Bangladesh and Afghanistan have somewhat less rapid growth rates, but a larger population base.

The countries of the EU, by contrast, are static or shrinking. Meanwhile, climate change is undermining agricultural productivity, and the 40-year breathing space granted by the Green Revolution since 1970 is over.

This May Be Where We Came In

This situation should sound familiar; Europe has been over-run before:

> 31 December 406 is the often-repeated date of the crossing of the Rhine by a mixed group of barbarians that included Vandals, Alans and Suebi. The Rhine-crossing transgressed one of the Late Empire's most secure *limites* or boundaries, a climactic moment in the decline of the Roman Empire … [and] a marker date in the

> Migrations Period. … The initial gathering of barbarians on the east bank of the Rhine has been interpreted as a banding of refugees from the Huns or the remnants of Radagaisus' defeated Goths. (Wikipedia 2015)

Four years later, the Visigoths sacked Rome itself, for the first time in 800 years. Seventy years later the last Roman Emperor in the West, contemptuously styled Romulus Augustulus, was removed from the throne by the German Odoacer, who then ruled as King of Italy. *Vae victis!*

The invasion of Europe now beginning is not just about a group of refugees, albeit a very large group, from a specific conflict. Gadhafi understood this. The refugees have shown that Europe, like the Rhine frontier, can be breached, and the economic migrants are coming with them. Reguly concludes: "So much for Col. Gadhafi's threat." One wonders why?

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DISCUSSION AND DEBATE

The Personal Support Worker Program Standard in Ontario: An Alternative to Self-Regulation?

Le Cahier des normes pour le programme Préposé aux services de soutien personnels en Ontario : une solution à l'autoréglementation?

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Abstract

Personal support workers (PSWs) provide hands-on assistance in a variety of long-term care and community settings. The question of whether PSWs should become regulated similar to other self-regulating health professions is a perennial concern in policy circles, especially because of the intimate nature of their work and the potential for abuse of clients and workers. This article explores a chain of policy decisions around PSWs in Ontario culminating in the creation of a common educational standard for PSW programs, titled the PSW Program Standard. We argue that these policy developments may represent an alternative pathway to self-regulation of an essential workforce.

Résumé

Les préposés aux services de soutien personnels (PSSP) apportent une aide pratique dans une variété d'établissements de soins de longue durée et communautaires. La question à savoir si les PSSP devraient faire l'objet d'une réglementation, à l'instar des autres professionnels de la santé autoréglementés, est récurrente dans les cercles politiques, en particulier en raison de la nature intime de leur travail et des possibilités d'abus pour les clients ou les travailleurs. Cet article examine une chaîne de décisions politiques relatives aux PSSP en Ontario, laquelle se termine par la création de normes éducatives pour les programmes destinés aux PSSP, soit le Cahier des normes pour le programme PSSP. Nous avançons que le développement des politiques peut constituer une démarche de remplacement à l'autoréglementation pour ce type de main-d'œuvre essentielle.

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Personal support workers (PSWs) are a cadre of care workers who assist with the activities of daily living for older adults and people with disabilities in long-term care homes, retirement homes and community settings. Writing in the UK context, Saks and Allsop (2007: 165) define support workers as a diverse "group who work[s] across the health/social and the formal/informal care boundary." The demand for PSWs in Canada is expanding due to our aging demographics and economic pressures to lower healthcare costs by shifting tasks from higher- to lower-paid workers. Indeed, the number of PSWs is said to eclipse the number of nurses in the healthcare system. In Ontario, the Ministry of Health and Long-Term Care (MOHLTC) estimated that there are 90,000 people working as PSWs, with many job openings in this field. It is important to delineate, however, that many PSWs work on a contractually, part-time or on-call basis, creating difficult working conditions and making PSWs difficult to count. It is also noteworthy that these workers are largely women and over-represented by racialized people and/or immigrants to Canada (Lum et al. 2010; PSNO 2012).

The question of whether this growing body of workers should become self-regulating health professionals is a perennial concern in policy circles, especially because of the intimate nature of their work and the possibility for abuse of both clients and workers. Drawing together documentary materials from the public domain, this article explores the Ontario government's decision to develop the PSW Program Standard, a common educational standard that was released in July 2014 and is the most recent development in a chain of policy decisions. We argue that the policy developments around PSWs in Ontario move towards standardization and the creation of infrastructure that may represent an alternative pathway to self-regulation.

A Brief Background on Forms of Regulation

Adams (2010) identifies three types of professional regulation in Canada: *self-regulation* with autonomous regulatory boards of practitioners utilized by groups such as doctors and lawyers; *title regulation* in which a regulatory body of practitioners requires workers to register and provide proof of training to claim a restricted title, but with limited authority in the field; and *occupational regulation* where governments create a board to monitor field membership, most commonly used for skilled trades. Adams' (2010) work highlights that there are many ways to regulate professions and that there is an inherent hierarchy from self- to title to occupational regulation. In the case of health professions, occupational regulation is rarely used in contrast to self- and title regulation.

Considering the situation of PSWs in this regulatory context is not a simple exercise. As in other locations, most studies of regulation focus on "fully fledged registered professions" and do not consider the ambiguous position of PSWs (Saks and Allsop 2007). Some might argue that PSWs are more akin to skilled trade workers than medical professionals, but PSWs are often regarded as members of the healthcare hierarchy, falling just "below" registered practical nurses (RPNs). Educational programs reinforce this position through bridging programs where PSWs with recognized certificates are given credit towards an RPN diploma. In the case of Ontario, many of the activities of PSWs fall under the controlled acts under the *Regulated Health Professions Act*, although to perform them, they must be delegated. In sum, PSWs are an anomaly that is difficult to categorize in attempts to distinguish health professions from other regulated occupations.

The Chain of Policy Developments Leading up to the PSW Program Standard

The context leading up the educational standard indicates increasing social and political pressure to address the intricate problems of long-term care, even if solutions are not readily available or agreed upon. In 2006, the Health Professions Regulatory Advisory Council (HPRAC) considered the question of PSW self-regulation. The report concluded that PSWs should not become a self-regulated health profession owing to factors including ambiguity around their scope of practice, non-standardized knowledge held by the occupation, lack of consensus among key stakeholders, and the possibility that pursuing regulation would entail retraining and human resourcing costs (HPRAC 2006). Foregrounding discussions of PSW regulation is the increasing levels of acuity of clients in long-term care facilities, which is in turn linked to political and medical commitments to shorter hospital stays (HPRAC 2006). Personal support work has become much more complicated, and according to the HPRAC report, transitioning PSWs to a regulated health profession would not be the appropriate response to their changing job requirements.

Developing a PSW Registry

Although the issue of regulation was put on hold, the MOHLTC followed the example of British Columbia and created a PSW Registry in May 2011 commissioning the Ontario Community Support Association (OCSA) to establish the platform (MOHLTC 2011) . The Registry broadly aims: "to identify and acknowledge PSWs and individuals providing personal support services for their role in healthcare and for their daily contributions to some of Ontario's most vulnerable populations" (PSW Registry 2015). In practice, the Registry collects basic information on the registrants related to employment history and educational background, includes a job board, and a referral process for complaints. The personal information is only available to employers and for limited research purposes (PSW Registry 2015). It is mandatory for PSWs who work in publicly funded home care settings to register and over 30,000 have done so (Lum 2013). This requirement will extend to other work settings in the coming years (OCSA 2012).

Generally speaking, the establishment of the Registry has been well-received by community groups representing PSWs. The Canadian Union of Public Employees (CUPE) Ontario, however, objects to the Registry's emphasis on employer needs and suggests it does little to benefit PSWs. Coordinators of the Registry are working to clarify the overall goals, monitor mandatory registration, confront potential issues of confidentiality and to specify whether the Registry will be used to handle complaints and dismissals (Laporte and Rudoler 2013; OCSA 2012). The latter issues move more directly into the realm of self-regulation, and the approach to these issues will illuminate the regulatory intent of the PSW Registry.

Establishing a PSW education standard

Working as a PSW in Ontario does not necessarily require formal training, nor passing a standardized examination. There are an array of training programs offered in public, private and vocational colleges, school boards and online, as well as an established practice of on-the-job training, creating a complex educational landscape. Scholars and community groups note that there is remarkable variability in the content among PSW training programs, resulting in differential skills, responsibilities and knowledge (HPRAC 2006; Keefe and Légaré 2011; Laupacis and Born 2012; Lilly 2008). In 2012, the Association of Canadian Community Colleges (ACCC)argued for a national educational standard to address worker mobility and international training (ACCC 2012; NACC PSW 2013).

In light of the increasing concerns voiced by a number of stakeholder organizations with the variability of PSW preparation, the Ontario Ministry of Education issued a Memorandum on April 5, 2013, announcing the development of an educational standard for PSW programs, following similar moves in Nova Scotia and British Columbia (ACCC 2012). Consultations and an online survey about the Ontario standard were carried out by the MOHLTC in May-June 2013, the results of which were not released to the public. The consultations did, however, yield three publicly available responses from the Personal Support Network of Ontario (PSNO), CUPE Ontario and the Ontario's Nurses' Association (ONA), all of which were strongly in favour of establishing the standard (CUPE 2012a; ONA 2012; PSNO 2012). CUPE (2012a), for example, saw the development of a standard as a way to rein in for-profit educational providers. PSNO and ONA did, however, express concern for how the standard will affect those already working as PSWs. PSW work is poorly paid and often sporadic, raising concerns about the ability of working PSWs to return to school if required by the establishment of a standard.

The task of developing the standard was passed to the Ministry of Training, Colleges and Universities (MTCU), who based the new standard on the existing standards and a consultation process that involved focus groups and the formation of a Technical Working group. Once the Program Standard was released in July 2014, the programs were given a year to update their curriculum and submit to the appropriate department or ministry for approval (as different programs fall under different jurisdictions, e.g., the school boards report to the Ministry of Education, public colleges report to MTCU).

Implications for PSW Regulation

The recent policy developments related to PSWs culminating with the Program Standard may represent alternative measures to standardize, monitor and improve this field without PSWs becoming a self-regulated health profession.

The pursuit of self-regulation typically involves an organized group of workers to advocate, develop official policies and consult on legislative changes (Bourgeault 2006 on midwifery). While there are some organizations that represent PSWs in Ontario, for example, PSNO, CUPE and the Ontario Community Support Association (OCSA), these organizations are not actively working towards self-regulation. As suggested by informal discussions on social media discussion boards associated with the aforementioned organizations, PSWs themselves express interest in becoming regulated, but expect it to "come from above" (e.g., PSNO Facebook group: https://www.facebook.com/groups/53248778815/).

Ontario is not yet in a stage of title regulation as defined by Adams (2010) for PSWs. It is not mandatory for PSWs to apply to the registry, nor to have a PSW certificate if they do register, nor for employers to hire registered PSWs, and most significantly, there is no practitioner board overseeing the registry. Owing to the shortfalls of the current long-term and community care landscape, there remains an incentive for working as or hiring private care workers, a tendency that will be reinforced by the Ontario directive towards self-managed home care (Grant 2015). In the UK, Saks and Allsop (2007) do not recommend licensure of support workers, but emphasize enhancements in training and advocate for the introduction of a registry similar to what Ontario has done.

As noted above, state-led occupational regulation has taken place for skilled trades such as hairdressers and insurance brokers, but not for groups in the health and social care sector. Thus, the provincial government would be forging new ground in taking this approach. A key implication of state regulation noted in the literature is the issue of job loss (Kleiner 2011), and employers already report a lack of PSWs and a high turnover rate (Denton et al. 2006; PSNO 2012).

From a health economics perspective, regulation leads towards more expensive human resourcing. In an American study on the effects of occupational licensing, Kleiner and Krueger (2010) found that licensing increases wages by approximately 15%, and further, in combination with unionization, licensing increases wages by 24%. There are some indications of the relevance to the PSW case with the announcement of the MOHLTC to raise the minimum wage for PSWs working in publicly funded settings from $14/hour to $16.50/hour. Kleiner and Kruger (2010) also found that without unionization, licensing alone does not reduce wage dispersion across a field, a major issue in current PSW work. While fraught with problems in implementation, the PSW wage increase represents an alternative mechanism to address low and disparate wages at a lower cost than what could be associated with licensure.

The evidence on whether regulation improves patient services is inconclusive, according to Kleiner (2011), although his study considers many occupations beyond PSW work. In sum, there are a number of disincentives for state-initiated regulation of the sector, namely, the risk of slowing job growth, increase in costs and inconclusive evidence about addressing wage dispersion or improving patient services.

Conclusion

The Ontario PSW Program Standard has the potential to simplify an educational landscape, while adding another mechanism to prevent this field from becoming a self-regulated health profession. Depending on the setting, PSW work is highly regulated in other ways, for example, through legislation, ministry guidelines and evaluations. The long-term care landscape is complicated by factors such as individual life stage and circumstance, geographical setting, precarious working conditions for PSWs and settings of support ranging from highly autonomous direct funding attendant service options to more closely monitored long-term residential settings. Policy decisions around this sector must thus build-in flexibility to reflect the changing needs of long-term care in Ontario.

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RESEARCH PAPER

Incorporating Group Medical Visits into Primary Healthcare: Are There Benefits?

Intégrer les visites médicales de groupe aux soins de santé primaires : y a-t-il des avantages?

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Abstract

Objective: Group medical visits (GMVs) have been touted as an innovation to effectively and efficiently provide primary healthcare (PHC) services. The purpose of this paper is to report whether GMVs have tangible benefits for providers and patients.

Methods: This descriptive study included in-depth interviews with patients attending and providers facilitating GMVs and direct observation. Five primary care practices in rural towns and four First Nations communities participated. This paper reports on an analysis of interviews and observations.

Results: Thirty-four providers and 29 patients were interviewed. Patient participants were an average of 62 years old, mostly female and married. The three most common chronic conditions reported by patients were diabetes (n = 9), high blood pressure (n = 8) and arthritis (n = 7). Three themes illustrated how GMVs: (1) can foster access to needed health services; (2) expand opportunities for collaboration and team-based care; and (3) improve patient and provider experiences. A fourth theme captured structural challenges in delivering GMVs.

Discussion: There are tangible benefits in delivering GMVs in PHC. While whole patient panels can benefit from the integration of GMVs into practice, those who could gain the most are patients with complex medical and social needs. GMVs provide an opportunity to enhance PHC, strengthening the system particularly for patients with chronic conditions.

Résumé

Objectif : Les visites médicales de groupe (VMG) sont considérées comme des innovations pour la prestation efficace et efficiente de soins de santé primaires (SSP). Le but de cette étude est de voir si effectivement les VMG offrent des avantages pour les prestataires et pour les patients.

Méthodes : Cette étude descriptive comprenait des entrevues en profondeur auprès de patients qui participent à des VMG et auprès des prestataires de soins qui les animent, ainsi que des observations directes. Cinq cliniques de soins primaires dans des petites villes rurales et quatre communautés autochtones y ont participé. L'article fait état d'une analyse des entrevues et des observations.

Résultats : Trente-quatre prestataires de soins et vingt-neuf patients ont été interviewés. L'âge moyen des patients participants était de 62 ans, la plupart étant des femmes mariées. Les trois états chroniques les plus fréquemment rapportés par les patients étaient le diabète (n=9), l'hypertension artérielle (n=8) et l'arthrite (n=7). Trois volets montrent comment les VMG peuvent (1) favoriser l'accès aux services de santé requis, (2) accroître les chances de collaboration et les soins en équipe et (3) améliorer l'expérience des patients et des prestataires. Un quatrième volet a trait aux défis structurels liés aux VMG.

Discussion : Les VMG dans le cadre des SSP présentent de réels avantages. Bien que tous les patients d'un groupe puissent tirer avantage de l'intégration des VMG à la pratique, ceux qui en bénéficient le plus sont les patients qui présentent une complexité de besoins médicaux et sociaux. Les VMG permettent d'accroître les SSP en renforçant le système, particulièrement pour les patients aux prises avec un état chronique.

Introduction

Strengthening of primary healthcare (PHC) remains a priority for Canada since it can lead to a more equitable system of care with better population health outcomes at reduced cost (Starfield 1998; Valaitis et al. 2012; WHO 2008a, 2008b). Canada has seen extensive reforms and investments in PHC totalling over $1 billion (Aggarwal and Hutchison 2012). This has unleashed a myriad of innovations, at a time when a greater proportion of the population needs increasingly complex clinical and psychosocial care to meet their needs and expectations. Yet, many patients, especially those living with chronic conditions, continue to have challenges in accessing a family physician (Ouellet et al. 2011; San Martin et al. 2004) for timely or comprehensive care (Baker and Denis 2011; Nasmith et al. 2010; Schoen and Osborn 2010). Overall, family physicians are accepting fewer patients (Canadian Institute for Health Information 2010; National Physician Survey 2004) and newer generations of family physicians are seeking a better work–life balance (Brcic et al. 2012; Watson et al. 2006). This creates challenges in access, especially in rural and remote communities.

In efforts to improve the access to and quality of PHC, experimentation and implementation of different organizational models has occurred across Canada (Glazier et al. 2012; Hutchison et al. 2011). The focus of these reforms has primarily been on changing providers' behaviours through implementing new types of payments and physician fee enhancements or utilizing interprofessional teams (Health Canada 2004). At the same time, a growing body of research questions whether the conventional use of individual appointments can meet the needs of a practice's panel of patients, particularly for those with chronic conditions (Lavoie et al. 2013; Riley and Marshall 2010; Weinger 2003). There has also been a growing interest in group medical visits (GMVs), which have been touted as an innovation to effectively and efficiently provide PHC services (McLeod 2004; Noffsinger 2009). Yet less is known from provider or patient perspectives about the benefits and challenges that GMVs offer within the context of PHC.

GMVs have emerged as a model of care that strengthens PHC by addressing some of the challenges related to the changing nature of patients' health and healthcare needs and the needs of family physicians for increased work–life balance. GMVs are visits with one's regular provider that take place in a group of 10–15 patients. There are two main types of GMVs (McLeod 2004; Noffsinger 2009). The first type of GMVs are "drop-in group medical appointments" (DIGMAs), which are meant to increase timely access to primary care (Noffsinger 2009). The second type of GMVs are "homogenous visits," which are meant to increase the quality and comprehensiveness of services delivered to patients who share common healthcare needs and facilitate increased self-management of an individual's health. Other healthcare providers and, sometimes, community organizations (e.g., local recreation centre) are also present.

GMVs in PHC, though relatively recent in Canada (McLaren 2008; Noffsinger 2009), were introduced in the US in the 1990s to optimize clinicians' time and increase the quality of care to growing numbers of patients with chronic conditions (Noffsinger and Scott 2000;

Riley and Marshall 2010; Yehle et al. 2009), including those with hypertension, stroke, heart failure (Griffin et al. 2009; Yehle et al. 2009) and chronic obstructive pulmonary disease (De Vries et al. 2008). GMVs have also been used to deliver prenatal care (Rice and Slater 1997). The content of GMVs includes medical services related to a common chronic condition, such as a routine physical examination (Riley and Marshall 2010; Walker 2000), and an education or health promotion component.

GMVs can provide self-management support encompassing strategies such as individualized assessment, collaborative goal-setting, skills enhancement and access to resources (Schillinger et al. 2009). Compared with individual visits, randomized trials have shown that, overall, group interventions are associated with clinically significant improvement in a variety of medical, psychological and behavioural outcomes (Beck et al. 1997; Clancy et al. 2003a; Eisenstat et al. 2013; Kulzer et al. 2007; Sadur et al. 2002; Trento et al. 2004; Wagner et al. 2001). Past work has shown GMVs to improve patients' access to medical care (Bronson and Maxwell 2004), decrease emergency department and outpatient utilization, increase quality of life, improve self-efficacy, increase satisfaction with care (Bray et al. 2005; Clancy et al. 2003b; Coleman et al. 2001; De Vries et al. 2008; Howard 2002; Jaber et al. 2006; Kirsh et al. 2007, 2008; Scott et al. 2004; Trento et al. 2005) and increase providers' ability to monitor those with complex chronic care needs (Beck et al. 1997; Scott et al. 2004). Most of this work has taken place in the US and in mainly urban settings. The purpose of qualitative work is to examine the benefits and challenges of delivering of GMVs for patients living in rural settings in British Columbia (BC), Canada.

Methods

This descriptive study included in-depth interviews with patients attending and providers facilitating GMVs and direct observation. It took place in Northern Health (NH) Authority in BC, where there is a partnership between the health authority and family physicians to deliver PHC services across northern BC. GMVs are delivered in a primary care practice, in a space provided by NH or in community clinics, many of which are located on a First Nation reserve (lands reserved for First Nations[1] peoples).

Participants

Primary care practices and First Nation reserve communities who had offered GMVs for two years or more were identified by NH. Five primary care practices in different towns participated. Practices were funded through fee-for-service ($n = 2$) or contract arrangements through BC's Alternative Payment Plan ($n = 3$). Four First Nation reserve communities also participated. Providers delivering GMVs in First Nation reserve communities were either salaried or paid through fee-for-services. These communities ranged in population size from 200 to 76,000; some communities were up to 1,000 km away from Prince George, BC's northern regional city (Consumer-Purchaser Disclosure Project 2011).

Inclusion criteria for patient participants included: (1) adults ≥19 years; (2) living in NH; (3) having no significant cognitive impairment; and (4) had participated in a GMV in the past year. Inclusion criteria for providers were that they had been involved in facilitating or providing care in at least two GMVs in the past year and identified the participating practice as the place where they regularly provided care.

Recruitment

Participants were recruited from the practices and communities working in partnership through PHC coordinators, medical office assistants or Community Health Representatives (CHRs) who worked and resided in First Nation reserve communities. PHC coordinators are NH employees who facilitate access and service delivery in specified communities across the health authority. CHRs play a key role in health promotion, protection and injury prevention (Health Canada 2004). Care was taken to adhere to ethical principles outlined in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, 2010 (Government of Canada 2010). All procedures were approved by the University of BC, University of Northern BC, NH ethics boards and by the PHC practices and First Nation reserve communities. Memoranda of understanding to participate in this research were signed with each First Nation community.

Data collection

Interviews were conducted in-person or over the telephone if the time the researchers were in the community was not convenient for participants. Sampling and analysis occurred iteratively. Purposive sampling (Corbin and Strauss 2008) was used to explore a range of patients' and providers' experiences (e.g., patients' ages, different types of providers' experiences) in attending or facilitating a GMV. After obtaining informed consent (verbal or written), interviews with providers and patients and one interview with two patients were conducted. Open-ended questions explored: participant's experiences; barriers to delivering or receiving PHC in a group format; and recommendations for improving GMVs. Interviews were audio-recorded. Field notes were written following interviews or direct observation. All participants were given $15 in appreciation of their time.

Data analysis

Transcribed, anonymized interview transcripts were compared with the audio recordings for technical accuracy. An interpretive thematic analysis was conducted according to procedures for qualitatively derived data (Thorne et al. 2004). Coding of data was conducted by two of the research team members, where agreement was reached on the coding by consensus. Coded data were then analyzed. We checked our analysis with discussion in the team (which included NH) as well as with a sample of participants. Atlas.ti, software for analyzing qualitative data, was used to organize and code the data. Trustworthiness (Thorne 2008) of the analysis was evaluated through discussions with PHC experts and feedback from a selection of participants.

Results

Providers (n = 34) reported delivering all types of GMVs, with the CHCC model being the most frequently used (Table 1). Examples of the types of services delivered through GMVs ranged from prescription refills, health education and links to other resources, ordering laboratory tests, to having a physical examination (in a separate room but then joining the group for discussion) and coordinating services with public health and specialist care. GMVs were offered weekly to quarterly, lasting between 60 and 90 minutes with between 9 and 15 patients. The primary care provider was not present for the entire time for GMVs that took over 60 minutes.

TABLE 1. Demographic characteristics of provider

Providers (n = 34)	
Type of provider attending GMV (n)	
Family physician	10
Nurse	7
Nurse practitioner	2
Primary healthcare coordinator	4
Other (includes medical office assistant, community health representative, outreach coordinator, etc.)	11
GMVs delivered by provider in one month	
Mean (SD)	1.4 (1.85)
Range	1–6
Type of GMVs delivered (%)$^{+}$	
Homogenous (e.g., disease-specific teaching, reviewing lab values – haemoglobin A1c, prenatal, physical exams)	88.57
Drop-in group medical appointments (e.g., prescription renewals, sick day notes, acute episodic events such as a cough)	34.29

Note: $^{+}$providers were asked to list all types of GMVs delivered

Patient participants (n = 29) were an average of 62 years old, mostly female and married (Table 2). Patients had attended an average of four GMVs in the past year, with most attending a homogenous GMV. Most patients had three or more chronic conditions.

TABLE 2. Characteristics of patients attending GMVs

Patients (n = 29)	
Age (yrs)	
Mean (SD)	62 (16)
Gender (% female)	65.52
Self-reported health (1-5)$^{+}$	
Mean (SD)	2.76 (1.12)
Ethnicity (%)	
European (Caucasian)	55.17
Aboriginal**	
First Nation	41.38
Métis	3.45

TABLE 2. Characteristics of patients attending GMVs (continued)

Patients (*n* = 29)	
Marital status (%)	
Married	79.31
Income (%)	
<$20,000	37.93
$20,000–$29,999	20.69
$30,000–$39,999	20.69
$40,000–$49,999	3.45
$50,000–$59,999	6.90
$60,000–$69,999	3.45
≥$70,000	0
Missing	6.90
Number of chronic conditions (%)	
Range	0–7
0	10.34
1	6.90
2	27.59
3 or more	55.18
Chronic conditions (%)++	
Diabetes	58.62
Arthritis	48.28
High blood pressure	51.72
Depression	34.48
Heart disease	20.69
Other: Kidney disease	10.34
Other: Cholesterol	6.90
Other	27.59
GMVs attended in the last year (*n* = 12)*	
Range	1–15
Mean (SD)	4 (2.95)
Type of GMV attended (%)	
Homogenous	82.76
Drop-in group medical appointments	17.24
Satisfied with care from family physician (%)	
Always/Usually	79.31
Sometimes/Rarely/Never	20.69

Note: +higher score=more of the concept; ++patients were asked to report all chronic diseases they had been diagnosed with; *there were 17 people who did not answer this question. **In Canada, 'Aboriginal people' is the term used to refer to Indigenous people, including First Nations, Métis and Inuit populations.

Four themes, consistent across homogenous and DIGMA GMVs, emerged. Three themes illustrated how GMVs fostered access to needed health services, expanded opportunities for collaboration and team-based care, and improved patient and provider experiences.

The fourth theme captured providers' challenges in delivering GMVs. The format, processes and proximal outcomes of the GMVs are reported elsewhere (Lavoie et al. 2013).

Fostering access to needed health services

If offered on a regular basis, our data show that GMVs can provide a mechanism for increasing access to PHC for all practice patients. This is a tangible benefit for both providers and patients. Once GMVs had been implemented on a regular basis, providers saw wait-time for appointments decrease because patients were able to obtain some services more quickly (e.g., prescription renewal, follow-up appointments for episodic care).

> " … it's freed up other appointments for patients to see their family doctor, I think its allowed more access for patients to see their doctor for the same type of care so they're not coming in on a Wednesday morning to see the doctor about I don't know a cough, and they realize they haven't had blood work done in six months … so at least they're maintaining their health by having access … getting things done on a more routine basis than worrying about it or forgetting about it." (Provider #5)

As this quote reveals, GMVs increased individual patients' access to needed health services related to their care as well as had the unintentional benefit of increasing access for those who wanted the more traditional one-to-one patient–provider visits. Some providers were able to accept new patients, as the GMVs increased the overall capacity of the practice. Our direct observation of GMVs suggested that these types of visits had to be offered on a routine basis (e.g., every 1–2 months) to influence the overall capacity of the practice to decrease their waiting time to see patients or accept new patients.

GMVs provided increased opportunities for patients to access health promotion activities. Providers often referred to GMVs as a "max-packed" visit where patients obtained care based on their reason for visiting but also benefitted by receiving preventive care (e.g., flu vaccine, B12 injection) and screening. This quote provides an example of how GMVs could increase opportunities for cancer screening:

> " … we were doing diabetic visits, we were also picking up all the other things that you need so, if you happen to need a tetanus shot … a mammogram … go for colon cancer screening, all of that stuff has been picked up so the visit is what we call max-packed, getting the maximum benefit." (Provider #9)

Patients also reported experiencing more comprehensive services, as illustrated in this next quote from a patient attending a GMV focused on smoking cessation:

> "The pharmacist, public health … it was amazing, the information that was given out, which you do not have in a regular doctor's appointment. They [patients] wanted

> to talk to the doctor about quitting smoking … I'm just trying to think of anything negative. I just thought they [GMVs] were wonderful." (Patient #109)

In most cases, GMVs were an efficient use of both patients' and providers' time. Synchronous communication between patients' regular provider, other providers and staff with patients created immediate opportunities for adjustments in treatment plans or follow-up individual visits, and educational opportunities. Providers and staff gained time because they did not travel between rooms, answer the telephone or attend to queries from people in the waiting room. There were a few patients who thought if the GMV had too many people that patients' time was not used appropriately because they needed to listen to too many patients' health concerns.

Expand opportunities for collaboration and team-based care

The provision of GMVs increased collaboration between primary care and public health. For example, prenatal GMVs provided a place where public health, prenatal registry nurses as well as women's regular primary care providers could work together in coordinating care and exchanging information and meet health system requirements such as registration of newborns. GMVs were also a space where the healthcare professionals could identify and work with patients who may have more vulnerabilities such as being low-income, having multiple morbidities or identified as a potentially high-risk pregnancy.

Primary care providers offering GMVs enabled more team-based care with healthcare providers (e.g., public health nurses), the Health Authority and communities (CHR, First Nation reserve nurse):

> "It's [GMVs] kind of a win all around because when you increase your productivity you increase access for patients, your waiting times go down, patients like it, doctors like it, staff likes it and we're better able to meet evidence-based guidelines because there's a team taking care of patients rather than a single provider … it's just worked out really, really well." (Provider #1)

This quote illustrates that delivering some primary care in a group setting can help providers achieve higher quality of care through the use of teamwork, without having to increase the practice's costs by having to hire more staff. Direct observation revealed that team members and patients were working together to find potential solutions for individuals' medically and socially complex care needs.

The GMVs brought healthcare providers together with those working in First Nation communities. CHRs played an important role in identifying patients needing further testing for confirming a diagnosis of diabetes:

> "So what happens is that we have these GMVs that were supposed to be homogenous and now there's just everybody coming and the Community Health

> Representatives decided, oh well, we were doing these blood sugars on people with diabetes and we might as well do them for everyone … we started to find people with diabetes because as they came to the DIGMAs they were diagnosed … " (Provider #29)

This quote also shows that a GMV that was originally designed as a homogenous group turned into a DIGMA-style GMV where patients with any health concern started attending. An unintended benefit of this DIGMA was that providers and patients not previously aware of any diabetic symptoms were able to work with an earlier diagnosis of diabetes. Across all GMVs, patients became actively involved in a team-based care approach. Patients reported learning from other health professionals such as dieticians and their peers. The GMV environment provided opportunities for patients to share their day-to-day management skills and how they prevented illness exacerbations with other attendees.

Improving patient and provider healthcare experiences

Patients attending GMVs reported increased confidence and skills in managing their health within their personal and social context. One patient stated:

> " … you come out of the group feeling much more self-confident … you've got your batteries recharged and you can really go till the next group … it's [GMV] more motivating … you want to do more yourself and rely less on others … but then you always realize there's others out there to help you if needed." (Patient #16)

Patients were motivated by knowing they were "not alone." The GMV structure also helped to neutralize the inherent power imbalance between patient and provider. GMVs were more interactive, allowing patients to gain information from their providers but also to listen and share their day-to-day management strategies with each other. As this patient with diabetes describes, he was upset about going to his first GMV but was surprised at how supportive the physician and other patients were:

> " … I had been diagnosed about a year ago … and not following up with my blood work, on my tests. I just kept trying to wish it away. I was so humiliated when the doctor started talking to everyone around the table, asking what questions we had. I thought, he's [going to] mention that I didn't go for blood work and all this stuff that I wasn't doing, and I was so pissed off. But what happened was it really made me face the problem I was dealing with and so I actually started to smarten up … I saw people who went to the DIGMA very supportive of me, what I was struggling with … I didn't like the idea at first but I'm okay with it now … I got to meet people who were dealing with diabetes, complications that they're having, what they were doing about it." (Patient #112)

This quote also illustrates what providers saw as the clinical impact of GMVs on patients. Providers reported that attending GMVs could lead to improved clinical indicators, such as better HbA1c levels and cholesterol levels. Providers were also satisfied with their practice, as GMVs were an environment to easily deliver comprehensive care for those with complex care needs:

> "I think there's no question about the overall goodness of what we're doing … when you take in patient satisfaction, your satisfaction, and meeting objectives for chronic disease management … this is a far superior way to go." (Provider #2)

Rather than repeating health education messages (e.g., reasons for a high HbA1c) across several individual visits, providers taught to the whole group at once, witnessed reinforcement of key messages by patients sharing their own experience and, in addition, reported more opportunities for in-depth patient–provider interactions. GMVs enabled providers to quickly address the common and predictable parts of a visit (e.g., blood pressure, weight) and focus on the complexity of living with different and often multiple chronic conditions, while benefitting from peer patients providing their personal experience and emotional support.

Structural challenges in delivering GMVs.

Introducing and maintaining GMVs were challenging. A structural challenge for fee-for-service physicians was the financial risk of seeing fewer patients. This challenge was overcome by trying to ensure that between 10 and 15 patients were seen during a group visit. One provider stated:

> "I think even [in] fee-for-service [practices] they come out ahead as well … they can still bill for every person that is in the group. So really if they can get through fifteen people in an hour I don't think they could do that if they were seeing one at a time." (Provider #4)

One common challenge patients experienced, however, with the larger groups was that they felt there was not a lot of time spent on their particular issues.

Additional support was needed to transform everyday practice from a series of individual appointments to delivering care to a group of patients that might include multiple providers. PHC coordinators and the medical office assistants invested time "starting-up" GMVs to identify and coordinate patients who might be inclined to try a GMV. Most providers reported that identification of these patients was time-consuming, particularly for those not using an electronic medical record. Providers also identified patients whom they felt were less suited to participating in GMVs, including those who were hard of hearing, had limited English-speaking skills or cognitive deficits or were uncomfortable in groups. Some patients also identified themselves as not wanting to attend more GMVs because they did not want to talk about their issues, nor hear other patients' issues in a group.

Other key factors for GMVs to be successful were the facilitation skills of the provider leading the group and simply having a large enough space to conduct a group visit. Whether the facilitator was a provider or other staff, he/she was important in creating a safe environment where patients could comfortably share their experience, managing group dynamics, keeping the group relatively focused and ensuring delivery of specific medical services (e.g., review blood test results). Delivering GMVs without an appropriately large room was challenging and for some providers, impossible. In some cases, NH worked in partnership with practices to provide adequate space, for example, in a community centre. Sometimes the alternate location worked better for patients, but coordination was needed to ensure that equipment and patient charts were available.

Discussion

Managed care systems and others have experimented with GMVs for the past two decades but this study is the first of its kind in Canada. The themes we report were consistent across patients and providers and across both homogenous and DIGMA GMVs. Similar to past findings, our analysis showed that GMVs can address physical and psychosocial outcomes (Beck et al. 1997; Clancy et al. 2003a; Kulzer et al. 2007; Sadur et al. 2002; Trento et al. 2004; Wagner et al. 2001) through communication between patients and providers and among patients, increase access to medical care (Bronson and Maxwell 2004) as well as improve patients' ability to manage their health (Clancy et al. 2003b; Coleman et al. 2001).

GMVs provide a window into how PHC can continue to be transformed to be an efficient use of multiple providers' and patients' time as well as an effective mechanism to deliver care. In smaller communities, GMVs can strengthen collaboration between primary care and public health (Valaitis et al. 2012) to address wider social determinants of health. This work sheds light on the process of delivering GMVs with the greatest advantage provided to attendees being in an environment conducive to obtaining resources, skills and confidence in managing their health on a day-to-day basis. While whole patient panels can benefit from the integration of GMVs into practice, those who gain the most have complex medical and social needs. GMVs allow for more in-depth communication (Masley et al. 2000; Noffsinger and Atkins 2001) and a wholistic approach to care (Lavoie et al. 2013; Noffsinger et al. 2003). Research continues to show that GMVs can have clinically and significantly positive effects on patient outcomes, such as decreased blood pressure and HbA1c and increased quality of life (Housden et al. 2013).

The results should be interpreted with caution, since only GMV participants were interviewed, and GMVs may not be suitable for all patients. Data were collected in one health authority. Future work should be informed by practices delivering GMVs in urban areas. More work is needed to understand whether the benefits and challenges are similar by modality of GMV (e.g., homogenous vs. DIGMA) and to examine what the ideal mix of GMVs and individual visits for practices is.

Delivery of GMVs remains complex; resources and support are needed to overcome structural challenges (e.g., appropriate space, coordination of patients, schedules and charts). New skills such as facilitation and attention to group dynamics, working in collaboration with others and patients and the ability to potentially provide a variety of healthcare services to multiple people within a short period are also required. Financial incentives may be required as one approach to off-setting the potential perceived barriers. Practices will need other supports such as strong collaborations with jurisdictions responsible for geographic delivery of health services to obtain tools for more efficient coordination of care. Offering GMVs in primary care could be an opportunity to enhance PHC, strengthening the system particularly for patients with chronic conditions.

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Note

1. In Canada, 'Aboriginal people' is the term used to refer to Indigenous people including First Nations, Métis and Inuit populations.

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RESEARCH PAPER

Barriers and Facilitators for Primary Care Reform in Canada: Results from a Deliberative Synthesis across Five Provinces

Obstacles et appuis à la réforme des soins de santé primaires au Canada : résultats d'une synthèse délibérative réunissant cinq provinces

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Abstract

Introduction: Since 2000, primary care (PC) reforms have been implemented in various Canadian provinces. Emerging organizational models and policies are at various levels of implementation across jurisdictions. Few cross-provincial analyses of these reforms have been realized. The aim of this study is to identify the factors that have facilitated or hindered implementation of reforms in Canadian provinces between 2000 and 2010.

Methods: A literature and policy scan identified evaluation studies across Canadian jurisdictions. Experts from British Columbia, Manitoba, Nova Scotia, Ontario and Quebec were asked to review the scope of published evaluations and draft provincial case descriptions. A one-day deliberative forum was held, bringing together researchers (n = 40) and decision-makers (n = 20) from all the participating provinces.

Results: Despite a relative lack of published evaluations, our results suggest that PC reform has varied with regard to the scope and the policy levers used to implement change. Some provinces implemented specific PC models, while other provinces designed overarching policies aiming at changing professional behaviour and practice. The main perceived barriers to reform were the lack of financial investment, resistance from professional associations, too overtly prescriptive approaches lacking adaptability and an overly centralized governance model. The main perceived facilitators were a strong financial commitment using various allocation and payment approaches, the cooperation of professional associations and an incremental emergent change philosophy based on a strong decentralization of decisions allowing adaptation to local circumstances. So far the most beneficial results of the reforms seem to be an increase in patients' affiliation with a usual source of care, improved experience of care by patients and a higher workforce satisfaction.

Conclusion: PC reforms currently under consideration in other jurisdictions could learn from the factors identified as promoting or hindering change in the provinces that have been most proactive.

Résumé

Introduction : Depuis 2000, des réformes des soins de santé primaires (SSP) ont lieu dans plusieurs provinces canadiennes. Les nouvelles politiques et les nouveaux modèles organisationnels en sont à divers stades de mise en œuvre. Il y a eu peu d'analyses panprovinciales de ces réformes. L'objectif de cette étude est de déterminer les facteurs qui ont permis de faciliter ou ont fait obstacle à la mise en œuvre des réformes dans les provinces canadiennes, entre 2000 et 2010.

Méthodes : Un examen de la littérature et des politiques a permis de repérer des études d'évaluation dans les provinces canadiennes. Nous avons demandé à des experts de la Colombie-Britannique, du Manitoba, de la Nouvelle-Écosse, de l'Ontario et du Québec d'examiner l'étendue des évaluations publiées et des descriptions de cas. Un forum délibératif d'un jour a été organisé pour réunir les chercheurs (n=40) et les décideurs (n=20) de toutes les provinces participantes.

Résultats : Malgré le manque relatif d'évaluations publiées, nos résultats font voir que la réforme des SSP varie selon l'envergure et les appuis politiques employés pour mettre en œuvre les changements. Certaines provinces ont mis en place des modèles spécifiques de SSP, tandis que d'autres ont mis au point des politiques générales visant un changement de comportements et de la pratique professionnelle. Les principaux obstacles perçus sont le manque d'investissements financiers, la résistance de la part d'associations professionnelles, des méthodes trop prescriptives faisant peu de place à l'adaptabilité et un modèle de gouvernance trop centralisé. Les principaux appuis perçus étaient un fort engagement financier employant plusieurs types d'allocations et de paiements, la coopération des associations professionnelles et l'émergence progressive d'un changement de philosophie fondé sur une forte décentralisation des décisions, ce qui permet une adaptation aux circonstances locales. À ce point, les résultats les plus avantageux des réformes semblent être un accroissement de la fidélité des patients à un point de services habituel, une amélioration de l'expérience des soins par les patients et une plus grande satisfaction de la main-d'œuvre.

Conclusion : Les réformes des SSP actuellement envisagées par d'autres provinces peuvent tirer leçon des facteurs qui favorisent ou font obstacles dans les provinces qui ont été les plus proactives.

* * *

Introduction

Since 2000, transformation in primary care (PC) delivery has been occurring in varying degrees across Canada. A change in the policy environment was driven by a better fiscal climate after years of cutbacks, increased federal transfers including the Health Transition Fund and the Primary Health Care Transition Fund, recommendations from major commissions, such as the Romanow Commission in 2002, and a shortage of family physicians throughout Canada (Hutchison 2008; Wilson et al. 2004). In addition, this renewal occurred at a time when the performance of Canadian PC is increasingly recognized as lagging behind other developed countries (CSBE 2009; Lamarche 2008). The state of Canada's PC sector is worrisome, as its performance is worse than most other wealthy and industrialized countries, as described by recent commonwealth fund and OECD surveys (CSBE 2009; Hutchison 2008). To a certain extent, this has been the outcome of years of budgetary cutbacks and a lack of appreciation of family medicine as a discipline. Both of these factors have contributed to the imbalance in the health system towards secondary and specialist care (Katz 2008; Lamarche 2008).

Other major reasons for lagging performance are problems in the organization of PC. These organizational gaps include: the fragmentation of care and inefficient use of providers due to lack of coordination, limited management and follow-up of vulnerable groups; access problems; the low priority given to health promotion and disease prevention; and problems related to the quality, collection and sharing of patient information (CSBE 2009). To address some of these organizational gaps, a consensus has emerged on the necessity to offer PC services on a 24/7 basis through interdisciplinary teams who are supported with information technology and electronic medical records, who undertake health promotion and prevention activities, and who share links with other healthcare providers and local governing bodies (Breton et al. 2009; The College of Family Physicians of Canada 2011; CSBE 2009; Health Affairs 2010).

Across Canada, new models and innovations of care delivery have been introduced to improve the performance of PC (Muldoon et al. 2006a; Pineault et al. 2010; Russell et al. 2009; Watson et al. 2009; Wong et al. 2010). The implementation of collaborative and inter-disciplinary models and quality improvement innovations are among the main transformations (Hutchison 2008). New organizational models are more predominant in Quebec, Ontario and Alberta, while the focus in British Columbia, Manitoba and Saskatchewan has been more on quality improvement initiatives within the traditional models of delivery (Hutchison et al. 2011). Other provinces have adopted these components in a more incremental fashion rather than relying on an explicit overarching policy. Another critical area of change has been the adoption of health information systems in PC centres (Hutchison 2008). On the whole, these changes have been implemented on a voluntary basis. They have been incentive-based and occurred by including organized medicine in the process while preserving the autonomy of physicians (Hutchison 2008). Provincial levers for change are limited and mostly related to finances, as these changes are negotiated with organized medicine rather than imposed (Green et al. 2009; Hutchison et al. 2011; Strumpf et al. 2012). Many new models, such as Family Medicine Groups in Quebec, are, however, criticized as limited and lacking the characteristics of high-performing models by remaining physician-centred with limited inter-disciplinarity (Hutchison 2008; Lamarche 2008; Pomey et al. 2009; Russell et al. 2010).

As PC reform has not progressed at the same speed in different provinces, this appears to be an opportune time to explore some questions about these reforms. What factors have contributed to or have impeded changes occurring in PC models of delivery and quality innovations in the different provinces of Canada? The aim of this study is to identify the factors that have facilitated or hindered implementation of PC reforms in Canadian provinces over the period 2000–2010. The goal of this analysis is to be alert to recurring obstacles as well as levers for change as reforms in Canada continue.

Methods

This synthesis was completed through a two-stage process. The first stage involved the development of case descriptions of PC reforms that had been completed or that were underway in Nova Scotia, Quebec, Ontario, Manitoba and British Columbia between 2000 and 2010. Case descriptions were generated from a review of existing grey and published literature. There has been elaborate discussion about what the concept of PC encompasses (Muldoon et al. 2006b). In this study, we define PC as practices where general practitioners, or in some instances other healthcare professionals taking a similar role, provide medical care to patients. These provinces were selected on the basis of the existence of published evaluations related to PC reform. Whilst other provinces had also engaged in PC reforms, as was the case in Newfoundland, evaluations had not been published at the time of the study. Each of these five provinces was considered the unit of analysis and a case.

The initial case descriptions were developed by synthesizing the information gathered through the grey literature search (scanning provincial level organizations' websites, Google and Google Scholar searches, and PubMed search for published evaluations of PC reforms in Canadian provinces). Consultations with selected experts from each province served to adjust the case descriptions, generate hypotheses with regards to potential barriers and facilitators, and document impacts of emerging models of PC. This consultation was done electronically in iterative waves, asking each of the selected experts to revise and suggest adjustments to the draft case description, and identify additional documents to integrate in the analysis.

An analytic grid was developed to guide the retrieval of relevant information from identified documentation and to permit comparisons across case descriptions. The grid was structured around a previously published conceptualization of PC policies to support the classification of extracted information according to how it related to: (1) the vision, aims and objectives of the reforms; (2) the structural implications; (3) the resources implications; (4) the service provision models impacted or promoted by the reform; and (5) the important elements related to the context (Lamarche et al. 2003; Levesque et al. 2012).

The second stage involved a deliberative process that was held during a *Synthesis and Exchange Forum on the Impact of Primary Care Organizational Models and Contexts*, which took place on November 3rd, 2010. This forum brought together researchers ($n = 40$) and decision-makers ($n = 20$) from different Canadian provinces to discuss factors influencing the reform processes and the impact of reforms initiated over the preceeding decade. The participants were selected through a snowball process, following a purposive selection of recognized leaders in PC research, to ensure sufficient knowledge and experience from each of the studied provinces, and included researchers in PC and decision-makers from provincial and regional levels. Guiding questions to be addressed during the Forum were submitted to the provincial experts and decision-makers with the case descriptions as preparatory material (see Appendix). These questions elicited complementary information about the case descriptions, factors associated with changes in PC, impacts of primary healthcare and the main findings from each province's experience. At the Forum, various experts and decision-makers from provincial governments or professional associations were invited to discuss these themes and share their own professional experience. Following these presentations, small groups of 8–12 participants discussed two questions:

1. Which factors would you say are the most important either in supporting or hindering changes in PC organizations or implementing reforms? In your opinion, how do you see these factors evolving in the future?
2. What are the most significant impacts of recent PC reforms and introduction of new organizational models? In your opinion, how do you see these impacts evolving in the future?

An open discussion with all participants took these same questions further and attempted to clarify the most important factors and impacts. Drawing upon the wealth of information obtained from the reading materials, case studies and group discussion, participants were asked to identify the most important factors and impacts based on their own research and/or experiences. All discussions were recorded, transcribed and synthesized into a report along with the final revision of the case descriptions and the literature review (Levesque et al. 2012).

The final analysis of barriers and facilitators was performed using a framework adapted from institutional theory, which views organizational change as resulting from three types of environmental influences, namely, coercive (laws, regulations, policies), normative (professional influences and culture) and mimetic (presence of champions and successful leaders) influences, as well as receptivity to change within the practices (perceptions and attitudes) (DiMaggio and Powell 1991; Meyer and Rowan 1991; Scott et al. 2000). We adapted the framework for this study (Levesque et al. 2010). This framework proved to be useful in providing a classification system to critically appraise the factors that have been identified to be crucial in facilitating or impeding primary healthcare reforms in the studied provinces.

Results and Discussion

PC reforms have varied from province to province. Levers used to involve and motivate primary healthcare professionals have varied. Recourses to a more prescriptive and coercive approach (e.g., laws, regulation, financial incentives) or a more emergent and championing approach vary and often mix together in different balances in different provinces. In addition, various barriers and facilitators for reform have been identified in different provinces. However, some common findings emerge. The main barriers to reform were insufficient financial investment in the reforms, resistance from professional associations, excessively prescriptive approaches lacking adaptability and an overly centralized governance model. In contrast, the main facilitators were a strong financial commitment using various allocation and payment approaches, the cooperation of professional associations through the process of reform, an incremental emergent change philosophy based on a strong decentralization of decisions and adaptation to local circumstances. There were many examples, though, that a lever for change in one context was perceived as a barrier in another context, especially in terms of funding and involvement of professional associations. The full description of the case and literature synthesis as well as detailed findings from the deliberative forum can be found in the full report of this study (Levesque et al. 2012).

Coercive Influences

A STRONG ROLE FOR GOVERNMENTS AND LEGISLATION TO SUPPORT CHANGE

Though the policy environment has historically been neutral towards PC, it is clear that as of 2010, the socio-political context had changed throughout the country. For a long period, PC was left out of explicit policies aimed at reorganizing the healthcare delivery system. In contrast, hospitals and long-term care facilities have been part of reforms of provinces' public delivery systems. Participants at the Forum suggested that PC practices were often perceived as being part of the "private" sector, despite the vast majority of its services being reimbursed through provincial health plans. The recent shift has seen a driving force for reform coming mainly from governments, with the climate among providers ranging from neutral to favourable. Major commissions at the provincial and federal levels have been identified as important influences in initiating a long overdue process of reforms. The federal government has been perceived as having played an important role. Without the massive federal transfers committed for PC reform across the country, many initiatives or new models would certainly not have been implemented or sustained. The federal transfers thus provided the impetus needed for the expansion of programs and models.

Relevant new legislation has expanded the role of non-medical health professionals in PC. This has supported the development of interdisciplinary teams and collaborative practice. In particular, laws redefining the roles and scope of other health professionals, most notably registered nurses and nurse practitioners, have supported their introduction into PC. Legislation has been identified as a major factor benefitting the reform process in various provinces. Quebec has introduced delegations of medical acts and has revised its professional code. The *Health Professions Act* in British Columbia and the *Registered Nurses Act* in Nova Scotia are other examples (Levesque et al. 2007; Pottie et al. 2008; Wong 2009). In some instances, legislation has also been enabled by collaboration between registered nurses and physicians' organizations. However, insufficient attention to appropriate remuneration and certification has slowed the development and implementation of interdisciplinary teams.

A DUAL INFLUENCE OF FUNDING MECHANISMS ON REFORMS

Both too much and too little funding have been identified as critical. The federal health transfers gave a kick-start to many of the first reforms of primary healthcare across the country and enabled many initiatives to start. The emphasis has been on providing incentives for physicians to move into new organizational models of care or for physicians in group practice to transform the way care is delivered in their clinics. It takes large financial resources to incentivize providers and to facilitate changes. The case of Ontario is a good example of this, with all changes in organizational models voluntary and grounded on financial incentives. Alberta has also benefitted from an increased availability of financial resources at the time of the reform, greatly facilitating its implementation. As reforms move forward and the resources required to transform practices increase, will governments have the capacity to sustain this process in the future, especially in a climate of financial restraint and recession?

Remuneration can also become a hindering factor to PC reforms. To begin with, physicians on the basis of potential loss of income, in particular to capitation, often resist changing the remuneration method. An exception is Ontario, where the introduction of blended models such as Family Health Teams (FHTs) and Family Health Groups was associated with an increased remuneration for physicians and has proven to be successful (The Conference Board of Canada 2014; Green et al. 2009; Hutchison et al. 2011). In addition, participants have pointed out how an exclusively fee-for-services (FFS) remuneration system is often incompatible with the development of multidisciplinary teams in PC. Other professionals might not be able to work to the full scope of their practice if the physician does not delegate some tasks to them, given that physicians might otherwise lose income because most of these services are then not billable. This is especially important where FFS is the main remuneration model, and seeing the patient is required for the general practitioner.

In addition, there are challenges related to responsibility for the salaries of registered nurses and other allied health professionals. The introduction of registered nurses is seen as being promoted by governments without the essential funding, and practices cannot be responsible for the funding of other professionals from physician FFS billings. Thus, it is essential that some of these new reform funds be directed to other professionals to integrate them in the PC system. Furthermore, participants have acknowledged the need to provide incentives to registered nurses and allied health professionals, to attract and retain them in PC. The incentives should not be offered exclusively to physicians.

Normative influences

AN EMERGING COLLABORATION BETWEEN GOVERNMENTS AND PROFESSIONAL ASSOCIATIONS

A clash of agendas has been observed between provincial governments and professional medical organizations aiming to preserve the professional autonomy of their members. An example is the opposition from medical associations, such as was the case in British Colombia, to the implementation of primary healthcare organizations. In contrast, what is observed now is a greater openness to reform by professionals. Although reforms are now accepted and seen as necessary, only a few instances of active lobbying from within the profession for new organizational models have been observed.

In many instances, the biggest change in 2000–2010 has been the increased collaboration between physicians and governments. Physicians, many of whom can be considered "small business owners" delivering essential services, and the government, as the largest payer of these services, recognized an increasing need to strengthen the delivery and organization of PC. Various collaborative committees have been created to negotiate and implement initiatives and new models, thereby ending a long period during which PC physicians were essentially operating with high autonomy but at the margin of health system oversight. In certain provinces, such as British Columbia, these committees involving the representatives of physicians and government have become powerful players. However, most of these approaches also remain essentially physician-centred and, to a great extent, they leave other health professionals out of the decision-making. It has also been observed that the number of requirements imposed on physicians by some of these committees might also ultimately threaten their success at stimulating change in the medical profession.

Another aspect of this collaboration has been seen at the level of governance at the regional or district level. To implement reform, health authorities and ministries have had to build governance structures that include PC physician leadership into the governance of the health system. An example is the case of Nova Scotia where a co-leadership model was implemented in the Capital District Health Authority with a health authority District Department of Family Practice and a PC office. Other examples include the Regional Departments of General Medicine in Quebec and the Divisions of Family Practice in British Colombia (Hutchison et al. 2011; Strumpf et al. 2012).

In some provinces, the provincial chapters of The College of Family Physicians of Canada, as well as the chairs of the university departments of family medicine, have taken an active supportive role. However, some universities' lack of support or involvement has been identified as a factor explaining the slow uptake of reforms.

Mimetic influences

THE IMPORTANCE OF INNOVATORS AND CHAMPIONS

The role of family physicians in many contexts is undergoing profound changes from being the main provider in traditional models to very often a leadership role of a multidisciplinary team (Beaulieu et al. 2006; Martin-Misener et al. 2004; McKendry et al. 2006; Watson and Wong 2005). Having been practically ignored by health reforms for many years, PC physicians are now expected to transform their practices, be agents of change and to actively participate in the reform process. A number of continuing education programs have helped support this, such as Building a Better Tomorrow Together in Nova Scotia. Physicians are now asked to take on new leadership roles not only in their practice but also in governance of regional systems of care. Physicians have contributed to change norms and values, to institute a new climate for change and changed attitudes among professionals. New committees composed of physicians and with some degree of decision-making power have also helped change norms and values. These structures may have helped to reduce resistance of physicians towards reforms by giving the profession's voice more merit. However, in every province, the presence of champions among primary healthcare providers has been crucial. They have often acted as role models for other physicians to generate the necessary climate for new models or initiatives to grow.

Receptivity to change

A FELT URGENCY FOR CHANGE

A strong desire for change by physicians delivering PC has been observed in many provinces. Physicians are seeing their workloads increase because of the shortage of human resources relative to the increased complexity of clinical presentations. Many are now more receptive to change. The fact that PC is overwhelmed is acknowledged and represents a strong argument for change. Notwithstanding this receptivity, PC reforms are often perceived as having been made possible because they were essentially based on the voluntary participation of physicians in policy-driven models or quality improvement initiatives. Slow and incremental transformation within physicians' offices has taken place in many provinces, as few providers can (or want to) manage large-scale transformations in their practices. In some provinces, such an incremental approach reflects government fiscal prudence in managing change, as large-scale changes are seen as much more expensive to implement.

Few changes have been imposed on providers and it is more a discourse about incentives or a demonstration of effectiveness that has been seen in many provinces. In fact, most reforms have been based on financial incentives to providers. A lot of money has been injected to mobilize professionals. Quality-based incentive funding or increased remuneration was made available to physicians to attract them to new models. Examples are the Physician Integrated Network in Manitoba and FHTs in Ontario.

A LACK OF INVOLVEMENT OF COMMUNITIES AND PATIENTS

The forum's participants also suggested that little attention so far has been given to the public's voice. In many contexts, there is a perceived failure to sell PC reform to the public and to outline ongoing progressions to transform PC. Community engagement in the reform process and the implementation of new models of care were also identified as critical factors (Muldoon et al. 2010). The Community Health Teams in Nova Scotia, which were constructed using population-based planning and community-engagement strategies, are an example of where this has been done. For some participants, communities clearly have to be involved in the decision-making process. Efforts should be undertaken to inform the public as to what has been done so far to get input into what needs to be done to transform PC. Governments have to ensure better communication with the public regarding the progress of reforms and to consider the pressure that the democratic point of view can put on the system. An uninformed public can lead to unrealistic public expectations that, coupled with the power of the media, could push governments to move in the wrong direction. However, there was disagreement among participants as to the degree of public input that was necessary and desirable. Some felt that the public is only concerned about having access to a physician and services that are attainable while maintaining relational continuity of providers.

During the forum, participants also put great emphasis on the importance of system integration. The health system in Canadian provinces is fragmented, and PC in particular has been functioning almost in parallel to the rest of the system (Haggerty et al. 2008). Many private clinics have been left out of the reform process. The fragmented system affects not only the capacity of family physicians to ensure continuity of care and establish links with other lines of service, but the collaboration between PC clinics is even more difficult and horizontal integration is almost nonexistent. Practices have to be linked to the rest of the system with greater collaboration. Participants stated that when governments undertake local networks or integration of services, PC is often left out, as was the situation in Ontario. Thus, there is both a need to put emphasis on modernizing and upgrading existing practices and a need to create systems of care where PC providers are integrated with each other and with the rest of the system. This is part of reform in the different provinces, such as Quebec and British Colombia, where structures have been established to integrate the system, but there remains a lack of investment in a system of PC or the integration of PC to the rest of the system.

Conclusion

In this paper, we have presented the results of a deliberative synthesis about the main barriers and facilitators of implementation of PC reforms. This synthesis pertained to five Canadian provinces at various levels of reform implementation and using different modalities to implement change. Our synthesis suggests a strong receptivity to change in clinical settings and a strong role for government and legislative tools to implement change in a context of increased acceptance of reforms from professional organizations. This study also highlights the importance of collaborative designs of reforms involving the policy and professional organizations for a successful implementation. Funding remains a crucial issue. A good balance between enough funds to support the implementation, and not relying too much on purely financial incentives, has to be found.

Many provinces have opted for quality-based incentive funding and pay-for-performance instead of large-scale redesign. Some provinces are more advanced in redesigning PC through the introduction of new models. In many instances, the need to approach reforms in a slow and incremental fashion was chosen in order to mobilize providers. Enthusiasm for new organizational models is present if funding is made available to support providers in transforming their practices. PC reforms are made on a voluntary basis but often they succeed only with significant incentives. In some instances, governments have started to give themselves a framework and a vision for primary healthcare reform. Examples are British Colombia's Primary Care Charter and Manitoba's Primary Health Care Policy Framework. Perhaps what was needed for many provinces was to first create the necessary conditions for the eventual success for PC reform. In provinces where PC reforms are based on incentives, there is the question of whether these will remain either effective or sustainable and what subsequent policy levers, prescriptive or model-based approaches to reforms, will be used. In particular, future studies should assess the extent with which, as reforms mature and are sustained or dwindle, certain levers play a more crucial role or are more difficult to sustain. This study, looking at various provinces and the implementation of their PC reforms, highlighted that financial incentives and more coercive policies have played an important role at the induction of reforms. Levers related to more normative and mimetic levers and the use of sustain facilitation might prove important for the long-term sustainability of these reforms in the future.

In most of the provinces, the implementation of the reforms has continued since 2010, and there is a renewed interest in furthering PC reform with organizational models that support integration of PC within the broader health and social care systems. Such recent reforms could benefit from understanding the levers that are associated with change in how PC has been delivered in various provinces since 2000. Despite the current study presenting data from 2010, the insights remain relevant to reconsider progress made since and potential adjustment to reform effort in the future.

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RESEARCH PAPER

Inter-Provincial Migration Intentions of Family Physicians in Canada: The Roles of Income and Community Characteristics

Intentions de migration interprovinciale chez les médecins de famille au Canada : rôles du revenu et des caractéristiques locales

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Abstract

The inter-provincial migration patterns of family physicians in Canada show that some provinces like Newfoundland and Saskatchewan experience persistent net out-migration, while others, including Ontario and British Columbia, are destinations more often than origins of migrants. Governments in provinces exhibiting net out-migration have responded with a number of incentive and recruitment programs. In this study, we investigate the determinants of the stated interprovincial migration intentions of 3,995 rural and urban family physicians in the 2010 wave of the National Physician Survey. We consider a range of physician characteristics, community attributes and working conditions. We find that in the intention to move, higher compensation has a modest effect, while the community characteristics have a consistently important influence. Our results suggest that policy and program designers should acknowledge the critical role of community-level living and working conditions in their family physician recruitment and retention efforts.

Résumé

Les schémas de migration interprovinciale des médecins de famille au Canada montrent que certaines provinces comme Terre-Neuve et la Saskatchewan connaissent une émigration nette constante tandis que d'autres, notamment l'Ontario et la Colombie-Britannique, représentent plus souvent les points d'arrivée que les points de départ des migrants. Les gouvernements des provinces qui connaissent une émigration nette constante ont mis en place plusieurs mesures incitatives et programmes de recrutement pour faire face à la situation. Dans cette étude, nous examinons les déterminants des intentions de migration interprovinciale chez 3 995 médecins de famille en milieux ruraux et urbains, et ce, dans le cadre du Sondage national des médecins de 2010. Nous avons pris compte de plusieurs caractéristiques des médecins et des communautés, ainsi que des conditions de travail. Nous avons observé qu'une plus grande rémunération a de modestes effets sur l'intention de déménager, alors que les caractéristiques de la communauté ont une influence assez importante. Nos résultats font voir que, dans leurs efforts pour recruter et retenir les médecins de famille, les responsables des politiques et des programmes devraient tenir compte des rôles importants liés au niveau de vie dans la communauté et aux conditions de travail.

Introduction

An oft-cited symptom of the consequences of the current geographic distribution of physicians in Canada is the increasing number of patients unable to find a family doctor and having to resort to emergency rooms and walk-in clinics for their primary care. In the past decade, a number of provincial governments have increased physicians' pay to attract them to their provinces (Grant and Hurley 2013). As a result, the average incomes of physicians have increased from three-and-a-half times the average Canadian worker's salary to nearly four-and-a-half times (Grant and Hurley 2013). Financial incentives in one province have implications for the healthcare costs of other provinces, resulting in a "race to the top" by the provinces (McDonald and Worswick 2012).

Nevertheless, these policies have not been adequate to offset family physicians' apparent location preferences, as reflected in the net migration patterns that continue to disproportionately favour some provinces over others. Interprovincial migration of family physicians resulted in Newfoundland, Prince Edward Island, Saskatchewan, Manitoba and Nova Scotia being "net loss" provinces in 2010, while Ontario, British Columbia and New Brunswick gained more doctors than they lost. Quebec and Alberta maintained a relative stable supply of physicians (CIHI 2011).

Numerous studies have focused on the importance of remuneration in the recruitment and retention of physicians, but few have modelled physicians as active agents who weigh all the competing incentives and constraints (Grépin and Savedoff 2009). The objective of this paper is to model Canadian family physicians' inter-provincial migration intentions to provide empirical evidence regarding the extent to which remuneration and community characteristics influence their migration intentions. While the current location of the surveyed physicians is known, and we exploit this information in terms of identifying the physicians as residing in "urban" or "rural" locations, data on intended migration exist only for moves out of province. Thus, our analysis does not extend to within-province moves.

Literature Review

There are numerous studies of location choice of physicians in Canada and abroad (Hurley 1991; Kazanjian and Pagliccia 1996; McGuire 2000; Simoens and Hurst 2004; Wade et al. 2007), particularly for rural and remote areas (Chauhan et al. 2010; Dauphinee 2006; Florizone 1997; Goetz and Debertin 1996; Hancock et al. 2009; Hays et al. 2003; Mainous et al. 1994; Nestman 1998; Pope et al. 1998; Rourke et al. 2003; Williams et al. 2001). Our focus in this study, inter-provincial migration, is just one manifestation of physician movement.

The major variables of importance in physicians' inter-provincial migration decisions can be clustered into a number of categories. First, existing studies have recognized the importance of personal characteristics. Young, male and single physicians are more likely to move than their counterparts (Basu and Rajbhandary 2006; Vanasse et al. 2009). Physicians usually move to other provinces within the first five years of establishing a medical practice (CIHI 2007). French-speaking physicians are less likely to move, confirming an expected language barrier between Quebec and other provinces (Benarroch and Grant 2004). Immigrant physicians in rural communities are drawn to the large cities in Ontario (McDonald and Worswick 2012).

Second, considerations pertaining to professional practice are cited as the most important factor in the migration decisions of physicians. Dissatisfaction with professional life and professional relationships are good predictors of physicians' intentions to move to other provinces (Vanasse et al. 2009), and also the migration from rural to urban areas. For example, physicians located in rural communities are more likely to move than those in urban centres because of the lack of partners, locum relief, support from specialists and uninterrupted free time from work (Barer et al. 1999; CIHI 2007). Indeed, the most commonly cited reasons for leaving rural practices by family physicians are factors like burnout, excessive workload, excessive on-call duties and lack of time off for vacations or continuing medical education, rather than income (Mainous et al. 1994; Nestman 1998; Williams et al. 2001).

Third, family concerns have become increasingly important in inter-provincial migration decisions of physicians. Preferences of physician spouses are particularly important because of the growing prevalence of two-income earner families (Barer et al. 1999; Mathews et al. 2012). Indeed, migration of physicians is a family decision that depends on the education, age and other characteristics of the spouses (McDonald and Worswick 2012). Since the availability of employment opportunities for spouses and the presence of professional/social peer groups for all members of physician families are concentrated in communities with a larger population (Barer et al. 1999), it becomes increasingly challenging for small communities to attract and support physician–spouse pairs (Mathews et al. 2012; Vanasse et al. 2009).

Fourth, there is evidence, albeit mixed, concerning the importance of the level of compensation in inter-provincial migration decisions of physicians. Benarroch and Grant (2004) find that income differences between provinces have a significant and positive effect on physicians' decision to move. This finding is partially confirmed by Rajbhandary and Basu (2006) for physicians residing in Ontario and Saskatchewan, but not for those from other provinces. Dostie and Léger (2009) find that individuals with greater unobserved ability or desire to generate income are more likely to migrate to provinces where the returns are greater. On the other hand, income and financial incentives have been shown to be ineffective in the long-term retention of physicians in underserved areas (Anderson and Rosenberg 1990; Sempowski 2004). While some physicians were attracted by higher salaries in other provinces, others reported that income had limited influence on their migration decisions (Mathews et al. 2012).

Fifth, a few studies address the role of community characteristics in migration decisions of physicians. For example, Thommasen et al. (2000) find that the percentage of physicians in British Columbia who practiced in the same community for at least 10 years increased sharply for communities of more than 7,000. In another study, Thommasen and Thommasen (2001) find that long-term physician retention rates are lower in health regions with lower family physician-to-population ratios and lower specialist-to-family physician ratios. A case study by Cameron et al. (2010) reveals that four community attributes – appreciation, connection, active support and physical/recreational assets – are positively related to physician retention in four rural Alberta communities.

Most of the studies summarized above about inter-provincial migration of physicians were conducted either at the provincial level (Basu and Rajbhandary 2006; Benarroch and Grant 2004; CIHI 2007) or individual physician level (Barer et al. 1999; Mathews et al. 2012; Vanasse et al. 2009). The few that explicitly studied community characteristics are all about the retention of physicians in local communities instead of inter-provincial migrations. In summary, none of the work discussed above has *empirically* studied the role of community characteristics in inter-provincial migration of physicians, probably due to the absence of a data set with detailed information of both physicians and communities.

Methods

From the literature reviewed above, the most cited reasons for migration are professional practice and family concerns. Many of these factors, in turn, are highly dependent on the population size of the community, as the latter will determine the community-level presence of a highly educated professional peer group, other family physicians and specialists (and thus on-call imperatives); the number and types of jobs for family members; the number and quality of educational possibilities; the recreation possibilities; and the access to international airports (Chen and Stuart 2008; Scott 2009; Stabler and Olfert 2002). In addition to local population size, the distance from a rural community to the nearest urban centre will be important, as it represents the cost of accessing professional support, as well as the full range of employment and consumption goods and services in larger centres (Partridge et al. 2008).

In equation (1) below, the inter-provincial migration intentions of family physicians is modelled as a choice between remaining in the current province versus moving, as a function of the physician's personal characteristics, the community characteristics and relative income that will be earned:

$$\textbf{Logit [stay (0) / move (1)]}_i = \beta_0 + \beta_1 \times \textbf{Personal Characteristics}_i\ (\textit{Female, Age, Age\_Square, IMG, French}) + \beta_2 \times \textbf{Community Characteristics}_{ir}\ (\textit{Population, Distance}) + \beta_3 \times \textbf{Income Difference}_{irj}\ (\textit{RealFeeDif}) + \varepsilon \tag{1}$$

where subscript i represents the physician, r his or her current community and j the potential out-of-province destinations. The underlying assumption is that family physicians, like other professionals, make a choice regarding their practice location. This choice reflects their expectations regarding incomes, opportunities and/or lifestyle in potential future locations compared with their current situation (Beeson and Eberts 1989; Goetz and Debertin 1996). The logit estimation strategy reflects the dichotomous nature of the stay/move decision.

The migration intentions and personal information of physicians are from the 2010 wave of the National Physician Survey (NPS), the largest and most comprehensive census of family physicians in Canada, administered to all family physicians every three years. In total, 6,602 of 34,810 family physicians responded to the survey in 2010, a response rate of 19%. We chose those respondents who are at or below the age of 65 in 2010 as our sample population because we want to understand inter-provincial migration intentions of family physicians for purposes other than retirement. We excluded the 19 family physicians practicing in the three territories because their communities are too different from the other communities, particularly in terms of distance to the nearest urban centre. After these selections, our targeted sample has 4,711 family physicians. Data availability for all the variables in equation (1) reduced our sample size to 3,995, or 84.8% of the 4,711 physicians. In an examination of the mean values of variables in the full targeted sample and the reduced sample, we find virtually no difference in any of the variables of interest, leading us to infer that there is no bias due to missing values for some variables.

A Census Consolidated Subdivision (CCS) represents our "community" in which physicians serve the local and nearby clientele. We divide our sample into urban and rural communities, as the community characteristics are fundamentally different between the two, as are the recruitment and retention challenges. For purposes of this study, urban is defined as consisting of Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs), as defined by Statistics Canada, while rural is everything else. According to Statistics Canada (2013), CMAs and CAs are geographic areas consisting of one or more neighbouring municipalities situated around a core. A CMA must have a total population of at least 100,000, of which 50,000 or more live in the core. A CA must have a core population of at least 10,000. In our sample, 3,348 physicians were practicing in urban communities and 647 in rural communities. The population size of communities is from Census 2006. The distance of a rural community from the nearest urban centre is provided by the Canada Rural Economy Research Lab at University of Saskatchewan (C-RERL). The distances were computed based on straight line calculations (i.e., "as the crow flies") by the Remote Graphics Software.

Because the NPS did not ask the family physicians who intend to move about their intended destinations, we make an assumption based on past trends. We assume the intended destinations are the top three most popular destination provinces of actual movers in 2010 (CIHI 2011), representing 80% of family physicians' moves within Canada. Our destination characteristic is the weighted average value for the three potential destination provinces, common for all family physicians in a province.

We use the difference in real fees for fee-for-service physicians between the current and destination provinces, *RealFeeDif*, to represent the higher real income in the current relative to potential destination provinces. Although only 41% of the family physicians in our sample work exclusively under the fee-for-service arrangement, the aggregate data show that 62% of all the clinical payments to family physicians were through fee-for-service in 2010 (CIHI 2012).

Although the response rate (19%) for the NPS census is low, NPS (2010) reports strong similarity between subgroup distributions in the NPS respondents and in the physician population based on five basic group characteristics. The NPS study also acknowledges non-response bias in certain groups, including an over-representation of females and older family physicians. Another limitation is that there are no data of payment levels from alternative payment methods such as contract and salary.

The descriptions, data sources and descriptive statistics of all the variables, for the rural sample and urban sample separately, are provided in Table A1 of the Appendix. In the following section, we will first discuss the estimation results based on estimation equation (1) and then report results of several sensitivity analyses.

Results

Columns (1) and (2) in Table 1 present the estimation results for rural and urban physicians, respectively. Robust standard errors are used in all the estimations. A result is reported as statistically significant if its *p*-value is less than 5%.

Rural physicians

For rural physicians (Col. 1), there is no statistically significant difference in the intention to move between female and male physicians, nor between younger and older physicians or between those who speak only French and others. However, results show that the odds of intending to move to other provinces for international medical graduates (IMGs) are three times those of Canadian medical graduates (CMGs), a finding consistent with that of Mathews et al. (2013) in Newfoundland.

TABLE 1. Migration intentions of rural and urban family physicians

Covariables	Rural			Urban		
	Odds ratio	95% CI	*Z* score	Odds ratio	95% CI	*Z* score
	Personal characteristics					
Female	0.63	[0.31–1.27]	−1.29	**0.66****	[0.43–0.99]	−1.99
Age	1.002	[0.74–1.36]	0.01	**0.78*****	[0.65–0.93]	−2.82
Age_Square	1.000	[0.996–1.003]	−0.3	**1.002****	[1.000–1.004]	2.26
French	0.14	[0.02–1.07]	−1.89	0.32	[0.1–1.06]	−1.86
IMG	**3.08*****	[1.54–6.14]	3.19	**2.93*****	[1.86–4.62]	4.63
	Community characteristics					
Population	**0.96****	[0.93–1.00]	−2.01	1.000	[0.999–1.000]	−1.26
Distance	1.003	[1.00–1.01]	1.89			
	Income difference					
Real Fee Dif	1.002	[0.99–1.01]	0.32	1.003	[1.00–1.01]	0.91
	Regression statistics					
N	647			3,348		
Pseudo R^2	0.12			0.07		
Chi-square (*p*-value)	36.68 (0.00)			72.65 (0.00)		
Linktest_hat	0.03			0.59		
Linktest_hatsq	0.81			0.47		

Legend: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

In terms of community attributes, the estimation results show that population size of current rural community has a statistically significant influence on the inter-provincial migration intentions of family physicians. If Community A has 1,000 population less than Community B, the odds of a physician moving out is 4% higher. Neither distance to the nearest urban centre *(Distance)* nor differences in real fees between current and potential destination provinces *(RealFeeDif)* are influential at the 5% statistical significance level.

Urban physicians

The results for urban physicians (Col. 2) differ markedly from those for rural physicians. Most personal characteristics of physicians are statistically significant, suggesting that gender, age and training background of physicians all affect migration intentions. In particular, the odds of moving for female physicians are only two-thirds those of male physicians. Like rural physicians, the odds of moving for IMGs are about three times those for CMGs. A one-year increase in the age of physicians decreases the odds of moving by 2.4%. Further, the odds ratio of *Age_Square*, at 1.002, suggests that the speed of the influence of age on migration intentions, i.e., the slope of age, also diminishes with age. These findings about the influence of gender and age confirmed those of Basu and Rajbhandary (2006) and Vanasse et al. (2009).

Interestingly, population size of urban communities does not have a statistically significant effect on urban physicians' intention to move, maybe because the size of any urban centre (with a core population of at least 10,000) is sufficient for market size, sustainable working conditions and accessible amenities. Like rural physicians, the difference in real fees is not influential in migration intentions.

The role of foreign training in migration intentions of rural physicians

As 18% of the physicians practicing in rural communities are IMGs in our sample, we provide separate results for CMGs and IMGs who practice in rural communities in Columns 1 and 2 of Table 2, respectively.

TABLE 2. Migration intentions of CMGs and IMGs in rural communities

Covariables	**Rural CMGs**			**Rural IMGs**		
	Odds ratio	**95% CI**	***Z* score**	**Odds ratio**	**95% CI**	***Z* score**
	Personal characteristics					
Female	0.54	[0.24–1.12]	–1.49	1.06	[0.24–4.76]	0.08
Age	0.93	[0.65–1.32]	–0.41	0.85	[0.36–2.00]	–0.37
Age_Square	1.0003	[0.996–1.004]	0.13	1.001	[0.99–1.01]	0.22
French	0.18	[0.02–1.46]	–1.61	(dropped)		
	Community characteristics					
Population	**0.94****	[0.90–0.99]	–2.52	0.98	[0.92–1.04]	–0.73
Distance	1.001	[0.997–1.005]	0.56	**1.01*****	[1.006–1.02]	3.56
	Income difference					
Real Fee Dif	**0.99***	[1.00–1.02]	–1.7	**0.98****	[0.96–1.00]	2.03
	Regression statistics					
N	530			113		
Pseudo R^2	0.09			0.28		
Chi-square (p-value)	19.81 (0.01)			20.51 (0.00)		
Linktest_hat	0.61			0.001		
Linktest_hatsq	0.75			0.1		

Legend: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$. The variable "French" was automatically dropped by STATA because all the IMGs who speak only French do not plan to move in the next two years.

The sign and significance of all the coefficients in Column 1 (CMGs) are consistent with those in Column 1 of Table 1, suggesting that the results for all rural physicians are largely driven by physicians trained in Canada. In particular, CMGs value the working conditions implied by the community size. An increase of 10,000 population in a rural community reduces the odds of moving by 6% for CMGs.

The motivations of IMGs in migration intentions (Col. 2) are quite different from those of CMGs. The community size has no statistically significant influence on IMGs' intention to move, while distance to the nearest urban centre *(Distance)* has a strong positive effect. The odds ratio associated with *Distance* suggests that 100 additional kilometres away from the nearest urban centre increases the odds of moving for IMGs by 12%.

For IMGs (Col. 2), unlike CMGs, a higher real fee in the current province relative to potential destination province is associated with lower odds of moving (98%). The odds ratio suggests that an additional $10,000 higher real fee relative to the potential destination provinces will decrease their odds of moving by 2%.

In contrast to rural physicians, there is no significant difference between IMGs and non-IMGs in terms of importance of income and community size for migration intentions among urban physicians (results available upon request).

Sensitivity analysis

The estimation models discussed above are all jointly significant at 5% or lower level, as suggested by the log likelihood chi-square statistics and their associated *p*-values in Table 1 and Table 2. However, the low pseudo *R*-squares and some of the model specification error test statistics (Linktest results in Table 1 and 2) suggest that other factors should also be considered. We therefore conducted several sensitivity tests to see how the other, often suspected factors affect our main estimation results. The additional variables and their sources used in the sensitivity analyses are described in Table A1 in the Appendix.

First, physicians practicing in rural communities may not be paid through fee-for-service, but rather by salary or contract. We therefore estimate a model that includes alternative payment methods in addition to the variables in Table 2, on rural IMGs and rural CMGs separately. The findings concerning the relative importance of community attributes and fee difference for both IMGs and CMGs are robust to the inclusion of alternative payment methods (see Tables A2 and A3 in the Appendix).

Second, while overhead costs of running a clinic may be expected to affect physicians' migration intentions, regressions including overhead costs suggest that it is not a statistically significant factor for the migration intentions of either IMGs or CMGs in rural communities (see Tables A2 and A3 in the Appendix).

Third, some may wonder whether the location decisions of IMGs are somewhat constrained before they have their full licences. A condition of special provisional licences may be that IMGs sign a "return-for-service" agreement and serve in under-serviced communities for several years before obtaining a full licence (Mathews et al. 2013; Saskdocs 2015). This condition of provisional licences may reduce the mobility of IMGs in their first few years of practice. The maximum number of years allowed for IMGs with a provisional licence to obtain a full licence varies among provinces. For instance, three years are allowed in Newfoundland (Mathews et al. 2008, page 38), and five years in Manitoba (Armstrong et al. 2013, page 8). We chose the maximum allowed time, five years, to represent the period during which the IMGs' location decisions may be encumbered because of not having a full licence. We therefore included a dummy variable indicating whether the years licenced to practice (provisional or full) are less than or equal to five years in a sensitivity analysis. The estimation result shows that whether an IMG has passed the maximum five-year period and (probably) achieved full licensure has no statistically significant effect on his or her migration intention (see Table A2 in the Appendix).

Finally, the results of multi-level (hierarchy) logit models confirmed that our estimation results in Table 2 are robust when the correlation among family physicians in the same community and in the same provinces are considered; our estimation results in Table 2 are also robust when family physicians are clustered by provinces (results available upon request).

Discussion

Policy implications for all provinces

Our results have common policy implications for rural and urban communities in all the provinces. First, it is harder for all communities to retain IMGs than CMGs, perhaps with implications for those provinces where international recruitment is a perceived solution in addressing the physician distribution problem (Dauphinee 2006; Mathews et al. 2013).

Second, further fee increases are not likely to be effective in retaining physicians. One possible explanation is that, as the threat of losing physicians is often used as a justification for fee increases in negotiations between physician unions and provincial governments (Grant and Hurley 2013), the existing fee rate structure across provinces likely already incorporates past incentives, making additional fee increases an ineffective instrument for influencing migration intentions of physicians.

Policy implications for provinces with a net out-migration of family physicians

During 2010, Newfoundland, Prince Edward Island, Saskatchewan, Manitoba and Nova Scotia suffered net losses of family physicians through inter-provincial migration of physicians (CIHI 2011). As rural physicians are much more likely to migrate than urban physicians, and the share of rural physicians in these "net loss" provinces (except for Prince Edward Island) are all above the national average, we next investigate the contribution of each of the statistically significant factors to rural physicians' intentions to move from these provinces. The total contributions are calculated as the product of the marginal effect associated with a factor in Table 2 and the difference in value of that factor between the top destination province and the current province. Columns C1 and C2 in Table 3 are about CMGs practicing in rural communities and Columns I1, I2 and I3 are about rural IMGs.

Column C2 suggests that the importance of population size varies across provinces for CMGs. For Newfoundland, if a rural community had an average population size as large as the average rural community in its top destination province, Alberta (18,690 instead of 5,650), the intention to move for CMGs would decrease by 3.1%. Relative to the average moving intention of 37.5% in Newfoundland, this effect is minimal. On the other hand, for Nova Scotia, an average community size as small as that in Ontario will increase the migration intention of CMGs by 2%, quite substantial relative to the overall migration intention of 4.2%.

TABLE 3. Contribution of key factors to the migration intentions of rural physicians

Column		(C1)	(C2)	(I1)	(I2)	(I3)
Current province	**Top destination province**	**Stay/Move _CMGs (%)**	**Contribution of *population* (%)**	**Stay/Move _IMGs (%)**	**Contribution of *distance* (%)**	**Contribution of *RealFeeDif* (%)**
NL	AB	37.5	−3.1	58.3	−6.7	−17.5
NS	ON	4.2	2.0	7.7	−3.3	0.9
MB	ON	11.4	0.8	21.4	−6.3	6.3
SK	AB	16.7	−2.3	50	−5.2	−11.6

This finding thus suggests that while improving the working conditions and quality of life in small rural communities will significantly reduce the out-migration of CMGs from Nova Scotia, such programs will be less effective in Newfoundland. Non-community factors, including probably the remote location of the province, play a more important role than population size in Newfoundland than in Nova Scotia.

A comparison between Column (I1) and Column (C1) shows that IMGs in all the "net loss" provinces are more likely to move than those trained in Canada. Column (I2) suggests the distance to the nearest urban centre is influential for the migration intentions of IMGs. For instance, IMGs practicing in rural Manitoba would be 6% less likely to move (to potentially Ontario), if their average travel distance to the nearest urban centre (99 km) were the same as in Ontario (46 km).

Column (I3) suggests that higher fees in the current province relative to the destination province have a substantial influence on the migration intention of rural IMGs. For example, if the real fee rate in Saskatchewan ($236,829) were to reach the same level as its top migration destination province Alberta ($291,948), the intention of moving for IMGs practicing in rural Saskatchewan would decrease by 11.6%. Even relative to the globally high moving intention of IMGs in rural Saskatchewan (50%), the influence of the fee difference is substantial.

Conclusion

This study investigates the extent to which remuneration and community characteristics influence the inter-provincial migration intentions of family physicians in Canada. Our findings suggest that the influence of higher compensation on inter-provincial migration intentions is rather modest. What competition through fee increases will accomplish is a cascading increase in healthcare costs in ALL provinces. The exception is IMGs practicing in rural communities, where higher fees play an important role in retaining IMGs in rural communities. As a policy option, this implies long-term high cost incentives to retain the IMGs in a community they would otherwise not choose.

Our results also suggest that the intention of migration for CMGs in rural communities is strongly influenced by population size of those communities. A larger population base increases the "market potential" for an individual physician and his or her spouse, the number of physicians present in the community as well as the total bundle of private and public goods and services that can be supported locally. While policy makers cannot change the size of rural communities, nor re-locate them, this is a very important result in terms of the realism, or cost, of trying to incentivize physicians to locate in small/rural communities where they would not otherwise choose to locate their practice. Doing so may be a very high-cost and short-term remedy. Where a decision is made to recruit to a small community, there may be some benefit to looking for ways to mimic urban conditions by way of spousal hire programs, assistance for conference travel and support for other means of accessing peers and specialists.

The findings regarding the importance of a minimum population size for retention of physicians may also suggest looking for a more flexible model of primary care delivery in rural communities. For example, by grouping physicians to work at an appropriately chosen centre for nearby rural communities via "Collaborative Emergency Centres" – a recent initiative of Nova Scotia and Saskatchewan – physicians can share workload and on-call responsibilities, provide professional support to each other and enjoy a higher satisfaction with work–life balance (Government of Saskatchewan 2014).

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RESEARCH PAPER

An Evaluation of In-Person and Online Engagement in Central Newfoundland

Évaluation de la participation en personne et en ligne dans le centre de Terre-Neuve

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Abstract

Background: This study evaluates the use of in-person focus groups and online engagement within the context of a large public engagement initiative conducted in rural Newfoundland.
Methods: Participants were surveyed about their engagement experience and demographic information. Pre and post key informant interviews were also conducted with organizers of the initiative.
Results: Of the 111 participants in the focus groups, 97 (87%) completed evaluation surveys; as did 23 (88%) out of 26 online engagement participants. Overall, focus group participants were positive about their involvement, with 87.4% reporting that they would participate in a similar initiative. Online participation was below expectations and these participants viewed their experience less positively than in-person participants. Organizers viewed the engagement initiative and the combined use of online and in-person engagement positively.
Conclusions: This study presents a real-world example of the use of two methods of engagement. It also highlights the importance of the successful execution of whatever engagement mechanism is selected.

Résumé

Contexte : Cette étude évalue l'utilisation des groupes de discussion et de la participation en ligne dans le contexte d'une vaste initiative de participation citoyenne qui a eu lieu à Terre-Neuve, en milieu rural.
Méthodes : Les participants ont été questionnés pour s'enquérir de leur expérience de participation et pour recueillir des données démographiques. Des entrevues avant et après la tenue de l'initiative ont été menées auprès des principaux organisateurs.
Résultats : Parmi les 111 participants aux groupes de discussion, 97 personnes (87 %) ont répondu au sondage d'évaluation; de même que 23 (88 %) des 26 personnes qui ont pris part à la participation en ligne. Dans l'ensemble, les participants aux groupes de discussion se montraient positifs face à leur participation; en effet, 87,4 % d'entre eux indiquent qu'ils participeraient encore à une initiative du genre. La participation en ligne n'a pas été aussi importante que ce à quoi on s'attendait. Les personnes qui y ont pris part ont qualifié leur expérience moins positivement que les participants aux groupes de discussion. Les organisateurs ont qualifié positivement l'initiative de participation ainsi que la combinaison entre participation en personne et participation en ligne.
Conclusions : Cette étude présente un exemple concret de l'utilisation de deux méthodes pour favoriser la participation citoyenne. Elle souligne également l'importance de la réussite d'exécution, peu importe le mécanisme de participation choisi.

* * *

Introduction

For the organizers of public engagement initiatives, while there are frameworks available that identify features that need to be considered (Chafe et al. 2009), there is often little evidence available to determine which options for structuring an initiative are preferable in which context. Despite the relative lack of empirical evidence for their effectiveness, electronic and Internet-based methods of public engagement represent a new frontier in public engagement mechanisms. Online engagement can be a cost-effective method of engaging citizens in policy discussions (Weber et al. 2003). They have the potential to allow greater numbers of people or those who find it difficult to attend in-person engagement exercises, the ability to participate. However, given the lack of nonverbal cues, it has been suggested that online discussion may be less effective than face-to-face discussion (Min 2007). Other potential difficulties include the inaccessibility of the online survey to those without Internet service or who have poor communication skills (Van Selm and Jankowski 2006), survey designs that are not always user-friendly (Nair and Adams 2009) and an inability to directly engage respondents in discussions to address any potential misunderstandings (Puleston 2011).

This study evaluates two popular mechanisms of public engagement – a series of in-person, deliberative focus groups and an online survey – used within the Central Region Citizen Engagement Initiative (CRCEI). We evaluated the CRCEI for a number of reasons. The organizers were quite interested in having their initiative evaluated and were open to working closely with us. Because the initiative was structured by a third-party, we could not implement an experimental design. However, the use of two types of engagement within a single real-world engagement initiative offered the opportunity to gather evidence around the experience of designing and implementing these mechanisms within a similar context. Our analysis also provides a detailed account of the challenges and the achievements of an engagement initiative conducted in rural Canada and the organizers' views on the effectiveness of the mechanisms used, which is likely useful for others planning similar engagement initiatives.

Central Region Citizen Engagement Initiative

The CRCEI was developed and run by the CRCEI Working Group, which included members of Central Health, the local Regional Health Authority; the Government of Newfoundland and Labrador's Rural Secretariat, which is responsible for advancing the sustainability of rural regions of the province; Memorial University, which provided advice on the planning and evaluative components of the initiative; the College of the North Atlantic, a public college with campus locations throughout Newfoundland and Labrador; and the Gander-New-Wes-Valley Regional Council of the Rural Secretariat, a citizen-based advisory council. The CRCEI was precipitated by the perceived need by these partners to learn more about citizens' perspective on regional healthcare and the allocation of public resources across sectors in relation to rural sustainability. For the CRCEI, there was a particular focus on capturing the values of the citizens in the region, as they relate to resource allocation and priority setting decision-making.

The CRCEI initiative had two components:

1. Eleven in-person focus groups held throughout the region between February and March 2013; and
2. an online survey was made available to every member of the public in central Newfoundland between May 1st and July 4th, 2013.

For the CRCEI focus groups, participants were recruited by local employees of Central Health in each community where focus groups were held. The manner of recruitment varied slightly by facilitator, but usually included a personal invitation to selected members of the community. These local employees, with support from a person with training in public engagement from the province's Rural Secretariat, also served as the focus group facilitators. At the start of the focus group sessions, participants were provided with a conversation guide, which included various facts about health and education services in the Central region, information about general infrastructure and public services offered in the Central region and an overview of the demographics of the region. The guide also included information about the various organizational values used in decision-making and provided participants with two different scenarios, one in education and one in health, to enable participants to deliberate in a small group about what choices they would make and why. During the focus group, participants were asked individually to list what values they considered most important in decision-making around the use of public resources. Participants were also asked what perspectives or concerns they thought should be used by public sector decision-makers to allocate services in the region. The online survey was carefully designed to mirror the focus group sessions. It was available to residents through the Central Health website (Central Health 2015) and consisted of a downloadable conversation guide and a survey with the same questions about values and perspectives/concerns as those used in the focus group sessions. The online survey was mentioned at the focus group sessions and was available on the front page of the Central Health webpage; however, there was no formal public outreach conducted to inform the public about the online survey.

Methods

The research team worked with the CRCEI Working Group to incorporate our evaluation into the CRCEI. While there is a clear need for increased evaluation of public engagement initiatives, the development and use of evaluative tools is often lagging (Abelson and Gauvin 2006). Many reasons have been cited for this deficiency, including the lack of rigorous and validated evaluative frameworks and the tendency for organizers to overlook the importance of evaluation (Abelson and Gauvin 2006; Mitton et al. 2009; Rowe and Frewer 2005). Among the most recognizable frameworks is one developed by Rowe and Frewer (Abelson and Gauvin 2006; Abelson et al. 2010; Rowe and Frewer 2000), which lists nine evaluative criteria for use in public engagement evaluation, including independence, representativeness, early involvement, influence, transparency, resource accessibility, task definition, structured decision-making and cost-effectiveness. Faced with a limited amount of time for administering our evaluation within the CRCEI, the research team, in consultation with the CRCEI Working Group, modified the Rowe and Frewer framework to focus on five key elements and included two additional criteria: likelihood to participate again and expectations of the organizers. The likelihood for participants to participate in a similar initiative correlates with an increased public confidence in their own ability to participate in a public engagement initiative (Warburton et al. 2007). It also reflects the overall feeling participants have about the initiative (Gregory et al. 2008). Organizers' expectations and whether they were met illustrate how the organizers viewed the initiative and provide an indication of its potential organizational impact (Kathlene and Martin 1991; Rowe and Frewer 2000). If the initiative is well-run, then the organizers will rate the process favourably and be more likely to embrace the recommendations stemming from the engagement (Rowe and Frewer 2000; Warburton 2008). Despite the unsystematic recruitment process used in the CRCEI and the potential for an unrepresentative sample of participants, the criterion of representativeness was included for its importance in understanding the impacts of the different mechanisms for engagement.

The CRCEI Working Group preferred the use of a survey incorporated into the in-person and online sessions over more resource-intensive qualitative methodologies when collecting data from the participants in the CRCEI. The research team developed surveys administered to all participants based on the five elements identified by the Rowe and Frewer framework and two additional elements identified by the research team. Surveys were reviewed and approved by both the research team and the CRCEI Working Group prior to being used.

Surveys had two components, focusing on:

- participants' experience with the engagement initiative; and
- demographic information.

The surveys completed by focus group and online participants were similar, except for minor wording differences to reflect the different contexts (Appendix 1). For participants of focus group sessions, surveys were administered via the TurningPoint 5.0 polling technology (Turning Technologies 2013) with the assistance of the focus group facilitator. This polling technology enables each participant to anonymously register their survey responses via a wireless transmitter. Online participation was based on a survey instrument using the Fluid Survey™ website (FluidSurveys 2014). The criterion of "representativeness" was evaluated by comparing demographic data reported by participants with available census data for the region (Community Accounts 2013, 2008; Statistics Canada 2013). The criteria of "task definition," "independence," "resource accessibility," "fairness" and "likelihood to participate again" were evaluated using survey responses. The criterion of the "expectations of the organizers" was evaluated based on key informant interviews conducted with members of the CRCEI Working Group. All members of the Working Group were asked to participate in an interview before the start of the initiative. Those who completed a pre-initiative interview were also asked to complete another interview after the CRCEI was complete. Similar questions were discussed in both interviews (Appendix 2), which allowed for an examination of any changes in response over the course of the CRCEI (Hermanowicz 2013). All interviews were conducted by one researcher (PW) and were recorded and professionally transcribed. Field notes were also taken during and after each interview and included in the analysis. The data was analyzed using a thematic content analysis approach (Green and Thorogood 2009), with the aim of identifying issues and themes that the interview participants discussed. Initially, the interview transcripts were reviewed and notes and general codes were developed by the primary author (PW). Codes were then further refined and sub-categories were developed to represent the various themes present in the interviews. The coding analysis was regularly reviewed by another author (RC) to validate consistency. Analysis of the interview data was then discussed by all authors to confirm relevant findings. Ethics approval for the project was obtained from the *Newfoundland and Labrador Health Research Ethics Authority* (2013).

Results

Table 1 lists the communities of participants in the CRCEI in either the focus group or online sessions. For the 111 focus group participants, the survey response rate varied, with 108 (97%) completing the participant experience component and 97 (87%) completing both the participant experience and demographic components. Out of the 26 people who completed the CRCEI's online survey, 23 (88%) completed both the participant experience and demographic components of our evaluation survey.

TABLE 1. Communities and number of focus group and online participants

Community	Number of focus group participants	Number of online participants
Baie Verte	10	
Botwood	5	
Eastport	10	
Fogo Island	13	
Gander	5	3
Glovertown	No focus group	1
Grand Falls-Windsor	10	4
Greenspond	No focus group	1
Harbor Breton	No focus group	1
Lewisporte	20	1
New Wes Valley	No focus group	2
New-Wes-Valley	8	

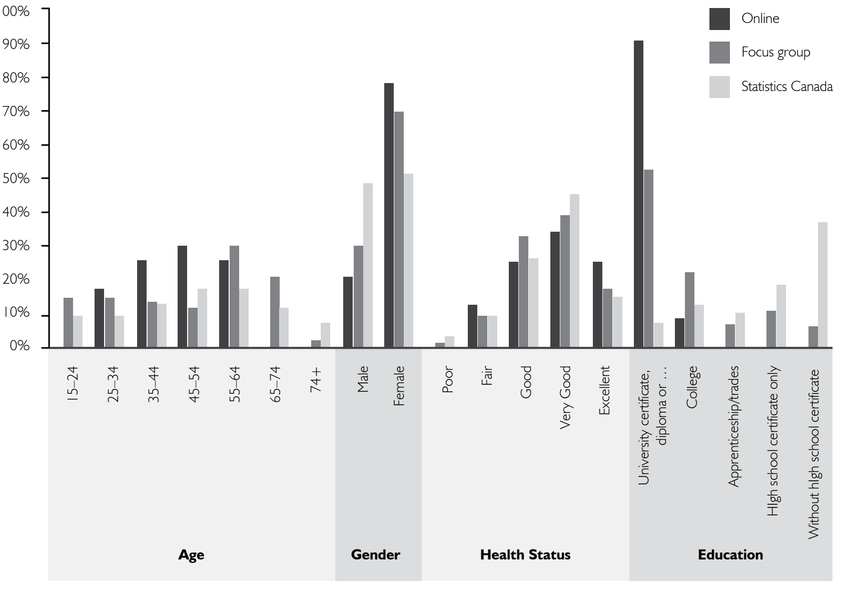
TABLE 1. Communities and number of focus group and online participants (continued)

Community	Number of focus group participants	Number of online participants
Springdale	11	7
St. Alban's	12	
Twillingate	7	
Not identified		6
Total	111	26

Representativeness

Comparing demographic survey results with data from Statistics Canada, we found that both online and focus group participants were fairly unrepresentative of the adult population in the central region of Newfoundland (Figure 1). While age breakdown and self-reported health statuses are comparable, noticeable differences emerge regarding the level of education and gender of participants. In particular, online participants were overall much better educated than the population average, with 91.3% of online participants and 52.6% of focus group participants reporting a university education, compared with 7.8% of the region's adult residents. Both engagement mechanisms also display a female bias, with 78.3% of online participants and 69.7% of focus group participants being female, compared with Statistics Canada data, which report that 51.0% of the population are female. It is also of note that no one under the age of 24 or over the age of 64 completed the online survey, even though these age groups make up 10.2% and 19.5% of the region's population, respectively.

FIGURE 1. Demographic results from online and focus group sessions compared with Statistics Canada data



Participant Experience Criteria

Table 2 displays the percentage agreement (the sum of "agree" and "strongly agree" responses) and the percentage disagreement (the sum of "disagree" and "strongly disagree" responses) for the other evaluative components. Focus group participants were more positive about their engagement experience than the online participants across all of the evaluative criteria measured by the participant experience components of our surveys. In fact, focus group participants' positive ratings ranged between 75 and 96.2% for the five components of their experience. In contrast, the highest positive rating given to any of the components by online participants was 43.4% for the independence of the process. Participants of the online engagement gave two components, task definition and resource accessibility, higher negative scores than positive, highlighting their poor experience.

TABLE 2. Participant experience for focus group and online participants

Evaluative component	Statement to which participants were asked to respond	Focus group percentage agreement (percentage disagreement)	Online percentage agreement (percentage disagreement)
Task definition	I feel that the nature and scope of this citizen engagement session has been well-defined	75 (10.6)	30.5 (52.2)
Independence	I feel that today's session was run in an unbiased way	96.2 (0.96)	43.4 (26.1)
Resource accessibility	I feel that the sponsors of today's session provided me with enough time and information, to enable me to take part in the discussion	92.3 (0.96)	30.5 (47.8)
Fairness	I feel that this citizen engagement session allowed me equal opportunity to provide input	92.3 (3.9)	39.1 (21.8)
Likelihood to participate again	I would participate in a similar exercise such as today's session again if the opportunity arises	87.4 (5.8)	39.1 (21.7)

Expectations of the organizers

Six members of the CRCEI Working Group completed pre- and post-interviews. In interviews before the start of the engagement initiative, several dominant themes emerged for the organizers. Most believed that the online process was more of an experiment and would not yield the same depth of discussion as the focus group sessions.

> "I'm thinking, in my head, that you would get more of that [useful information] from that dialogue between people, than you would get when an individual is just thinking about their own … their own thoughts on the issue." (Study Participant 5)

Key informants generally anticipated that the online component would be more representative than the focus group sessions, based on the assumption that the online technology would be accessible to more citizens. It was also generally felt that there would be more participants in the online survey than in the in-person focus groups.

> "Well, from an online perspective, my expectation is that we'll get a broad overview of public … public input." (Study Participant 4)

Key informants brought up the idea of learning and building on the initiative several times during the interviews. This was important, as many of the partners involved in the initiative had limited experience with public engagement and saw the CRCEI as an opportunity for their organization to further develop this ability. They also viewed the CRCEI as an opportunity to develop and foster a relationship with the public through information sharing.

> "One of our objectives was to do somewhat of education or awareness to the public about decision-making and the difficulty and how decisions are made." (Study Participant 5)

During the post-initiative interviews, key informants' views changed regarding representativeness and the online component. This change was most likely owing to the lower than expected number of people who completed the online survey; this point was discussed by one participant who noted the readiness of the population to use the online technology.

> "Is it just at this point in time a reflection of our population and readiness for this sort of activity?" (Study Participant 2)

Despite these concerns, a possible remedy to the unrepresentativeness of the participating public was the use of social media to increase awareness among youth.

> "I think you'd need to use more of a social media, things like Twitter and Facebook and tweets and all this different kind of stuff that kids are into, because there's a lot of people out there that we're not reaching and we know that." (Study Participant 2)

Nonetheless, they felt that there were still strengths worth discussing and that there were lessons learned from the initiative. Of the major strengths discussed by interviewees, the success of the focus group format was dominant.

> "When you have a situation where you can sit one-on-one in person with people, and have a round of discussions around things that you know, sort of occur to them as they are listening to others speak, you end up getting richer and deeper insights into, you know, what may be happening." (Study Participant 2)

Key informants interviewed also viewed the collaboration between the various partners involved in the CRCEI as a major success worth touting. Mentioned by several participants, the CRCEI was a rare successful instance of regional collaboration.

> "The strength I think of the entire initiative was that, um, it was a partnership approach. Um … we had multi partners throughout this process." (Study Participant 3)

However, many weaknesses were also discussed by key informants, including the usability of the information collected from the online component owing to the limited number of participants and the issue of representativeness.

> "The actual deliverable, in terms of what the true values that citizens have and all those types of things that were of interest questions to the partners … I'm reserving judgment yet on whether or not we could or probably should utilize that information because I don't personally feel it is representative of the population." (Study Participant 3)

Overall, several of the key informants were happy with the way the initiative proceeded, even if they were slightly hesitant regarding the use of online engagement.

> "I think we got some good engagement, some good feedback, some themes. I'm really happy about that, but I really know we'd have been a lot richer if we could have gotten more online [participants] to have a more representative sample and more input, to add to the data." (Study Participant 1)

Discussion

This study evaluated two mechanisms of engagement, online and in-person, used in the CRCEI. We found that both mechanisms of engagement were unrepresentative of certain aspects of the population of Central Newfoundland, particularly in terms of the level of education and gender of the sample. This result is not surprising, given the recruitment strategy and that many public engagement initiatives often include an unrepresentative sample of the public, including in terms of gender, age, income and employment in the sector being engaged (Lomas and Veenstra 1995). Other online surveys have also shown, as in our study, an over-representation of highly educated participants (Duda and Nobile 2010; Rowe et al. 2006). In fairness, the organizers of the CRCEI did not explicitly attempt to ensure that the initiative was representative, using a direct invitation to certain members of the community and an online survey opened to everyone. However, it is interesting that after the online survey had a much lower response rate than was expected, some of the organizers pointed to the lack of representativeness because of the small number of respondents, as a reason to question the results. It may be the case that being as representative as possible is as important then to balance off criticisms or attempts to undermine the use of the findings of an engagement initiative, as it is to balance concerns about democratic need.

Participants in the focus groups were much more satisfied with their participation than those who participated online across all five criteria. These results are somewhat surprising, given some of the suspected benefits of engaging people online and that the information and tasks given to both sets of participants were closely modelled after each other. In terms of task definition, 75% of focus group participants, but only 30.5% of online participants, agreed with the statement that the scope of the initiative was well-defined. The instructions and information given to each group were designed to be the same. The difference here may be access to the focus group facilitator and other focus group participants, and the rather non-interactive presentation of the information online, which may play a strong role in how participants feel about online surveying (Puleston 2011). It is important that the issues during a public engagement initiative are framed in a manner easy for the public to understand (Sheedy 2008); this may be a particularly pertinent consideration when using online engagement where participants are without access to a facilitator.

Resources for a public engagement initiative can include information, material, time and human resources (Rowe and Frewer 2000). While focus group participants were provided with a copy of the conversation guide prior to the session, online participants were able to access the conversation guide beforehand and spend as much time as possible to review the material and give their responses. The fact that 92.3% of focus group participants, but only 30.5% of online participants, felt that they were given enough time and information likely either reflects the participants were unsure about the tasks they were being asked to perform and had no one to turn to for clarification, or that there is a "halo effect," in which raters simply selected the same evaluation category throughout the entire evaluation (McLaughlin et al. 2009); in this case, rating all of the evaluative criteria negatively to reflect their overall negative experience.

Due to the rural context of the CRCEI, it was important to reach citizens despite vast geographical boundaries. The organizers felt that, although the online process was an experiment in online engagement, the use of the online technology would allow the opportunity for everyone to participate; an important consideration in a rural context. However, owing to the lower than expected number of online participants, their expectations around the use of online engagement changed, as reflected during the second round of interviewing. The minimal advertising and recruitment efforts completed for the online survey were recognized by organizers after the initiative. Organizers discussed the use of innovative recruitment strategies, including the use of social media, as ways to address this issue. The use of social media has been successful in a similar online style engagement initiative in Northern Ontario (Shields et al. 2010). While the focus groups of the CRCEI were viewed as a success by participants and organizers, it was noted during the interviews that it would have been impractical to provide a focus group for every area. For this reason, organizers commended using both mechanisms of engagement if they were to conduct a similar initiative in the future.

This research project had a number of limitations. Evaluations of public engagement initiatives can be categorized as either process- or outcome-based. Process evaluations of public engagement initiatives focus on how the initiative was conducted. Outcome evaluations focus on the impact of the public's input (Abelson and Gauvin 2006; Weiss 1998).

While incorporating an evaluation of impacts of the different mechanisms and their combined impact would have added an important component to our understanding of the different mechanisms, the evaluation of the CRCEI in this project was limited to a process-based evaluation, owing partially to time constraints of the research team and delays in the public reporting of results. Similarly, while our evaluation would have been further strengthened by expanding the qualitative interviews to the participants in the focus groups and online sessions, the organizers felt that surveys were sufficient to be incorporated into the CRCEI. The project was conducted within a particular social and institutional context. While there are no reasons that arose within the project that would lead the researchers to conclude that the conclusions are not applicable to other contexts, particularly in rural areas, discretion needs to be taken in generalizing the findings. Finally, the small number of online participants limited the ability to conduct any statistical analysis on the focus group and online results.

Conclusion

This study offered unique insight into the use of concurrent engagement mechanisms and provides lessons for organizers of similar initiatives in the future. The use of the two engagement mechanisms allowed the organizers to use focus groups to reach citizens near larger centres, while the online component was designed partly so that residents in hard-to-reach locales, or those who were not invited to the focus groups, would also have an opportunity to provide input. Organizers, who were initially hopeful that online engagement would allow a greater proportion of a rural population to participate, ultimately questioned whether the results would be used by decision-makers because of the low participation. While organizers of the engagement exercise interviewed were disappointed with some aspects of the initiative, they discussed ways of improving the online experience and reiterated their support for using two mechanisms of engagement for future initiatives.

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RESEARCH PAPER

From Policy to Practice: Implementation of Treatment for Substance Misuse in Québec Primary Healthcare Clinics

De la politique à la pratique : coup d'œil sur la mise en œuvre d'un programme de première ligne pour la prévention des problèmes de dépendance au Québec

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From Policy to Practice: Implementation of Treatment for Substance Misuse in Québec Primary Healthcare Clinics

Abstract

Background and Objectives: In 2007, the Québec Ministry of Health issued a policy document that specifically mandated the development of addiction treatment services including screening, brief interventions and referral (SBIR) to be delivered by primary healthcare clinics throughout Québec. The current study examined the level of implementation of SBIR one year following the end of the mandate (2007–2012).

Approach: Semi-structured interviews were conducted with 45 participants from 21 primary health and social service centres throughout the province. Qualitative analysis was used to evaluate the level of success each centre had in implementing SBIR and to identify organizational measures that contributed to successful implementation.

Results: The results show that Québec primary health and social service centres had limited success in their efforts to integrate SBIR into their services. A comparative analysis of the centres, categorized according to their level of implementation, revealed the presence of significant organizational- and staff-level factors, including the creation of formal action plans that were conducive to the successful implementation of SBIR in primary care.

Conclusion: The findings highlight the importance of offering support and guidance, as well as a menu of specific practices that are likely to assist primary health and social services centres to implement SBIR. At the organizational level, the adoption of local action plans and formal service trajectories offers a framework that allows for horizontal and vertical integration of new practices.

Résumé

Contexte et objectifs : En 2007, le ministère québécois de la Santé publiait un document d'orientation qui confiait aux Centres de santé et de services sociaux de toute la province le mandat d'organiser l'offre de services pour le traitement des problèmes de dépendance – notamment le dépistage, l'intervention rapide et l'orientation (DIRO) – dans les cliniques de soins primaires du Québec. La présente étude avait comme objectif d'examiner le degré de mise en œuvre du DIRO un an après la fin du mandat (2007–2012).

Démarche : Des entrevues semi-structurées ont été menées auprès de 45 participants provenant de 21 centres de services de santé et communautaires dans la province. L'analyse qualitative a été employée pour mesurer le degré de succès de la mise en œuvre du DIRO dans chacun des centres et pour repérer les mesures organisationnelles qui y ont contribué.

Résultats : Les résultats font état d'un succès limité quant à l'intégration du DIRO dans les services offerts par les Centres de santé et de services sociaux au Québec. Une analyse comparée entre les divers centres, catégorisés selon leur degré de mise en œuvre, a révélé la présence d'importants facteurs aux niveaux de l'effectif et de l'organisation, notamment la création de plans d'action officiels qui ont été propices à la mise en œuvre du DIRO dans les soins de santé primaires.

Conclusion : Les résultats soulignent l'importance d'offrir du soutien et une orientation, de même qu'une liste de pratiques précises qui sont susceptibles d'aider les Centres de santé et de

services sociaux à mettre en œuvre le DIRO. À l'échelon organisationnel, l'adoption de plans d'action locaux et de schémas d'aiguillage officiels donne lieu à un cadre de travail qui permet une intégration horizontale et verticale des nouvelles pratiques.

Introduction

Over the past decade, the Health and Social Service Ministry of Québec (Ministère de la santé et des services sociaux; MSSS) recognized the importance of addressing substance abuse in Québec (MSSS 2006). Reports and research by local expert committees and academics, as well as surveys conducted by the provincial government, have noted increasing costs related to substance dependence in terms of healthcare and lost productivity (Guyon and Desjardins 2002; Schneeberger and Desrosiers 2001). Subsequently, the MSSS issued two policies related to substance dependence entitled "Plan d'action interministériel en toxicomanie 2006–2011" (*Action Plan on Addiction*) and "Offre de service–Orientations relatives aux standards d'accès, de continuité, de qualité, d'efficacité et d'efficience: programme-services dépendances, 2007–2012" (Addictions Program and Services) (MSSS 2006). These policy documents contained plans for a system-wide change in primary care practices by mandating Québec Health and Social Services Centres (Centres de santé et de services sociaux; CSSS[1]) to provide treatment for substance dependence.

Description of the MSSS Addictions Program

As outlined in the MSSS policy documents, the new Addictions Program was designed to focus on screening, brief intervention and referral (SBIR), an evidence-based and cost-efficient set of interventions for substance abuse that are widely recognized in the scientific literature (Babor et al. 2007; Humeniuk et al. 2008; Kaner et al. 2007; Madras et al. 2009; Nilsen et al. 2008). As entry points into Québec's primary health and social service system, the CSSS were mandated to offer addiction-related services, including:

1. screening[2] for alcohol, drug and gambling problems and orientation to appropriate services;
2. brief intervention and referral to appropriate treatment;
3. psychosocial follow-up during specialized treatment;
4. methadone maintenance with psychosocial and medical follow-up; and
5. detoxification with psychosocial follow-up.

Repérage consisted of approximately six questions about substance use and gambling, and it was to be conducted with all clients seeking care at a CSSS, either through general services or specialized services such as mental health. Following a positive screen, further assessment, termed "*détection*," would then determine if the client could be referred internally for a brief intervention or externally to second-line specialized addiction services. All staff (nurses, social workers, youth workers, mental health workers, etc.) working in general services, mental health services and integrated services in perinatal and infant care were to be trained to screen, detect and refer clients to appropriate services and to be familiar with brief motivational interviewing techniques (MSSS 2009).

Specialized services including methadone maintenance treatment and detoxification with psychosocial follow-up were expected to be performed by "trained professionals" according to the Addiction Program policy document. Further details regarding the profession or training were not provided; however, it should be noted that prescription of methadone requires a licensed physician.

Implementation of the Mandate

It is notable that while the program rationale and description of services were well-outlined within the MSSS policy documents, the methods of implementation were not specified. To aid development of addiction services, the MSSS provided a two-day training workshop to healthcare professionals (HCPs) within the CSSS system entitled "Formation première ligne adulte en dépendances du MSSS" (*MSSS Frontline Training for Adult Addictions*) (MSSS 2009), and in some cases, they also provided funding to hire an addictions specialist (Landry et al. 2012). However, no specific implementation models were prescribed and thus each CSSS was expected to develop their own implementation plan and timeline.

Recent attempts by the MSSS to implement Alcochoix+, a program aimed at reducing hazardous alcohol intake (Cournoyer et al. 2009), and a Mental Health Services program (MSSS 2005b; Vallée et al. 2009) within Québec's primary care CSSS centres have shown how slow and difficult the implementation process can be. For example, a study of the Alcochoix+ program showed that while some CSSS were successful in offering the program, many organizational barriers such as staff resistance and lack of adequate training impeded their efforts to fully implement it (Cournoyer et al. 2009). In terms of the development of Mental Health Services, a study of 15 CSSS revealed that three years following the initial launch, only a third of the CSSS had full implementation, while the remainder managed only partial to low levels of mental health service implementation (Vallée et al. 2009). Again, similar organizational- and staff-level barriers were identified as factors limiting the CSSS's efforts to implement primary care mental health services locally.

In terms of the Addictions Program, an extensive literature review of journals and government documents indicated that there has been little examination of program implementation on a province-wide scale. Thus, the aim of the current study was to examine the level of implementation of the Addictions Program throughout the province, one year following the launch of the Addictions Program and Services mandate (2007–2012). Twenty-one CSSS from various geographical regions of Québec participated in the research study, and through a qualitative analysis of services and organizational factors, three groups of CSSS were identified with low, partial or high implementation of the Addictions Program. These groups were compared to identify structural, staff and organizational elements that were conducive to a successful and sustainable integration of the government program. This study contributes to the field of implementation science by describing a case of real-world policy implementation that can be used to inform decision-makers regarding knowledge transfer related to evidence-based practices into primary care services.

Methodology

A qualitative approach was adopted to evaluate which Addictions Program services were offered at each CSSS, and what strategies, if any, were used to implement them. An in-depth understanding was gained by gathering testimonies from stakeholders involved in all aspects of the Addictions Program, from the initial planning phase to the day-to-day provision (Given 2008).

An invitation to participate was sent to all of the 94 CSSS in the province and a random purposeful sampling (Patton 2005) was used to select 21 CSSS from the 35 who responded positively. The 21 CSSS were identified and selected to maximize the representation of the 18 regional health districts in Québec (13 of 18 districts are represented in this study) and include centres from both urban and rural settings. The 14 CSSS that were not selected for the study were eliminated to avoid over-representation of some regional health districts, namely, the Montréal and Québec City urban regions. The study took place a year following the end of the implementation period (2007–2012). This time frame is optimal, as studies on the implementation of evidence-based practices are often done too early in the implementation process (Fixsen et al. 2005).

A logic of purposive stakeholder sampling, most commonly used for policy analysis (Given 2008), was used to recruit a maximum of four key informants per CSSS for a total of 45 participants. Participants were identified and selected based on potential involvement in the decision-making processes related to the Addictions Program within their CSSS or in the everyday functioning of the program. The positions selected for recruitment depended on the organization chart of each site but could generally be classified as:

- Director of Services ($n = 12$);
- Coordinator of Services or Program Manager ($n = 18$; addictions services, mental health services, public health or community health); and
- primary HCP designated to work in addictions ($n = 15$).

Participation in all components of the research was voluntary and informed consent was obtained. Ethical approval for this study was provided by both the McGill University Health Centre Research Ethics Board and the Research Ethics Committee of each CSSS involved in the project.

Data were collected through semi-structured interviews of approximately 1.5 hours in duration, conducted by a research assistant with extensive experience in semi-structured interviewing and qualitative research/analysis. A supplementary checklist of currently offered addiction services was also completed by each participant. Interviews were audio-recorded and transcribed verbatim by a research assistant, and transcripts were subsequently reviewed by a second assistant to ensure accuracy and comprehensiveness.

The interview guide consisted of four sections:

1. the participant's role in the CSSS and in the Addictions Program;
2. the addiction services offered in the CSSS;
3. the implementation process of the Addictions Program; and
4. program-related training offered to CSSS staff.

When available, case documentation such as organizational guidelines and strategic plans related to the Addictions Program was collected and integrated for a more thorough understanding of the process and level of implementation of primary care addiction services at each site. Additional details regarding the study protocol and methods are available in Gill et al. (2014).

Data were sorted by case (CSSS) as the main unit of analysis to allow for an in-depth exploration of each CSSS as well as comparison of cases. A triangulation of the data from the different case participants and available in-house documentation increased the validity of the case descriptions. NVivo 9 (QSR International) qualitative data analysis software was used to manage the data. The coding strategy was based on variables associated with the primary care services outlined in the Addictions Program as well as additional themes that emerged over the course of the project. Analysis was completed through a process of familiarization with the data through multiple readings of the transcripts, identification of major themes and line-by-line coding. The analysis was guided by the Framework Analysis Method (Ritchie and Spencer 1993).

Analysis of the services and implementation data was initially done separately by two qualitative analysts, and findings were validated through cross-evaluation of the two analyses. Further validation was conducted in team meetings that included the principal investigator and research coordinator, and through a literature review of similar implementation ventures. All of these methods helped ensure trustworthiness of findings as defined by Lincoln and Guba (1985): credibility, transferability, dependability and confirmability.

Results

The sample of 21 CSSS showed great variation in the level of success they had implementing services. As shown in Table 1, a majority of the CSSS used standard tools to screen (repérage) and detect clients. Almost two-thirds of the CSSS had a formal policy for systematically screening clients; however, only a quarter of the CSSS had actually put these policies into practice. It should be noted that while some CSSS did systematically screen clients for substance misuse, those clients who tested positive were not necessarily followed up with in terms of the next step in the recommended "détection" procedures. This was left up to the judgment of the HCP who had completed the initial screening. Inversely, some CSSS did not systematically screen all clients (this was again left up to the discretion of the HCP); however, those who tested positive would systematically go through the détection process. This suggested that there was some confusion on the part of many CSSS regarding the aims of the screening process, as, in principle, both screening and détection were to be approached systematically.

TABLE 1. Primary care addiction services offered at the Health and Social Services Centres (CSSS)

Services	N = 21	%
Screening (repérage)		
Standard tool	16	76
Formal procedure	13	62
Systematic approach	5	24
Detection		
Standard tool	20	95
Formal procedure	12	57
Systematic approach	6	29
Internal orientation & referral		
Formal procedure	11	52
External orientation & referral		
Formal procedure	14	67
Intervention		
Alcochoix+	14	67
Motivational approach	13	62
Psychosocial follow-up post-treatment		
Service available	16	76
Psychosocial & medical follow-up for methadone maintenance		
Service available	5	24
Outpatient detoxification		
Service available	2	10

Regarding the referral process, half of the CSSS had implemented formal procedures for internal referrals (incidentally, this was highly dependent on the presence of a trained HCP able to offer brief interventions) and two-thirds had formal procedures for external referrals to second-line addiction treatment centres.

In terms of brief interventions, close to two-thirds of the CSSS had a trained HCP who could offer one or more forms of brief intervention:

1. individual sessions using the motivational approach; or
2. the Alcochoix+ program, a locally developed alcohol harm reduction program (Cournoyer et al. 2009).

Psychosocial follow-up post-treatment was available in 76% of the CSSS. However, it should be noted that in most cases, respondents considered this to be an existing service that had been instituted prior to the implementation of the Addictions Program, and thus no specific actions around it had been undertaken following the issuing of the MSSS policy documents.

Very few CSSS offered services related to methadone maintenance ($n = 5$) or outpatient detoxification ($n = 2$), and in all of these CSSS, these services existed prior to the launch of the government program.

Following the analysis of services, the 21 CSSS were categorized according to their level of SBIR implementation. Three variables were considered: the presence of a systematic approach to the screening process, the presence of a formal procedure for internal and external referrals and the presence of one or more staff members trained to provide brief interventions. However, more weight was given to the existence of a systematic screening process, as this is the cornerstone of SBIR. Without systematic screening at intake, only severe cases of substance dependence are likely to be detected, which defeats the overall purpose of SBIR as a method for secondary prevention within the context of primary healthcare services (Ernst et al. 2007).

This categorization process resulted in the identification of three subsets of CSSS: a group of six CSSS where a high level of implementation of SBIR was achieved, a group of eight CSSS where implementation was partially achieved and a third group of seven CSSS where a low level of implementation was achieved. Table 2 offers an overview of these three groups.

TABLE 2. Characteristics of each level of implementation

	High implementation	Partial implementation	Low implementation
General description of services offered	• Formal and systematic approach to **screening and detection** • Formal procedures for **internal or external referrals** • Offer one or two types of **brief interventions** (motivational approach, Alcochoix+)	• Formal approach to **screening and detection**, but not systematic (done at discretion of HCP) • Procedures for **internal or external referrals** in place (but often done at discretion of HCP) • Offer one or two types of brief interventions	• Informal approach to **screening and detection** • Few internal referrals, few services in place and external referrals done at discretion of HCP • Brief interventions rarely offered

These results were then compared with the data pertaining to the implementation process. There was a correlation between the presence of certain organizational elements in each group and the level of success they had in sustainably implementing the Addictions Program.

Key elements conducive to successful implementation

The common elements identified in the high-implementation group (and, inversely, absent in the low-implementation group) concern two mutually dependent factors: organization and staff. Both factors are intertwined: organizational changes are often made possible by the individuals involved in the Addictions Program; in turn, organizational changes allow individual staff to work efficiently. Significant organizational and staff factors are described below, and summarized in Table 3.

TABLE 3. Summary of key elements conducive to successful implementation

Organizational-level factors	Staff-level factors
• Development of a formal action plan and service trajectory • Internal or local addiction networks • Formal internal follow-ups and tracking • Non-hierarchical decision-making process	• Priority setting by management • Presence of a full-time addiction worker • Addiction worker takes on a caseload • Additional staff members trained to offer addiction services

Organizational level

Since the Addictions Program was not intended to become a service in itself, organizational measures to support and adapt it to the local context of each CSSS became the cornerstone of successful implementation. All of the CSSS from the high-implementation group had taken such measures, while most of the CSSS from the low-implementation group had taken few or no measures to integrate the Addictions Program. The organizational measures identified below play an important role in one or both phases of the Addictions Program:

1. implementation and adaptation to the specific setting of the CSSS;
2. sustainability and evolution.

Development of a formal action plan and service trajectory

All of the CSSS from the high-implementation group had developed a formal action plan with specific measures to implement the Addictions Program locally (only one CSSS in the low-implementation group had created a local action plan). All of these CSSS also created formal service trajectories that detailed the different services involved in the Addictions Program (intake, psychosocial services, etc.), the role of the HCPs and the services that a client should receive during the SBIR process. Possible advantages to having formal action plans and service trajectories are that they both support the implementation process and provide a framework for the ongoing provision of addiction services by adapting the Addictions Program to the local setting of the CSSS.

Internal or local "addiction networks"

To give structure to the Addictions Program and facilitate ongoing communication between services and partners involved in the Addictions Program, all CSSS in the high-implementation group had created an internal or local network. Local networks included other nearby CSSS, other treatment centres and/or community organizations. The networks engaged in discussing more practical "day-to-day" issues regarding the program (e.g., how to improve procedures and services for clients, and improve communication between internal CSSS services and second-line services).

The presence of these networks seems to have two major positive outcomes: it prevented the addiction workers (AWs) from operating in isolation, and it provided a framework for the governmental program and open lines of communications between relevant partners and services.

Formal internal follow-ups

To monitor the implementation of the local action plan, most CSSS from the high-implementation group reported having formal internal follow-ups. Generally speaking, these were fixed meetings where all those involved in making decisions regarding the Addictions Program assessed, discussed and re-evaluated the action plan. For some CSSS, this also included a tracking procedure to monitor the offer of services and ensure that the plan was actually integrated into routine practice. In fact, all the CSSS that had such tracking procedures had been able to enforce a systematic screening process. In short, internal follow-ups and tracking measures were ways to determine if the action plan was actually being put into place and allow the program to be adapted based on a continual assessment of addiction services.

Decision-making process – shared vs. hierarchical

A shared decision-making process seemed to be an important factor in successful implementation: all of the CSSS in the high-implementation group (for which data pertaining to this element are available; 5/6) had this type of decisional process in place. For the CSSS in the low-implementation group, 80% had a "hierarchical" decision-making process. A shared decision-making process was one where the AW and management worked in collaboration and the AW had the freedom to take initiative towards new ventures.

This type of decision-making process presented two advantages. By giving the AW a degree of autonomy, the program could be implemented in ways that reflected the specific needs of the client population because the AW was best positioned to assess those needs. This also minimized isolation of the AW by establishing a collaborative model. A good example of one such initiative was the organizing of "cafés" that served as social reinsertion support groups. The AW explains that this was made possible because of the support and freedom given by a supervisor:

> **I have that kind of openness to try things.** So when I see with the [community] partners that it makes sense, well then, we talk to our managers about that. And then, well, we put it down on paper. Then at a given time, well, it becomes more … more formal.[3]

Another AW, from a low-implementation CSSS, provides a counter example of being unable to follow through on initiatives owing to the hierarchical structure of their CSSS:

> **There's a lot of hierarchy**, you know, at healthcare centres. So I can't talk to a department head. Me, I'm just supposed to get things up and running and to … make it come alive, "detection" and "dependence", that's one of my duties. **But I don't have the right to speak to any of the managers. My manager is supposed to […] introduce me**, eh. So my manager, there, she didn't just have me to take care of as … She has 40 healthcare workers [to look after].

Non-hierarchical decision-making processes allowed AWs to communicate with other service and community partners, reducing their isolation and facilitating the uptake of shared knowledge. This may further explain why non-hierarchically structured CSSS were more successful: shared decision-making seems to make the AW position more attractive, which reduces turnover. Those CSSS that were unsuccessful or had limited success implementing the Addictions Program often considered isolation as one of the factors that contributed to a high turnover rate among Addictions Program workers. Alternatively, the AW and management from CSSS with successful implementation centres reported high levels of motivation and a low turnover rate.

Staff level

Management and prioritization

The priority given to the Addictions Program was, unsurprisingly, an important factor in how successful each CSSS was at implementing services. All CSSS in the high-implementation group (for which data pertaining to this element are available; 5/6) reported that the program had been made a priority by management. This meant that it was regularly discussed during general meetings and inquiries were made as to the progress of ongoing implementation efforts. Inversely, among the low-implementation CSSS group (for which data pertaining to this element are available; 4/7), all reported that the program was not a priority.

Mid-level managers seemed to be key actors in the prioritization of the Addictions Program. Their position within the organization allowed them to both initiate changes and assume leadership. Examples of mid-level management assuming leadership of the program's implementation were found among those CSSS in the high-implementation group, and the opposite attitude was found among managers in the low-implementation group:

> Because me, like we say, I'm not going to put my head on the chopping block to develop a nice action plan for my managers with great ways to do things if, on the organizational front, it's not a priority. I won't put my energies there. There are other things to do …
> (Mid-level manager, low-implementation CSSS)

Presence of a full-time AW

The presence of a full-time AW seemed to play a role in the level of success the CSSS had in the implementation of the program. All of the CSSS from the high-implementation group had a full-time AW working for them, compared with only two out of the seven CSSS in the low-implementation group. However, results showed that hiring an AW alone was not sufficient. The position of the AW needs to be supported by a structure that favours open communication with other services and local partners (as previously illustrated) and that allows for a continuity of services in the event that the person occupying the position leaves. As an AW from a CSSS in the high-implementation group explains, the presence of an internal addiction committee, along with involvement from multiple staff members, constitutes a safeguard against the discontinuity created by staff turnover:

> And if I were to leave, well, it would go on with each team, this goal, shared by the direction and management team.

Some CSSS have attributed past and present failures in the implementation of the program to staff turnover, namely due to the fact that the Addictions Program heavily rested on the shoulders of a single staff member.

How the role of the AW was defined also seemed to play a part in the successful implementation of the Addictions Program. Of the 21 CSSS in this study, only five decided to opt for a strategy where the AW became the in-house addictions specialist to whom clients were referred for detection and brief interventions. Out of those five, four belonged to the high-implementation group. This strategy was considered to be optimal, as the AW provided the interventions, thus encouraging the remaining HCPs to conduct screening, particularly when they lacked experience treating patients with substance dependence. As an AW explains:

> They're more … [comfortable], because it's not scary to uncover something when you know that […] you won't have to meet your client for another 12 sessions if you do.

Other CSSS opted for a different strategy whereby the AW did not have a caseload and was only there to support staff (e.g., coaching and co-interventions), offer training and to work on further implementation efforts. However, to be effective, a "caseload" strategy needed to be coupled with some structural elements:

1. a communication network that gave the AW access to managers and staff of other services;
2. a shared decision-making process (see previous section); and
3. one or more additional staff members who were trained to offer addiction services in case the AW left (temporarily or permanently), to ensure continuity of services.

Discussion

Two pilot studies were conducted prior to the province-wide dissemination of the Addictions Program in Québec (Saint-Jacques et al. 2012, 2009). These studies showed, among other challenges, that training alone was insufficient to modify HCPs' practices on a long-term basis. Saint-Jacques et al. (2012) found that systematic screening peaked at 70% in a group of HCPs who underwent training in SBIR, but returned to pre-training levels seven months later. These same studies also identified barriers to the implementation of SBIR, such as staff resistance, lack of adequate training and organizational barriers. Similar challenges also emerged in past attempts by the MSSS to implement an alcohol reduction program (Cournoyer et al. 2009) and Mental Health Services (MSSS 2005b; Vallée et al. 2009) into primary care clinics in Québec. The findings overall are consistent with a vast body of literature that shows the inherent challenges in the dissemination and implementation of SBIR (Johnson et al. 2011; Nilsen 2010; Nilsen et al. 2008; Rogers 2002) or other evidence-based practices in primary care health services (Deane et al. 2006; Johnson and Austin 2008).

In light of this, it is surprising that in their efforts to integrate addiction services into all of the CSSS in the province, the MSSS did not prescribe a specific implementation model or framework for the CSSS, despite extensive recommendations made following province-wide deployment studies (INSPQ 2009; Saint-Jacques et al. 2009). Models for policy implementation have been well-developed by the INSPQ (Institut national de santé publique du Québec), Québec's public health institute (INSPQ 2009).

This study shows the limited success a selected group of CSSS had in their efforts to integrate the Addictions Program into their existing services, as only 29% were able to implement SBIR using a systematic approach. A comparative analysis of the CSSS, categorized according to their level of success in their implementation efforts, revealed the presence of organizational- and staff-level factors that were conducive to successful implementation of SBIR into primary care health centres. Inversely, the absence of these components in the CSSS that were less successful further demonstrates the importance of these organizational- and staff-level changes in ensuring that the Addictions Program was implemented successfully.

Many of the elements identified in this study have been highlighted in the literature on implementation science. At the organizational level, the adoption of local action plans and formal service trajectories offers a framework for the realignment of organizational structures that allows for a horizontal and vertical integration of new practices (Fixsen et al. 2005).

The presence of internal networks is a key factor in ensuring communication across the organization, which in turn contributes to effective horizontal implementation (Damschroder et al. 2009; Vallée et al. 2009). At the regional level, a network that allows for good collaboration with community partners may impact sustainability of the implementation process (Tibbits et al. 2010). Internal follow-ups and monitoring play a central role in pushing the implementation process forward (Reay et al. 2013) and in making sure that policy is put into practice (Williams et al. 2011). A closed and hierarchical decision-making process has been shown to inhibit innovations (Damschroder et al. 2009), indicating that a shared decision-making process can contribute to adapting the program to the local context through local innovations.

As for staff-level components, dedicated mid-level managers or clinical coordinators can be essential in facilitating positive organizational change (Reay et al. 2013), as they play an active role in removing barriers (Fixsen et al. 2005), assuming leadership (Cournoyer et al. 2009) and taking actions to move forward with implementation measures (Reay et al. 2013). In a context where funding is limited and competing programs have to be implemented or kept active, a mid-level manager can be key in making sure that the program he or she is responsible for is made one of the organization's priorities (Fixsen et al. 2005). Additionally, in a demonstration project, Ernst et al. (2007) posited the presence of a behavioural health specialist as instrumental in successful implementation of a full range of substance abuse services into a primary care setting. Although the AWs in the present study were not behavioural health specialists, those who took on a caseload seemed to have played a significant role in the successful implementation of SBIR into the CSSS.

This study also revealed the existence of potential confusion among the CSSS surrounding SBIR (i.e., the screening process), an issue raised by the earlier studies on Québec's addiction services (Saint-Jacques et al. 2009, 2012). Clarity of the intended intervention has been identified as a central element in a successful implementation process (Damschroder et al. 2009; Tibbits et al. 2010; Williams et al. 2011).

In terms of limitations, this study did not take into account other key elements – such as training (Tibbits et al. 2010) and organizational readiness for change (Castaneda et al. 2012) – that could shed further light on ways to ensure successful program implementation. The MSSS plans to renew its effort to implement addiction services into primary care (MSSS 2010), and findings from this study highlight the importance of offering additional guidelines and support to assist the CSSS in their implementation of SBIR.

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Notes:

1. CSSS are administrative bodies responsible for overseeing the primary health, mental health and social services needs of specific geographical regions in Québec. At the time the MSSS policies were issued, there were 94 CSSS in Québec.

2. Within the context of MSSS policy documents, screening for substance abuse and addiction involved a two-stage process including: repérage – initial screening that should be conducted systematically with all clients, and détection – a more extensive assessment performed following a positive screening, to determine the severity of the substance use, and treatment requirements.
3. Quotes were translated (from French to English) by a certified translator.

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RESEARCH PAPER

Health System-Level Factors Influence the Implementation of Complex Innovations in Cancer Care

Les facteurs au niveau du système de santé influencent la mise en œuvre d'innovations complexes pour le traitement du cancer

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Abstract

Background: The movement of new knowledge and tools into healthcare settings continues to be a slow, complex and poorly understood process. In this paper, we present the system-level factors important to the implementation of synoptic reporting tools in two initiatives (or cases) in Nova Scotia, Canada.

Methods: This study used case study methodology. Data were collected through interviews with key informants, document analysis, non-participant observation and tool use/examination. Analysis involved production of case histories, analysis of each case and a cross-case analysis.

Results: The healthcare system's delivery and support structure, information technology infrastructure, policy environment and history of collaboration and inter-organizational relationships influenced tool implementation in the two cases.

Conclusions: The findings provide an in-depth, nuanced understanding of how healthcare system components can influence the implementation of a new tool in clinical practice.

Résumé

Contexte : Le mouvement des nouvelles connaissances et des nouveaux outils dans les établissements de soins de santé est un processus lent, complexe et mal compris. Dans cet article, nous présentons les facteurs au niveau du système de santé qui sont importants pour la mise en place d'outils d'observation synoptique dans le cadre de deux initiatives (ou cas) en Nouvelle-Écosse, au Canada.

Méthodes : Cette étude a utilisé la méthodologie de l'étude de cas. Les données ont été recueillies à l'aide d'entrevues auprès d'informateurs clés, d'une analyse de la documentation, d'observations non participantes ainsi que de l'examen et de l'utilisation de l'outil. L'analyse s'est faite par l'étude des histoires de cas, une analyse de chaque cas et une analyse croisée des cas.

Résultats : Dans les deux cas, la structure de soutien et de prestation des services, l'infrastructure des technologies de l'information, le contexte des politiques ainsi que l'historique des collaborations et des relations interorganisationnelles ont influencé la mise en place de l'outil.

Conclusions : Les résultats permettent une compréhension approfondie et nuancée de la façon dont les composantes du système peuvent influencer la mise en place d'un nouvel outil dans la pratique clinique.

Background

Despite a growing literature, the movement of innovations (i.e., new knowledge and tools) into healthcare settings continues to be a slow, complex and poorly understood process (ICEBeRG 2006; Stetler 2003; Ward et al. 2009). Though researchers in this area have focused predominantly on individual-level factors that affect the uptake of new knowledge (Eccles et al. 2005;

Grimshaw et al. 2001, 2006; Grol and Grimshaw 2003), many organizational, socio-political and economic factors influence whether individuals in healthcare settings actually adopt and make use of innovations in their practice (Contandriopoulos et al. 2010; Grol et al. 2007; Kitson et al. 2008; Stetler 2003). Indeed, the process of moving innovations into healthcare practice is dynamic and highly contingent on contextual factors (Battista 1989; Denis et al. 2002; Dijkstra et al. 2006; Fraser 2004; Kitson et al. 2008; Litaker et al. 2006; Rycroft-Malone et al. 2004; Titler 2008; Van de Ven et al. 1999).

As the delivery of care becomes increasingly multidisciplinary and technologically advanced, the introduction of innovations is increasingly becoming a collective endeavour. That is, many new tools and practices introduced in healthcare organizations are complex and require coordinated use by many individuals and professional groups to achieve benefits (Helfrich et al. 2007). At the same time, healthcare settings are characterized by high levels of interdependency and interconnectedness among individuals in the system (Contandriopoulos et al. 2010; Iles and Sutherland 2001). Thus, for many practices, individuals working in healthcare organizations (e.g., clinicians, administrators) seldom have enough autonomy to apply new knowledge in making use of new tools and technologies (Contandriopoulos et al. 2010; Havelock 1969; Leviton 2003). In addition, many of the defining features of healthcare systems, including the range and diversity of stakeholders; professional autonomy of many of its staff; and complex governance, resourcing and regulatory arrangements, may all impact the implementation and use of innovations in healthcare settings (Iles and Sutherland 2001; Pollitt 1993). An improved understanding of the system-level influences on the implementation of innovations in healthcare may prove important to more effectively moving many innovations into practice.

Synoptic reporting tools (SRTs) are an evidence-based means of reporting findings from medical and surgical investigations and procedures that differ from the dominant method of reporting, known as narrative reporting. Although there is a spectrum of what is considered synoptic reporting (Srigley et al. 2009), contemporary SRTs generally differ from narrative reporting in at least two ways. First, SRTs normally require that the physician enter information about the patient, procedure and findings using a computer rather than dictate information into a voice recorder or telephone system. Second, the end synoptic report presents data items in a structured manner and contains only the information necessary for patient care rather than providing a free-text descriptive account of the procedure and findings. More than two decades of research has demonstrated that SRTs consistently improve the quality of pathology (Austin et al. 2009; Beattie et al. 2003; Branston et al. 2002; Chamberlain et al. 2000; Chapuis et al. 2007; Cross et al. 1998; Gill et al. 2009; Hammond and Flinner 1997; Karim et al. 2008; Messenger et al. 2011; Mohanty et al. 2007; Rigby et al. 1999; Srigley et al. 2009; Wilkinson et al. 2003; Zarbo 1992) and surgery (Chambers et al. 2009; Edhemovic et al. 2004; Park et al. 2010; Temple et al. 2010) reporting for a variety of cancers, as well as of various diagnostic investigations and procedures (Harvey et al. 2007; Laflamme et al. 2005), compared to narrative reporting.

In this paper, we present the system-level factors important to SRT implementation in two initiatives in Nova Scotia (NS), Canada.

Methods

In NS, we examined the key interpersonal-, organizational- and system-level factors that influenced the implementation and use of SRTs in two contemporary cases of cancer care:

1. Synoptic reporting in the Colon Cancer Prevention Program (CCPP); and
2. Synoptic reporting in the Surgical Synoptic Reporting Tools Project (SSRTP).

In this paper, we present the findings with respect to the system-level factors. We used case study methodology (Stake 2006; Yin 2009) to examine SRT implementation and use. A case study is "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context" (p. 18) (Yin 2009). The cases were selected to allow cross-case analysis and comparison, and to permit the investigation of a particular phenomenon in different contexts (i.e., to study SRT implementation and use across different settings and individuals). The study was approved by the Research Ethics Boards at all applicable institutions. A detailed description of the methods, including sampling decisions and recruitment processes, and analyses are provided elsewhere (Urquhart et al. 2012).

Three theoretical perspectives largely informed the design of this study: the Promoting Action on Research Implementation in Health Services (PARiHS) framework (Kitson et al. 1998, 2008), the organizational framework of innovation implementation (Helfrich et al. 2007) and "systems" thinking/change (Kitson 2009). The PARiHS framework proposes that the successful implementation of research into practice is a function of the interaction between three core elements: the level and nature of the evidence; the context into which the research is implemented (where context is comprised of the sub-elements of culture, leadership and evaluation); and the method by which the process is facilitated. These elements are conceptualized as existing on a continuum, with high evidence, context and facilitation driving successful implementation. The organizational framework of innovation implementation comprises the following six elements and highlights relationships among them: management support, implementation policies and practices, financial resource availability, implementation climate, innovation champions and the "fit" between users' values and the innovation. These elements are posited to play important roles in achieving implementation effectiveness (i.e., consistent, committed and skilled innovation use). "Systems" thinking/change posits that the successful translation of knowledge into practice is a function of: the nature and characteristics of the new knowledge; individuals' levels of autonomy in making decisions about using the new knowledge; how individuals negotiate and renegotiate relationships with others in the system; and how individuals attract the resources needed to sustain changes in practice.

Case descriptions

In 2009, the CCPP implemented an SRT for colonoscopy reporting as part of this new population-based screening program. The CCPP is administered by Cancer Care Nova Scotia, the provincial cancer agency. Within the program, individuals are advised to undergo a *screening colonoscopy*, arranged through the CCPP, if they have a positive fecal immunochemical test. The impetus for implementing an SRT was to enable performance monitoring and quality improvement for colonoscopy, support the appropriate follow-up of participants in the screening pathway and facilitate overall maintenance of the screening program. The CCPP implemented the endoscopy reporting software and database from the Clinical Outcomes Research Initiative (CORI), developed at Oregon Health and Science University, in partnership with the National Institutes of Health, AstraZeneca and Novartis. CORI was rolled out across the province concurrently with the screening program over a two-year period (2009–2010). All screening colonoscopies in the province are coordinated through the screening program and must be reported using CORI (i.e., a policy of mandatory use for screening colonoscopies). Refusal to use this tool meant that endoscopists (gastroenterologists and surgeons) would not be permitted to perform screening colonoscopies coordinated by the CCPP.

In 2010, synoptic reporting for cancer surgery commenced as part of a pan-Canadian collaboration, funded and led by the Canadian Partnership Against Cancer, to expand surgical synoptic reporting to numerous Canadian provinces. The intent was to capitalize on the successful adoption and implementation of synoptic reporting in Alberta, Canada. Thus, the SSRTP commenced as a pilot project for breast and colorectal cancer surgery. A small number of surgeons (nine) performing breast and/or colorectal cancer surgeries were selected to participate at three hospitals (two academic/tertiary care centres, one community hospital). The SSRTP implemented the Web-based Surgical Medical Record (WebSMR), originally developed in Alberta and jointly owned by Alberta Health Services and Softworks Group Inc. WebSMR was implemented at the three hospitals over 2010–2011; its use was voluntary. The implementation team had neither the authority to mandate use nor the capacity to influence use through organizational or provincial policies.

Both initiatives planned to integrate their SRT with existing hospital information technology (IT) systems, allowing seamless transfer of information across patient registration and medical record systems. Detailed case records are provided elsewhere to describe each case's socio-political context, governance structure and implementation timeline (Urquhart 2013).

Data collection

Multiple data collection procedures were used to gain rich, detailed information about each case:

1. One-on-one semi-structured interviews (Patton 2002) were conducted with key informants. One researcher (RU) conducted all interviews. Each interview was audio-recorded, transcribed verbatim by an experienced research coordinator and checked for accuracy.

Following each interview, the questions and responses were reviewed to determine whether the issues were answered in sufficient depth and the interview script was adapted when needed (Rubin and Rubin 1995).

2. Documents (e.g., project plans/charters, formal/informal evaluations, communications materials) were reviewed to gain a historical and contextual perspective on the initiative and to corroborate and augment evidence from other sources (Yin 2009). Documents related to the structure, infrastructure and/or governance and regulatory frameworks of NS's healthcare system were also retrieved and reviewed.
3. Non-participant observation was conducted for one case only (SSRTP) to observe training sessions (format, quality of training) and initial surgeon reactions to viewing/using the SRT.
4. Each SRT and resulting synoptic reports were examined to gain insight into the technical operations related to using the tool and the end report.

Data analysis

Data analysis began with the first data collected. Analysis involved conducting a separate thematic analysis (Braun and Clarke 2006) for each case, involving coding; collating codes; and generating, reviewing and refining themes. The coding framework was developed during pilot work (Urquhart et al. 2011). One researcher (RU) constructed the case descriptions and coded all interview transcripts and field notes line-by-line in their entirety. The documentary evidence was not coded line-by-line but rather read and re-read to identify contextual and historical data, record codes/concepts and link them to specific document excerpts and triangulate findings from other sources (e.g., interviews and observation). Codes were collapsed into categories through an iterative process that included: critically analyzing each concept and category to identify similar and distinct concepts and categories, linking the same concepts and categories across all the data collected, reviewing the research questions and re-reading the study protocol, reviewing the theoretical perspectives and re-reading the publications associated with those frameworks, consulting several case study methodology and general qualitative research texts and several research team meetings to review and question the analyses. An analogous iterative process was performed to identify, review and refine themes. These processes were imperative to developing a deeper understanding of what occurred in each case and to considering and questioning alternative explanations.

A cross-case analysis was conducted to compare and contrast the themes across cases, and to understand their specific relevance to each case and its context. Emergent findings were discussed on multiple occasions with the research team to assist the analytic process and questioning of the data. Table 1 presents the numerous steps taken to maximize rigour.

TABLE 1. Techniques to maximize rigour

Technique
Use of *three theoretical perspectives* to guide research design, analyses and interpretation, helping to build a wider explanation of SRT implementation and a means of exploring a range of plausible theoretical interpretations.
Strategic selection of cases to support greater confidence in findings.
Pilot work to refine data collection and analyses processes, and inform the final study design.
Interview guides that included questions/probes reflective of all constructs present in the three theoretical perspectives, but open-ended questions to minimize non-biased responses and to elicit a variety of perspectives and viewpoints.
Key informants across four units of analysis (clinician user, implementation team, organization and larger system) and *multiple data collection methods*, permitting triangulation.
A *single researcher* to collect all data. *Audio-recording, verbatim transcription* and *auditing* of all interviews.
Considering *other plausible explanations* for the findings and seeking out additional evidence where inconsistencies or contradictions existed.
Maintaining a *case study database*, or a complete set of all the data collected for each case and all records related to the treatment of the data during the analytic process.
Maintaining a *chain of evidence* throughout data analysis, or an explicit trail that identified the links between the data collected and the interpretations/conclusions.
Member checking to verify specific factual data and to ask participants for their responses/reactions to findings.
Multiple meetings/discussions of the research team to review the analytic procedures and discuss and question the findings.

Results

A description of the healthcare system context is presented in an additional online file. Nineteen key informants were interviewed in the CCPP case; 21 in the SSRTP case (Table 2). Informants included implementation team members, SRT users (i.e., endoscopists, surgeons), organizational members (e.g., department heads/managers) and regional/provincial members (e.g., administrators at the provincial cancer agency, health districts or Department of Health and Wellness). Table 3 presents the number and nature of documents collected and analyzed for each case.

TABLE 2. Number and nature of key informants, by unit of analysis

	CCPP	SSRTP
Implementation team[a]	Team members = 4	Team members = 3
Clinician user	Physician, tertiary = 3 Physician, community = 2	Physician, tertiary = 4 Physician, community = 2
Organization	Department head, tertiary = 1 Manager, tertiary = 1 Manager, community = 2 Report end user, tertiary = 1	Manager, tertiary = 3 Manager, community = 1 Report end user, tertiary = 3
System	Executive, health district = 1 Executive, government = 1 Executive, provincial program = 2 Manager, provincial program = 1	Executive, health district = 1 Executive, government = 1 Executive, provincial program = 2 Manager, provincial program = 1
Total	*n* = 19	*n* = 21

Note: CCPP = Colon Cancer Prevention Program; SSRTP = Surgical Synoptic Reporting Tools Project.

The data demonstrated that specific characteristics of the provincial healthcare system, presented below, influenced SRT implementation. By the end of data collection for this study (Winter 2012), the CCPP had integrated its SRT with hospital IT systems in one of nine health districts, allowing patient demographics to electronically enter the system and the colonoscopy report to enter the patient's electronic medical record in that one district. In the other eight districts, various "work-around" solutions were created to accommodate the SRT within each hospital's existing processes and capacities. By the end of the study, the SSRTP had integrated its SRT with hospital IT systems in each hospital it was implemented, allowing immediate transfer of information across systems.

TABLE 3. Number, source and nature of documents collected and analyzed

	Source	Type
CCPP (*n* = 19)	Web search	Communications materials (6) Governmental reports (4) Practice recommendations/position statements (3) Analysis of software applications (1)
	Implementation team	Implementation strategy (1) Provincial evaluation (1) Public presentation (1)
	Other key informants	Published consensus guidelines (1) Media article (1)
SSRTP (*n* = 14)	Web search	Communications materials (3) Conference presentation (1)
	Implementation team	Project charter (1) Provincial evaluation (3)
	Other key informants	National implementation strategy (4) National evaluation (2)
System context (*n* = 16)	Web search	Consultant's report on Nova Scotia's healthcare system (1) Cancer Management Strategy for Nova Scotia (1) Evaluation of Cancer Care Nova Scotia (1) Reports on Nova Scotia's e-health system (2) Reports/discussion papers on privacy and personal health information legislation (3) Acts on privacy/personal health information, Nova Scotia (4) Act on privacy/personal health information, Federal (1) Pan-Canadian framework on privacy/personal health information (1) Hospital Business Plans (2)

Note: CCPP = Colon Cancer Prevention Program; SSRTP = Surgical Synoptic Reporting Tools Project.

Care delivery and support structure

The existing healthcare system structure created challenges in terms of role clarity, governance and sharing of patient information across organizations. Within this structure, health districts were responsible for managing and delivering care, while various other organizations were responsible for relevant policy or support activities. For instance, the provincial cancer agency's role in cancer care was largely related to policy development and standard setting (not service delivery), while a centralized IT organization provided operations support for most (but not all) provincial health IT systems, but was not responsible for implementing new IT systems.

The lack of clarity around each organization's roles and mandates led to many issues and frustrations over the course of SRT implementation.

For example, the CCPP was situated in the provincial cancer agency, yet was responsible for implementing and delivering a population-based screening program. As described by one informant, "There is a big question of governance … As a provincial cancer agency, we introduced this tool to support cancer screening … It puts us in a difficult position because we really have no business being in the business, on the service side, right?" (Team Member #2, CCPP). This apparent discrepancy in roles (policy setting vs. service delivery) created many challenges related to governance and data sharing.

In the SSRTP, many key informants linked a lack of clarity around organizational roles and responsibilities to governance challenges: "The problem is … we have got a hybrid cancer system that is not totally clear on who does what and how. From my perspective, … that becomes problematic because you don't know … who owns it and who really wants it. There is no trouble finding people who support it, the trouble is finding the group that owns it" (Team Member #1, SSRTP). In fact, related to governance, key informants identified different organizations (sometimes incorrectly identifying their own organization) as the "owner" of SRT implementation. The lack of clarity meant the implementation team had to spend considerable effort understanding the core business of each organization: "It was not until I understood how that system worked, it was frustrating, but once I figured it out, [implementation] was a lot easier" (Team Member #2, SSRTP).

IT infrastructure

Key informants described the legacy of health IT infrastructure in the province as a patchwork of disparate systems that were implemented and had evolved in a largely unplanned way. There was no single IT platform in the province, nor was there a provincial plan on how to best leverage information management/IT systems. Key informants across all levels of the healthcare system viewed this legacy as impeding the progress of SRT implementation as well as the user experience. One key informant described the challenge this way: "We have three different hospital systems, you know, [Hospital A] has their own Meditech Magic, then there is Meditech out in the districts, and then [District B] has the best of breed, a combination of a whole bunch of things. The lab systems are not all the same, the operating room systems are not all the same, nothing is the same. So it is a huge challenge, particularly as we seek to share information … and it takes an enormous amount of resources" (System Member #2, SSRTP). The challenge of multiple IT platforms and systems was compounded by differing processes and structures at each hospital. As one implementation team member expressed, "To have [CORI] sit on top of different business processes, different information systems, different staff structures in terms of where their IT person sits, is a challenge. … For me, that has been the biggest challenge" (Team Member #2, CCPP).

Policy environment

Privacy legislation at the time of SRT implementation (in both cases) included more than 40 different pieces of provincial and federal legislation, all relevant in some way to the collection, sharing and/or use of personal health information. At the same time, each hospital had its own policies and procedures related to privacy, security of personal health information and data integrity. In the CCPP, this legislative and regulatory environment was viewed by implementation team members as especially prohibitive in the context of SRT implementation, wherein personal health information would be collected and shared: "There is a wall there and nobody is really willing to ask 'why is that wall there and does that wall really need to apply in this case?' You know, the wall might be there for a very good reason. But, you know, should we put a door in for these guys? Maybe yes, maybe no, but I don't think those risk assessments are really ever done. It is the 'just talk to the hand.' It is a no" (Team Member #4, CCPP). Despite implementing in the same policy context, implementation team members in the SSRTP did not view the legislative/regulatory requirements as barriers to implementation but rather tasks that had to be completed: "You know, from my perspective, I don't really, I am not all that invested in caring about [privacy impact assessments and related things]. I realize that has to be done and all that I care about is that it gets done" (Team Member #1, SSRTP).

Inter-organizational relationships

The history and nature of inter-organizational relationships and interactions within the healthcare system were viewed as impacting SRT implementation. Underlying the structural, infrastructural and regulatory components, key informant interviews and documentary data suggested a widespread resistance by health districts and the organizations tasked with supporting the districts to work together and think beyond their individual organizations and programs. Key informants in the CCPP case described limited collaboration and existing relationships among organizations within the healthcare system (which were sometimes perceived as precarious) as obstacles that often "got in the way" of SRT implementation. As one system member put it, "there is going to be issues with the adoption of these systems until there is a change of culture within the environment. In particular, there is a lot of, a lot of, 'this is the way it should be done and this is how we will do it' rather than collaboratively working together on a solution. That is true, I think, of the healthcare sector environment. That whole mentality has to change and until it does, implementing any system is going to be difficult" (System Member #5, CCPP). Similarly, in the SSRTP, key informants discussed historical relationships and interactions within the healthcare system as being critically important to SRT implementation: "organizational interactions are absolutely the number one [factor] … because there are so many players, so many organizations" (Organizational Member #3, SSRTP).

Discussion

This paper presents the system-level factors that influenced SRT implementation in one Canadian province. System-level components, such as the structural, infrastructural, regulatory, political and socio-historical context of the existing healthcare system, are largely absent (Berwick 2003; Davis et al. 2003; Graham et al. 2006; Grol and Grimshaw 1999; Helfrich et al. 2007; Jacobson et al. 2003; Kitson et al. 1998, 2008; Lavis et al. 2003; Stetler 2003; Ward et al. 2009), or recognized but given scant description (Dobbins et al. 2002; Greenhalgh et al. 2004), in much of the theoretical work in the knowledge-to-practice literature. Findings from this study demonstrated that certain features of the healthcare system – its delivery and support structure, IT infrastructure, policy environment and history of limited collaboration and weak working relationships across organizations – were problematic in the context of SRT implementation. In a study investigating the diffusion of eight innovations in acute and primary care in the UK, Fitzgerald and colleagues (2002) found that the capacity of an organization to innovate depended on the structural complexity of the organization and broader care delivery system, the history of the organization and the quality of intra- and inter-organizational relationships. While the nature of these components, and the degree of impact they will ultimately have, will almost certainly vary by setting, our findings support their importance to the implementation process. We advise others to consider these factors when planning implementation efforts. However, other factors influenced SRT implementation in the cases studied, in both facilitating and impeding ways. These are reported elsewhere (Urquhart et al. 2014).

The mandatory versus voluntary nature of the cases warrants further discussion. Indeed, the considerable enabling influence of a mandatory use policy in the CCPP was incredibly important to ensure province-wide use of the SRT for screening colonoscopies. Nonetheless, the findings suggest that this mandatory use policy did not lessen the importance of the system-level factors, nor benefit the implementation team as it navigated the socio-political context. In addition, this policy did not automatically make SRT implementation a higher priority initiative among supporting departments (e.g., IT, medical records), nor did it increase departmental or organizational capacity for implementation. Despite the mandatory nature, the end goals of implementation had not been achieved in most health districts four years post-implementation (i.e., integration with existing hospital IT systems, use of the SRT for diagnostic colonoscopies). Thus, our findings suggest that policy related to mandatory use, in and of itself, was insufficient to ensure *effective* implementation.

Interestingly, despite the cases occurring at the same time within the same provincial healthcare system, the legislative and regulatory environment was viewed as especially obstructive to SRT implementation in the CCPP but not in the SSRTP. While the SSRTP was able to integrate its SRT with hospital IT systems in a relatively timely manner, the issues that delayed IT integration in the CCPP case purportedly related to privacy and data ownership/sharing, and technical work that had to be completed. The data (not shown) strongly suggested that one of the fundamental reasons for this difference between cases related to the interpersonal aspects of implementation – stakeholder involvement; the capacity to build, negotiate and leverage helpful relationships; and managing the change process in each organization. See Urquhart et al. (2014) for detailed presentation of these findings.

SRT implementation in this study occurred in a highly interdependent healthcare system, in which 34 hospitals were governed by nine health districts and supported (either in a policy or operations way) by provincial programs and organizations. These interdependencies, however, created considerable challenges for SRT implementation in a system wherein roles, mandates and governance structures were not clearly defined; legislative and regulatory frameworks were inconsistent; and relationships among organizations were burdened by past conflict and tension. Given our findings, viewing innovation implementation in healthcare organizations through the lens of complex adaptive systems (Begun et al. 2003; Best and Holmes 2010; Plsek and Greenhalgh 2001; Zimmerman et al. 1998) might aid our understanding of implementation processes. This perspective focuses on the relationships embedded inside and outside the organization itself and emphasizes the need to analyze relationships across levels of the system (Begun et al. 2003). In such a social system, history matters: what is happening now is undoubtedly influenced by what happened earlier (Anderson and McDaniel Jr. 2000). The data from this study demonstrated that historical relationships and interactions within the healthcare system impacted SRT implementation. Similarly, Fitzgerald et al. (2002) found that diffusion processes in acute and primary care settings were "radically affected" by the nature of the prior relationships among the various players in each initiative, and that high-quality relationships were able to counterbalance many negative contextual factors (p. 1441).

The limited conceptual and empirical work on system-level factors in the literature on moving knowledge into healthcare practice may be partly owing to difficulties in investigating them (Contandriopoulos et al. 2010; Mitton et al. 2007; Zapka et al. 2012) or to the belief that "changing these factors is generally out of reach of those within the organization who are involved in improving health care" (p. 122) (Grol et al. 2007). Even if these factors are difficult to change, however, recognizing and understanding their potential influence is still important when designing strategies to affect practice change. Several authors have recently proposed conceptual models or frameworks (Damschroder et al. 2009; Satterfield et al. 2009) that take an ecological perspective and more fully account for system-level factors, such as the economic, regulatory and/or socio-political context, that need to be considered when moving knowledge into practice.

This study has a number of strengths, including the high participation rate and numerous techniques used to enhance rigour. One limitation is that it was undertaken in one province only, potentially limiting its applicability to other jurisdictions. At the same time, healthcare systems have many similarities (e.g., complex governance and resourcing arrangements, diverse stakeholders), which should facilitate the applicability of these findings to other settings. A second limitation is that some of the system-level components influential in this study might be more germane to the implementation of health IT innovations whereby implementation teams often have to navigate current healthcare structures and develop relationships with individuals in different departments and organizations to integrate the innovation into existing IT infrastructure. However, the structure of the care delivery and support system as well as its socio-historical context could conceivably influence innovation implementation in many areas of healthcare, especially those characterized by high levels of interdependency – for example, the implementation of care delivery models for persons with chronic disease or multi-morbidities whereby appropriate care usually involves mutually supporting roles spanning healthcare providers, organizations and sectors. Moreover, recent Canadian studies (Look Hong et al. 2010; Wright et al. 2011) have suggested that targeted system-level strategies, particularly those related to policy changes, may facilitate the implementation of complex innovations in healthcare.

In summary, this study has provided an in-depth, nuanced understanding of how healthcare system components can influence the implementation of a complex innovation in clinical practice. Future research is needed to refine and expand our knowledge of how system-level factors affect implementation processes and how to manage and/or leverage these factors to more effectively plan for and integrate innovations into healthcare settings.

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