Without Compromising Integrity: Research and Planning Around the Primary Healthcare Landscape in Southwestern Ontario

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Abstract

Primary care is the foundation of any high-performing healthcare system. We report a subset of findings that characterize the existing primary care system in southwestern Ontario, Canada, and describe the experiences of primary healthcare providers (PHCPs). Between December 2015 and January 2016, in collaboration with the South West Local Health Integration Network (LHIN), we conducted a mixed-methods research study to gain a better understanding of experiences in providing primary care to support systems planning for primary care. We believe our approach allowed for integrity across both the research and planning process.

Background

Primary care is the foundation of any high-performing, efficient and effective healthcare system (Aggarwal & Hutchison 2013; Association of Ontario Health Centres 2016). Primary care is often the first point of contact that patients have with traditional health services and is also a gateway to specialized care. A population's ability to access primary care is critical to optimizing health outcomes (Government of Canada 2004).

Primary care has traditionally been overlooked for the large impact it has on health outcomes within the Canadian healthcare system. In a global comparison, 13 countries with an expanded set of indicators showed better health outcomes for primary care-oriented countries after controlling for income inequality (Starfield et al. 2005). Studies in the US showed that states with higher ratios of primary care physicians to population had better health outcomes and lower costs in the health system (Starfield et al. 2005). The improved ability to offer care outside the hospital has triggered health networks to invest resources in maximizing the potential of primary care efforts (Schoen et al. 2009).

We have defined a "primary healthcare provider" (or "PHCP") as a family physician, general practitioner (GP) or nurse practitioner (NP) in an NP-led clinic (NPLC) that has a roster of patients to whom they provide comprehensive primary care. Family physicians in sub-specialized clinics were not included as PHCPs in this paper.

In Ontario, family health teams (FHTs) (MOHLTC 2016a), community health centres (CHCs), NPLCs and Aboriginal health access centres (AHACs) all provide interdisciplinary, team-based care to rostered or enrolled patients (MOHLTC 2016a). These team-based care models include other healthcare professionals, such as NPs, pharmacists, registered practical nurses (RPNs), dietitians, social workers, mental health workers, health educators and psychologists. Interaction between multiple health professionals allows for further integration in care services and an increase in patient care delivery (Davis et al. 2005). Over one-third of physicians in Ontario described their main patient care setting

as an interprofessional or group practice (National Physician Survey 2014). An FHT is Ontario's approach to primary healthcare that brings together different healthcare providers to co-ordinate the highest possible quality of care (Khandor et al. 2011). CHCs deliver primary care services in combination with health promotion and illness prevention services to populations who have traditionally faced barriers accessing health services (Employment and Social Development Canada 2011a) and/or are disadvantaged by health determinants (Seabrook & Avison 2012). Health promotion and illness prevention often share desired outcomes and exhibit overlap between their functions (World Health Organization, Regional Office for the Eastern Mediterranean 2017). Aboriginal-specific healthcare agency (AHAC) programs are informed by the unique communities they serve. They provide a combination of health and social services to First Nations, Métis and Inuit communities (Southwest Ontario Aboriginal Health Access Centre 2014). Along with primary healthcare, they provide traditional healing, health promotion services, cultural programs, community development initiatives and social support services (Employment and Social Development Canada 2011b).

While there is a great deal of evidence suggesting that an increase in primary care access leads to healthier populations and improved health outcomes (Butler-Jones 2008), research is less fulsome in capturing and reporting on the lived experiences of vulnerable populations in accessing primary care using different models. In this study, we wanted to understand the experiences of primary care professionals in one region in Ontario in meeting the needs of the patients they serve. We were interested in learning about the barriers PHCPs face in providing quality primary care. At the same time, we were tasked with supporting the primary care system planning process of the South West Local Health Integration Network (LHIN), the crown agency responsible for planning, integrating and funding local healthcare in southwestern Ontario. There are several different primary care funding models in Ontario meant to address the needs of the population while also providing options for primary care providers. However, for most of these models, the Ministry of Health and Long-Term Care, not the LHIN, provides funding, with the exception of CHCs (MOHLTC 2017). This funding arrangement contributes to the challenge the LHINs now face in trying to plan and coordinate for primary care. Often research and planning are two separate streams, with very different timelines. This study reports on three objectives: (1) to characterize the existing primary care system in the South West LHIN; (2) to describe the experiences of PHCPs within the region and (3) to adequately and efficiently support the primary care system planning process of the South West LHIN.

Methods

Between December 2015 and January 2016, we conducted research with patients, health service providers and primary care providers across the region to gain a better understanding of experience in accessing and providing primary care. Multiple data collection tools were used to allow for a more complete picture of lived experiences, including survey engagement sessions and focus groups. This paper reports a subset of the findings, highlighting the results from an online survey conducted with PHCPs working within the South West LHIN's geographic boundaries.

Sample and setting

LHINs are publicly funded non-profit organizations with the responsibility of coordinating services offered by hospitals, community care, long-term care and other health service providers. The South West LHIN serves a population of approximately one million people (South West LHIN 2015). The region served by the South West LHIN includes eight counties (Grey, Bruce, Huron, Perth, Middlesex, Elgin, Oxford, Norfolk – partial) and seven urban settlements (Owen Sound, Stratford, London, Strathroy, Woodstock, Tillsonburg, St. Thomas).

Although current patient attachment rates to primary care providers within the South West LHIN are reported at 95%, about the same as the 94% attachment rate within Ontario (South West LHIN 2015), timely access to primary care remains a challenge for residents/people.

Half the population of the South West LHIN live in an urban area, 19.8% live within a 30-minute drive and the remaining 30.2% live in rural areas (Table 1). The population's characteristics vary between counties; however, the general characteristics of the larger South West LHIN population are as follows:

- 30.0% of the population are living under Statistics Canada's low-income cut-off (South West LHIN 2016: 76–77); low-income cut-off represents a threshold where families have less income available for health and other expenses (e.g., education, transportation, recreation) as they are likely to spend 20% more of their income on food, shelter and clothing than the average family (Statistics Canada 2008);
- 16.6% of the population are senior citizens (65 years and older);
- 7.6% of the inhabitants identify as a visible minority;
- 2.8% of the inhabitants identify as Aboriginal;
- 1.6% of the population are recent immigrants (2006–2011); and
- median household income before taxes is $60,037 (CAD) per year (Statistics Canada 2009).

At the time of data collection, 617 PHCPs were actively practising within the South West LHIN's geographic

boundaries (Human Environments Analysis Laboratory 2016), of which 53% were affiliated with team-based practices at the time of this study. South West LHIN residents are served by 19 FHTs, five CHCs, one AHAC and two NPLCs. In rural communities, PHCPs also provide medical care outside of the office setting, including EDs, inpatient care, surgical assists (for example, in obstetrics or anesthesia) and long-term care coverage.

There are five CHCs located in the South West LHIN, some with satellite sites. There were 17.5 full time equivalent (FTE) family physicians funded across the five CHCs, with 20.8 NP FTEs. The CHCs were expected to serve 19,556 residents across the LHIN, representing 2% of the total population. All CHCs in the South West LHIN offered some after-hours care for their patients. The Southwest Ontario Aboriginal Health Access Centre (SOAHAC) operates three sites in the South West LHIN. There were 2.6 family physician FTEs and 6.0 NP FTEs funded across the three sites supporting 3,317 residents. There are two NPLCs in the South West LHIN, which were staffed by a total of eight NP FTEs, who also qualified as interdisciplinary health professional FTEs. Altogether, they provided care to 4,904 residents.

Data collection

The PHCP survey was conducted as an online survey and distributed by the South West LHIN and its partner organizations between December 2015 and January 2016. The survey included questions about the PHCPs and their practice, their confidence in providing certain services, their view on the healthcare system in Ontario, their ability to provide quality care for their patients and four open-ended questions to supplement previous responses with further details and/or suggested improvements. This study was approved by the university's non-medical research ethics board (details of ethics approval withheld for blinding).

Statistical analysis

Surveys were analyzed using IBM SPSS Statistics, version 23.0 (Armonk, NY). The PHCP survey provided summary descriptive statistics for the South West LHIN, including sample characteristics of the PHCPs and their practices. Categorical data were reported as percentages. Normally, distributed continuous variables were reported as mean and standard deviation, and skewed continuous data were summarized using the median and range. Qualitative responses from the PHCP survey were used to discuss common barriers identified by participants. Data from qualitative, focused PHCP engagement sessions were used to triangulate findings. The independent samples *t*-test was used to compare differences in means between team and non-team PHCPs where appropriate, whereas the chi-square test was used to compare differences in percentages.

TABLE 1.
Sample characteristics of primary care provider respondents from South West Local Health Integration Network

Distinguishing characteristics	Number of total responses	Percentage of total responses
Sample size, *n* (*N*)	100 (617)	16.2
Sub-region, *n* (*N*)		
Elgin	16 (40)	40.0
Huron Perth	28 (101)	27.7
London Middlesex	30 (312)	9.6
Grey Bruce	16 (108)	14.8
Oxford	10 (56)	17.9
Urbanicity		
Urban areas	59	59.0
Urban commute zones	15	15.0
Rural areas	26	26.0
Profession		
Physician	84	84.0
Nurse practitioner	16	16.0
Gender		
Male	43	46.2
Female	50	53.8
Age		
Under 35	10	10.5
35–49	42	44.2
50–64	37	38.9
65 or older	6	6.3
Location of birth		
Born in Canada	81	86.2
Born outside of Canada	13	13.8
Race/ethnicity		
White	76	80.0
Aboriginal	4	21.1
Visible minority	15	5.3
Languages they provide care in		
English only	81	80.2
English and French	13	12.9
English and non-official language(s)	7	6.9

Results

Primary care landscape

Primary care provider characteristics

Most respondents of the PHCP survey practised in urban areas (59.0%), self-reported race as White (80.0%), were born in

Canada (86.2%) and provided care in English only (80.2%). Geographically, the PHCP respondents were well distributed across the region, although there was an over-representation of one county (Elgin, 40.0%) and under-representation of another (Middlesex, 9.6%).

Models of care

Most PHCP survey respondents (64.3%) worked in team-based practices (i.e., FHT, CHC, AHAC, NPLC). The locations of team-based practices varied considerably across the region, with the majority being in urban areas, although there are some clusters of team-based physicians in rural areas. Of the PHCPs that were not team based, 51% worked independently, with no affiliated interdisciplinary health practitioners, and were most prevalent in Oxford, Elgin and the city of London. Most of these independent PHCPs were required to provide after-hours service either in their office or in local rural emergency departments (EDs).

Examining the number of hours spent on professional tasks outside of family practice revealed that PHCPs split their time between primary care and other tasks. PHCPs in our sample spent an average of 9.7 hours per week (standard deviation [*SD*] = 9.8) on non-practice-related work (e.g., ED and specialist duties), and a quarter of PHCPs surveyed spent more than 20 hours per week on work outside of their practice. Approximately 8.1% of the PHCPs surveyed from the South West LHIN met with scheduled patients during their ED hours.

Team-based models of care

In total, 19% of respondents believed there was a need for more PHCPs and/or team-based practices to meet the needs of patients. Almost one-third (31.6%) of PHCPs indicated that they were unable to connect their patients with local services and organizations to help them manage their health concerns, and many respondents suggested that incorporating a "system navigator" role within primary care practices who could "follow patients through the system" may help to bridge this gap. Team-based PHCPs believed they could provide their patients with a higher quality of care and were better able to connect them to services to manage health concerns, compared to non-team-based PHCPs. Almost all the respondents (97%) agreed that a team-based approach to primary care had a positive impact on patient care, with many PHCPs mentioning the ability to address all aspects of a patient's care in a holistic manner.

Access

The PHCPs provided care for an average of 1,375 patients (*SD* = 749), ranging between 159 and 5,000 rostered patients. The number of appointments a PHCP had in a week ranged between 18 and 160 patients (mean = 82; *SD* = 35). Overall, 15.2% of PHCPs stated that they were not accepting any new patients, and 11.1% of PHCPs reported that they were actively accepting new patients. The majority of PHCPs said they accepted new patients in special circumstances, such as being a family member of a current patient (48.5%), a referral by another doctor (31.3%) or being part of a vulnerable patient group (27.3%). The ability to accept new patients differed based on whether they were part of a team, with team PHCPs being less likely to accept new patients. This is evident as 20.6% of team PHCP respondents reported that they do not accept any new patients, which is significantly higher than non-team PHCPs (6%) ($\chi^2 = 4.052$; $p = 0.044$). This is most likely because of significantly more non-team PHCPs accepting patients by referral (44.4%) compared to team-based PHCPs (23.8%) ($\chi^2 = 4.535$; $p = 0.033$).

Sustainability of care

When PHCPs were asked about plans for their practice within the next five years, 43.4% of participants stated that they would be continuing practice as they currently are. The rest of the PHCPs were planning to leave within five years (30.4%) or considered leaving within five years (32.2%). The most commonly reported reasons for plans to leave were issues surrounding Ministry of Health policies, such as fee cuts, changes to the system and workload (40.3%) and retirement (32.3%), and a small number reported considering leaving because of burnout and a lack of proper support in the current political climate (4.5%).

Caring for complex patients

While most providers reported feeling confident in providing services for complex patients, some PHCPs reported a lack of support in providing certain care, such as culturally appropriate care or care for trauma and violence (Table 2). In total, 41% of surveyed PHCPs believed they lacked critical support in providing care to patients with addictions, and 39% felt unequipped to discuss alternative or traditional sources of medicine. PHCPs who practised in a non-team setting reported less confidence (22.2%) than their team-based peers (7.9%) in the support they received to manage patients' mental health issues ($\chi^2 = 4.099$, $p = 0.043$). This may be because team-based PHCPs were more likely to have additional support of interdisciplinary health professionals, such as social workers or mental health workers.

Key Challenges

Respondents of the PHCP survey were asked whether they agreed or disagreed with a series of statements discussing their experiences providing primary healthcare (Table 3). The results indicate that there are two key concerns that may affect the quality of care PHCPs provide to their patients.

First, almost half the surveyed PHCPs (45.5%) indicated that it was not easy to refer patients to specialists, with 25% of respondents specifically mentioning challenges making referrals and/or wait times for referrals. Second, 31.6% of surveyed

PHCPs reported dissatisfaction with the time they could spend with each patient. Many respondents cited an increasing number of complex and aging patients, as well as large roster sizes, as contributing factors. While these key findings are consistent between team and non-team PHCPs, team PHCPs report being significantly (χ^2 = 6.089, p = 0.014) happier with their ability to provide high-quality care (98.4%) compared to non-team PHCPs (86.1%). Similarly, non-team PHCPs (44.4%) have significantly (χ^2 = 4.319, p = 0.038) more difficulty connecting patients with services and organizations that will help manage health concerns than team PHCPs (24.2%). Many PHCPs cited being too busy seeing patients as the main reason for difficulty in making changes to practice (54.8%).

Discussion

While our research provided a rich description of the current primary care landscape in southwestern Ontario, there are several key lessons to glean from the research conducted.

First, the methods we used to gather information and learn about our region were feasible and appropriate for our purposes (Haywood et al. 2005). It was important to have support from the South West LHIN leadership team, and individuals within a primary care steering committee were integral to both informing participants of the study and gathering data. Without this support, it would have been extremely challenging to get responses to the survey because we do not have easy access to our participant group. Support from the

TABLE 2.
Lack of confidence that PHCPs have in the support they receive for providing quality care

n (%) of PHCPs who lack confidence in the support they have to …	Non-team PHCPs (*n* = 36)	Team PHCPs (*n* = 64)	All PHCPs (*N* = 100)	χ^2 analysis
Provide culturally safe care to patients	7 (19.4%)	16 (25.4%)	23 (23.2%)	
Provide care to patients with addictions	18 (50.0%)	23 (36.5%)	41 (41.4%)	
Provide care to patients of all religious backgrounds	5 (13.9%)	14 (22.2%)	19 (19.2%)	
Discuss alternative, traditional or holistic medicine with patients	13 (36.1%)	26 (41.3%)	39 (39.4%)	
Provide prescriptions for birth control pills	1 (2.8%)	1 (1.6%)	2 (2.0%)	
Provide care for patients of all gender identities and sexual orientation	4 (11.1%)	9 (14.3%)	13 (13.1%)	
Screen for abuse, trauma and sexual violence	11 (30.6%)	13 (20.6%)	24 (24.2%)	
Manage a patient's mental health issues	8 (22.2%)	5 (7.9%)	13 (13.1%)	χ^2 = 4.099 p = 0.043

PHCPs = primary healthcare providers.

TABLE 3.
PHCPs' feelings on the primary healthcare environment in Ontario, Canada

n (%) of PHCPs who disagree with the following statements	Non-team PHCPs (*n* = 36)	Team PHCPs (*n* = 64)	All PHCPs (*N* = 100)	χ^2 analysis
I can easily refer my patients to specialists when needed	17 (47.2%)	28 (44.4%)	45 (45.5%)	
I am satisfied with the time I have available to spend with each patient	11 (31.4%)	20 (31.7%)	31 (31.6%)	
I am able to connect my patients with local services and organizations to help them manage their health concerns	16 (44.4%)	15 (24.2%)	31 (31.6%)	χ^2 = 4.319 p = 0.038
Access to health services is mostly an absolute right; everyone should have the same access to healthcare, based on need, regardless of financial ability to pay	7 (19.4%)	6 (9.5%)	13 (13.1%)	
Health is mostly a collective responsibility; it is up to society to create conditions that help maintain or improve health	4 (11.1%)	5 (7.9%)	9 (9.1%)	
Overall, I am able to provide high-quality care for my patients	5 (13.9%)	1 (1.6%)	6 (6.1%)	χ^2 = 6.089 p = 0.014
A team-based approach to primary care has a positive impact on patient care	1 (2.8%)	2 (3.2%)	3 (3.0%)	
I am able to communicate effectively with my patients in a way they can understand	1 (2.8%)	0 (0.0%)	1 (1.0%)	

PHCPs = primary healthcare providers. Note: Significance testing was conducted between non-team and team PHCPs for each variable examined in this study. Chi-square analysis was conducted for all categorical/binary variables. Only significant results are provided.

LHIN communications department was also important to communicate the intent of the survey and attract participants. Among governmental organizations and those involved in policy making, it can be difficult to get rigorous data collected and analyzed in the required (and often expedited) timelines of the policy process (Koduah et al. 2015). The analytic approach used satisfied both groups without compromising the integrity of the research or the policy process.

Second, given the current climate of change (implementation of *Patients First* legislation; Legislative Assembly of Ontario 2016), we wanted to share the process and information that the South West LHIN is using to help with its planning. Primary care has the potential to improve health outcomes, lower mortality rates and lower health system costs (Employment and Social Development Canada 2011b). Ontario has acknowledged the benefits with and associated need to focus greater attention on primary care toward an integrated care approach in the *Patients First* legislation. Another challenge is understanding where and how PHCPs prefer to work. As previously stated, attachments to PHCPs were high within the South West LHIN and equivalent to trends observed in Ontario.

Third, despite widespread support for team-based approaches in primary care, several challenges remain. The challenges faced in southern Ontario are not unique to the area. As in many regions across the province, the country and even internationally, competing demands on providers' time and struggles related to coordination with partners are two major challenges found in our data and supported in the literature (Rosenthal 2008). Movement toward system-wide, integrated team-based care (such as FHTs) is common in most health systems in the developed world (Davis et al. 2005); however, systematic barriers are inherent. The province of Ontario has turned its focus to providing team-based care to patients with the highest need and to those who cost the system the most. The "Health Links" approach is touted as a cost-effective solution using principles of the Chronic Care Model, providing coordinated healthcare to patients with multiple complex conditions (MOHLTC 2016b). Currently across Ontario, there are 82 Health Links, with five Health Links located across the South West LHIN providing integrated care and additional support to residents (Evans et al. 2014). This remains a cost-effective alternative to mitigate the challenges and high costs associated with FHTs. More research is needed to fully understand the benefits of the Health Links approach (Ryan et al. 2016). Patients in Need of Teams (PINOT) is a team-based primary care initiative meant to be a "a direct referral program that allows physicians to connect patients with complex needs to services available from the London InterCommunity Health Centre as an extension of their primary care" (London InterCommunity Health Centre 2014). PINOT exists as a subsidiary under the parent program Solo Practitioners in Need (SPIN), intending to increase collaboration in PHCP service delivery and provide the necessary resources to improve care to complex patients. While too new to evaluate effectiveness, the goal is to improve quality of care for patients needing team-based care. Other innovative solutions to patient care teams have been tried across Canada, such as Alberta Health Services Strategic Clinical Networks (Alberta Health Services 2017), where teams have been deployed around focused areas of healthcare (such as cancer, diabetes and respiratory health).

While more research is always needed to better understand what works for whom and in which context, this research provides an example of how to approach that research in a meaningful and cost-effective manner.

Limitations

The results of the current study may not be generalizable to other regions, as Ontario has specific governance, planning and delivery modes that are unique to the province. In addition, the findings are specific to the South West LHIN and, as such, are region specific. However, the methods we have used are both acceptable and feasible to study and explore context and conditions in other regions.

Another limitation is the sample size; although we tried to gather a representative and broad range of PHCPs, our sample remains limited, and not all voices were heard.

Conclusion

The current study provides a comprehensive overview of primary care practices in southwestern Ontario. The findings will be important in planning future interventions; it is hoped that the information can be used effectively and critically by policy and decision makers to make evidence-informed decisions both within the region and beyond. Across the province and the country, there is still work to be done to address the challenges of meaningful reform in primary care; describing the current patient care landscape is a necessary first step. We encourage other regions to understand the primary care landscape by engaging providers in a similar approach. HQ

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