



Briefing **October 2012**

# Improving Primary Health Care Through Collaboration

## Briefing 1—Current Knowledge About Interprofessional Teams in Canada

### At a Glance

- ◆ Compared with other developed countries, Canada's primary health care sector is inadequately supported and organized.
- ◆ Optimizing interprofessional primary care (IPC) teams can help mitigate the economic burden of chronic conditions and comorbidities and improve the sustainability of the health care system.
- ◆ Although primary care reforms over the past decade have improved team-based care, significant variability exists in IPC team model structure, function, funding, governance, and maturity across and within provinces and territories.

### INTRODUCTION

Primary health care reform has great potential to improve population health and sustain the Canadian health care system.<sup>1</sup> Yet many studies have shown that, compared with other developed countries, Canada's primary health care sector is inadequately supported and organized. As well, we could achieve important health and economic benefits by changing the way we fund and deliver primary care.<sup>2</sup> The need for health care system reform has been shaped by

1 Fooks and Lewis, *Romanow and Beyond*.

2 Schoen and others, "Primary Care and Health System Performance"; Schoen and others, "On the Front Lines of Care"; Schoen and others, "A Survey of Primary Care Physicians in 11 Countries, 2009"; Schoen and others, "Toward Higher-Performance Health Systems."



multiple factors. Among the most prominent are changes in population dynamics,<sup>3</sup> the fiscal unsustainability of the current system,<sup>4</sup> and a shortage of health human resources as a result of geographical mal-distribution and the misuse and underuse of existing health professionals.<sup>5</sup>

This series of four briefings aims to provide an analysis of the impact of interprofessional teams on the Canadian primary health care system. In this first briefing, we provide a general overview of the various interprofessional primary care (IPC) team models currently used in Canada. In the second, we will review the key challenges in IPC team uptake, effectiveness, and sustainability. The third briefing will examine the health and economic impacts of IPC teams and the potential impacts of increased access for the chronically ill, using the examples of diabetes and depression. The final briefing will deliver recommendations for moving forward by addressing the challenges and providing guidelines on how to optimize IPC teams.

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An IPC team is a group of professionals from different disciplines who communicate and work together in a formal arrangement to care for a patient population in a primary care setting. Examples of common primary care settings include family physicians' offices or practices and community health centres. IPC teams often comprise, at the core, a family physician or general practitioner, a nurse practitioner, and one or more nurses. Additionally, other professionals could be involved. These may include dietitians, nutritionists, social workers, mental health counsellors, psychologists, pharmacists, exercise physiologists, physical therapists, chiropractors, and physician assistants.

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3 Canadian Institute for Health Information, *Health Care in Canada, 2011*.

4 Di Matteo and Di Matteo, *The Fiscal Sustainability of Canadian Publicly Funded Healthcare Systems*.

5 Canadian Health Services Research Foundation, *Myth: Canada Needs More Doctors*.

### What Is Primary Care?

Primary health care “is linked to and often provides a referring or coordinating function for other specialized health care sectors as well as community services.”<sup>1</sup> Primary care is “the medical model of response to illness [and] is part of the broader concept of primary health care.”<sup>2</sup> It is defined as “a service at the entry to the health care system.”<sup>3</sup> Primary care is critical for patients: it is often the first and most common point of contact with the health care system.

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1 Mable and Marriott, *Sharing the Learning*.

2 Ibid.

3 Accreditation Canada, *Primary Care Services Standards*.

IPC teams can improve health outcomes and access for patients with chronic and complex conditions. They can develop care plans, address the medical and social needs of these patients, and provide better coordination of care.<sup>6</sup> Chronic conditions and comorbidity<sup>7</sup> pose a significant economic burden to the health care system and to society.<sup>8</sup> Optimizing IPC teams can help mitigate the economic burden of chronic conditions and comorbidities and improve the sustainability of the health care system.<sup>9</sup> To optimize IPC teams is to make the most effective use of opportunities and resources in order to provide better care and obtain better health outcomes.

### CURRENT MODELS OF INTERPROFESSIONAL PRIMARY CARE TEAMS IN CANADA

Although IPC teams exist across Canada, the structure, function, governance, funding, and impact of these teams vary regionally. We chose to categorize IPC team models as physician-led practices, nurse practitioner-led practices, community-led practices, and integrated primary care networks. In this briefing we aim to describe each of the different models in terms of structure, coverage,

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6 Goldman, “Interprofessional Collaboration in Family Health Teams.”

7 *Comorbidity* is defined as the presence of two or more conditions.

8 Rapoport and others, “Refining the Measurement of the Economic Burden of Chronic Diseases in Canada.”

9 Barrett and others, *CHSRF Synthesis*.

patient rostering,<sup>10</sup> funding, governance, and health and economic impacts where data were publicly available. The content of this briefing is supported with information gathered through a scan of the published and publicly available literature, and through consultations with various primary health care system administrators and policy analysts.

## PHYSICIAN-LED PRACTICES

We define a physician-led practice (PLP) as one that provides primary care services to patients and that is managed or led by a physician or group of physicians. In this model, the family physician or general practitioner is most often responsible for the care plan for each patient. Although PLPs provide the majority of primary care in most of Canada, we discuss those models that are guided by an operational framework of interprofessional collaboration. In terms of funding, PLP physicians are predominately remunerated under a blended payment model. Others are paid fee-for-service, contract, or salary and, in some provinces and territories, there are additional bonuses or incentive payments. Non-physician professionals are often paid on a contract or salary basis. PLP teams can provide the following services: information, diagnosis and treatment of acute and chronic conditions and mental illness, health promotion, disease prevention, wellness care, coordination of care, counselling, and referrals to specialist care. The majority of these practices also employ electronic medical records. Overall, there is a paucity of health and economic evaluation data for PLPs. Table 1 of Appendix A provides a summary of the various PLP models that exist in Canada.

### ONTARIO

Family health teams (FHTs) were developed in 2006 from fee-for-service primary care practices and are based on using interdisciplinary teams and incentive-based

#### Note to the Reader

The content in this briefing is based on our analysis of publicly available information and our consultations with administrators and government policy analysts. Although our search was comprehensive, the report may not include all current models of interprofessional primary care delivery. The report content will continue to evolve, and we encourage you to send us feedback and information at [contactcashc@conferenceboard.ca](mailto:contactcashc@conferenceboard.ca).

funding.<sup>11</sup> According to the Ministry of Health and Long-Term Care (MOHLTC) website, there will be 200 FHTs serving over 2 million Ontarians this year. FHTs vary in size: the smallest involves 1 practice and the largest 92 practices. FHTs include physicians, non-physician health professionals, a lead administrator, and administrative staff. Non-physician health professionals on the team may include nurse practitioners, other nurses, pharmacists, registered dietitians, chiropractors or podiatrists, social workers/mental health workers, health educators, and occupational therapists.<sup>12</sup> The number and types of non-physician health professionals funded by MOHLTC is dependent upon the business and operational plans that FHTs present and the number of rostered patients. FHTs vary in terms of organization, structure, and operation; in part as a result of the needs of the community and the availability of resources.<sup>13</sup> Within any given FHT, resources such as non-physician health professionals will be shared among member practices of the FHT.

MOHLTC remunerates FHT physicians using a blended capitation model.<sup>14</sup> In addition, financial supports are in place to enable the employment of non-physician health professionals, who are paid a salary or a sessional fee.<sup>15</sup>

10 *Rostering* is defined as follows: "assigning patients to a family physician or practice; also called registering; facilitates the monitoring of patient care by the government or the practice; often accomplished by a formal agreement or contract between patients and their family physician." (The College of Family Physicians of Canada, *Primary Care Toolkit for Family Physicians—Glossary*.)

11 Rosser and others, "Progress of Ontario's Family Health Team Model."

12 Ontario Ministry of Health and Long-Term Care, *Guide to Interdisciplinary Provider Compensation*.

13 Howard and others, "Self-Reported Teamwork in Family Health Team Practices in Ontario."

14 Rosser and others, "Progress of Ontario's Family Health Team Model."

15 Glazier and Redelmeier, "Building the Patient-Centred Medical Home in Ontario."

This funding support may come from MOHLTC through the FHT budget, or through other funding envelopes. For example, physician assistants are currently supported by MOHLTC through dedicated funding to the Physician Assistant Demonstration Project. Salaries for other health professionals not covered by MOHLTC FHT funding may be covered directly by the physician. FHTs must have a governing board, with most boards made up primarily of physicians. Community FHTs (C-FHTs) are governed by a community board, and mixed FHTs (M-FHT) are governed by a board made up of a combination of community and provider representatives. The C-FHTs and M-FHTs have been categorized in this briefing as community-led practice models.

A multi-year external evaluation of the FHTs by The Conference Board of Canada, commissioned by MOHLTC, is currently under way. Some FHTs have already reported improvements in clinical outcomes. The London FHT, for example, reported a 19.7 per cent reduction over one year in the proportion of chronic obstructive pulmonary disorder patients with one exacerbation.<sup>16</sup> In 2011, the Petawawa Centennial FHT and Timmins FHT reported improvements in the proportion of diabetic patients with controlled HbA1c (<7 per cent), with 30 per cent and 12 per cent relative improvement after one year, respectively.<sup>17</sup> An evaluation conducted by the Institute for Clinical Evaluative Sciences reported higher emergency room visits than expected for patients of FHTs.<sup>18</sup>

## QUEBEC

Integrated network clinics, or “cliniques-réseau intégrées” (CRIs), were established in Montréal in 2009—the result of a merger between Montréal family medicine groups (GMFs) and traditional network clinics. CRIs staff include a team of health professionals composed of physicians, nurses, administrative support staff (family

### Example of an Ontario Family Health Team: The North Perth Family Health Team

Located in Listowel, Ontario, the North Perth Family Health Team (NPFHT) has served the rural community of North Perth since April 2007. The NPFHT comprises 22 health care providers, including family physicians, nurse practitioners, other nurses, a pharmacist, a dietitian, a social worker, a mental health therapist, and a youth addictions counsellor. The community has a high prevalence of chronic diseases such as diabetes, heart disease, and chronic obstructive pulmonary disease (COPD). In addition to the many services and programs they offer, the NPFHT's mental health outreach programs leverage partnerships in the community, such as through local schools.

The NPFHT offers a comprehensive program for diabetes management that provides education supporting self-management. Building on the success of this program, the NPFHT has also developed an effective COPD program. Patients of the COPD program are supported at all stages of their treatment plan—from assessment and diagnosis to medication education and lifestyle counselling—by a COPD program team. The team includes nurses trained in respiratory education and spirometry who help patients set goals for successful self-management. The COPD program will soon expand to include childhood asthma, which will be facilitated through the NPFHT's existing partnerships with schools throughout the region.

To ensure continuous quality improvement, the NPFHT has a designated quality improvement coordinator who collects data on access, efficiency, and chronic disease management indicators. Quality improvement data are presented to the NPFHT's governing board. In addition, a Diabetes Scorecard, presented to physicians on a quarterly basis, provides data on clinical measures such as HbA1c, cholesterol, and blood pressure. A COPD scorecard currently in development will focus on reducing COPD-related emergency room visits.

medicine group staff), and some combination of social workers, nutritionists, psychologists, physiotherapists, kinesiologists, occupational therapists, respiratory therapists, and community or local pharmacists.<sup>19</sup> Previously, coordinated interprofessional care was offered in certain GMFs, especially those that were associated with a health

16 Health Quality Ontario, *Quality Monitor: 2012 Report on Ontario's Health System*.

17 Health Quality Ontario, *Quality Monitor: 2011 Report on Ontario's Health System*.

18 Glazier and Redelmeier, “Building the Patient-Centred Medical Home in Ontario.”

19 Government of Quebec, *Medical Clinics*.

and social services centre (CSSS) or those that were successful in obtaining budgets for other health professionals. Traditionally, GMF budgets do not allow for the hiring of professionals other than nurses.<sup>20</sup> The number and types of other professionals in a GMF vary according to needs and priorities as well as the success of the GMF in obtaining other funds. A CRI care team includes 10 to 15 full-time equivalent (FTE) family physicians, about the same number of other health professionals, and a technical team. The CRI is led by one physician, who coordinates the clinic schedules and operations.<sup>21</sup> Patients of a CRI are rostered to a participating GMF physician, who can take on as many as 2,000 patients. The projected team ratio is one FTE professional to one FTE physician. The potential medical caseload is 30,000 patients per clinic. The physicians work as a group with one file per patient, which is shared with the other professionals in the CRI. There are currently 30 CRIs in Montréal, with plans to expand to 60 in that region, and similar initiatives are under way in other parts of Quebec.<sup>22</sup> Physicians are paid within a blended model of fee-for-service and capitation. Other salary or contract health professionals are paid by the physicians, using dedicated funds from the Ministry of Health and Social Services.

## BRITISH COLUMBIA

In 2008, 26 integrated health networks (IHNs) were implemented across British Columbia to deliver care for approximately 50,000 patients.<sup>23</sup> There are currently 21 IHNs in the province. The IHNs were developed in partnership with regional health authorities and the British Columbia Medical Association. The IHNs' goals are to improve access to care for patients with complex chronic conditions, as well as to improve coordination

of care across multiple care providers and community resources.<sup>24</sup> Patients are rostered to a primary care physician within the network. IHNs often include a lead physician, a nurse leader, a primary health care nurse, a social worker, a registered dietitian, and administrative support.<sup>25</sup> Services provided include identifying high-risk patients, patient assessments, referrals to specialists, education for self-management, and individualized action plans. The IHNs are funded through a bilateral agreement between the Ministry of Health and the regional health authority. They are governed by the regional health authority. An independent evaluation conducted by the Interior Health IHN in 2010 found improvements in their patients for a number of health indicators, including a reduction in blood glucose levels in 78 per cent of diabetic patients.<sup>26</sup> It is not known whether similar findings could be generalizable to other IHNs.

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**The goals of B.C.'s Integrated Health Networks are to improve access to care for patients with complex chronic conditions and to improve coordination of care.**

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## ALBERTA

Since 2005, primary care networks (PCNs) have emerged as a new model of primary care delivery coordinated by general practitioners and Alberta Health Services.<sup>27</sup> The 40 existing PCNs employ more than 2,500 family physicians and serve over 2.5 million Albertans.

PCNs are networks of physicians, nurses, social workers, pharmacists, dietitians, mental health workers, exercise specialists, and support staff who work together to provide primary care to patients. A PCN can include one clinic with many physicians and support staff or several

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20 Vanier, Rivest, and Boucher, "Des équipes interprofessionnelles en soins de première ligne."

21 Agence de la santé et des services sociaux de Montréal, *Orientations for the Development of Integrated Family Medical Groups and Network Clinics*.

22 Vanier, Rivest, and Boucher, "Des équipes interprofessionnelles en soins de première ligne."

23 The College of Family Physicians, *Primary Care Toolkit for Family Physicians*.

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24 Ibid.

25 Vancouver Island Health Authority, *Integrated Health Networks*.

26 Interior Health, *Evaluation of Interior Health Primary Health Care Integrated Health Networks*.

27 Primary Care Initiative, *What Is a PCN?*

doctors in several clinics within a given geographic area. The team-care approach is meant to increase access, with an emphasis on chronic disease management and coordination of care. In this model, the physician is at the centre of care and coordinates all services. PCNs are funded by Alberta Health Services. Physicians are paid fee-for-service or capitation, and receive an additional payment for time used for administration. PCNs also receive an annual payment of \$62 per patient, which is used to salary other professionals and cover other PCN operating costs. There is significant flexibility in how PCNs operate, including whether funds are used to hire non-physician clinicians or for other initiatives.<sup>28</sup> Patients are informally rostered to the PCN. In terms of effectiveness, an evaluation of 80 PCN physicians found that access to timely care had increased, although the data may not be generalizable to all PCNs.<sup>29</sup> Recent data also show improvements in health outcomes for diabetic patients. A 2011 evaluation reported significantly lower levels of blood glucose (HbA1c: 6.60 per cent versus 6.71 per cent;  $p=0.0036$ ) over four years in incident diabetes patients managed by a physician in a PCN.<sup>30</sup> There are no published data on the economic impact of the PCNs.

## SASKATCHEWAN

Primary health care teams are governed by Saskatchewan's 12 regional health authorities. Family physician practices have more or less formal relationships with health regions, depending on the practice. This year, a new model of primary care delivery was developed in the province with the implementation of eight primary health care innovation sites. The innovation sites comprise various health professionals, including physicians, nurses (clinical and/or practitioner), dietitians, pharmacists, and emergency medical personnel. The structure of the collaborative teams in each site varies according to the community's needs, which are identified through community consultations.

The compensation model may also vary. Physicians may be paid either fee-for-service by the Ministry of Health or salary, contract, or blended (fee-for-service and contract/salary) by the health region, as specified in the master agreement between the Ministry and the Saskatchewan Medical Association. Other health professionals and staff who work in the sites are paid directly by the health region as salary or contract. Prior to the development of the innovation sites, primary care in the province was delivered by a mix of family physician practices and primary health care teams. Within many of these teams, collaborative relationships between physician, nurses, and other professionals existed to varying degrees. As the innovation sites are relatively new, no health or economic evaluation data are currently available.

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## MANITOBA

The Manitoba government recently announced the development of four primary care networks (PCNs) to build on the work of the previously existing physician integrated networks. The goal is to deliver more multi-disciplinary care that is patient-centred and focused on using existing resources to provide more coordinated and comprehensive care to patients.

PCNs are partnerships formed between regions, fee-for-service clinics, and other partners to provide coordinated, comprehensive primary care to a defined population. Their focus is prevention and coordinated disease management. This includes screening for and diagnosis of chronic diseases, as well as the reduction of modifiable factors for chronic disease. Some PCN health care providers will be co-located in the same clinic, health centre, and/or community, while other providers will be in different locations. All professionals in a network will work together to plan and deliver primary care services to the community. Members of the different teams within the

28 Mans and others, "Enrolment in Primary Care Networks."

29 Regehr and Wedel, "Alberta's Primary Care Networks."

30 Interdisciplinary Chronic Disease Collaboration, *The Impact of Primary Care Networks on the Care and Outcomes of Patients With Diabetes*.



network include physicians and some combination of other providers. These include primary care nurses, nurse practitioners, midwives, dietitians, pharmacists, mental health workers, social workers, spiritual care providers, community developers, exercise specialists, physiotherapists, and occupational therapists.<sup>31</sup> Physicians are paid by the province either as fee-for-service, alternative funding, or blended funding. Non-physician providers are directly funded by the province as salary or contract, with some contracted directly by the physician. The PCNs are self-governed, although there is a partnership agreement with the regional health authorities. Patients are rostered to the participating physician. There are no publicly available evaluation data on the health or economic impact of PCNs.

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**Nurse practitioner-led clinics were first implemented in 2007 in underserved regions of Ontario. Currently, 26 clinics provide care for more than 27,000 Ontarians.**

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## NEWFOUNDLAND AND LABRADOR

From 2003 to 2006, the seven primary health care (PHC) team areas in Newfoundland and Labrador were financially supported at the provincial level by the Office of Primary Health Care and the Primary Health Care Advisory Council. Since 2006, the PHC team areas have been funded and governed by the regional health authorities (RHAs). These teams provide primary care for people in defined geographic areas.<sup>32</sup> PHC teams can include family physicians, facilitators, coordinators, nurses, community health staff, social workers, occupational therapists, pharmacists, physiotherapists, and psychologists.<sup>33</sup> The staffing complement is based on the needs of the community and the availability of health human resources. Imbedded within some teams are chronic disease management collaboratives providing secondary and tertiary services. Although they do not have a governing mandate, community advisory committees help identify the communities' health

care needs. An evaluation conducted in 2006 reported improvements in access to services, resulting in lower wait times and fewer emergency department visits.<sup>34</sup> There have been no publicly available, comprehensive health or economic impact evaluations of the PHC teams.

## NURSE PRACTITIONER-LED PRACTICES

The nurse practitioner-led practice (NPLP) is a practice that provides primary care services by a team of professionals under the leadership of a nurse practitioner (NP). There are some differences in the nurse practitioner's scope of practice compared with that of a physician, which can vary by jurisdiction. NPLPs serve as an alternative model of primary care delivery for patient populations that have difficulties accessing a family physician. Services include annual physicals, episodic illness care, falls prevention programs for the elderly, immunizations, smoking cessation programs, injury prevention, and monitoring and management of chronic diseases.<sup>35</sup> Although NP roles have significantly expanded, only a few provinces and territories have substantially increased the use of a more comprehensive NPLP model. For the most part, NPLPs are supported by global funding, with expected target patient numbers. Due to the newness of this type of model, there is a paucity of evaluation data. Table 2 of Appendix A provides a summary of NPLP models in Canada.

### ONTARIO

Nurse practitioner-led clinics (NPLCs) were first implemented in 2007 in underserved regions of Ontario.<sup>36</sup> Currently, 26 NPLCs provide care for more than 27,000 Ontarians. NPLCs provide primary care services for patients who have difficulty accessing primary care and who are "unattached" (i.e., not already rostered with another care provider). Primary care nurse practitioners (NPs) can provide annual physicals, patient counselling, health promotion, immunizations, screening, treatment for short-term acute illnesses, referrals to other

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31 Manitoba Health, *Primary Care Networks and Team-Based Care*.

32 Office of Primary Health Care, Newfoundland & Labrador, *Newfoundland and Labrador Primary Health Care Renewal Initiative*.

33 Ibid.

34 Ibid.

35 Nurse Practitioners' Association of Ontario, *Nurse Practitioner-Led Clinics*.

36 Ontario Ministry of Health and Long-Term Care, *Nurse Practitioner-Led Clinics*.

services, and monitoring of chronic diseases. Patients are rostered to the clinic, not to a specific NP. An electronic medical record is used to record patient information.

NPLCs are funded through a transfer payment agreement between the Ministry of Health and Long-Term Care (MOHLTC) and the board of directors. They are funded to a maximum staff complement of up to four full-time equivalent (FTE) nurse practitioners, including an NP lead stipend; up to four FTE interprofessional health care providers; one FTE administrative lead; and up to three FTE clerical staff. All NPLC staff, except the collaborating physician, are salaried. Collaborating family physicians are funded through a monthly stipend of \$838.40 per FTE NP for consultations. They receive full remuneration for fee-for-service when providing direct care to patients whose needs fall outside the NP's scope of practice. Other than salaries, MOHLTC also funds the clinic's operations—including medical supplies, facilities, professional development, program supplies, information technology, etc.

NPLCs are governed by a not-for-profit board made up of community members, NPs (at least 51 per cent), and other health professionals. NPLCs are led by NPs, who work with other NPLC employees. The employees include registered nurses, registered practical nurses, physicians, and other professionals, including social workers and registered dietitians. As a new model of primary health care, NPLCs have not yet been evaluated. MOHLTC is working with nursing stakeholders and primary care experts to develop a framework that evaluates the NPLC model.

### MANITOBA

In Manitoba, nurse practitioners lead “QuickCare clinics” and will soon be leading mobile primary care units. QuickCare clinics address unexpected minor health care needs during times when most primary care clinics are closed. Three clinics have opened to date. Mobile primary care units have not yet been implemented, but will act as a regular, ongoing primary care home to patients in the small, rural communities they serve. They will help provide access to residents who otherwise would not have a regular care provider and who are difficult to reach. Three mobile units are currently being planned.

### An Example of a Nurse Practitioner-Led Clinic: The Lakehead NPLC

The Lakehead Nurse Practitioner-Led Clinic (NPLC) was first opened in November 2010 and serves the city of Thunder Bay and area. The interdisciplinary team includes four nurse practitioners (NPs), one registered nurse, one registered practical nurse, one social worker, one registered dietitian (0.8 full-time equivalent), and one pharmacist (0.2 full-time equivalent).

The NPs provide health promotion, disease and injury prevention, treatment, rehabilitation, and other support services. The roles of the dietitian, social worker, and pharmacist in the Lakehead NPLC are similar to other IPC team models. The registered dietitian provides nutrition education to individuals and groups for health promotion and management of chronic diseases. The social worker not only provides counselling support to clinic patients, addressing issues such as depression, anxiety, grief, and chronic pain, but also makes referrals to appropriate community services; helps patients navigate systems; and completes paperwork required to access social supports. The pharmacist conducts individual patient assessments to identify, prevent, and resolve medication-related problems; and reviews medical histories, identifies problems, and develops and monitors care plans, which are then communicated to the patient and the interdisciplinary team. The Lakehead NPLC's collaborating physician has medical directives in place for some controlled acts and is a source for consultation on complex cases. He comes to the clinic on a bi-weekly basis to see patients at the clinic. A collaborating psychiatrist comes once a month. The NPLC serves 3,200 patients, with a ratio of 800 patients to every NP.

The health professionals working in these two models include nurse practitioners, primary care registered nurses, and primary care assistants. Manitoba Health funds the salaries and the costs of the QuickCare clinics and the mobile units.

### SASKATCHEWAN

A mobile primary care centre, called the Health Bus, is used to provide clinic services for patients who face access barriers in Saskatchewan.<sup>37</sup> Patients often include First Nations, Métis, immigrants, and refugees. The clinic is staffed with a paramedic and a nurse practitioner, who provide services that include taking blood pressure and

<sup>37</sup> Saskatchewan Ministry of Health, *Introducing “The Health Bus.”*



blood sugar levels, assisting with the management of chronic diseases, and giving follow-up care and health advice. The Health Bus makes its services easily accessible by locating in a familiar locale, such as a Walmart parking lot, during flexible hours seven days a week.<sup>38</sup> The Ministry of Health governs and funds the mobile clinic and provider salaries. The level of interprofessional collaboration is low. A preliminary evaluation of the mobile clinics found improvements in screening for chronic conditions such as diabetes and hypertension and in coordination of care.

## COMMUNITY-LED PRACTICES

A community-led practice (CLP) is defined as a not-for-profit organization that is often governed by a board of directors with community representation. It is defined by a geographic area or by a specific patient population, such as the vulnerable and underserved. Patients who access care from CLPs are often either rostered to the practice or not rostered at all. CLP staff members are remunerated under either a salary or capitation model, with budget funding for overhead and operational costs. There is a paucity of available published data on the health and economic impacts of this type of model. Table 3 of Appendix A provides a summary of the community-led practice models in Canada.

### ONTARIO

The community health centres (CHCs) in Ontario are non-profit organizations funded by the local health integration networks (analogous to regional health authorities) and other sponsoring organizations. They are governed by a not-for-profit board made up in part by community members.<sup>39</sup> CHCs have provided health services and programs for local communities over the past 40 years and currently serve 110 communities.<sup>40</sup> They have an expanded scope of health promotion, outreach, and community development services and employ

salaried interprofessional teams. The teams often include physicians, nurse practitioners, other nurses, dietitians, chiropractors, speech pathologists, audiologists, social workers, health promoters, and community health workers. There are also 10 Aboriginal health access centres (AHACs) in Ontario. These are essentially CHCs that are led by and serve the First Nations, Métis, and Inuit communities. AHACs include traditional healers and program coordinators on the team. They provide additional services to meet the needs of the communities they serve, including traditional healing, cultural programs, community development programs, and social support.<sup>41</sup> For CHCs and AHACs, patients are rostered to the centre. There are currently 73 CHCs and 10 AHACs serving 4 per cent of the Ontario population.

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**A community-led practice is defined as a not-for-profit organization that is often governed by a board of directors with community representation.**

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Some of the family health teams (FHTs) in Ontario were funded as community family health teams (C-FHTs), which, borrowing features from the community health centre model, have a governing community board. C-FHTs differ from other FHTs in that patients may be rostered to the physician or to the group.<sup>42</sup> Mixed family health teams (M-FHTs) have a mixed governing board of providers and community representatives. C-FHT physicians may be remunerated by a blended salary model, while M-FHT physicians may be remunerated by blended capitation or blended salary. There are about 65 C-FHTs and M-FHTs combined. The same types of interprofessional teams work in a C-FHT or M-FHT as in a regular FHT. An evaluation conducted by the Institute for Clinical Evaluative Sciences showed CHCs had lower emergency department visit rates than other primary care delivery models in Ontario.<sup>43</sup>

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38 Health Council of Canada, *Teams in Action*.

39 Ontario Ministry of Health and Long-Term Care, *Community Health Centres*.

40 Glazier, Zagorski, and Rayner, *Comparison of Primary Care Models in Ontario by Demographics, Case Mix and Emergency Department Use*.

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41 Association of Ontario Health Centres, *Aboriginal Health Access Centres*.

42 Association of Ontario Health Centres, *Looking Back: Looking Forward*.

43 Glazier, Zagorski, and Rayner, *Comparison of Primary Care Models in Ontario by Demographics, Case Mix and Emergency Department Use*.

The Group Health Centre (GHC) in Sault Ste. Marie is an alternative community-led practice in the province. This particular centre is governed by a not-for-profit board of directors and is funded in part by the Ministry of Health as well as through donations or trusts.<sup>44</sup> The GHC serves over 62,000 patients and services approximately 80 per cent of its area's patients.<sup>45</sup> They have introduced a focused diabetes program aimed at maximizing nurses' and dietitians' scope of practice, resulting in fewer visits to physicians for standardized care. An evaluation of the program found improvements in blood glucose control at the end of program.<sup>46</sup> GHC's services can be provided by physicians, nurse practitioners, optometrists, chiropractors, physical therapists, and audiologists.

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**B.C.'s community health centres deliver primary care to populations that are defined geographically or based on access barriers (e.g., First Nations and seniors).**

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**QUEBEC**

Quebec has 147 community service centres, or "centres locaux de services communautaires" (CLSCs), delivering 15 per cent of all primary care in the province. Established in the 1970s, the CLSCs were considered highly innovative for being governed by the Ministry of Health and Social Services and for incorporating social services into the provision of primary care services.<sup>47</sup> CLSCs often include physicians, nurses, social workers, intake workers, psychologists, nutritionists, medical aides, dental hygienists, physical therapists, occupational therapists, family care workers, and coordinators.<sup>48</sup> They provide preventive, curative, and support services, including home care. In 2004, some CLSCs merged with residential and long-term care and

hospitals to form 95 health and social services centres (CSSSs). These local services networks aim to improve the coordination of care for patients across the primary, secondary, and tertiary care systems.<sup>49</sup> The impact of this merger remains largely unknown. Team members, including physicians, are paid a salary by the Ministry. CLSCs are governed by a non-profit community board. No health or economic impact evaluations were found for CLSCs.

**BRITISH COLUMBIA**

Although British Columbia has no published list of community health centres (CHCs), there are an estimated 78 self-identified CHCs in that province.<sup>50</sup> The CHCs' aim is to deliver primary care to populations that are defined either geographically or based on access barriers (e.g., First Nations, seniors, immigrants, and refugees). As a result, physicians who work in more rural and remote areas of the province usually work within a CHC. Services delivered by CHCs reflect the needs of the community and are provided by various professionals—including physicians, primary care nurses, public health nurses, social workers, dental health workers, and nutritionists.<sup>51</sup> Staff members are remunerated either by salary or capitation. The majority of CHCs in B.C. are funded by the regional health authorities through a contract with the Ministry of Health Services. They can be governed by an elected board of local community members or a community advisory board, but the majority are governed by the regional health authority.<sup>52</sup> Patients are generally rostered to the centre, while others CHCs offer drop-in services. The CHCs in the province vary significantly in terms of staffed professionals, services provided, governance structure, funding, and accessibility.

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44 Group Health Centre, Sault Ste. Marie, Ontario, "Thriving Models That Haven't Spread."

45 Ibid.

46 eHealth Ontario, *ePrescribing*.

47 Bozzini, "Local Community Services Centers (CLSCs) in Quebec."

48 Ibid.

49 Ibid.

50 Goldsmith, "Key Organizational and Delivery Features of Community Health Centres in British Columbia."

51 Wong and others, *An Environmental Scan of Primary Care and Public Health in the Province of British Columbia*.

52 Goldsmith, "Key Organizational and Delivery Features of Community Health Centres in British Columbia."

### **An Example of an Interprofessional Community Health Centre: Mid-Main Community Health Centre**

The Mid-Main Community Health Centre (CHC) is located in central Vancouver, British Columbia. The CHC has been operating since 1986 and covers the population that is defined by a geographic area of fewer than 80,000 persons and persons who are experiencing barriers in accessing services. The CHC has a medical clinic and a dental clinic. Both are open six days a week and offer after-hours care. Special programs include group clinics, which provide educational counselling on health issues such as pre-diabetes, diabetes, and chronic kidney disease.

The CHC employs six family physicians, one clinical pharmacist, one nurse practitioner, one medical office administrator, six dentists, five registered dental hygienists, one dental office administrator, one executive director, one human resources and financial officer, and one administrative and public relations coordinator.<sup>1</sup> The CHC remunerates its staff by salary and/or by capitation. A registered not-for-profit charity, the CHC is governed by an independent board of directors. Patients are eligible to access services from the CHC if they are elderly and frail, if they experience complex chronic conditions, or if they have significant socio-economic issues such as homelessness or are from a low-income, lone-parent household. Patients must also be referred by a medical or social professional or agency, not be currently attached to another family physician, and reside in the CHCs' catchment area.

<sup>1</sup> Mid-Main Community Health Centre, *Staff and Board*.

### **ALBERTA**

Family care clinics (FCCs) are a type of CHC model established in March 2012 as a pilot in three sites: Calgary, Edmonton, and Slave Lake.<sup>53</sup> The objective of the FCCs is to provide primary care to Albertans who do not currently have a family physician, and who have complex chronic conditions and/or addiction and mental health needs.<sup>54</sup> They aim to allow patients to book same-day appointments and increase access to care through the use of multiple service providers—including counsellors, dietitians, family physicians, licensed practical nurses, nurse practitioners, pharmacists, physical therapists,

<sup>53</sup> Alberta Health Services, *Family Care Clinics*.

<sup>54</sup> Ibid.

and registered nurses. The new model allows patients to access care without having to make an appointment with a physician. As part of the clinic, family physicians are expected to provide care beyond the scope of the other health care providers on the team and to provide advice as required. Due to their newness, little information is available on the FCCs' funding and governance structure.

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**In Alberta, the objective of the family care centre is to provide primary care to those who have complex health conditions, but don't have a family physician.**

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### **NEW BRUNSWICK**

In 2003, CHCs were established to enhance local access to primary health care through the provision and coordination of services for all clients within a defined population.<sup>55</sup> One of several objectives of the CHCs was "to establish an interdisciplinary approach to the delivery of primary health care services so that the most appropriate service is provided by the most appropriate provider."<sup>56</sup> The team may include physicians, nurse practitioners, other nurses, social workers, dietitians, health educators or promoters, and community development workers.<sup>57</sup> There are six CHCs. In addition, two satellite CHCs are staffed with a physician and/or nurse practitioner and a nurse, and have access to the larger team of the affiliated CHC. Patients are not rostered to a physician but rather belong as clients to the CHC: if the PHC physician leaves the CHC, the patients remain with the CHC. Funding is received directly from the regional health authority, which receives funding from the Department of Health and Wellness. CHCs are accountable to the regional health authority, which is governed by a board of directors with community representation. Each CHC has a community health centre advisory committee, although it does not have a governance mandate. Currently there are no data on the health or economic impact of the CHCs in New Brunswick.

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<sup>55</sup> Department of Health and Wellness New Brunswick, *The New Brunswick Community Health Centers Framework*.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

## NOVA SCOTIA

Nova Scotia has 42 CHCs, which provide primary care with expanded services to include women's clinics, physical activity programs, literacy services, and other social services.<sup>58</sup> The CHCs usually include a physician, who works solo or with other physicians and/or with a nurse and/or other health professionals. Other health professionals include social workers, dietitians, health educators, a traditional healer (in First Nations CHCs), occupational therapists, pharmacists (part of the team, or extended team), community health workers, midwives (maternity care), and mental health and addictions staff. The other health professionals can be accessed in the physician's office at specific times during the week or at other nearby locations.<sup>59</sup> The CHCs are funded by the district health authorities through funds from the Department of Health and Wellness. These funds cover salaries for non-physician team members and for other operational costs. Physicians are paid directly by the Department of Health and Wellness either by fee-for-service or contract. A CHC may choose from three governance models: community board, district health authority, or First Nations board. There are no publicly available evaluations on the health or economic impact of the CHCs.

## PRINCE EDWARD ISLAND

Prince Edward Island has eight health centres (HCs) with three health service outreach sites that serve 20 per cent of the population. The HCs are managed by a primary care network (PCN) manager and staff physicians, who report administratively to the manager and clinically to a PCN medical director. Health centres are staffed with clerical and health professional staff. They deliver primary care services and include at least one general practitioner, a nurse practitioner, and an advanced-practice nurse at the core. Other health professionals include nurses, counsellors, community workers, social workers, and dietitians.<sup>60</sup> The nurses do much of the chronic disease prevention and management follow-up visits. As part of the HCs' delivery model, teams implement clinical programs and activities in the community,

including clinical protocols for hypertension and an influenza vaccine program.<sup>61</sup> Family physicians have the choice of being paid either by fee-for-service or an alternative payment scheme (contract-for-service or salary), with the majority being paid by contract or salary.<sup>62</sup> Other health professionals are paid salary by Health PEI.<sup>63</sup> Since not all patients need to see a physician at every visit, they are rostered to the centre rather than to a physician. The HCs are governed by Health PEI, which is governed by a board of directors who represent various community perspectives and have the skills and experience required to govern health on the island. The board is also mandated to employ a public engagement strategy. Early health outcomes data show reductions in emergency department visits (initial and repeat) as well as an increased number of patients meeting target (HbA1c  $\leq 7$  per cent) and improved blood glucose. No economic evaluation data on the HCs currently exist.

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**As part of the Territorial Health System Sustainability Initiative, Nunavut plans to expand the chronic conditions support program, tailored to the Nunavut experience.**

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## NUNAVUT

Nunavut has 26 community health centres (CHCs). They comprise community health nurses, social workers, community health representatives, clerk interpreters, dietitians, and an x-ray technician, and provide the most accessible and interprofessional primary care for the region. In addition, as part of the Territorial Health System Sustainability Initiative, Nunavut plans to expand the chronic conditions support program (collaborative care model) tailored to the Nunavut experience.<sup>64</sup> Services in Nunavut are sometimes delivered by physicians on call from other regions who make up the Northern Medical Unit. For example, consultant specialists in Winnipeg can be consulted by phone or e-mail. There is no rostering in Nunavut. The CHCs

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58 Nova Scotia Advisory Committee on Primary Health Care Renewal, *Primary Health Care Renewal*.

59 Nova Scotia Canada Health and Wellness, *Primary Health Care Collaborative Teams*.

60 Health PEI, *Health Centres*.

61 Health Canada, *Primary Health Care Transition Fund*.

62 Haygroup, *Physician Human Resources Report*.

63 Health PEI, *Health Jobs*.

64 Government of the Northwest Territories, *Territorial Premiers Welcome Extension of Territorial Health System Sustainability Initiative (THSSI)*.

are governed and funded by the Department of Health and Social Services. There are currently no data on the health or economic impact of the CHCs.

## INTEGRATED PRIMARY CARE NETWORKS

Integrated primary care networks are structures where organizations and professionals are connected to provide services for a patient population. Networks facilitate shared resources and information between organizations and providers, as well as coordination of care. In this type of model, with the exception of physicians and nurses within the same practice, other health professionals are often not co-located. Table 4 of Appendix A provides a summary of the integrated primary care networks in Canada.

### PRINCE EDWARD ISLAND

Five primary care networks (PCNs) have been established in the West Prince, East Prince, Queens West, Queens East, and Kings areas of Prince Edward Island. Each network serves a defined geographic area that includes multiple health centres and physician-led practices/medical clinics. The PCNs are funded by Health PEI, a Crown corporation funded by the provincial government and responsible for primary care delivery in the province. Each network has a core team that includes a manager, a clinical nurse lead, an administrative supervisor who manages the clerical staff, a physician medical director who manages the clinical activities of physicians, and a network administrative supervisor who manages the administrative activities of physicians. Each PCN has a core centre out of which the core team works with satellite sites. Some non-physician professionals may be co-located (health centres) and/or they provide outreach services. For example, professionals who typically provide outreach services within the PCNs include diabetes educators (nurse or dietitian), registered nurses, licensed practical nurses, nurse practitioners, a diabetes social worker, and a mental health worker. Based on a master agreement with the province, physicians are paid by either fee-for-service, salary, or contract. All other health professionals hired by the PCNs are paid salary by Health PEI.

Physicians are offered a financial incentive of \$5,000 per year to be part of a collaborative team with other health professionals. Preliminary evaluation of the demonstration projects shows that the impacts of PCNs include reductions in emergency department use by those patients who have chronic obstructive pulmonary disorder.<sup>65</sup> Early results found improvements in blood sugar levels for diabetic patients. In terms of governance, the PCNs are accountable to Health PEI, which is governed by a board of directors.

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**Integrated primary care networks facilitate shared resources and information between organizations and providers, as well as coordination of care.**

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### YUKON TERRITORY

The Diabetes Collaborative was first implemented in 2005. It has since expanded to become the Chronic Conditions Support Program (CCSP). The program provides support for chronic conditions that include chronic obstructive pulmonary disorder and high blood pressure in addition to diabetes. The CCSP involves the employment of nurse specialists in chronic disease management to provide assistance to participating physician medical clinics (physician and office assistant) and health centres (primary care nurses). A computer-based chronic disease management database (the Chronic Disease Management Toolkit) and self-management consultative services for patient clients are also provided. A physiotherapist/clinical exercise therapist provides COPD rehabilitation, and the CCSP also contracts the use of pharmacists. The Toolkit database, which is linked to Canadian best-practice guidelines, stores information on a patient's condition or conditions and includes basic personal identification information and test results. This tracking information helps physicians and nurses monitor changes in their patients' test results and provide better care. To facilitate collaboration, the CCSP provides additional funds to physicians for the time they spend with the nurse specialists discussing patient status and care.

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65 Health PEI, *Better Access to Primary Care Leads to Fewer Emergency Department Visits*.



The CCSP also covers costs of overhead and office space used by the nurse specialists in the physician medical clinics and health centres. Some of the funding from the Territorial Health Access Fund, which is a transfer from the federal government to the Yukon government, was allocated to the program. Funding for the CCSP was renewed to 2014. The CCSP is governed by the Yukon government. There are currently no health or economic evaluation data available on the program.

### **NORTHWEST TERRITORIES**

Health care services can be received from different providers who work in or travel to fixed sites in the communities such as clinics, health centres, or health stations. Health care in the NWT is delivered to approximately 43,000 residents in 33 communities within eight regional health authorities (RHAs). IPC teams are integrated within the health services delivery system through team-based care or networked care by a variety of health professionals. They include physicians, registered and practical nurses, advanced practice nurses, nurse practitioners, occupational therapists, physical therapists, audiologists and speech pathologists, ophthalmological technicians, nutritionists, pharmacists, and unlicensed care providers/trained lay responders. There are 63.5 full-time equivalent general practitioners working for the NWT. The bulk of primary care in communities outside of the four largest communities of Yellowknife, Inuvik, Fort Smith, and Hay River is provided by nurse practitioners or by nurses working in an advanced scope. Physicians are paid by the Ministry of Health and Social Services through contracts for service. All other professionals are paid salary by the RHAs. All operational costs of the clinics, centres, and stations are funded by the RHAs, which receive funds from the Ministry of Health and Social Services. In terms of governance, the RHAs govern all health care operations in the NWT, based on the strategic direction provided by the Ministry. Interaction between health professionals is facilitated through formal and informal mechanisms. For example, an interoperable electronic health record within each RHA is used to access patient health information related to diagnostic tests and specialist consults that most care providers can have access to.

Providers often communicate with each other in person, over the phone, and through other informal means. Depending on the area in which they reside, patients may have less or greater access to various health care providers. Therefore, the level of interprofessional collaboration in the direct care of patients can vary from low to high. There are currently no published evaluation data on the health or economic impact of primary care delivery in the NWT.

### **CONCLUSION**

Based on what we currently know about IPC teams in Canada, we focused on the more traditional concept of the primary care setting. It must be recognized that other IPC structures exist within a broader primary health care system, that includes home and community care, palliative care, or other care. We acknowledge that many formal and informal primary health care networks exist across the country. This briefing included a summary of the types of IPC models in Canada based on a review of published information and consultations with administrators and policy analysts.

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**In the NWT, health care services can be received from different providers who work in or travel to fixed sites in the communities, such as clinics or health centres.**

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### **IPC TEAMS EXIST IN ALL OF CANADA**

Over the past decade, all provinces and territories have made efforts to improve collaborative team-based care, the integration of new team-member disciplines and roles, workflow redesign, chronic disease management, connections and collaboration with other parts of the health care system, and the use of telehealth and electronic medical records. While there are many settings where more than one health care professional is involved in the delivery of primary care in Canada, significant variability exists in the degree and quality of collaboration. This situation may be attributable to the differences in IPC team structure, function, funding, governance, and the length of time

teams have been operating. Previous research on inter-professional health teams has shown that it takes many years for primary care teams to develop, as functional and transformative changes are a continual process.<sup>66</sup> As the new IPC teams mature, it is expected that team performance and health outcomes will improve. While it is difficult to select one best model, several current models appear to have better provider integration and role optimization. These models seem to provide more patient-centred care, with a focus on disease prevention and chronic disease management, which has resulted in improved access to care and better health outcomes.

### **MANY CHALLENGES**

The quality of the collaboration and the extent to which members of the team are working to their full scope of practice is inconsistent across provinces and territories.

Although we see a growing number of different professional disciplines in primary care settings, we are slow in creating true interprofessional practices (because of the many barriers to collaboration). These barriers include a lack of role clarity, appropriate provider remuneration schemes and financial incentives, strong governance structures, and interprofessional education and training. There is a need for sustainable funding, monitoring, and evaluation and the uptake of information communication technology. The barriers in the uptake, optimization, and sustainability of IPC teams will be further explored in the next briefing in the series.

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66 Gotlib Conn and others, "Creating Sustainable Change in the Interprofessional Academic Primary Care Setting."

## APPENDIX A

# Tables

**Table 1**  
Summary of IPC Team Physician-Led Practices

Province	Model	Team members	Structure and Function			Evaluation			
			Coverage	Patients registered/ rostered to	Funding	Governance	Collaboration*	Health impact	Economic impact
Ontario	Family health team (FHT)	Physicians, non-physician health professionals, a lead administrator, and administrative staff. Non-physician health professionals on the team may include nurse practitioners, other nurses, pharmacists, registered dietitians, chiropodists or podiatrists, social workers/mental health workers, health educators, and occupational therapists.	In 2012, expanding to 200 FHTs serving over 2 million Ontarians	Physician	Physicians remunerated by the Ministry of Health and Long-Term Care by one of three blended models: capitation, complement, or salary. Additional incentives, premiums, and special payments for provision of specific services. Extra funds for operational overhead expenses, interdisciplinary health care providers, and administrators. Physician assistants hired through other funding envelope.	Board primarily consists of physicians. May include community and provider representatives. Majority have an executive director that answers to the board.	High	No published comprehensive evaluations. Some evidence of improvement in specific FHTs, including clinical improvements in COPD and diabetes.	No published comprehensive evaluations; potential cost savings due to reductions in emergency department use
Quebec	Integrated network clinic (CRI) [family medicine groups (GMF) + network clinics]	Physicians, nurses, administrative support staff (family medicine group staff), and some combination of social workers, nutritionists, psychologists, physiotherapists, kinesiologists, occupational therapists, respiratory therapists, and community or local pharmacists.	30 network clinics and 4 integrated network clinics	Physician	CRIs are funded through family medicine groups, network clinics, and one of two additional funding models: 1) percentage of all recurring costs provided by the Ministry of Health and Social Services; applies to the salary budget for the other professionals, including coordination bonuses; and 2) funds based on the number of projected patient registrations and on the scale of the GMF.	Contractual between physicians, network clinics, and the Ministry of Health and Social Services to provide defined range of services.	High	No published comprehensive evaluations	No published comprehensive evaluations
British Columbia	Integrated health network (IHN)	Physicians, nurse leaders, primary health care nurses, social workers, registered dietitians, and administrative support.	21 IHNs serving 50,000 patients with complex chronic diseases, the frail elderly, and marginalized citizens	Physician	Networks funded through a bilateral agreement between the Ministry of Health and the regional health authority with a matched funding model. Physicians paid fee-for-service and non-physician team members paid from funds attached to the bilateral agreement.	Regional health authority	High	Improvements in blood glucose levels in diabetes patients	Reduction in emergency room visits; no published comprehensive evaluations
Alberta	Primary care network (PCN)	Physicians, nurses, social workers, pharmacists, dietitians, mental health workers, exercise specialists, and support staff.	40 PCNs with over 2,500 family physicians serving over 2.5 million Albertans	Informal rostering to the PCN	Physicians receive usual payment from the Ministry of Health for providing primary care (fee-for-service or capitation) plus PCN funds for administrative activities. PCN receives annual payments of \$62 per patient enrolled, used to salary other team professionals, facilities costs, and other operational costs.	Paid board of directors, mostly made up of physicians. Some mixed boards with Alberta Health Services representation and some with community member representation.	High	Some evaluations by individual PCNs have reported improvements in clinical outcomes for diabetic patients.	No published comprehensive evaluations

(continued...)

\*Level of interprofessional collaboration as evaluated by the estimated average number of relationships within the team based on publicly available information. Interaction between two professional types is considered low-level collaboration; interaction between three professional types is considered moderate-level collaboration; and interaction between four or more professional types is considered high-level collaboration.

Sources: The Conference Board of Canada; various provincial/territorial health experts.

**Table 1 (cont'd)**  
Summary of IPC Team Physician-Led Practices

Province	Model	Team members	Structure and Function				Evaluation		
			Coverage	Patients registered/ rostered to	Funding	Governance	Collaboration*	Health impact	Economic impact
Manitoba	Primary care network (PCN)	Physicians and some combination of other providers, including primary care nurses, nurse practitioners, midwives, dietitians, pharmacists, mental health workers, social workers, spiritual care providers, community developers, exercise specialists, physiotherapists, and occupational therapists.	4 PCNs	Physician	Physicians paid by the province by fee-for-service, alternate funding, and blended funding. Non-physician providers funded by the province as contract or salary. Some non-physicians may be contracted directly by a physician within physician-led practices.	Partnership with regional health authorities (PCN agreements). Self-governed, autonomous practices.	High	No published comprehensive evaluations	No published comprehensive evaluations
Newfoundland and Labrador	Primary health care team	Physicians, facilitators, coordinators, nurses, community health staff, social workers, occupational therapists, pharmacists, physiotherapists, and psychologists, through networks.	7 primary health care team areas	No rostering	Physicians paid fee-for-service or salary.	Primary health care governed by 4 regional health authorities: Eastern Region, Central Region, Western Region, Labrador/Grenfell Region. Community advisory committees used to help identify community needs.	High	No published comprehensive evaluations	No published comprehensive evaluations

\*Level of interprofessional collaboration as evaluated by the estimated average number of relationships within the team based on publicly available information. Interaction between two professional types is considered low-level collaboration; interaction between three professional types is considered moderate-level collaboration; and interaction between four or more professional types is considered high-level collaboration.  
Sources: The Conference Board of Canada; various provincial/territorial health experts.

**Table 2**  
Summary of IPC Team Nurse Practitioner-Led Practices

Province	Model	Team members	Structure and Function				Evaluation		
			Coverage	Patients registered/ rostered to	Funding	Governance	Collaboration*	Health impact	Economic impact
Ontario	Nurse practitioner-led clinic (NPLC)	Nurse practitioners, registered nurses, registered practical nurses, physicians, and other professionals, including social workers and registered dietitians.	26 NPLCs in 2012, providing care to over 27,000 Ontarians	Clinic	Ministry of Health and Long-Term Care provides 100 per cent funding for the clinics. Nurse practitioners and other team members paid salary.	A not-for-profit board is responsible for the clinic and held accountable to the Ministry of Health and Long-Term Care and the community. Board members include a mix of nurse practitioners, other health care professionals, and members of the community.	High	No published comprehensive evaluations	No published comprehensive evaluations
Manitoba	Quick care clinic and mobile primary care unit	Nurse practitioners, primary care registered nurses, and primary care assistants.	3 quick care clinics and 3 mobile primary care units	Quick care clinic patients rostered to the PCN; mobile primary care patients rostered to their primary provider	Manitoba Health funds the clinics and mobile units. Health professionals are paid salary by Manitoba Health.	Manitoba Health	Low to moderate	No published comprehensive evaluations	No published comprehensive evaluations
Saskatchewan	The Health Bus (mobile primary care centre)	Nurse practitioner and paramedic.	1 Health Bus servicing almost 1,000 clients, mostly hard-to-reach and vulnerable populations	No rostering	Saskatoon Regional Health Authority	Saskatoon Regional Health Authority	Low	Improvements in clinical outcomes for hypertension and diabetes	No published comprehensive economic evaluations

\*Level of interprofessional collaboration as evaluated by the estimated average number of relationships within the team based on publicly available information. Interaction between two professional types is considered low-level collaboration; interaction between three professional types is considered moderate-level collaboration; and interaction between four or more professional types is considered high-level collaboration.  
Sources: The Conference Board of Canada; various provincial/territorial health experts.

**Table 3**  
Summary of IPC Team Community-Led Practices

Province	Model	Team members	Structure and Function			Evaluation			
			Coverage	Patients registered/ rostered to	Funding	Governance	Collaboration*	Health impact	Economic impact
Ontario	Community health centre (CHC) and Aboriginal health access centre (AHAC)	Physicians, nurses practitioners, other nurses, dietitians, chiropodists, speech pathologists, audiologists, social workers, health promoters, community health workers. AHACs include on the team traditional healers and program coordinators.	73 CHCs and 10 AHACs serving 4 per cent of Ontarians	Centre	Physicians are paid by the Ministry of Health and Long-Term Care using a blended salary model. All other health professionals and the executive director are paid salary through a mix of funding from the Ministry and other sponsoring organizations.	CHCs governed by not-for-profit community board. AHACs governed by not-for-profit community board or by elected First Nations Band Councils.	High	No published comprehensive evaluations	Potential cost savings due to reduction in emergency department use; no published comprehensive evaluations
Ontario	Community family health team (C-FHT) and mixed family health team (M-FHT)	Physicians, nurse practitioners, other nurses, executive director, support staff, site coordinator, and some combination of case workers, chiropodists or podiatrists, counsellors, health educators, occupational therapists, pharmacists, psychologist or associate, registered dietitian, and social worker/mental health worker.	About 65 C-FHTs and M-FHTs combined	Physician or the centre	Physicians are paid by the Ministry of Health and Long-Term Care using a blended salary model for C-FHTs and blended salary or blended capitation for M-FHTs. All other health professionals and the executive director are paid salary.	Not-for-profit community board (C-FHT) or mixed provider and community board (M-FHT)	High	No published comprehensive evaluations	No published comprehensive evaluations; potential cost savings due to reduction in emergency department use
Ontario	Group health centre (GHC)	Physicians, nurse practitioners, optometrists, chiropodists, physical therapists, and audiologists.	1 GHC servicing 62,000 area patients (about 80 per cent of population)	Centre	Ministry of Health as well as through donations or trusts.	Community board of directors	High	Improvement in blood glucose control	No published comprehensive evaluations
Quebec	Local community service centre/"centre local de services communautaires" (CLSC)	Physicians, nurses, social workers, intake workers, psychologists, nutritionists, medical aides, dental hygienists, physical therapists, occupational therapists, family care workers, and coordinators.	147 CLSCs. 5 per cent of physicians in Quebec work in a CLSC. About 15 per cent of primary care in the province is delivered at a CLSC.	Centre	All staff, including physicians, paid salary by Ministère de la santé et des services sociaux (government).	Not-for-profit community board	High	No published comprehensive evaluations	No published comprehensive evaluations
British Columbia	Community health centre (CHC)	Physicians, primary care nurses, public health nurses, social workers, dental health workers, and nutritionists.	78 CHCs. Number of patient clients unknown.	Centre	Part core funding from the Ministry of Health and part funding from community support, individual donations, fundraising events, and foundations. Funds through the regional health authorities based on contract with the Ministry of Health. Professionals, including physicians, paid by salary.	Not-for-profit community board or regional health authorities.	High	No published comprehensive evaluations	No published comprehensive evaluations
Alberta	Family care clinic (FCC)	Counsellors, dietitians, family physicians, licensed practical nurses, nurse practitioners, pharmacists, physical therapists, and registered nurses.	3 pilot sites. Plans to expand to 140 clinics.	Centre	Unknown	Unknown	High	No published comprehensive evaluations	No published comprehensive evaluations

(continued...)

\*Level of interprofessional collaboration as evaluated by the estimated average number of relationships within the team based on publicly available information. Interaction between two professional types is considered low-level collaboration; interaction between three professional types is considered moderate-level collaboration; and interaction between four or more professional types is considered high-level collaboration.

Sources: The Conference Board of Canada; various provincial/territorial health experts.



**Table 3 (cont'd)**  
Summary of IPC Team Community-Led Practices

Province	Model	Team members	Coverage	Structure and Function			Evaluation		
				Patients registered/ rostered to	Funding	Governance	Collaboration*	Health impact	Economic impact
New Brunswick	Community health centre (CHC)	Physicians, nurse practitioners, other nurses, social workers, dietitians, health educators or promoters, and community development workers.	6 CHCs and 2 satellite CHCs	Centre	Funding from the Department of Health and Wellness to the regional health authority	Regional health authority, which itself is governed by a board of directors with community representation.	High	No published comprehensive evaluations	No published comprehensive evaluations
Nova Scotia	Community health centre	Physicians, nurse practitioners, social workers, dietitians, health educators, traditional healer (in First Nations CHCs), occupational therapists, pharmacists (part of team, or extended team), community health workers, midwives (maternity care), and mental health and addictions staff.	42 CHCs	Centre	Non-physician team members are paid by the District Health Authority (DHA) through funds from the Department of Health and Wellness (DHW). Physicians are paid directly by the DHW either through fee-for-service or contract. CHC operational costs funded by the DHA.	Three governance models: 1) community board 2) district health authority 3) First Nations	High	No published comprehensive evaluations	No published comprehensive evaluations
Prince Edward Island	Health centre	Physicians, nurses (practitioner, licensed practical, registered), diabetes educators, clerical/administrative staff, counsellors, community workers, social workers, diabetes nurses, and dietitians.	8 health centres with 3 health centre outreach sites serving 20 per cent of the population	Centre	Government of P.E.I. provides funds to Health PEI, which pays physicians either fee-for service, contract-for-service, or salary (most common). Other health professionals paid salary. Other incentive funding for working in a collaborative.	Health PEI	High	Reduction in emergency department visits (initial and repeat); increased patients meeting target ( $\leq 7$ per cent) and improved blood glucose	No published comprehensive evaluations
Nunavut	Community health centre (CHC)	Community health nurses, social workers, community health representatives, clerk interpreters, x-ray technician, with physician visits.	26 CHCs	No rostering	Department of Health and Social Services funds the CHCs. Includes salaries of health professionals. Physicians are paid per diem rate.	Department of Health and Social Services	Low to moderate	No published comprehensive evaluations	No published comprehensive evaluations

\*Level of interprofessional collaboration as evaluated by the estimated average number of relationships within the team based on publicly available information. Interaction between two professional types is considered low-level collaboration; interaction between three professional types is considered moderate-level collaboration; and interaction between four or more professional types is considered high-level collaboration.

Sources: The Conference Board of Canada; various provincial/territorial health experts.

**Table 4**  
Summary of IPC Team Integrated Networks

Province	Model	Team members	Coverage	Structure and Function		Governance	Evaluation		
				Patients registered/ rostered to	Funding		Collaboration*	Health impact	Economic impact
Prince Edward Island	Primary care network (PCN)	Physicians, diabetes educators (nurse or dietitian), registered nurses, licensed practical nurses, nurse practitioners, a diabetes social worker, and a mental health worker.	5 PCNs servicing the entire P.E.I. population. All models of care delivery are managed under the PCNs.	Physician	All health professionals who work with Health PEI are salaried. The majority of physicians who work in government-owned/-operated health centres are salaried. Some physicians, by choice, are on an alternative pay model (fee-for-service or contract).	Health PEI is responsible for the delivery of all public health services in P.E.I. It receives funds from the provincial government and has a governing board of directors.	Low to high	Reductions in emergency department use due to chronic obstructive pulmonary disorder	No published comprehensive evaluations
Yukon Territory	Chronic Conditions Support Program (formerly Diabetes Collaborative)	Physicians/primary health care nurses, and some combination of nurse specialist in chronic disease management, contracted pharmacists (medication review and respiratory care planning), physiotherapist/clinical exercise therapist.	12 rural health centres and 4 physician-led practices in Whitehorse, servicing 1,500 patients.	Physician or health centre	Program funding from the Yukon government until 2014. Territorial access fund from the federal government to the Yukon government.	Yukon government	Low to moderate	No published comprehensive evaluations	No published comprehensive evaluations
Northwest Territories	Clinics, health stations, and health centres	Physicians, registered and practical nurses, advanced practice nurses, nurse practitioners, occupational therapists, physical therapists, audiologists and speech pathologists, ophthalmological technicians, nutritionists, pharmacists, and unlicensed care providers/trained lay responders.	5 clinics, 8 health stations, 21 health centres servicing 43,000 residents in 33 communities. 63.5 FTE general physicians.	No rostering	Physicians paid contract by Ministry of Health (MOH). Other health professionals and staff paid salary by the regional health authorities. Other centre/clinic/site costs funded by the regional health authorities. Regional health authorities receive funds from the MOH to deliver health and social care.	Regional health authorities	Low to high	No published comprehensive evaluations	No published comprehensive evaluations

\*Level of interprofessional collaboration as evaluated by the estimated average number of relationships within the team based on publicly available information. Interaction between two professional types is considered low-level collaboration; interaction between three professional types is considered moderate-level collaboration; and interaction between four or more professional types is considered high-level collaboration.  
Sources: The Conference Board of Canada; various provincial/territorial health experts.

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by *Thy Dinh*

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