afhto association of family health teams of ontario

# Optimizing the value of team-based primary care
# Review of the literature

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## Contents

# 1 Introduction and Summary

At present, about 25-30% of Ontarians can access team-based primary care, by virtue of the fact that their family physician or nurse practitioner is a member of one of the province's 10 aboriginal health access centres (AHACs), 75 community health centres (CHCs), 184 family health teams (FHTs) and 25 nurse practitioner-led clinics (NPLCs). The logical question is – how do we get the best value from primary care teams for all Ontarians?

In order to guide members, the Ministry of Health and Long-Term Care (MOHLTC) and other stakeholders in optimizing the value of team-based primary care for Ontarians, the Association of Family Health Teams of Ontario (AFHTO) has assembled the evidence on:

- the added value of team-based primary care
- the critical ingredients for achieving optimal results from primary care teams
- optimizing the value of primary care teams across a population

The evidence reviewed for this paper primarily relates to the FHT model. With a 10-year history in the province, studies have been emerging over the past 2 years. NPLCs are a newer model (about 5 years old) and studies are now underway. This review did not search for studies specific to CHCs and AHACs, since these organizations provide services that go beyond the traditional health service domain to target complex social and economic issues that impact their clients' health.

From this evidence, AFHTO proposes that Ontarians will be best served – as patients and as taxpayers – in a health system where the policy, structure and funding environment fosters:

- Long-term continuing relationships with a family physician (FP) or a nurse practitioner (NP)
- Timely access to primary care
- Population-based needs assessment, regularly updated, around which programs, services, structures and processes are built and evolved
- Participation of the people who receive care and health professionals in needs assessment and planning
- Access to team-based care for all, with priority given to those who would most benefit, i.e. people living with chronic disease and complex conditions, including those related to social determinants of health
- Care coordination led by primary care, and including linkages to services and supports to address the social determinants of health
- Measurement and tracking to optimize quality, capacity and total cost of care at the team level, taking into consideration the full process of care and including everyone involved in that process
- FPs, NPs and other health professionals (IHPs) working together as full members within the team
- Support for teams and all team members to work in an optimal fashion:
    - Development, recruitment and support for effective administrative and clinical leadership
    - Education and support for building effective teams, including clear understanding of and respect for roles and responsibilities of team members, and development of constructive team culture
    - Sufficient funding to recruit and retain skilled team members
    - Time and support to enable all team members to collaborate in measuring and improving processes and quality of care

# 2 The value of comprehensive primary care

In the work of Dr. Barbara Starfield, primary care is defined as "first-contact, continuous, comprehensive, and coordinated care provided to populations undifferentiated by gender, disease, or organ system."[1] *Strategic Directions for Strengthening Primary Care in Ontario,* a paper released in December 2011 by a Primary Healthcare Planning Group (PHPG) convened by Ontario's Ministry of Health and Long-Term Care, defines it as follows[2]:

> Primary care is that level of a health service system that provides entry into the system for all new needs and problems, provides person-focused (not disease-oriented) care over time, provides care for all but very uncommon or unusual conditions and coordinates or integrates care provided elsewhere or by others.
>
> It thus is defined as a set of functions that, in combination, are unique to primary care. Primary care also shares characteristics with other levels of health systems: accountability for access, quality and costs; attention to prevention as well as therapy and rehabilitation; and teamwork.
>
> Primary care is not a set of unique clinical tasks or activities; virtually all types of clinical activities (such as diagnosis, prevention, screening and various strategies for clinical management) are characteristic of all levels of care. Rather, primary care is an approach that forms the basis for and determines the work of all other levels of health systems.
>
> Primary care addresses the most common problems in the community by providing preventive, curative and rehabilitative services to maximize health and well-being. It integrates care when there is more than one health problem and deals with the context in which illness exists and influences the responses of people to their health problems. It is care that organizes and rationalizes the deployment of all resources, basic as well as specialized, directed at promoting, maintaining and improving health.

This comprehensive approach to primary care has a compelling association with system efficiency and effectiveness. The lifelong work of Barbara Starfield observed that an investment in primary care was associated with improved system quality, equity and efficiency (reduced cost)[1]. In British Columbia this efficiency was quantified by Marcus Hollander. The total cost of care was measured

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[1] Shi, L., Starfield, B., Kennedy, B.P., Kawachi, I. (1999). Income inequality, primary care, and health indicators. *The Journal of Family Practice*, 48, 277-284.
Starfield, B. (2009). Family medicine should shape reform, not vice versa. *Family Practice Management*, *16*(4), 6-7; (2007). Global health, equity, and primary care. *The Journal of the American Board of Family Medicine*, *20*(6), 511-513; (2000). Is US health really the best in the world? *Journal of the American Medical Association, 284*(4), 483-485; (2003). Research in general practice: co-morbidity, referrals, and the roles of general practitioners and specialists. *SEMERGEN*, *29*(s1), Appendix D, 7-16.
Starfield, B., Shi, L. (2002). Policy relevant determinants of health: an international perspective. *Health Policy*, 60, 201-218.
[2] The Primary Healthcare Planning Group. (2011, December). Strategic direction for strengthening primary care in Ontario: overview of processes and recommendations of the primary healthcare planning group. Retrieved May 22, 2015, from http://www.afhto.ca/wp-content/uploads/PHPG_Overview-of-Process-and-Recommendations_Final.pdf

for the sickest patients. Patients without close alignment to primary care had a system cost of $30,000/patient/year. Patients with close alignment to primary care had a system cost of $12,000/patient/year[3]. This fiscal reality emphasizes the economic importance of investing in comprehensive primary care services.

## *2.1 Fundamental ingredient: Long-term, continuing relationship with a comprehensive primary care provider*

It is important to consider the nature of the patient-provider relationship, specifically the impact of provider continuity as it relates to improved patient outcomes. A recent study published by the Canadian Institute for Health Information (2015) provides evidence for why developing and sustaining a relationship with a regular primary care physician is linked to improved health outcomes. It defined relational continuity of care using the Usual Provider Continuity (UPC) index, where the UPC is calculated as the number of visits to the usual primary care physician divided by the total number of visits to all providers. The study looked at billing data for patient interactions with certain health services in Alberta and Saskatchewan, including visits to family physicians, hospitalizations for ambulatory care sensitive conditions (ACSCs), and unscheduled emergency department visits for family practice sensitive conditions (FPSCs). The underlying hypothesis was that higher UPC scores result in improved health outcomes for patients and greater cost-savings to the healthcare system, insofar as greater continuity helps build a culture of open and honest communication between the patient and the provider, resulting in better illness identification and management, which ultimately leads to a reduction in hospitalizations and emergency department use. The results in fact demonstrated that patients with higher continuity scores were less likely to be hospitalized for an ACSC and less likely to visit an emergency department for an FPSC. Overall, this study concludes by suggesting that team-based models of primary care, which are put in place to increase access, take into consideration the importance of continuity in order to ensure high quality, comprehensive care that is capable of reducing avoidable hospital services[4].

In the Conference Board of Canada's *External Evaluation of the Family Health Team Initiative (2014)* patient survey data confirms that patients associate seeing the same physician or nurse each time with better care experiences. Similarly, a common theme that emerged from patient focus groups

[3] Hollander, M. J., Miller, J. A., MacAdam, M., Chappell, N., & Pedlar, D. (2009). Increasing value for money in the Canadian healthcare system: New findings and the case for integrated care for seniors. *Healthcare Quarterly*, *12*(1), 38-47.
[4] Canadian Institute for Health Information. (2015). Continuity of care with family medicine physicians: why it matters. Retrieved May 5, 2015, from https://secure.cihi.ca/free_products/UPC_ReportFINAL_EN.pdf.

was the high value that patients associate with being able to see the same physician at each visit. Furthermore, 90% of patients surveyed reported they were able to see the same physician each time they visited their FHT, with many patients reporting that the team model helps to facilitate continuity of care by freeing up health professional's time for consultations. A particularly interesting finding from this evaluation was that at baseline (2009-2010), 26% of patients surveyed reported that they saw an interprofessional health provider for most of their primary care, while this proportion rose to 32% at follow-up (2012). This finding indicates that over time, as long-term relationships developed between patients and interprofessional health providers, continuity increased[5].

It appears that strong patient-provider continuity in primary care results in improved health outcomes and cost-savings to the healthcare system, and it is also of great importance to patients. Therefore, it is important that teams continue to provide timely access to comprehensive quality care, while facilitating the creation of long-term patient-provider relationships.

## *2.2 Team-based care is recognized as a basic building block for effective primary care*

The triple aim framework for healthcare reform seeks to achieve better health outcomes, improve patient experiences, and control per capita costs. A recent publication by the University of California Centre for Excellence in Primary Care suggests that this framework depends on a foundation of high-performing primary care, which is composed of ten building blocks[6].

***Four Foundational Blocks:***

1) **Engaged leadership:** establishing a practice-wide vision with concrete, measurable goals and objectives.
2) **Data-driven improvement:** tracking clinical, operational, and patient experience metrics to monitor progress towards objectives.
3) **Empanelment:** establishing a link between patients, care teams, and primary care providers builds relationships, which are essential for good primary care.
4) **Team-based care:** building primary care teams that include well-trained interprofessional health providers to increase primary care capacity.

***Five Middle Blocks:***

5) **The Patient-Team Partnership:** engaging patients in shared decision making and providing a framework for self-management support.

[5] The Conference Board of Canada. (2014, December 17). Final report: an external evaluation of the Family Health Team (FHT) initiative. Retrieved May 5, 2015, from http://www.conferenceboard.ca/e-library/abstract.aspx?did=6711.
[6] Bodenheimer, T., Ghorob, A., Willard-Grace, R., & Grumbach, K. (2014). The 10 building blocks of high-performing primary care. *The Annals of Family Medicine*, *12*(2), 166-171.

6) **Population Management:** matching team roles with population needs.
7) **Continuity of Care:** facilitating and encouraging patients to see the clinician and care team to whom they are empaneled.
8) **Prompt Access to Care:** ensuring patient satisfaction through readily accessible primary care services
9) **Comprehensiveness and Care Coordination:** providing patients with the services they need and arranging for services that fall outside the scope of primary care

***The Final Block:***

10) **Template for the Future:** the ultimate state of primary care reform, which can only be realized when all other blocks are in place, along with changes to health policy, such as, a shift away from fee-for-service remuneration to pay-for-performance payment models.

In examining the literature on primary care teams, the evidence on how to get the best value is highly aligned with this list.

# 3 What is the evidence on the added value of team-based primary care?

Team-based primary care, commonly referred to as interprofessional primary care, is the provision of a wide range of health services to patients by healthcare providers committed to delivering comprehensive, coordinated, high-quality care within and across settings through team collaboration[7]. Specifically, primary healthcare teams work in concert with individuals, families, and communities to realize shared goals for health and well-being[8]. An all-encompassing vision for team-based care is providing "the most appropriate care, by the most appropriate providers, in the most appropriate settings.[9]" This shared approach to health care delivery has the potential to improve health system efficiency and patient-important outcomes by ensuring appropriate triage and use of the health professional with the greatest expertise for a particular problem, thereby freeing up more time for all team members to see more patients[10]. In order to optimize the value of team-based primary care it is

[7] Health Care Innovation Working Group. (2012, July 26). From innovation to action: The first report of the health care innovation working group. *Ottawa, ON: The Council of the Federation*. Retrieved May 12, 2015, from http://www.pmprovincesterritoires.ca/phocadownload/publications/health_innovation_report-e-web.pdf.
[8] Mitchell, P., Wynia, M., Golden, R., McNellis, B., Okun, S., Webb, C. E., Rohrback, V. & Von Kohorn, I. (2012). Core principles & values of effective team-based health care. Discussion Paper, *Washington, DC: Institute of Medicine*. Available from: www.iom.edu/tbc.
[9] Canadian Intergovernmental Conference Secretariat. (2000, September 11). First Ministers' meeting communique on health. Retrieved May 8, 2015, fromhttp://www.scics.gc.ca/english/conferences.asp?a=viewdocument&id=1144.
[10] Goldman, J., Meuser, J., Rogers, J., Lawrie, L., & Reeves, S. (2010). Interprofessional collaboration in family health teams An Ontario-based study. *Canadian Family Physician*, *56*(10), e368-e374.

important to first consider the added value of healthcare teams and then to examine key determinants for achieving optimal results and maximizing the value of a team-based approach.

Teamwork is now considered integral to primary care for many reasons: Firstly, the complexity of primary health care is increasing as evidenced through a rise in chronic illnesses, which prevents physicians from adequately addressing all issues and concerns with their patients due to time constraints[11,12]. Next, there is a renewed emphasis that primary care delivery should be organized around the social determinants of health, calling for the development and deployment of primary health care services targeting health promotion and disease prevention[11]. Therefore, the delivery of comprehensive health services tailored to individual-patient needs requires specialized skills and training that may be delivered more effectively and appropriately by non-physician health professionals[11]. In a team setting there is a certain level of interdependence and collaborative effort required by all members in order to accomplish specific tasks related to the team's shared goals and objectives[11]. While developing the characteristics of a high-functioning primary care team is not without its challenges, it is worthwhile to first examine the evidence on the added value of effective collaboration in team-based models of primary care (summarized below).

## *3.1 Teams improve timely access to primary care*

Several sources have found higher levels of access to primary care reported by patients attending a family health team (FHT), compared to Ontario residents in general[13]. Increased patient access to healthcare services was reported as a key outcome of the FHT model in all studies included in a literature review of interprofessional collaboration in Ontario's FHTs by Gocan et al. (2014), while decreased wait times for primary care appointments, diagnostic testing, and mental health assessments were reported in half of the studies reviewed[14]. Results from 50 FHTs that participated in the first iteration of the *Data to Decisions* initiative undertaken by AFHTO in 2014, indicate that 59% of patients

[11] Sargeant, J., Loney, E., & Murphy, G. (2008). Effective interprofessional teams: "contact is not enough" to build a team. *Journal of Continuing Education in the Health Professions*, *28*(4), 228-234.
[12] Tracy, C. S., Bell, S. H., Nickell, L. A., Charles, J., & Upshur, R. E. (2013). The IMPACT clinic innovative model of interprofessional primary care for elderly patients with complex health care needs. *Canadian Family Physician*, *59*(3), e148-e55.
[13] In addition to the sources cited here, a not-yet-published study organized by the Ontario College of Family Physicians (OCFP) made the same finding. Specifics are not provided here since this work has been submitted to peer-reviewed journals.
[14] Gocan, S., Laplante, M. A., & Woodend, K. (2014). Interprofessional collaboration in Ontario's family health teams: A review of the literature. *Journal of Research in Interprofessional Practice and Education*, *3*(3), 1-19.

have same day or next day access to primary care, compared to only 40% reported in an internal patient survey conducted by Health Quality Ontario (2014)[15,16].

Key drivers for enhanced patient access have been identified as after-hours clinical services, reduced wait times, and interprofessional health services[14]. The Conference Board's evaluation of the FHT initiative indicates that a common belief among FHT providers and administrators is that wait times for many services have decreased, in due part because of the addition of interprofessional health providers. One physician reported "*it is only possible because I have allied professionals sharing the caregiving role*[5]." This statement illustrates the link between decreased wait times in FHTs and teamwork, namely that sharing the workload improves access and helps bolster team camaraderie[5].

## *3.2 Patients experience better coordination of care in primary care teams*

The literature review by Gocan et al. (2014) found increased coordination and collaboration to be an outcome of the team approach to care[14]. Improved coordination of care involves efficient communication mechanisms between providers and established processes to ensure patients gain access to the right healthcare provider for the right concern[14].

One of the key reasons why the team model improves care coordination is because communication between healthcare providers is facilitated through the use of a common electronic medical record (EMR), ensuring a level of systems integration that is currently lacking across different models of primary care in Ontario. This kind of seamless integration improves communication among providers, results in less conflicting advice from care providers, and facilitates the transfer of data between providers[5,14].

The 2012 patient survey data from the Conference Board of Canada's external evaluation of the FHT initiative showed that less than 10% of patients receiving care in FHTs felt they had received conflicting advice from different providers, or felt that their medical records were not accessible to all providers, and the majority of patients who participated in focus groups expressed satisfaction with the coordination of care within their FHT[5].

[15] Association of Family Health Teams of Ontario (2014, November 20). Comparing health quality Ontario's new measuring up report to D2D 1.0 results. [key issues]. Retrieved May 5, 2015, from http://www.afhto.ca/news/key-issues/comparing-health-quality-ontarios-new-measuring-up-report-to-d2d-1-0-results/.

[16] Health Quality Ontario (2014). Measuring Up: a yearly report on how Ontario's health system is performing. Retrieved May 5, 2015, from: http://www.hqontario.ca/portals/0/Documents/pr/measuring-up-yearly-report-en.pdf.

Patients who have access to coordinated primary care tend to have better health outcomes compared to those who do not, as well as, coordinated care is reportedly linked to more efficient use of healthcare resources [16].

### *3.3 Team-based primary care supports improved management of chronic diseases*

Another benefit of interprofessional team-based care is improved management of patients with chronic diseases. It is estimated that 1/3 of Canadian adults are living with a chronic condition and the bulk of chronic disease management is provided through primary care. Most physicians simply do not have enough time to address all chronic disease needs in a standard visit – as was found in a study that examined guideline application for 10 common chronic diseases to a panel of 2,500 primary care patients with an age-sex distribution and chronic disease prevalence similar to those of the general population, and estimated the minimum physician time required to deliver high-quality care for these conditions. The study concluded alternative methods of service delivery are needed to meet recommended standards for quality health care[17].

The team model gives ready access to interprofessional health providers that deliver diverse professional expertise and access to the necessary resources and skills required to manage the "whole patient"[14], and the knowledge of and connections to external services and supports in the community[5]. Indeed, there is a vast amount of literature in support of using patient care teams to effectively manage chronic illnesses, however Wagner (2000) reports that in order for patients to experience improved quality of care in a team-based approach the team must be composed of the right people, with the right skills, committed to common goals and willing to share care effectively[18].

With that, we now turn to examine the key ingredients for achieving optimal results from team-based care.

## 4 What is the evidence on critical ingredients for optimal results from a primary care team?

There is no uniform concept of "team" in primary care – this paper therefore examines the evidence to assess the critical ingredients for achieving optimal results from a primary care team, and how to

[17] Østbye, T., Yarnall, K. S., Krause, K. M., Pollak, K. I., Gradison, M., & Michener, J. L. (2005). Is there time for management of patients with chronic diseases in primary care?. *The Annals of Family Medicine*, *3*(3), 209-214.
[18] Wagner, E. H. (2000). The role of patient care teams in chronic disease management. *BMJ: British Medical Journal*, *320*, 569-572.

achieve optimal value of these teams across a population. To illustrate the many different ways in which primary care teams work, within the AFHTO membership there are examples where:

- Family physicians (FPs), nurse practitioners (NPs), and interprofessional health professionals (IHPs) work in the same location or in separate locations.
- FPs, NPs and IHPs work in close collaboration with integrated processes of care, or in a "referral model" where the FP or NP will send a patient to an individual IHP (e.g. dietitian, chiropodist) when a consultation or service is needed.
- IHP work is dedicated to delivering programs for groups of patients, or to clinical service with individual patients, or a mix thereof.
- FPs and/or NPs work in other locations and refer their patients as needed to IHPs.

A scan of the literature revealed several key ingredients required to ensure optimal results in team-based care – reported in the sections below.

### *4.1 Effective administrative and clinical leadership is absolutely essential*

Effective leadership is repeatedly cited as being a key determinant for team success[5,14,19,20]. Leadership may be shared amongst team members, but is most often present in the form of a "champion", that is, a clinician who takes responsibility for leadership at the service-provision level, as well as an effective and approachable executive director who takes responsibility for administrative-level leadership, ensuring efficient and effective business operations[14,20]. Without clear boundaries around the operational structure of the team, potential conflicts of interest and/or the establishment of hierarchies may arise, where both serve to corrode rather than support effective team functioning[19]. The presence of strong leadership is crucial to achieving optimal results and good strategic alignment between the team's mission, vision, goals and objectives, and the patients' needs and values[5,19]. A study of Ontario FHTs found correlation between qualitative team interviews and quantitative assessment of team climate, leading to the conclusion that the role of leadership, both family physician and executive director, was pivotal in forging a common philosophy of teamwork and encouraging team members collaboration, advancing evolution to a high-functioning team[20].

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[19] Thy Dinh, Carole Stonebridge, and Louis Thériault. (2014) Getting the most out of health care teams: recommendations for action. *Ottawa: The Conference Board of Canada*. Available from: http://www.conferenceboard.ca/e-library/abstract.aspx?did=5988.

[20]Brown, J. B., Ryan, B. L., Thorpe, C., Markle, E. K., Hutchison, B., & Glazier, R. H. (2015). Measuring Teamwork in Primary Care: Triangulation of Qualitative and Quantitative Data. *Families, Systems, & Health*. Advance online publication. http://dx.doi.org/10.1037/fsh0000109.

### *4.2 Teams must ensure members are the "right fit" for the team*

Hiring practices for teams should take into consideration the culture of the team, in order to ensure that any new members brought on board are the "right fit", which has been shown to be more important than possessing the "right skills"[5]. To achieve a high index of team climate it is important that all team members share a common philosophy towards teamwork, are actively engaged in team initiatives, task-oriented, and encouraged to give input and share new ideas[20]. Team climate, according to Howard et al. (2011), can be positively predicted based on strong leadership, use of EMRs, and group or developmental culture[21].

### *4.3 All team members must have a clear understanding of respective roles & responsibilities*

A grounded-theory study undertaken in the OCFP's work explored the attitudes and beliefs of FHT members across 20 FHTs in Ontario through the use of qualitative interviews to explore team functioning characteristics (n=110) . A major theme that emerged was the need for all team members to understand and respect each other's scope of practice[20]. This aspect is crucial to ensure optimal team functioning so that patients gain access to the most appropriate provider for each issue, resulting in improved quality and coordination of care. A review of literature by Gocan et al. (2014) found clear understanding of each professional's role to be a key determinant of high-level team functioning[14]. To further support the need for a clear understanding of roles and responsibilities to achieve optimal results in team-based primary care, the Conference Board of Canada found, from key informant interviews and surveys of clinical service providers, that agreement on policies around practice scope, roles, responsibilities, and competencies was key to a well-functioning and effective interprofessional care team[19]. Directly related to this is the role that physicians play in a team and the ongoing challenge to overcome the culture of autonomy associated with the medical profession.

### *4.4 Physicians must be collaborators within the team*

Traditionally, physicians have been viewed as lone decision-makers, responsible for accurate diagnosis and appropriate management of each patient[22]. With the advent of team-based models of

[21] Howard, M., Brazil, K., Akhtar-Danesh, N., & Agarwal, G. (2011). Self-reported teamwork in family health team practices in Ontario: organizational and cultural predictors of team climate. *Canadian Family Physician*, *57*(5), e185-e191.
[22] Saba, G. W., Villela, T. J., Chen, E., Hammer, H., & Bodenheimer, T. (2012). The myth of the lone physician: toward a collaborative alternative. *The Annals of Family Medicine*, *10*(2), 169-173.

primary care a cultural transformation must take place in order to best optimize the value of all team members and ensure quality of patient care improves[22]. Many primary care physicians value the long-term relationships and connections they establish with their patients and some fear what may happen to those relationships if they do not have complete control over all care decisions[22]. In a team-based model of primary care, the one-on-one relationship between the physician and the patient must be modified to include a meaningful sense of connectedness to other team members[22].

As identified above, high-functioning teams recognize and make optimal use of each member's scope of practice[20]. Additionally, physicians must shift their focus from thinking about "my patient" to "our patient" in order to undergo the cultural transformation that is required to build a high-functioning health care team[22].

### *4.5 Success is linked to participation of all providers in quality improvement*

The move to broader physician participation in primary care teams has had the added benefit of providing infrastructure to help them participate in quality improvement (QI) and make more meaningful use of their EMRs[5]. In looking at the factors associated with high-performing teams, the FHT evaluation report found: the greatest difference between the best and lowest performers in terms of access were the extent of provider involvement in QI activities and paperless medical records within the FHT[5]. In 2009, 74% of FHTs reported engagement in internally driven QI initiatives, rising to 78% in 2012. Additionally, provider engagement in the improvement of programs and services delivered within the FHT increased to 90% in 2012[5]. Still, participation in QI initiatives varies significantly across FHTs, with many FHTs actively engaged in formal quality activities, while others are still in the preliminary planning stages. Nevertheless, the participation of all team members, including administrative staff and interprofessional health providers, in the planning and implementation of QI activities has been identified as a success factor to improving FHT processes and teamwork[5].

Drawing from the work of Barbara Starfield, an approach has been tested in one FHT and is being spread to other primary care teams to measure and optimize quality, capacity, and total cost of care for the population of patients served by the team. This experience suggests that real benefits arise from meaningful feedback to providers[23].

[23]Southey, G., & Heydon, A. (2014, July). The Starfield model: Measuring comprehensive primary care for system benefit. *Healthcare Management Forum*, *27(2)*, 60-64.

### *4.6 Communication is key; common electronic medical record is one critical component*

Yet another important ingredient to ensure optimal results from team-based primary care is effective communication[5,14,19]. The use of a common EMR is one of the ways to achieve widespread communication across the care continuum. Electronic medical records represent a vital mode of communication that support data capture, knowledge sharing, and informational continuity within the team[14,20]. However, it should be noted that the EMR does not replace the need for face-to-face interactions, which are critical to team functioning[14]. Ninety-one percent of the studies examined by Gocan et al. (2014) listed effective communications and EMR integration as important determinants for interprofessional collaboration and effective team relationships in a FHT setting[14].

### *4.7 Physical space enhances team collaboration & cohesion*

According to the Conference Board of Canada's report, *Getting the Most out of Health Care Teams: Recommendations for Action (2014)*, co-location, wherein all health providers are located at one site, is one of the requirements for a high-functioning interprofessional primary care team[19]. Another related concept is allocation of space, where physical design of common areas to facilitate team interactions has been shown to improve communication and collaboration amongst team members[19,20].

## 5 What is the evidence on optimizing the value of primary care teams across a population?

Many things influence the establishment and subsequent utilization of healthcare services, including socioeconomic, cultural, financial, and geographical factors[24]. Moreover, health services utilization is a product of the complex interplay between these factors, each of which differs depending on the population[25]. As outlined in section 3.1 evidence shows that team-based models improve access to primary care. Optimizing the output of these existing teams is one step to further improve access to primary care. It will also require a bottom-up approach, where services and programs are designed based on evidence from local needs assessments, taking a decentralized approach to the planning of health services delivery and also recognizing the time and effort needed to build a high-performing team[24].

[24] Chapman, J. L., Zechel, A., Carter, Y. H., & Abbott, S. (2004). Systematic review of recent innovations in service provision to improve access to primary care. *British Journal of General Practice*, *54*(502), 374-381.
[25] Birch, S., Eyles, J., Hurley, J., Hutchison, B., & Chambers, S. (1993). A needs-based approach to resource allocation in health care. *Canadian Public Policy/Analyse de Politiques*, *19(1)*, 68-85.

## *5.1 Population-based needs assessment is the starting point*

There is compelling evidence for teams to perform local needs assessments on a regular basis to inform organizational structure and process design in order to better match patient needs with effective programs and services. This requires the focus of primary care to expand from diagnosing and managing specific conditions, to also include targeting the needs of the community, ensuring services are relevant and effective, insofar as they successfully address the health needs of the population while taking into consideration local challenges[24]. Addressing the social determinants of health is essential to providing high-quality comprehensive care and this means managing the "whole" person, which requires knowledge, skills, and expertise from a variety of different professionals across many disciplines. Furthermore, it is necessary to measure the specific needs of populations in order to justify resource allocation and eliminate disparities, ensuring both horizontal and vertical equity, meaning that communities with similar needs receive similar services, while those with greater needs receive a proportionate increase in services[26,27].

Historically, methods for assessing the relative needs of populations have included population surveys to gather data on self-reported health status, age, and sex. Additionally socio-economic status, disease prevalence, and mortality rates are considered good proxies for assessing relative health needs in a population[27]. More recent methods, such as the adjusted clinical group (ACG) system, account for each individual's unique mix of illnesses and the management of these comorbidities over time by different care providers and across various disciplines. When aggregated across a population, this system has the potential to have a profound impact, in terms of how the healthcare system is managed and financed, because it accounts for illnesses that cluster both within individuals and populations[28].

If needs assessments are to be used to inform the design of team structures and processes, guidance is needed around how best to conduct a healthcare needs assessment. The subjects of a healthcare needs assessment are both the populations that are being served, as well as the individual potential recipients of healthcare services[29]. The following four points are guiding principles for conducting a needs assessment, as proposed by Stevens and Gillam (1998).

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[26] Starfield, B. (2011). The hidden inequity in health care. *International Journal for Equity in Health*, *10*(1), 15.
[27] Reid, R. J., Roos, N. P., MacWilliam, L., Frohlich, N., & Black, C. (2002). Assessing population health care need using a claims-based ACG morbidity measure: a validation analysis in the province of Manitoba. *Health services research*, *37*(5), 1345-1364
[28] Reid, R. J., MacWilliam, L., Verhulst, L., Roos, N., & Atkinson, M. (2001). Performance of the ACG case-mix system in two Canadian provinces. *Medical Care*, *39*(1), 86-99.
[29] Stevens, A., & Gillam, S. (1998). Needs assessment: from theory to practice. *BMJ: British Medical Journal*, *316*(7142), 1448-1452.

- *'The population's ability to benefit from health care is equal to the aggregate of individuals' ability to benefit.'*
- *'The ability to benefit does not mean that every outcome will be favourable, but rather that need implies potential benefit, which on average is effective.'*
- *'The benefit is not just a change in clinical status but can include reassurance, supportive care, and the relief of carers. The list of beneficiaries of care can extend beyond the patient.'*
- *'Health care includes not just treatment but also prevention, diagnosis, continuing care, rehabilitation, and palliative care.'*

Additionally, an effective population healthcare needs assessment must take into consideration resource constraints when recognizing groups of individuals living with a common condition (e.g. diabetes) and deciding how to best manage competing priorities[29]. In order to effectively assess needs it is essential to gather information regarding existing services, which can often be accomplished through conversations with key informants, including patients, administrative staff, executive directors, physicians and interprofessional health providers. Finally, the true essence of a healthcare needs assessment is gaining an understanding of what is effective and for whom. The critical steps for achieving this, as presented by Stevens and Gillam (1998) are summarized below.

- Develop a clear statement of the population whose needs are being assessed
- Identify all sub-groups within population that have unique service needs.
- Obtain information about the prevalence and incidence of sub-groups within the population
- Define and describe healthcare services that are currently available
- Identify the effectiveness and cost-effectiveness of current healthcare interventions and associated services.
- Establish a new model of care that assigns relative priorities to services and recipients

## *5.2 Needs assessment and planning requires involvement of health professionals and the people being served*

The task of managing a healthcare needs assessment is not straightforward and requires input from multiple stakeholder groups. Perhaps the biggest challenge is involving health professionals in the process, namely physicians, because their focus tends to be directed towards individual patient care rather than population needs[29]. Nevertheless, changing services to target the needs of the population

cannot proceed without buy-in from the health professionals who are responsible for delivering the services[29]. Needs assessment is an iterative process and the results are intended to facilitate the development of new strategies that should be formally agreed upon and communicated to all members and re-visited on a regular basis[29]. Overall, good information gathering, clinical involvement, and a close relation to the planning process are key ingredients for a successful needs assessment[29].

The key to successfully addressing both the present and future needs of the population through the use of primary care teams lies in utilizing resources appropriately and engaging in team structure and process design in an iterative manner. In order to ensure that the team is always meeting the needs of the population it serves, ongoing measurement (i.e. continuous quality improvement, various methods or approaches to ensuring patient engagement, EMR data extracts etc.) is essential because it enables teams to better understand the needs of their patients and how those needs may be changing, allowing resource allocation and structure and process design to be modified to better address changes taking place at the population level. Once this foundation is laid, soft change management approaches can be applied to address internal factors such as, team dynamics, mix of professionals, scope of practice, role clarity etc. to optimize the value of each unique team member.

### *5.3 Organize to address social determinants of health*

It is well documented in the literature that patients with chronic illnesses, multiple co-morbidities, and challenging social needs are high consumers of healthcare services and therefore represent higher costs for the healthcare system[26,30]. The Institute for Healthcare Improvement (IHI) reports that the most complex aspect of managing patients with chronic illnesses and mental and social challenges is establishing the necessary connections and communications between the different providers involved in the care of the individual[30]. While primary care physicians may be able to identify social needs that are impacting health outcomes, they do not have the capacity to handle all of those needs on their own[30]. Interdisciplinary team-based models of primary care have the potential to address the issue of managing both health and social needs, while improving continuity and care coordination across the care continuum.

[30]Craig C., Eby D., Whittington J. (2011). Care coordination model: better care at lower cost for people with multiple health and social needs. IHI innovation series white paper, *Cambridge, Massachusetts*: *Institute for Healthcare Improvement*. Available from: http://www.ihi.org/resources/Pages/IHIWhitePapers/IHICareCoordinationModelWhitePaper.aspx.

## 5.4 Programs, structures and processes must be built around the needs of the community

It is widely accepted by policymakers, providers, and administrators that changes to health service delivery will involve seeking new ways to achieve organizational efficiency in order to effectively deliver comprehensive care to those who need it most, while reducing the provision of unnecessary services[28]. In-depth understanding of needs that are unique to each local context requires teams to model their structures and processes around the needs of the community, rather than having the model of care define the kinds of healthcare services that will be made available to the population. In their summary of achievements in primary care research, the Primary Care Policy Center (PCPC) at the John Hopkins Bloomberg School of Public Health reported that much remains to be learned about how to organize healthcare services that are patient and population-oriented rather than disease and risk factor focused[31]. Additionally, examining the role of non-physician personnel in providing adequate primary care was cited as an area for future research and expansion as little is known about how to best balance the different types of services offered by interprofessional practice teams to improve quality of care and achieve good outcomes[31]. Although evidence suggests that conducting needs assessments at the local population-level is an equitable and efficient means for optimizing the value of primary care, further research and development is needed to establish guiding principles and policies explicit to the organization of primary care teams that will effectively address the needs of the populations they serve.

## 5.5 Support is needed to optimize capacity and performance of existing teams

The FHTs and NPLCs in existence today in large part reflect the hard work – thousands of hours of volunteer work – of early adopter physician and NP leaders who shared a vision and guided their peers into a transformed style of practice. Still, there is variation in performance among primary care providers. The FHT evaluation report provides further evidence and direction for the Ministry, AFHTO, and primary care organizations on what is needed to continue to improve. The FHT evaluation report has identified organizational and structural characteristics that are associated with improved patient experience. This gives some foundation for primary care organizations to assess themselves on the basis of these characteristics and consider how to improve in these areas. Almost half of FHTs were the best performers in some domains and lowest in others. High and low-performing FHTs were differentiated by

[31] The Johns Hopkins Primary Care Policy Centre (2015). Summary of achievements in primary care research. Retrieved May 19, 2015, from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-primary-care-policy-center/achievements.html.

their culture, leadership and management practices, use of data and patient information, and patient experience with staff (e.g., reception and continuity of care)[5].

Current capacity could be further optimized through appropriate funding to retain qualified staff. The FHT evaluation report found that comparatively low compensation levels had a negative impact on recruitment and retention[32], which aligns with findings in a joint report from AFHTO, together with the Association of Ontario Health Centres (AOHC) and Nurse Practitioners' Association of Ontario (NPAO)[33]. The independent salary study commissioned by these three associations found compensation rates for non-physicians working in primary care teams are up to 30% below what is available in other parts of the health system, vacancy rates in some key professions are hitting 20%; that plus turnover is taking a huge bite out of capacity and productivity.

With respect to physician participation in teams, it means examining the current rules around team membership, looking at new ways to define the physician relationship to the team, and ensure there is appropriate support for physicians (and all team members) to participate in activities that are essential to effective interdisciplinary care – e.g. access to EMR to share relevant patient data, protected time for case conferencing and quality improvement activities. In future, The *Teaming Project*, currently being undertaken by the Department of Family and Community Medicine (DFCM) at the University of Toronto will be a valuable resource for advice on how to improve capacity and performance of teams.

[32] Finding reported on p.153 of The Conference Board of Canada. (2014, December 17). Final report: an external evaluation of the Family Health Team (FHT) initiative. Retrieved May 5, 2015, from http://www.conferenceboard.ca/e-library/abstract.aspx?did=6711.

[33] Association of Family Health Teams of Ontario, Association of Ontario Health Centres and Nurse Practitioners' Association of Ontario. *Toward A Primary Care Recruitment and Retention Strategy for Ontario — Primary Care Compensation Structure*. January 2014. Retrieved May 5, 2015, from http://www.afhto.ca/wp-content/uploads/Toward-a-Primary-Care-Recruitment-and-Retention-Strategy-January-2014.pdf