General Practice Services Committee

GPSC Literature Review

What are the characteristics of an effective primary health care system for the future?

Question 1:

What are innovative and collaborative primary care models worldwide?

Prepared for the GPSC Workplan & Budget Working Group

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Primary Care Models

Main Questions:

1. What are innovative and collaborative primary care models worldwide?
2. What aspects have merit in BC? In your community?

Sub-Questions

1. What makes them effective: promising/best practices; why are they working; course corrections? For example: primary care network in New Zealand; Australia; Wisconsin model; Nootka model; Canada (Alberta, Ontario, BC, other). What has been trialed and failed?
2. What attachment mechanisms have been successful? For example: patient registry for unattached/attached patients (recording patients as part of usual care or as part of understanding population needs)
3. Walk-in clinics (really explore this); hybrid models of walk-in clinics (e.g., they are following patients in a longitudinal way, e.g. in Maple Ridge, there is a walk-in clinic for attached patients, group of doctors providing after hour care for their group of patients)
4. Funding/payment models: to support integration/team-based care and enable change (e.g., mixed and/or blended FFS and salary model); funding attached to patient; business model/business case; sustainability; alternative funding sources
5. Assessment and evaluation: gaps in care; successes and failures; best practices; lessons learned; supports needed; barriers to overcome (e.g., silos); economic evaluation/cost-benefit analysis; evidence; policy reviews
6. Networking theory and models (e.g., dark networks)

Primary Care Reform / Renewal

> "It seemed like quite a few people had pieces of the jigsaw but no-one had the picture on the box."
>
> (Scottish Executive: Better outcomes for older people - framework for joint services part one. Edinburgh: Scottish Executive; 2005:11).

- Pressure to reform our health care system is at an all-time high, driven by the rising costs and fragmentation of care. These problems have led to lower quality care and limited access to primary care (Wexler, Hefner, Welker, & McAlearney, 2014).
- Over the years, countries have attempted many different strategies to redesign primary care. One fundamental, if not surprising observation is that primary care is highly variable, with each jurisdiction conceptualizing and implementing primary care reform in a way that is considerate to the problematic aspects of their respective health systems (Comino et al., 2013; Roland & Nolte, 2014). These reform attempts have faced many challenges, including intense regulatory requirements, rigorous professional standards, complicated reimbursement structures, a fragmented and decentralized health care system, and deep-rooted cultural norms and expectations (Goldberg, 2012). A number of key lessons about what doesn't work arose from these efforts to reform primary care, such as (Dunbar, 2011):
    - Reorganizing primary care based on a formal, hierarchical, and mechanistic view of how organizations work, as this downplays the importance of the culture, norms, values and relationships that exist within the system.
    - Centralist-planned, "command-and-control" organizations that are managed by targets, which may work in the short-term but can lead to medium-term problems.

- Additional key lessons that were identified from past reform strategies in Canada include (Hutchison, Levesque, Strumpf, & Coyle, 2011):
    - Policy legacies and entrenched professional and public values limit possibilities for radical, "big bang" reform.
    - There is no single "right" model for the funding, organization, and delivery of primary health care. Different models have different strengths and weaknesses and may perform better or worse in different contexts and with different target populations.
    - No single funding or payment method holds the key to transforming primary health care.
    - Changing physicians' payment methods may facilitate, but does not ensure, change in the organization and delivery of care. Conversely, organizational change and improved quality of care are possible through a blended payment structure.
    - Primary care renewal demands major investments in system transformation and infrastructure to support the delivery of high quality, coordinated care.

- Conflicting aspirations of the different parts of the system requires a balance between the interests and values of all stakeholders involved in the continuum of care.

- A major part of primary health care transformation is the transition from primary care to primary health care. Primary care, which includes clinical services like diagnosis and treatment of non-urgent conditions, chronic disease prevention and management, and mental health and addiction treatment, is one part of primary health care. Primary health care is a broader concept than primary care, that emphasizes prevention and wellness, and recognizes that success in improving people's health is largely determined by factors in their daily lives (e.g. lifestyles, housing, relationships, income, and workplaces) (Government of Alberta, 2014). Primary health care puts individuals and families at the centre of their care, rather than diseases, providers, or facilities. It involves people in the decisions about their own care and takes into account their physical, mental and social needs. To address these factors, primary health care brings in a wide range of services that have not traditionally been considered 'health services'. In addition to connections with services like public health, continuing care, and home care, primary health care incorporates social programs such as income and housing supports (Government of Alberta, 2014).
- Primary care is, or should be, the hub of the system (Spenceley et al., 2013).

- Health care reform aimed at improving **quality** and **efficiency** of care delivery for a defined **population** by empowering and supporting the primary care sector to better **engage** with the rest of the health care system has become the focus for governments across Europe, North America, Australia, and New Zealand (Nicholson, Jackson, & Marley, 2013). To achieve this aim, health care reform strategies have predominantly focused on enhancing **access** and **integration** of health care services, as well transformations to the payment structure (Wexler et al., 2014).
- Improvements to access, integration, and quality require multilayered approaches; there is no single solution that can uniquely strengthen primary care (Willcox, Lewis, & Burgers, 2011). Therefore, it is recommended that multiple, linked innovations targeting different levels of the health care system be implemented if the goals of primary care reform are to be realized (Comino et al., 2012). Major innovations that have been utilized to strengthen primary care include (Goldberg, 2012; Hutchison et al., 2011; Spenceley et al., 2013; Willcox et al., 2011):

    - Population-based approach;
    - Patient **enrollment** and patient registries;
    - Alternative scheduling arrangements;
    - Interprofessional collaborative **teams**;
    - Ongoing performance measurement and monitoring;
    - **Quality improvement** processes;
    - Multi-component / blended funding and **payment** arrangements with incentives and pay for performance programs;

- Health information technology, including **electronic medical / health record** (EMR/EHR) systems; and,
- Regionally operated primary care **networks** or organizations that focus on the whole-population.

- Practice supports that are required to renew primary health care include (Highsmith & Berenson, 2011):

  - **Process changes** to improve access and help providers leverage their time and work more efficiently (e.g., open/advanced access, after-hours and weekend coverage, telephone and e-mail consultations, appointment reminders, practice redesign, and patient outreach).
  - **Clinical decision support** to guide evidenced-based decision-making at the point of care and to facilitate population-based care (e.g. registry reports and panel management for patient tracking and population health management, electronic systems to order, receive and track tests, e-prescribing, clinical data systems that embed evidence-based guidelines, meaningful use of health information technology and electronic health records, quality measurement, tracking, and improvement).
  - **Changes in the delivery of care** to improve quality (e.g. use of non-physician staff to manage care, patient education and self-management support, motivational interviewing, care coordination between primary and specialty care, linkages to community, social, and health services.

Primary Care Reform Attributes and Enablers	
Attributes / Enablers	**Objectives**
Access*	All patients are attached to a single roster of choice, and have same-day, 24/7 access to their primary care team. a. Enhanced access to care is available through systems, such as open scheduling, expanded hours, and new options for communication between patients and their core team. b. Care is delivered when and where the patient needs it in a culturally and linguistically appropriate manner
Population-Focused Accountabilities	Primary care services are integrated around the identified health-care needs of a defined panel/roster of patients. 1. The core primary care team is defined based on the needs of the panel / roster of patients. Team members work together to their full scopes of practice to support the patient's plan of care, and collectively take responsibility at the practice level for the ongoing care of the patients.
Patient Engagement	Patients and families are active partners in their care; patients actively participate in decision-making, quality improvement and providing feedback to ensure that patient expectations are met.

Continuity	The physician is part of a core team that coordinates to preserve relational continuity. Each patient has an ongoing relationship with the physician within the team, and the team is trained to provide first-contact, continuous and comprehensive whole person-oriented care.
Coordination and Service Integration	Care is coordinated and existing/new services are integrated across all elements of the complex health-care system and connected to the primary care hub (i.e., home care, chronic disease management, public health, addictions and mental health, medical specialty, hospital, continuing-care nursing homes, supportive living).
Comprehensive, Whole-Person Care	The core team is responsible for providing comprehensive, whole-person care, or arranging needed care with other qualified professionals across the system. 1. Primary care teams also understand the broader health needs of the community, and are partnered with local social and community service organizations to assist in meeting the identified health needs of the defined population.
Team Care	Team care is an attribute inherent in all objectives.
Quality Improvement	All primary care teams will engage in continuous quality improvement using proven principles and approaches, and measure and report on a core list of provincial performance measures, and on selected clinical indicators as relevant to the population served.
Technology	Technology is selected for its integrated application across the system, and used appropriately to support optimal, evidence-informed patient care, as well as performance measurement, patient education, enhanced access, and communication between patients and teams and across teams and settings.
Payment to Align Incentives	Payment appropriately recognizes and supports achievement of collaboration, preventative care delivery, care continuity, comprehensiveness, and teamwork and care quality.
Shared Governance and Community Engagement	The primary care practice has accountabilities to the larger community as a contributor to overall population health. a. Primary care practices have mechanisms for engaging in community efforts to identify health and health care needs of their panel as part of the larger community. b. All governance structures for primary care at the provincial and local levels demonstrate citizen involvement.
(Spenceley et al., 2013)	

- As new models are introduced in isolation, there are risks that these models may exist in parallel, duplicate effort, and ultimately compete with one another for resources (Spenceley et al., 2013). Therefore, it is important to take a system-level approach to primary care renewal.

- There are various amounts of innovations currently being implemented in multiple jurisdictions around the globe. It isn't completely understood why some innovations are more frequently utilized versus others. However, there may be some explanations that can account for this (Goldberg, 2012). For example, the EMR/EHR system is one innovation that may be difficult to implement due to high implementation costs, a high learning curve, and significant disruption of office functions during the transformation process (Goldberg, 2012). Challenges with implementing specific innovations, such as those that require considerable financial and human resources, could be overcome by a number of strategies. For example, the use of trained facilitators has been associated with increased likelihood that practices implement innovations. In fact, the use of external expert facilitators, practice coaches or technical assistants have been shown to improve practice operations, finances, information technology, and quality improvement activities (Goldberg, 2012).

- Some countries have also faced resistance to particular reform strategies from various professional associations and public entities. This has been experienced in many countries, including Australia, where the government received resistance from the Australian Medical Association with respect to the implementation of formal patient enrollment. To address these conflicts, governments are negotiating primary care reform initiatives through an engaged and participatory approach (Hutchison et al., 2011). This could significantly slow down the process of transformation, but may be essential in its success. In fact, in those jurisdictions where primary care transformation has been the most far-reaching, major initiatives have been negotiated with the medical association that serves as the physicians' bargaining agent (Hutchison et al., 2011). For example, in Alberta, three-quarters of the province's family physicians participate in the **Primary Care Networks**, which were introduced in 2005 through an agreement by the Alberta Medical Association, the provincial health ministry, and Alberta's regional health authorities (Hutchison et al., 2011). Other jurisdictions include Quebec (**Family Medicine Groups**), Ontario (**Patient Enrollment Model**), and British Columbia (**Full Service Family Practice Incentive Program**), England (**GP Consortiums**), and Netherlands (**Regional GP Cooperatives**) (Hutchison et al., 2011).

Health Care Governance

- The predominance of independent, physician owned and managed solo and small-group family practices has repressed the development of local or regional governance mechanisms for primary health care (Hutchison et al., 2011). Furthermore, primary care providers and stakeholders in most communities have no collective voice and no means for assuming collective responsibility and being held accountable for addressing the needs of the local population (Hutchison et al., 2011). Therefore, it is important that effective governance models that involve multiple providers across health and social sectors be created to lead,

support, and maintain primary care reform strategies (Nicholson et al., 2013). This model requires an overarching commitment to shared leadership between government and all health service sectors (acute care, primary care, community health and public health, home care, specialty care/tertiary care) and across health disciplines (Spenceley et al., 2013). Some have suggested an **integrated governance**, which is a collation of systems, processes and behaviours by which health care organizations lead, direct and control their functions in order to achieve organizational objectives, safety and quality of service, and in which they relate to patients, the wider community and partner organizations' (Nicholson et al., 2013).

Transformation

- An incremental and participatory approach seems to have been key to integrating primary care reform strategies (Strumpf et al., 2012). This incremental approach enables a relatively quick, system-wide implementation of those reform elements with broad public and stakeholder support (Hutchison et al., 2011). However, some argue that an incremental approach runs the risk of creating a lack of system coherence, high administrative and transaction costs, and organizational models and a change process that can become bogged down in the details of implementing and coordinating a multitude of reforms. For example, strategies to improve access to one service, such as same-day episodic care (advanced access), can compromise access to other services, such as planned chronic disease care (Comino et al., 2012). But in a policy environment constrained by policy legacies unfavorable to sweeping health system change, it is likely to be the only feasible strategy for transforming the system (Hutchison et al., 2011). It is therefore important that this incremental and participatory process exist within a system thinking approach to problem-solving that goes beyond looking at a list of components and considers the interdependent relationships that exist between the components of the whole system (Dunbar, 2011).
- Change management has been recognized as a key factor in the transformation process. For successful transformation to occur, it is important to recognize that change takes time, that it should be managed locally, and that it requires a significant investment of both financial and human resources. Furthermore, successful change initiatives must also be met with a strong and committed executive and clinical leadership team that is active in the transformation process.

For more information, see Medical Homes – Transformation and Change

Accessible, Coordinated and/or Integrated Care

- Key trends in health care reform has been the implementation of initiatives that enhance access to a broader range of primary care services or that encourage better integration between primary care, specialist services, hospitals, community and social services, and public health agencies (Willcox et al., 2011).

- Limited accessibility to primary health care has been one of the driving forces for health care reform. There are many factors that contribute towards the issues of accessibility, including workforce shortages, limited hours of operation, and payment structures (McKinlay & Marceau, 2012). Strategies used in primary care to improve access include implementation of open access scheduling or walk-in visits, enhanced in-person hours, email and telephone consultations, group visits, and alternative methods of communication, such as email and telephone care (Goldberg, 2012; Wagner et al., 2012). Other innovative reforms initiatives utilized to eliminate or reduce barriers to access include (Willcox et al., 2011):
    - Multidisciplinary teams;
    - Collaborative arrangements across small groups of practices;
    - Larger regional cooperatives; and,
    - 24-hour health call centers.

- **Health call centres** are relatively new reform strategies, however they now contribute substantially to improving access and managing the primary care workload in various jurisdictions (Willcox et al., 2011). For example, the Netherland's **Regional General Physician Cooperatives** utilize telephone call centers to provide collaborative after-hours care. These cooperatives are primarily staffed by nurses who triage patients based on national guidelines (Willcox et al., 2011). Other countries that utilize health call centres include Australia, England, and the United States.

Recommendations for the Delivery of Personal, Comprehensive, Continuing Care in Canada

3.2 Provide support for delivery of personal, comprehensive, continuing care in many settings

3.2.1 Every Canadian should have the opportunity to have a family physician of his or her own.

3.2.2 Personal, comprehensive, continuing care provided by family physicians practicing in or linked to groups, networks, or teams should be the cornerstone of family practice.

3.2.3 Definitions of "comprehensive" and "continuity" in family medicine should evolve to include the roles of individual family physicians, groups and teams of family doctors and other health professionals, and information with patients at the centre.

3.2.4 The provincial Coordinating Committee on Community and Academic Health Science Centre Relations (PCCCAR) list of primary care mandatory functions should serve as a guide for defining the core services provided by family practice.

3.2.5 Individual family physicians may, but should not be expected to, provide full core family practice services on their own. Those in solo or small-group practices should be encouraged and supported to work with other family physicians when and where possible to help provide services and to share after-hours coverage.

3.2.6 Family physicians and family practice groups, networks, and teams that offer

personal, comprehensive, continuing care and full family practice services to their patients are highly valued by Canadians and should receive strong support from the health care system, including remuneration incentives for provision of these services.

3.2.7 Family practice groups, networks, and teams being introduced across Canada should:

- Encourage and support participation by physicians, patients, and other health professionals through voluntary rather than mandated approaches;
- Identify family physicians as the entry point to medical care and main providers and coordinators of medical care for each patient;
- Offer personal, comprehensive, continuing care for patients and families throughout their lives;
- Deliver the spectrum of primary health care services to patients through interdisciplinary integrated care teams;
- Ensure response to the needs of patients with full primary care and family medicine services 24 hours a day, 7 days a week, 365 days a year;
- Be supported to incorporate information technology systems, including electronic health records, as part of each practice; and
- Encourage and support all health professionals in the team in their continuing medical education / continuing professional development.

3.2.8 To help ensure patients' access to core primary care and family medicine services and other medical services needed in particular communities, family physicians with added skills or focused practices should be included as part of family practice groups, networks, and teams.

3.2.9 Remunerative incentives should be introduced in every province and territory for provision of comprehensive care by family physicians and family practice groups, networks and teams.

3.2.10 Secure and reliable access to electronic health records and communication links between family physicians, specialists, other health care providers, pharmacies, hospitals, laboratories, and other diagnostic services must continue to be developed.

3.2.11 Family physicians and practice groups, networks, and teams should be funded to include electronic information and communication systems, nurses and nurse practitioners, and other appropriate health professionals as required in their practices.

(College of Family Physicians, [CFPC], 2004)

- Alternative and innovative strategies to address access are being implemented. For example, in 2006, England established **Polyclinics**. These are one-stop shops that provide a broad range of services, including general practice, mental health, prenatal and postnatal care, community care, and specialist advice (Willcox et al., 2011). Australia has a model similar known as **GP Super Clinics**. These clinics, which were introduced in 2007, are intended to offer a more extensive range of primary care services while also providing access to visiting medical

specialists, extended hours, and significant capacity for interprofessional clinical training (Willcox et al., 2011). In the US, **Retail Clinics** are being implemented across the country. These clinics are located in retail outlets and consist of one or two private exam rooms with a waiting area, and equipped with the basic equipment and facilities characteristic of any medical outpatient office. Most retail clinic hours are more convenient than a traditional doctor's office, as they operate seven days a week, twelve hours a day during the workweek and eight hours on Saturday and Sunday, and do not require previously scheduled appointments (McKinlay & Marceau, 2012). It is important to note that all of these models have experienced opposition by the countries' respective medical associations.

- The predominant policy discourse in Australia, Netherlands, and England however, is no longer about access but about how to improve the coordination and/or integration of care. Integrated care requires a change in focus from health services delivered by separate units to care that is provided across organizations for a defined population (Nicholson et al., 2013; Spenceley et al., 2013). Coordination of care is about smooth transitions with warm handoffs between connected providers. These handoffs should minimize discontinuity by ensuring comprehensive information is shared, that trust in relationships is valued, a whole picture of care is communicated, and care is planned to happen at the right time to meet patient needs (Spenceley et al., 2013).
- Integration can be defined as **horizontal integration** across different types of primary care services or **vertical integration** across primary care physicians, specialists, and hospitals (Alberta Medical Association, [AMA], 2013; Willcox et al., 2011). Horizontal integration around primary care is foundational and must be followed by the alignment and coordination of specialty/tertiary services to also support the primary care hub (Spenceley et al., 2013). Information technology (IT) barriers, such as lack of inter-operability and privacy concerns have hampered some integration efforts and support is needed to overcome these barriers (AMA, 2013). Conversely, the most significant intervention in enabling integrated service provision was the shared EMR/EHR system. The EMR/EHR system supports primary, acute, and community care providers to access more accurate and detailed clinical information to inform clinical decision-making. It is essential for care coordination and communication across the continuum of care (Nicholson et al., 2013).

- Nicholson et al. (2013) conducted a systematic review to synthesize the existing published literature on elements of current integrated primary/secondary health care. This review led to the identification of ten elements that are necessary to establish integrated primary and secondary care initiatives across a regional setting (Nicholson et al., 2013).

Ten Elements for Establishing Integrated Care Initiatives	
Element	**Interventions shown to be effective**
1. Joint planning	▪ Conducting joint strategic needs assessment ▪ Establishing joint boards

	▪ Creating policies for collaborative decision-making ▪ Multi-level partnerships that promote coordination across levels of care ▪ Focusing on continuum of care with input from providers and users ▪ Planning for integrated services occurring across a region, settings, and levels of care for a defined population
2. Integrated information communication technology	▪ Integrating systems designed to support shared clinical exchange, such as electronic medical / health records
3. Change management	▪ Engaging strong and active leadership ▪ Creating a strong and clear collective vision ▪ Managing initiatives locally ▪ Committing resources for change
4. Shared clinical priorities	▪ Setting agreed to targets for redesign initiatives ▪ Creating multidisciplinary teams and clinical networks with clearly defined roles ▪ Identifying integrated pathways across the continuum of care
5. Incentives	▪ Offering incentives for engaging in activities that strengthen care coordination, such as participating in multidisciplinary teams
6. Population focus	▪ Geographical population health focus
7. Measurement (quality improvement)	▪ Using data as a quality improvement tool ▪ Integrating collaborative approaches for performance management that are transparent across the organization
8. Continuing interprofessional development	▪ Establishing interprofessional and inter-organizational learning opportunities ▪ Clearly identifying roles, responsibilities and guidelines across the continuum.
9. Patient/community engagement	▪ Involving patients and communities in planning and design ▪ Using of patient narratives showcasing their personal health care experience

10. Innovation	♦ Providing resources to support innovative models of care

Population-Based Care

- It is widely recognized that primary care should be organized to take responsibility for a population of patients across the spectrum of health care settings (Roland & Nolte, 2014; Wexler et al., 2014). A geographical population health focus is considered essential to achieve a fully integrated health system, maximize accessibility, and minimize duplication of services (Nicholson et al., 2013; Sajdak, 2013). To do so effectively, primary care practices need to change so that primary care physicians have access to a multidisciplinary team, as well as to mechanisms that support the delivery of coordinated and integrated care (Roland & Nolte, 2014). This need however is in conflict with the organization of primary care practices in many countries where physicians are self-employed and often work single-handed or in small groups (Roland & Nolte, 2014).
- Various strategies are being implemented to better support the delivery of accessible and coordinated population-based care, including formal patient **enrollment**, integration of **payment schemes** that reward providers for population health management, creation of health care **networks** (e.g. **Accountable Care Organization**-type models) (Dunbar, 2011; Hutchison et al., 2011; Wexler et al., 2014).

For more information, see Enrollment, Payment Reform, and Networks

Enrollment (Empanelment, Attachment, Paneling, Rostering, Registering)

- Enrollment is when patients are formally attached to a chosen health care provider and team. Patient enrollment provides the foundation for a proactive, population-based approach to preventive care and chronic disease management, as well as laying the groundwork for systematic practice-level performance measurement and quality improvement (Hutchison et al., 2011; Spenceley et al., 2013). The establishment and maintenance of validated patient panels is a fundamental requirement for practice improvement in primary care (Health Quality Council of Alberta, [HQCA], 2014).

- There are a number of techniques used to create a patient panel, including assigning patients to a panel based on geographic proximity, primary care utilization, disease status, or patient preference. Some evidence has shown however that placing patients on a panel for a particular primary care provider based on geographic proximity to the practice is not necessarily effective (Spenceley et al., 2013). Another more common method is attaching patients to practice panels based on patterns of primary care utilization. This is a somewhat passive approach, and typically does not include seeking commitment from patients to the

primary care attachment. Whatever technique used to enroll patients in a primary care practice, it is important to abide by a key principle of attachment, which is that patients and their providers know and trust one another, and that both parties are invested in establishing a continuous relationship over time (Spenceley et al., 2013). This can be supported by gaining an informal mutual confirmation or through a formal signed contractual agreement between the patient and his/her primary care provider (AMA, 2013; Spenceley et al., 2013). Although not legally binding, formally linking patients with primary care providers through a contractual agreement represents a commitment by both parties that encourages greater continuity of care (AMA, 2013).

- Patient enrollment can be supported by central coordination of attachment information in the form of a central registry, in order to avoid duplicate rostering to more then one primary care entity, and to assist in understanding the size and distribution of the unattached population (Spenceley et al., 2013). It is acknowledged however that attachment will not always be possible, as in the case of more transient, hard-to-reach populations, or for patients who don't wish to be attached (Spenceley et al., 2013).

- Panel management, including panel maintenance, is a fundamental component of patient enrollment (HQCA, 2014). However, it is important to note that, the process of establishing and maintaining a panel management process is challenging and time-consuming (HQCA, 2014). One key strategy is to provide panel management education and training to establish and maintain robust validated patient panels (HQCA, 2014).

- Patient enrollment is a key strategy in current health care reform activities. For example, in Canada, Quebec and Ontario have implemented formal patient enrollment with a primary care physician. In England, current patient enrollment policies state that patients must register with only one geographically defined practice at a time. However, one of the proposals for health care reforms in England will allow patients to enroll with a nonlocal practice. This proposal is designed to promote choice and competition among GP practices (Willcox et al., 2011). While many countries have seen success in patient enrollment initiatives, not all have been so lucky. In Australia, recent reform proposals to introduce patient enrollment have been strongly opposed by the Australian Medical Association, who argue that patient enrollment limits patient choice, interferes with the physician–patient relationship, and places GPs in a position where they may be forced to ration services (Willcox et al., 2011). As such, recent reform proposals to introduce patient enrollment in Australia have been progressively watered down (Willcox et al., 2011).

- Alberta Health developed the four-cut methodology for assigning patients to a patient panel. It is a mathematical assignment only (i.e., patients are not aware of the assignment or involved in confirming or validating that the assignment is correct in their opinion). The methodology results in an estimation of a patient panel calculated from physician billing data and a visit history for a physician (i.e. patient utilization) over a specified time period. The four criteria below are applied hierarchically until the patient is 'assigned' to a family physician (HQCA, 2014).

- Step 1: The patient has visited only this single family physician, or
- Step 2: The family physician seen most often by the patient, or
- Step 3: If the patient has visited two or more family physician with the same frequency, the family physician who completed the patient's last physician examination, or
- Step 4: The family physician visited last

- This method has some shortfalls, including the fact that many Albertans remain wholly unaware that they had been attached to a particular practice (Spenceley et al., 2013).

- Formal enrollment of patients into a patient panel will require (AMA, 2013):
  - Physician engagement;
  - Public awareness;
  - Development of a central registry;
  - Funding for administrative costs;
  - Standardized forms and communications materials; and,
  - Change management resources.

- Patient panels not only support the delivery of population-based care, they are also required for meaningful process and outcome measurement and evaluation (AMA, 2013). Access and continuity measures, among others, require an understanding of the denominator of the patient panel. This is the foundation for the development of clinical indicators that practices can use to assess their own clinical improvements (AMA, 2013). Furthermore, formal patient attachment will assist decision makers with health policy and planning (AMA, 2013).

For more information, see Medical Homes – Empanelment

Team-Based Care

- It is clear that the provision of comprehensive, proactive, and planned primary care can no longer be thought of as a single-discipline task (Friedman et al., 2014; Spenceley et al., 2013). It is essential to redesign service delivery to incorporate the use of teams to provide care (Spenceley et al., 2013). Team-based care increases efficiency and effectiveness of primary care delivery by providing multiple clinicians and staff who provide care for the patient, which in turn reduces the burden on the physician to address all patients' needs (Goldberg, 2012).

- Establishing high-function teams in health care faces many challenges, such as policy legacies (e.g. physicians' control of their work environment), institutional arrangements (e.g. physicians' ownership and governance of group practices and networks), cultural norms and behaviours (e.g. physician-centric models of care), and payment schemes (e.g. lack of remuneration for collaborative activities) (Hutchison et al., 2011). For example, there have long been challenges to integrating enhanced roles for nurse practitioners in primary care practices in part due to real and perceived resistance from physicians and physician organizations (Auerbach et al., 2013; Crabtree et al., 2010). Nurse practitioners are trained and licensed as autonomous professionals (in contrast to registered nurses and physician assistants) and see themselves as "equal members of the health care team." This has resulted in tension between the nurse practitioner and physician disciplines. Studies examining the transformation to teams have found that staff are also uncertain about their new roles and responsibilities, feel overworked, and are concerned that their effectiveness has been compromised (Allan et al., 2014). Therefore, the effective implementation of team-based primary care models will require that change management support be available to providers as they make the transition (Hutchison et al., 2011).

- Group practices and collaborative care models involving other health professionals as part of the team are being introduced with the support and reported satisfaction of family physicians, nurses, and patients. Most surveys indicate growing numbers of family doctors in Canada are in favour of, and would be interested in, considering these practice approaches (CFPC, 2004). In fact, examples of team-based care in practice are abundant. For example, interprofessional primary health care teams have been established in all Canadian provinces and territories (Hutchison et al., 2011). Ontario has been one of the leading provinces with the establishment of the **Family Health Team**, which is an interprofessional team of professional who work together to provide patient care. The team includes family physicians, nurse practitioners, registered nurses, social workers, dietitians, and other professionals as determined by their patient population. Each of the Family Health Teams is set-up based on local health and community needs (Rosser, Colwill, Kasperski, & Wilson, 2011).

For more information, see Medical Homes – Team-Based Healing Relationships and Team-Based Care

Instrumental Members to Team-Based Care

Two potential members of the primary care team have been missing from most primary care practices, particularly small- and medium- sized practices, despite having shown promise in improving care. They include practice facilitators and care managers (Sajdak, 2013; Taylor, Machta, Meyers, Genevro, & Peikes, 2013). Both of these roles expand the primary care team and allow various functions to be performed by team members other than physicians and non-physician clinicians. They also allow staff to move beyond acute needs and focus more broadly on providing coordinated, accessible care and improving quality and patient experience (Taylor et al., 2013).

Practice facilitators, also known as **practice coaches or quality improvement coaches**, help practices undertake quality improvement projects, understand and use data for quality improvement, and develop capacity for continuous quality improvement (Taylor et al., 2013). Practice facilitators work closely with primary care practices to build capacity for quality improvement activities, organize, prioritize and sequence quality improvement activities, redesign workflows and processes, train practice staff, build team orientation, and help the practice reach incremental and transformative improvement goals. Facilitators are external supports that often work with multiple practices. As such, they can provide "cross- pollination" of best practices and communicate lessons learned across the practice community. In addition, facilitators connect practices to a variety of resources (Taylor et al., 2013). Areas in which facilitators have been particularly active recently include assisting practices in the integration and use of electronic medical/health records and helping pursue transformation processes, such as implementing team-based care and patient-centered medical homes (Taylor et al., 2013).

Care managers are embedded within or integrated into a practice team. They are practice-based staff that play a direct role in patient care by providing patient education and training in self-management skills, coordinating care with other clinicians and settings, and connecting patients to community resources and social services (Taylor et al., 2013). In fact, the care manager's central role is delivering and coordinating services for patients across clinicians, settings, and conditions/diseases, and helping patients access and navigate the system (Taylor et al., 2013). Care managers are often nurses, social workers, and counselors (Taylor et al., 2013).

Quality Improvement

- A major emphasis for primary care reform and redesign efforts is on improving the quality of services provided (Goldberg, 2012). In fact, successful integrated health care systems have been shown to focus on quality improvement by systematically examining data at different levels of service provision, mapping clinical processes to identify gaps and causes of variation, and testing improvement (Nicholson et al., 2013). Effective improvements in the quality of a health system requires a robust and long-term quality improvement strategy that includes an accountability and performance management framework that is based on ongoing and consistently defined and measured performance indicators, regulation, accreditation, training, clinical guidelines, benchmarking, collaboratives, and the rigorous and timely evaluation of health care policy, management and delivery innovations (Hutchison et al., 2011; Spenceley et al., 2013; Willcox et al., 2011).
- A key element of improving the quality of care provided is the integration of an EMR/EHR system. EMR/EHR has provided a useful way to manage performance and achieve high-quality health care improvement, as it allows data management and effective tracking of utilization and outcomes (Nicholson et al., 2013).

- Accelerating the desired aspects of quality improvement however will likely require engagement and active leadership from all levels of the health care system, including frontline care providers, senior leaders, external organizations, community and social services, and public health agencies. This engagement and leadership must address (Sibbald, McPherson, & Kothari, 2013):

    - Quality improvement human resource/capacity planning
    - The culture of quality improvement in primary care
    - System-wide quality improvement issues (e.g. knowledge mobilization)

- To help inform quality improvement activities, health care organizations are engaging in evaluations to assess the impact of such activities. Examples of information that is measured and reviewed by health care organizations include (Goldberg, 2012):

    1. Clinician use of evidence-based guidelines
    2. Results of quality improvement projects
    3. Outcome data for selected diseases

- However, the absence of good baseline data, the lack of an agreed-upon and applied set of performance measures, the voluntary participation of patients and providers, and the confounding payment methods and organizational forms have made the evaluation of primary health care transformation challenging (Hutchison et al., 2011). In fact, much of the data that is relevant to primary health care is not designed or intended for evaluation purposes (HSCA, 2014).
- A measurement infrastructure that allows for more direct measurement of the outcomes of interest to different stakeholders in the system is needed (HSCA, 2014). Key principles to guide measurement within primary health care include (AMA, 2013):

    - Measurement must examine key attributes of primary health care.
    - Measures will align, where possible, with provincial/state and national initiatives to enhance standardization and support aggregate reporting.
    - Measurement will focus on both performance and quality improvement efforts from the PCN and systems level.
    - Financial and administrative burdens will be minimized, where possible, by considering workflow and clinical information systems implications when planning measurement activities.

- Essential elements of the evaluation process include (AMA, 2013):

    - Measures should allow primary care teams to know their patients. Measurement and evaluation activities will be oriented to the care provider by providing timely, accurate

and meaningful information back to the delivery site. This flow of information is essential to enable patient-centred care.

- The behavioral change required "out in the field" will take a long time. However, valuing the information, seeing the benefit of collecting the data, becoming secure with sharing data about one's practices and patients will lead to success.
- Data sharing is a key element. When sharing is more valuable than keeping, the willingness to collaborate, problem-solve and integrate will improve the system.
- This work should start with a short mandatory list of commonly agreed to indicators and build in a staged process of sharing to enable continuous quality improvement along the way (e.g., start by sharing just within a clinic over the course of one year; advancing to sharing within a larger network).

- System enablers required include (AMA, 2013):
  - Information Management / Information Technology systems to facilitate minimal burden for data collection and reporting.
  - Required updates to Information Management / Information Technology system to ensure timely and efficient reporting and data sharing, and to maintain consistent data standards.
  - Adequate and competent resources (e.g., human and financial).

- The most comprehensive and well-studied approach to quality improvement is England's **Quality and Outcomes Framework** (Willcox et al., 2011). The Quality and Outcomes Framework is comprised of four components, including (Willcox et al., 2011):

  1. Clinical care (chronic diseases or conditions)
  2. Organizational (records, information for patients, education and training, practice management, and medicines management)
  3. Patient experience (length of consultations)
  4. Additional services (cervical screening, child health surveillance, maternity services, and contraception)

- The Quality and Outcomes Framework was introduced as part of the new General Medical Services contract, which was intended to improve physician pay, conditions, and satisfaction. Under the Quality and Outcomes Framework, physician payment is conditional on performance, which is, in turn, based on quality indicators (Willcox et al., 2011). An important feature of Quality and Outcomes Framework is that general physicians can exclude patients if they judge that incentivized care would be inappropriate for particular individuals (Roland, Guthrie, & Thome, 2012). The introduction of Quality and Outcomes Framework has been associated with reduced socioeconomic inequalities in the delivery of care and may in some cases have helped to reduce emergency room admissions (Roland et al., 2012). However, while Quality and Outcomes Framework has been shown to be effective, some believe that Quality

and Outcomes Framework has introduced a negative "tick box" culture into primary care (Roland et al., 2012).

- Another model for quality improvement is Australia's **Practice Incentive Program**. The Practice Incentive Program comprises of three domains (Willcox et al., 2011):

    - Quality stream (prescribing, diabetes, cervical screening, asthma, and Indigenous health)
    - Capacity stream (e-health, practice nurses, after-hours care, teaching, and aged-care access)
    - Rural support stream (rural loading, procedural GPs, and domestic violence) Practice Incentive Program payments coexist with other incentive arrangements under the Medicare Benefits Schedule

- While the Quality and Outcomes Framework is relatively new, it is more enhanced than the Practice Incentive Program in terms of the breadth of domains included in its payment framework and the magnitudes of its potential payments (Willcox et al., 2011).

- Many Canadian provinces have attempted to address the quality gap between current and achievable primary care performance by implementing quality improvement learning collaboratives based on the **Institute for Health care Improvement's Breakthrough Series** model (Hutchison et al., 2011). Two examples of quality improvement initiatives in Canada are:

    - Ontario's **Quality Improvement and Innovation Partnership (QIIP)**: a provincial organization sponsored by the Ministry of Health and Long Term Care. It's mandate is to improve and sustain clinical, functional and population health outcomes in Ontario. Three main strategies are used to achieve this mandate: networking and partnerships; resources and supports; improvement and innovation methods (Canadian Health Services Research Foundation, [CHSRF], 2010; Mable, Marriott, & Mablee, 2012). The Quality Improvement and Innovation Partnership conducts workshops, provides tools and resources, facilitates innovative methods of exchanging information, creates learning collaboratives and learning communities, supports networking, and (Mable et al., 2012).

    - Alberta's **Access Improvement Measures (AIM)** model uses learning collaboratives (inspired by the Breakthrough Series of the U.S. Institute for Healthcare Improvement) to guide and support primary care provider teams in applying principles that guide system improvement in access to care, practice efficiency, and clinical care (CHSRF, 2010; Spenceley et al., 2013). Participation in AIM is not tied to a financial incentive, but Access Improvement Measures initiative gives doctors the skills to take advantage of existing incentives. Doctors in **Primary Care Networks** were the initial target audience, but specialty and regional program teams were later included (CHSRF, 2010). Within the AIM model, dedicated change facilitators supported primary care teams, a

strategy that enhanced team development and enabled ongoing measurement (Spenceley et al., 2013). In fact, the use of learning collaboratives and facilitation are two linked strategies that have been shown to be effective in advancing system-level quality improvement initiatives (Spenceley et al., 2013).

For more information, see Medical Homes – Quality Improvement

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Payment Reform

- Payment reform has been a major focus of primary care reform activities (Willcox et al., 2011). The reason for this is that under current payment structures, there is a misalignment between the traditional volume-based fee-for-service payment scheme and the trend towards the provision of team-based, coordinated and integrated models of care (Fontaine et al., 2014; Janamian, Jackson, Glasson, & Nicholson, 2014; Sajdak, 2013; Wexler et al., 2014). More specifically, in a fee-for-service model, the payment must cover all costs (e.g. overhead, staffing, etc.) therefore, the use of a team cuts directly into the profit margin (Spenceley et al., 2013).
- Other potential payment mechanisms include (Sajdak, 2013; Spenceley et al., 2013):

    - **Capitation**: a prospective form of payment where payments cover the cost of multidisciplinary clinical salaries, infrastructure costs and other necessary expenses based on the patients registered to the practice. Physicians are paid a fixed amount (risk- adjusted) for the care of a population of patients based on a roster or panel of patients linked to that physician or practice. In this model, there is, an incentive to keep the costs per patient low. It also incentivizes physicians to take actions to keep their patients healthy by promoting health and providing preventative care. Capitation, however, can also have several negative effects, including incentives to select healthy individuals who incur little costs in terms of care provision.

    - **Pay for performance:** in an attempt to more helpfully align incentives, there is increasing exploration of the use of pay for performance (P4P) to provide targeted incentives to improve care for patients. The evidence is quite mixed, however, on the efficacy of pay for performance. For example, some research suggests that a pay for performance approach is not a good tool to use for improving the efficiency in the delivery of care, as it can focus attention and effort on the attainment of targets, which can lead to undesirable outcomes. Other research claims that financial incentives tied to performance do change professional behaviour and that patients do receive higher quality care.

    - **Salary:** under this model physicians receive a fixed salary amount per year. Providing a salary can be a good base approach, as it eliminates concerns about financial self-interest playing a role in delivery of care (e.g., no incentive to over provide services). It

has been noted, however, that salaried approaches introduce the risk of lower productivity, and limit incentives to take responsibility for the problem at hand. As such, it may not send clear signals about desirable behavior, and may not be the best approach in and of itself in achieving the best patient outcomes.

Types of Payment Schemes		
Model	**Description**	**Implications for FP**
Shared savings	Fee-for-service, plus a portion of dollars saved relative to predicted costs if quality and patient satisfaction are enhanced.	Focus on population health incentives for well care and preventive services.
Shared savings plus penalty	Same as shared savings, plus a penalty if expenses exceed spending targets; bonus potential is increased to account for increased risk.	Potential for care coordination payments in addition to shared savings.
Capitation	Flat payments plus bonuses and penalties; provider organization assumes full risk for a defined patient population.	A better understanding of population management and IT now makes capitation a viable strategy in certain settings.
Episodic payments	Reimbursement is for defined episodes of care, which may extend from time of admission to days or weeks after discharge; may also include home health, extended care, or ancillary services.	No incentive for prevention or coordination / integration of care.
Pay-for-performance	Reimbursement is tied to achievement of metrics (e.g. number of patients immunized for a specific disease, desired clinical outcomes, high patient satisfaction scores).	Be sure any agreed-upon "targets" are achievable and patient-focused.
Wexler et al., 2014		

- It quickly becomes clear that any single payment approach has its strengths and flaws, and when used in isolation, may incentivize behaviors that do not support the achievement of high- quality primary care (Spenceley et al., 2013). As such, there has been major movement towards value-based, blended or bundled payment systems, which include combinations of prospective and retrospective payment models (e.g., fee-for-service, capitation, sessional payments, salary, infrastructure funding, shared savings with or without penalty), and targeted payments for priority activities or performance levels (Hutchison et al., 2011; Roland & Nolte, 2014; Sajdak, 2013; Strumpf et al., 2012; Wexler et al., 2014). The benefit of the mixed payment method is that it can provide an incentive for both quality and a measure of cost control (Sajdak, 2013). For example, **Geisinger's ProvenHealth Navigator** program uses a value-based reimbursement approach, an approach that combines fee-for-service payments to

reward practices for improving access to care with a pay for performance model for quality outcomes. This model emphasizes the bundling of indicators to reduce the risk of sub-optimization, an approach that has also been found by others to be effective in improving quality of care (Spenceley et al., 2013). The Geisinger approach also includes physician and practice transformation stipends to support new activities, and an incentive built on the notion of shared savings based on the practice receiving back a proportion of savings incurred, paid on the percentage of quality targets achieved (Spenceley et al., 2013).

- Establishing blended payment models that align with reform objectives is critical to increase accountability for cost and quality across the continuum of care. A blended or bundled payment model not only permits funders to align payment schemes with reform strategies, but it also allows them to (Hutchison et al., 2011):

    - Balance the perverse incentives inherent in individual payment models (e.g. over servicing in fee-for-service, skimping and cherry-picking in capitation, and avoidance in salary);
    - Support the development of appropriate infrastructure (e.g. electronic health / medical record systems, accessible premises, quality improvement mechanisms); and,
    - Encourage the provision of priority services, processes, and outcomes of care.

- The challenge is to find the right balance between fee-for-service, capitation, salary, incentives, and other bonus schemes. For example, the capitation rate should be sufficient to offset the costs and investments needed, the fee-for-service model should support physicians to offer sufficient volume of care and prevent negligence, and incentives should support physicians to work in a team-based environment (Willcox et al., 2011; Wexler et al., 2014). Given the difficulty of finding the right balance, the character of innovative payment reform has differed substantially from one jurisdiction to another.

    - In Canada, payment reform initiatives have included a shift from unitary physician payment methods (mainly fee- for-service, but also capitation or salary) to blended payment arrangements (Hutchison et al., 2011; Strumpf et al., 2012). In fact, the number of primary care physicians participating in blended-payment models has increased dramatically, if unevenly, across the country, with a corresponding decrease in only having fee-for-service arrangement. However, while all provinces have implemented strategies to modify their payment schemes somewhat, few have made a fundamental move away from fee-for-service payment. Exceptions have been Ontario and the Northwest Territories (Strumpf et al., 2012). Furthermore, most provinces now remunerate physicians for participating in certain types of coordination and collaborative activities that are not traditionally paid under the fee-for-service scheme, but few have moved toward partial capitation or integrated pay-for-performance schemes that provide reimbursement to physicians who meet certain targets or performance levels (Strumpf et al., 2012).

- In Australia, Netherlands and England, payment reforms have been using physician payments as an incentive for desired behaviors. This is occurring through the use of blended payment approaches in which the incentives are introduced alongside the predominantly capitation-based system (in England and the Netherlands) or fee-for-service (in Australia) (Willcox et al., 2011).

- In general, blended payment schemes that combine capitation with fee-for-service and incentive payments have been found to be more conducive to interprofessional team-based care than straight FFS remuneration. Incentive payments should however be paid to the practice rather than to one provider, and payments to health professionals contributing to improving the quality of care should be commensurate to their skill and effort (e.g., any pay for performance should go to all health care team members involved in the care of the patient population, and this pay should be consistent with their role in that care) (Spenceley et al., 2013). Unfortunately, there is little evidence to support the identification of the best payment model to support the delivery of team-based care, including a lack of literature related to team remuneration when team members employed by local health service providers are integrated into primary care teams, or when team members are shared between unionized and non-unionized environments. These remain open questions for further deliberation (Spenceley et al., 2013).

- Based on the evidence, it is clear that no model of blended payment has been proposed that is without weaknesses. Spenceley et al. (2013) suggests, however, that the evidence points to a blended payment model that combines appropriately risk-adjusted capitation nased on age, sex, and co-morbidities/complexity for a rostered population (to incentivize whole-person and team-oriented care, and mitigate the costs of caring for complex patients) with fee-for-service (to incentivize access and care of unattached persons), and the possible addition of a payment incentives to teams based on bundled indicators that are directly related to the delivery of quality, team-based care (Spenceley et al., 2013).

- A major recent innovation in funding is the establishment of primary care groups or organizations that share mutual responsibility for improving the quality of care delivered by taking a wider financial responsibility for a population of patients (Nielson, 2014; Roland & Nolte, 2014; Wexler et al., 2014). These models make it easier to improve health care for specific populations, using strategies designed to organize, provide, and manage care for defined groups (Wexler et al., 2014). These types of groups or organizations will take a variety of forms, depending in part on geographic and population need. For example, in England, current health care reforms are concentrating on developing **General Practitioner Consortiums** that have budgetary responsibility for majority of the National Health Service budget, including hospital and specialist care (Wexler et al., 2014). In the United States, the concept of **Accountable Care Organizations** gives budgetary responsibility to health care providers for a defined population (Wexler et al., 2014). The model in the US is more likely to be a combination of general physicians and specialists rather than having only physicians, as done in England.

For more information, see Medical Homes – Payment Reform, United States – Accountable Care Organizations, and England – General Practitioner Consortiums

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Health Information Technology

- The use of health information technology is another innovative strategy to improve care delivery, particularly primary care (Goldberg, 2012). Health information technology has the potential to enhance the capacity of primary health care to meet patient demand (Jiwa et al., 2013). In order to realize the potential of health information technology, leadership involvement in developing IT innovations remains paramount (Jiwa et al., 2013).

- For the most part, health information technology at the primary care level refers to the use of an electronic health / medical record (EMR/EHR). Attributes of an EMR/EHR system include (Goldberg, 2012):

    - Provides secure, reliable, real-time access to patient health information;
    - Captures and stores episodic and longitudinal information;
    - Functions as the clinicians primary information resource in the provision of care;
    - Aids decision-making by providing access to patient record information and evidence-based decision support;
    - Assists with planning and delivering evidence-based care;
    - Supports data collection for uses other than direct clinical care, such as billing, outcomes reporting, resource planning, and disease surveillance and reporting; and,
    - Captures information for quality improvement efforts, planning, and performance measurement.

- EMR/EHRs that support data capture as a function of clinical documentation on selected indicators are critical to reduce the burden of measurement. Effective EMR/EHRs also allow for the use of tools, such as chronic disease registries, clinical decision-support tools (e.g., care guidelines), point-of-care prompts and reminder systems (Spenceley et al., 2013).

- It was generally acknowledged that health information technology has not been readily adopted by all clinicians or at least not to its full potential. For example, in primary health care, health information technology is being used to schedule appointments, print prescriptions or for patient billing however, it is not typically used to maintain medical records, communicate with colleagues, inform clinical practice, or consult patients online (Jiwa et al., 2013).
- While the importance of health information technology in health care reform is widely acknowledged, it has also been cited as a key barrier in the transformation process. More specifically, innovations were constrained by the lack of interoperability of software systems,

issues of privacy and confidentiality, patient preference, and limited clinician willingness (or ability) to interact with technology (Jiwa et al., 2013). Therefore, the following features are required to establish an effective EMR/EHR system (CFPC, 2004; Spenceley et al., 2013):

  - A well supported infrastructure;
  - The development of good-quality hardware and software;
  - The assurance of systems' interoperability of electronic documentation and the expansion of broadband networks;
  - The assurance of security, privacy, and confidentiality of all patient and physician information; and,
  - The development of standardized nomenclature.

- To enhance the interoperability of electronic documentation within primary health care, and across health sectors, it is important that the number of EMR/EHR systems in place are minimized, and that there are compatible data fields and established metrics and data definitions used between systems (HSCA, 2014).

- In the US, the **Health Information Technology for Economic and Clinical Health Act** of 2009 describes a program designed to provide financial incentives to family physician practices for adopting and using an EMR/EHR for patient care and performance improvement (Goldberg, 2012). Under this Act, penalties are also imposed on practices that are not compliant with the EMR/EHR requirements. These efforts are aimed at to encouraging practice adoption of new technology and improvements to quality and access to care (Goldberg, 2012).

For more information, see Medical Homes – Health Information Technology

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Networks

- For the goals of health reform to be realized the different levels of the health care system must work together in an integrated and coordinated fashion. However, there is a lack of evidence to suggest how this will be achieved (Nicholson et al., 2013). One model that is being tested is the creation of health care networks, as they provide a critical mass to support the delivery of accessible and coordinated population-based care (Breton et al., 2013; Dunbar, 2011; Hutchison et al., 2011). The network model for primary care offers patients access to a broader array of services, including after-hours care, than a single physician could offer alone (CFPC, 2004). Networks could also establish a culture centered on high-quality care delivery, create a learning community of peers, offer community-based support, and provide a common target. Virtual networks should at first be bound both geographically and socially (e.g., include physicians with similar values and norms) (Highsmith & Berenson, 2011).

- There are many examples of networks in various jurisdictions around the world. For example, in Alberta, **Primary Care Networks** were established in 2003 through the Primary Care Initiative. The PCNs are networks of local primary care clinics that are physician-led and cover a specific geographic area. The physicians work in an interdisciplinary team, including nurses, dietitians, social workers, mental health workers, and pharmacists (Hutchison et al., 2011; Anon, 2013). In the United States, **Medical Neighbourhoods** are being established. A medical neighbourhood is a network of diverse services and resources from all components of care, including primary, specialty, hospital, community and social services, local public health agencies. Key roles of the medical neighbourhood are to enhance coordination of care, improve consultations and co-management, and create seamless transitions for patients moving through different components of the health care system (Kirschner & Barr, 2010).

For more information, see Canada – Alberta – Primary Care Networks and United States – Medical Neighbourhoods

- Other examples of networks are **Primary Care Organizations**. Primary Care Organizations fundamentally aim to support collaboration and coordination of care within the micro level of care delivery (clinical care delivered by individual practitioners) and between the micro and macro level of care delivery (systems responsible for policy, funding, and infrastructure) (Russell, Hogg, & Lemelin, 2010). While Primary Care Organizations differ significantly from one jurisdiction to another, there are several commonalities among them all (Russell et al., 2010):

    - They are primarily funded by governments and therefore differ from professional organizations.
    - They are regionally organized structures that are responsible for the needs of both the community and primary care clinicians.
    - They have some responsibility for access, quality of care, and coordination of primary care activities within a geographic location.

- In the past 2 decades, England (**Primary Care Trusts**), Australia (**Divisions of General Practice**), and New Zealand have implemented Primary Care Organizations to transform the primary care landscape. These PCOs have been defined as organizations that seek to increase the influence of primary care professionals, and in particular general practitioners, in health planning and resource allocation (Russell et al., 2010). Each of these countries has found ways to make Primary Care Organizations fundamental to health policy and management, while maintaining significant physician participation and satisfaction (Russell et al., 2010). They have also optimized the use of electronic medical records, have facilitated quality improvement activities, and enhanced access to services (e.g. after-hour services) (Russell et al., 2010). Another example of a Primary Care Organizations is the **Regional General Practice Cooperative** in the Netherlands. The cooperatives are the simplest form of primary care organizations (Willcox et al., 2011). There are many differences between these organizations (Willcox et al., 2011):

- Netherland: **GP Cooperatives** are directly involved in providing care to patients.
- Australian: **Divisions of General Practice** provide infrastructural support and tools for GPs but have no direct service delivery role for patients.
- England: **Primary Care Trusts** have had various roles, such as providing community health services, planning and developing new primary health care and public health services, contracting with general practices, and commissioning secondary health services.

- England and Australia have both been undergoing significant changes to primary health care in recent years. These reform activities have led to the evolution of both the **Primary Care Trust** (England) and the **Divisions of General Practice** (Australia) into **General Practitioner Consortiums** and **Medicare Locals**, respectively (Willcox et al., 2011).

For more information, see Australia – Divisions of General Practice and Medicare Locals, England – Primary Care Trusts and GP Consortiums, and Netherlands – GP Cooperatives

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Canada

- Canada is lagging behind other developed countries in the delivery of an adequate and fully functioning primary health care system (Sajdak, 2013). For example, research has shown that Canada lags behind other countries similar wealth and healthcare systems in after-hours care, wait times, chronic disease management, mental health, quality improvement, and EMR. Moreover, Canada's primary care sectors are characterized by fragmentation, ineffective use of providers, and inefficient use of resources (Sajdak, 2013).
- Over the past decade, Canada's primary care system has undergone substantial change, with each province and territory concentrating reform strategies on strengthening the infrastructure of primary care and establishing funding and payment mechanisms that support improvement in performance (Hutchison et al., 2011). The progress made has been uneven across Canada (CHRSF, 2010). Major reform initiatives have been pursued most aggressively in Ontario, Alberta, and Quebec, followed closely by British Columbia, with fewer system-level initiatives in the remaining provinces and territories (Hutchison et al., 2011).
- Countries with strong primary care infrastructure tend to experience better outcomes and efficiency, lower costs, and higher patient satisfaction than those with weak primary care systems. This evidence, paired with Canada's poor standing in recent international comparisons, should be a strong impetus for Canada to concentrate on major primary care reform. However, Canada lags in its efforts to spread its successes within and across regions (CHSRF, 2010).

- In October 2000, the College of Family Physicians of Canada published a report entitled *A Prescription for Renewal* to inform and guide primary care renewal in Canada. The principles underlying the recommendations in this document are still supported today (CFPC, 2004).

    - Every person in Canada should have the opportunity to have his or her own family physician.
    - A family physician should be the entry point to medical care for each patient.
    - Throughout their lives, patients should receive personal, comprehensive, continuing care from their family physicians.
    - The spectrum of primary health care services can be delivered by interdisciplinary integrated care teams in real or virtual groups through office or community-based strategies.
    - Primary care groups, teams, and networks should have systems in place to ensure they respond to the needs of their patients 24 hours a day, 7 days a week, 365 days a year.
    - Family physicians and groups, networks, and teams should be supported to acquire and maintain computerized information and communications systems.
    - Patients should own their health records; family physicians should be custodians of their records. As their patients move from one to another, their health records should move with them.
    - Primary care models should support and encourage continuing medical education and continuing professional development for every health care professional in a team.

Goals and Objectives of Primary Health care Reform in Canada	
Primary	**Secondary**
○ Improved access to primary care services ○ Better coordination and integration of care ○ Expansion of team-based approaches to clinical care ○ Improved quality/appropriateness of care, with a focus on prevention and the management of chronic and complex illness ○ Greater emphasis on patient engagement/self-management and self-care ○ The implementation and use of electronic medical records and information management systems	○ Better experiences for patients and providers ○ Delivery of a defined set of services to a specific population ○ Adoption of a population-based approach to planning and delivering care ○ Community/public participation in governance and decision making ○ Building capacity for quality improvement ○ Responsiveness to patients' and communities' needs ○ Greater health equity ○ Health system accountability, efficiency, and sustainability
(Hutchison et al., 2011)	

- More recently, Canada's health care reform strategies include a variety of interventions ranging from (CFPC, 2004; Hutchison et al., 2011; Russell et al., 2010; Strumpf et al., 2012; Wakerman & Humphreys, 2011):
    - Transforming health care leadership to support system-wide transformation;
    - Creating multidisciplinary/interprofessional teams who provide efficient, coordinated team-based care to all patients in the practice, or to patients with specific, complex, high-intensity needs (e.g., patients with chronic disease);
    - Establishing patient enrollment / rostering with a primary care provider;
    - Delivering patient-centred care that addresses the whole-person;
    - Establishing ongoing performance management and quality improvement processes;
    - Restructuring current payment models from unitary payment methods (mainly fee-for-service, but also capitation and salary) to blended payment schemes and financial incentives for the delivery of comprehensive continuing and coordinated care;
    - Building information infrastructure through the integration and efficient use of electronic medical records (e.g., computerized billing, e-prescribing, recall systems);
    - Expanding the primary health care provider pool to include midwives, advanced practical nurses, nurse practitioners, and in some provinces, physician assistants

- A centerpiece of reform in many Canadian provinces and territories has been the development of multidisciplinary, **interprofessional primary health care teams**, particularly in Ontario, Alberta, and Quebec. These teams are designed to improve access to care, continuity and coordination of health care services, and the quality of primary care (Hutchison et al., 2011; Strumpf et al., 2012). The establishment of interprofessional models of practice that promote the efficient collaboration of primary care providers to provide optimum, patient-centred care is both supported and encouraged by the College of Family Physicians of Canada (CFPC, 2011).
- The formal **enrollment** of patients in primary care provider groups and networks has proceeded most rapidly in Quebec and Ontario, where it is an integral part of the new primary care models. In these provinces, patient enrollment has been extremely successful, with majority of the populations are enrolled with a primary care provider (Strumpf et al., 2012).
- The use of **EMR/EHR** remains limited across Canada, with the highest use being reported in Alberta (Hutchison et al., 2011; Strumpf et al., 2012). This could be due to the fact that provincial and federal efforts related to health information technology have predominantly focused on an overall, centralized, secure architecture for health information technology, and in many cases this seems to have taken precedence over putting clinically relevant EMR/EHRs into practice (Strumpf et al., 2012). Furthermore, the decreased use of EMR/EHRs may also be exacerbated by inadequate performance measurement, disease management support, and registry capabilities within the approved systems (Hutchison et al., 2011).
- Many Canadian provinces and territories have made attempts to advance **quality improvement** through quality improvement learning collaboratives based on the Institute for Health care Improvement's Breakthrough Series model. However, less progress has been made

in terms of measuring performance and reporting back (Hutchison, 2012; Strumpf et al., 2012). This is likely tied to the limited utilization and functionality of EMR/EHRs in most jurisdictions (Strumpf et al., 2012).

- While there has been some success with Canada's health care reform agenda, it has been found many of these changes have been confined to patients belonging to and practitioners working in individual practices. As a result, these new models of care have had minimal influence on integrating the different sectors of the health care system, which has led to a defragmented health care system across Canada (Russell et al., 2010). To address this issue, it has been recommended that Canada develop **primary care organizations** that are aligned with government priorities and permit flexibility in order to respond to local and regional needs, as done in other countries (Russell et al., 2010). Movement towards primary care organizations has been initiated in some Canadian provinces with the establishment of **Primary Care Networks** in Alberta and **Divisions of Family Practice** in British Columbia (Russell et al., 2010).

Ontario

- Ontario has evolved into a national leader in primary health care renewal and health system reform with the introduction and growth of Family Health -Networks, -Groups, -Teams, and -Organizations in the early-mid 2000s. There are several notable policy differences among these models, including physician payment schemes, composition and degree of multi-disciplinary activity within the team, and team priorities (Sibbald et al., 2013). Ontario also focused on expanding the nurse practitioner role and on strengthening the role of Community Health Centres (Hutchison et al., 2011; Mable et al., 2012; Rosser et al., 2011; Sibbald et al., 2013).

    - **Community Heath Centres**: originated in 1980 with a recommitment from provincial government in 2004/05; tend to service rural, low-income minority populations; physicians are reimbursed by salary; practices are likely to have a multidisciplinary team.
    - **Family Health Networks**: established in 2001; serve the general population; composed of five or more physicians who are remunerated based off of a blended funding model that is based on capitation with additional financial incentives.
    - **Family Health Groups**: introduced in 2003; composed of three or more physicians who are reimbursed on a fee-for-service basis with bonuses.

- Both Family Health Networks and Family Health Groups give physicians responsibility for a panel of patients and have relatively few interdisciplinary care clinicians. The new Family Health Team model basically adds multidisciplinary clinicians to the Family Health Network model to assist the family physician and expand the scope of the practice (Rosser et al., 2011). They also provide after-hours access to a nurse through a telephone advisory service (College of Family Physicians of Canada, [CFPC], 2011).

- Community Health Centres and Family Health Teams are the chief interprofessional primary health care models. Together they now account for 21% of family physicians practicing in the province (Hutchison et al., 2011)

Family Health Teams

- Established in 2005, Family Health Teams are Ontario's provincial government's flagship initiative in primary health care renewal (Hutchison et al., 2011). They were created with the intention to expand access to comprehensive family health care services across Ontario. THE Ministry of Health provides road maps and guides for development of Family Health Teams for interested stakeholders. The guides cover the implementation process, governance and accountability, health promotion and disease prevention, community partnerships, interdisciplinary/team development, roles and compensation, physician compensation, planning, technology, and integration of French-language services where appropriate (Mable et al., 2012).

- Under the Family Health Team model, physicians sign a contract with Ontario's Ministry of Health to provide a broad basket of services and also agree to the a blended model of funding, including base capitation payment, fees for services, bonuses for achieving prevention targets, and special payments to expand the scope of care to incorporate prenatal and intrapartum care, inpatient care, home visits, and palliative care (CFPC, 2011; Rosser, Colwill, Kasperski, & Wilson, 2010; Rosser et al., 2011). The Ministry of Health also provides compensation support for other health professionals (Mable et al., 2012).
- Patients wishing to receive care from a Family Health Team must register with the Ministry of Health and select a physician at a given practice (Rosser et al., 2010). Patients are then rostered to a Family Health Team (Mable et al., 2012).
- Family Health Teams are interdisciplinary teams with size and composition based on community needs and provider availability (CFPC, 2009). As such, no two Family Health Teams are the same. They typically are made up of at least seven family physicians and a multidisciplinary team of health care providers who are responsible for providing a broad range of services to a panel of patients 7-days a week (Rosser et al., 2010; Rosser et al., 2011). In fact, Family Health Teams are the first explicitly interprofessional primary health care model introduced to Ontario in three decades. The interprofessional team is most commonly made up of family physicians, registered nurses, nurse practitioners, dietitians, mental health workers, social workers, pharmacists, occupational therapists, and health educators, as well as a lead administrator and administrative staff (Hutchison et al., 2011; The Conference Board of Canada, 2012). The number and types of non-physician health professionals funded by Ministry is dependent upon the Family Health Team business and operational plans the number of rostered patients (The Conference Board of Canada, 2012).

- Family Health Teams are community-centred **primary care organizations** whose programs and services are geared to the population groups they serve. They are also providing primary care services to unique populations of patients with specialized health needs (Hutchison et al., 2011).

- All Family Health Teams have to select an EMR system to implement within their network. There are a total of seven different software systems meeting provincial standards (Rosser et al., 2011).
- Each Family Health Team has a governing board with community representatives and is responsible for ensuring that standards are met.

The Family Health Team model is most likely the largest experiment of the **Patient-Centred Medical Home** model anywhere in North America (CFPC, 2011; Rosser et al., 2011).
For more information, see Medical Homes

- Although many physicians were initially skeptical about Family Health Teams, when the Ministry recently sought to delay expansion of the model, there was protest by patient groups and physicians, which led to a cancellation of this delay (Rosser et al., 2010).
- No studies of Family Health Team performance have been published to date, but a multiyear evaluation of the Family Health Team initiative, commissioned by the Ontario Ministry of Health and Long-Term Care, is in its third year (Hutchison et al., 2011).

- As of January 2010, 34% of the Ontario population was enrolled with a Family Health Network or Family Health Organization (capitation-based models), 32% was enrolled in a Family Health Team (fee-for-service-based model), 3% with Community Health Centre, and 16% with a Family Health Team (mostly capitation-based model) (Sibbald et al., 2013).

Patient Enrollment Model

- Physicians are paid through various blends of capitation, fee-for-service, and targeted payments. All payment models include special fees or premiums (which vary across models) for providing for preventive care outreach, pay-for-performance payments for preventive screening and immunizations, and bonus payments for the provision of certain services (obstetrical deliveries, hospital services, palliative care, prenatal care, and care of patients with serious mental illness) above threshold levels (Hutchison et al., 2011).

Alberta

- Alberta has invested greatly in primary care reform in recent years.

Alberta's Primary Health Care Strategy

Alberta's primary health care strategy focuses on three strategic directions:

1. **Enhancing the delivery of care** by providing a health home for every Albertan, establishing clear expectations for primary health care delivery, and integrating and coordinating services.

Goal 1. All Albertans will have a health home (e.g., access to comprehensive primary care, attachment to a primary care provider/team, care delivered by an interdisciplinary team, care coordination, connection with social services and supports).

Goal 2. There are clear expectations for service delivery in primary health care (e.g., clinical pathways, national accreditation process, interdisciplinary team competencies, performance evaluation and reporting, single information management / information technology system)

Goal 3: Primary care services are integrated with other parts of the health system and with social and community resources to create a primary health care system. This happens through partnerships, the use of leading practices to shape and improve innovation, connecting with social service centres, assessing community resources and assets, and removing barriers to integration.

2. **Bringing about cultural change within the system** through initiatives that: encourage and support people to be more active participants in their care; promote team-based care and collaboration; build and support community partnerships; foster a culture of continuous learning, innovation, and trust within the system; and develop a greater understanding of the social determinants of health.

   Goal 4: Albertans have the authority, knowledge, skills, and tools to take increased responsibility for their own health, and are supported as caregivers.

   Goal 5: Providers work in collaborative team-based models characterized by shared responsibility, an accountability to the team, knowledge of the capabilities of their peers; and enhanced cross-cultural competencies.

   Goal 6: Primary health care supports continuous learning, innovation, and an increased tolerance of risk by supporting formal and informal leaders to be change champions, transitioning successful pilot projects into operational programs, and using a centre of excellence approach to share successful innovations and practices.

   Goal 7: Primary health care will positively influence the root causes of health inequities by leveraging cross-ministry and cross-sector initiatives, and enhancing provider education and competencies about the social determinants of health.

3. **Establishing building blocks for change**, including: effective governance of the primary health care system; creating compensation models that support innovation and team-based care; common information management and information technology; developing and supporting the primary health care workforce; involving the community in planning and delivering primary health care services; communicating about primary health care; and effective evaluation and quality improvement processes.

Goal 8: Structures are needed to develop primary health care into a system. To start establish a committee to oversee and guide the implementation of the strategy and action plan, and establish a mechanism that uses geographic boundaries to co-ordinate the provision of primary health care in those areas.

Goal 9: Provider compensation is aligned with the new approach to primary health care delivery by developing compensation models that are flexible, sustainable and improve service delivery, examining compensation models to determine the most appropriate ways of compensating providers to support primary health care, and reviewing compensation models to ensure fair and equitable compensation for all providers in primary health care.

Goal 10: Primary health care uses a single Information Management / Information Technology (IM/IT) system. The single system uses a single medical record, enables communication, co-ordination and information management across providers, and allows reporting, performance evaluation and clinical statistics for clinic and system management.

Goal 11: The primary health care workforce has the skills, competencies, and resources to support the primary health care transition. This happens through post-secondary training, professional development, and change management programs.

Goal 12: Communities and individuals are key players in primary health care system planning and design, through: community representation on advisory and governance boards, and engaging individuals to make care more person-centred.

Goal 13: Communication channels and tools are in place to support the primary health care transition. These include: effectively communicating with Albertans and providers about the primary health care transformation, and establishing a forum for primary health care discussions, information sharing and disseminating best practices and resources.

Goal 14: The primary health care evaluation framework is used to support continuous improvement, measure effectiveness, improve quality of care, and inform best practices.

The guiding principles for the primary health care strategy include person-centred, accessible, sustainable, collaborative, proactive, quality, accountable and equitable.

(Government of Alberta, 2014)

- As Alberta's primary care system evolves, more Albertans will experience a system where (Government of Alberta, 2014):
    - Everyone is attached to a primary health care home and experiences care that is well coordinated and easily accessible;

- The focus is on wellness, prevention, chronic disease management, and systematic screening to detect potential problems early. There is also an emphasis on supporting people in managing their own health;
- Teams of people provide a range of services that move beyond medical care to include mental health and social and community services;
- Access to comprehensive primary health care is available to people across the province;
- Clinics have longer hours of service, people need to make fewer visits to emergency departments, and clinic staff connect people with health, social and community programs;
- Communities participate in planning for services;
- Integrated health records follow the person and help provide continuity of care and reduce duplication; and
- Ways of working together emphasize sharing information and working towards common goals.

- Alberta has the highest level of EMR/EHR integration in primary care practice across Canada, with over 80% of primary care physicians using EMR/EHRs in their practice (AMA, 2013; Hutchison et al., 2011). This increased use of an EMR/EHR system has also contributed towards an enhanced reporting system that can be used at the practice level to measure improvements in access and clinical indicators over time (Hutchison et al., 2011). However, while information may be added to EMR/EHRs at the point of care, data cannot typically be shared between networks or physician offices electronically due to a lack of infrastructure and support to do so. A few Primary Care Networks have capacity for information exchange. This capacity was only possible through a large investment made by Alberta Health Services and other stakeholders (AMA, 2013).
- It has been recognized that as primary care in Alberta evolves, it is important that investment be made to enhance Information Management / Information Technology infrastructure to support automating, sharing, and analyzing health information across the province. The next phase of the evolution must focus on the ever-changing IM/IT needs that require governance, data standards, policies, procedures and enhancements to the provincial Health Information Exchange (pHIE) infrastructure (AMA, 2013).

- In 2003, Alberta Health, the Alberta Medical Association, and the former nine health regions in Alberta established the Primary Care Initiative to improve access to primary care in Alberta. The purpose of the Primary Care Initiative was to develop **Primary Care Networks** and support them in meeting the following objectives (HQCA, 2014):

  - Increase the proportion of residents with ready access to primary care.
  - Provide coordinated 24-hour, 7-day-per-week management of access to appropriate primary care services.

- Increase the emphasis on health promotion, disease and injury prevention, care of the medically complex patient and patients with chronic diseases.
- Improve coordination and integration with other health care services including secondary, tertiary and long-term care through specialty care linkages to primary care.
- Facilitate the greater use of multi-disciplinary teams to provide comprehensive primary care.

Primary Care Networks

- Primary Care Networks is the main model of primary care delivery in Alberta. They were first introduced in 2003 through the Primary Care Initiative, an tri-lateral agreement by the Alberta Medical Association, the provincial ministry of health, and Alberta's health authorities to improve access to family physicians and other frontline health care providers in Alberta (Hutchison et al., 2011; Spenceley et al., 2013).

Establishing the key players as the Alberta Medical Association, health authorities, and government in the development and implementation of the Primary Care Networks had two immediate effects: embedding primary care reform into collective bargaining with physicians, and simultaneously sending a message to other providers that their contributions were somehow less essential (Spenceley et al., 2013). Although the first effect has since been addressed, the second will persist as long as we continue to fund primary care as a physician-only enterprise that views team-based care as an optional strategy (Spenceley et al., 2013)

- The services set out in the agreement are (AMA, 2013):
  - Services directly related to the provision of primary care services to the patient population
  - Services related to linkages within or between primary health care and other areas: 24-hour, 7-day per week management of access to appropriate primary care services, access to laboratory and diagnostic imaging, and coordination of care
  - Acceptance of the patient population and provision of the service responsibilities to an equitable and agreed upon allocation of unattached patients

- The Primary Care Networks are networks of local primary care clinics that are physician-led and cover a specific geographic area. The Primary Care Network can be a single clinic with multiple family physicians, health professionals and support staff, or a group of several clinics (HSCA, 2014). On average, each PCN has over 50 physicians participating in the network (The Conference Board of Canada, 2012). There are currently over 40 PCNs operating in Alberta (Government of Alberta, 2014).
- Primary Care Networks work to achieve 5 goals (AMA, 2013):
  - Increasing the proportion of Albertans with ready access to primary care;

- Managing access to appropriate round-the-clock primary care services;
- Increasing the emphasis on health promotion, disease and injury prevention, and care of patients with complex problems or chronic disease;
- Improving the co-ordination of primary care with hospital, long-term and specialty care; and,
- Facilitating the greater use of multi-disciplinary teams in primary health care.

- The physicians work in an interdisciplinary team, including nurses, nurse practitioners, dietitians, social workers, mental health workers, pharmacists, exercise specialists, and support staff (Hutchison et al., 2011; Anon, 2013; The Conference Board of Canada, 2012). This team is responsible for a defined patient panel.
- Each Primary Care Network is unique in the composition of its health professional team, based on a number of factors such as local patient population needs, network priority initiatives, availability of various health professionals in the community, space considerations, competing resources, and the budget of the network to hire additional personnel. One of the strategies in the evolutionary journey amongst the Primary Care Networks is to enhance teams and further develop a collaborative, interprofessional work culture that is centred on the patient (AMA, 2013). According to the Alberta Medical Association, Primary Care Networks have been successful in establishing team-based care by (AMA, 2013):

    - Supporting team members to generally work at their full scopes of practice.
    - Supporting the more effective flow of communication across the health team.
    - Developing evidence-based shared care pathways and integrated care protocols.
    - Establishing multiple points of access.

- Primary Care Networks have also faced some barriers when establishing team-based care, including (AMA, 2013):

    - Number and breadth of allied health professionals is limited.
    - Physical space limitations to co-locate teams.
    - Key barriers under existing funding and policy guidelines are limited financial resources in Primary Care Network budgets to hire more staff, and policy limitations on capital investment to house team members. .

- The physicians participating in the Primary Care Networks receive a base remuneration (fee-for-service or capitation) plus targeted payments for after-hours coverage and other priority activities. The Primary Care Networks also receive supplementary per capita funding ($62/patient) to support ongoing and one-time costs associated with running and maintaining the network, including enhanced staffing (including administration), premises and equipment, chronic disease management and other priority programs, expanded office hours, and 24/7 access to appropriate primary care (AMA, 2013; Anon, 2013; Hutchison et al., 2011). Costs can

all be paid out of PCN per capita (and surplus) funds, as long as they can be shown to be relevant to and directly support the work of the PCN and the delivery of its priority initiatives and programs (AMA, 2013).

- This model unfortunately may result in inequities between urban and rural Primary Care Networks due to the differing availability of family physicians and subsequently the panel sizes. More specifically, larger urban Primary Care Networks with large amounts of participating physicians and patient panels have increased financial capacity to grow and evolve the network services and programs than small rural Primary Care Networks with smaller amounts of physicians and patient panels (AMA, 2013). Therefore, as the Primary Care Network model continues to evolve, it is recommended that the network per capita funding model vary based on need (e.g., risk adjusted for age, gender and comorbidities), as well as on location (e.g., urban, rural, remote) (AMA, 2013). Smaller Primary Care Networks may also benefit from grants or another funding mechanism to establish the financial capacity to grow and evolve (AMA, 2013).
- Additional funding principles and/or strategies have been suggested to support the evolution of the Primary Care Networks (AMA, 2013):

    - Funding should be sufficient to accomplish enhanced primary care and to fulfill all expectations placed on Primary Care Networks and member physician clinics.
    - Funding and compensation models should align with the delivery of interprofessional team-based care.
    - Funding should follow the patient.
    - To the extent possible, funding policy should support the expansion or building of spaces that enables co-located health care teams.
    - Funding should be provided to support the delivery of care through electronic communication, telephone, personal computer (PC)-based video-conferencing, etc.
    - Funding should support the optimization of Information Management / Information Technology, including data management, integration with community providers, EMRs for the team to input patient data, training physicians and health professionals to meet chart etiquette and data standards, and funds for EMR vendors to conform to provincial standards to meet information sharing and analytic requirements.

- Furthermore, the Primary Care Networks model allows for wide local variation in the organization and delivery of services, with each network having the flexibility to develop programs and to provide services in a way that works locally to meet the specific needs of patients. There is also significant flexibility in how allocate funds (e.g., used to hire non-physician clinicians or for other initiatives) (Anon, 2013; HQCA, 2014; Hutchison et al., 2011).

- As previously discussed, over 80% of family physicians in Alberta use an EMR/EHR system. However, many use opposing systems that are unable to exchange electronic information. Furthermore, more mature Primary Care Networks have developed their own unique data infrastructure and measurement systems to assist with their program planning, implementation and evaluation work (HSCA, 2014). Therefore, to enhance the interoperability of electronic documentation within and across Primary Care Networks, it is important that the

number of EMR/EHR systems in place are minimized, and that there are compatible data fields and established metrics and data definitions used between systems (HSCA, 2014).

- Furthermore, to support the Primary Care Network evolution, the following features are necessary (AMA, 2013):
    - Linkage: e.g., patient demographics must be standardized with a discrete data field to capture the patients "linkage" to the provider.
    - Access: e.g., alternate forms of secure communication are needed, such as encrypted email, e-consults, online booking, and telehealth.
    - Standards and measures: common data standards, data collection and protocols need to be supported and embedded in EMR/EHRs.
    - Accountability: data sharing and exchange specifications must be established.
    - Enhanced teams: remote access to an EMR/EHR is necessary.
    - Horizontal/vertical integration: alternative secure communication, such as encrypted email, e-referral, e-consult and telehealth, needs to be expanded between health system providers and between health providers and other services as well (e.g., social services, education, etc.).
    - Population health: electronic patient panels and the ability to analyze data are required.
    - Funding: EMR/EHRs will provide the ability to track outcomes so that physicians can be remunerated when meeting PCN Evolution requirements.

- Primary Care Networks have implemented a variety of strategies to support the renewal of primary care in Alberta. These include (AMA, 2013):
    - Operating Primary Care Network sponsored after-hours clinics.
    - Supporting physician availability through primary care on-call models.
    - Utilizing intake and referral resources, such as Health Link and appropriate referral to Alberta Health Service emergency departments.
    - Providing extended hours of service in physician and Primary Care Network clinics.
    - Promoting public awareness of services and hours of service through local websites and media.
    - Promoting advanced scheduling models to ensure availability of same-day appointments.
    - Utilizing the interprofessional team to expand overall capacity of the primary care team.

- Primary Care Networks have been successful in advancing primary care renewal by (AMA, 2013):
    - Providing a platform for building a primary health care system in Alberta.

- Delivering significant improvements in primary health care. A series of evaluations conducted over the past several years have demonstrated improvements in access to, and delivery of, comprehensive primary health care for Albertans.
- Providing improvements in access to a broader range of services and movement to a more proactive approach to health care through the implementation of panel management, interprofessional team-based care, group governance and resource pooling.

- In 2010, the **Health Quality Council of Alberta (HQCA)** undertook a measurement initiative to understand the impact the Primary Care Networks were having on Alberta's healthcare system. The key findings of this work to date are (HQCA, 2014):
    1. Patients who see the same family physician for 80% or greater of their primary care visits (high-attached patients) use less healthcare acute care services overall. This finding is consistent with the research on relational continuity.
    2. Acute care services (ED visits and hospitalizations) decreased in most patient populations after their involvement with a Primary Care Network, while visits to family physicians increased.
    3. There is substantial variation between the Primary Care Networks studied in the utilization of health care services by their patients. It is not possible to account for differences between networks with the currently available data and therefore conclusions about Primary Care Network performance should not be drawn based only on a comparison of the health care service utilization rates of their patients. However, information about health care service utilization could be used by individual Primary Care Networks for improvement purposes.
    4. Primary Care Network patients are significantly different from non-Primary Care Network patients on key characteristics known to influence health care service utilization (age, gender, burden of illness, degree of attachment). Any conclusions drawn about Primary Care Network performance based on a comparison between Primary Care Network and non-PCN patients may be inappropriate and misleading.
- Primary Care Networks have also been shown to reduce the use of emergency rooms and wait times through extended and after-hours service (Hutchison et al., 2011).
- While there has been much success with the Primary Care Network model, there have also been some challenges. These challenges were the result of a number of problems with the Primary Care Network model, including (Spenceley et al., 2013):

    - Lack of a clear vision, buy-in, change management, public engagement, and strong political will.
    - Broad and vague initiative objectives;
    - Initiative funding tied to physician negotiations and required all network funding to flow through physicians;
    - Lack of clear guidelines as to how the money allocated should or should not be spent;
    - Lack of accountability framework with clearly defined outcomes or measures.
    - Patchy adoption of a quality improvement culture.

- Lack of interoperability, and therefore ability to share information across the system

- The Primary Care Network model continues to evolve in Alberta. Underpinning the Primary Care Network evolution is the concept of a **Patient-Centred Health Home** model. This model is based off of the College of Family Physicians of Canada **Medical Home** model, which is defined as (AMA, 2013):

    - The central hub for the timely provision and coordination of a comprehensive health and medical services that meet the needs and preferences of the patients.
    - An environment where patients and their families are listened to and respected as active participants in both the decision making and the provision of their ongoing care.
    - The home base for the continuous interaction between patients and their personal family physicians (i.e. relational continuity).
    - A place where a team, including physicians, nurses, physician assistants and other health professionals, who are located in the same physical site or linked virtually from different practice sites within a network, work together to provide and coordinate a comprehensive range of medical and health care services.
    - A home where relationships are developed and strengthened over time, enabling the best possible health outcomes for each patient, the practice population, and the community being served.

For more information on the College of Family Physicians of Caanda, please see Medical Home Overview – Definition.

- The Government of Alberta and the Alberta American Association is in support of the **Patient-Centred Health Home** (AMA, 2013). The Government of Alberta (2014) describes a Health Home as a "place" where patients receive primary health care services from a team, are connected with other health and social services, and experience coordinated and integrated care. One of the key features of Health Home model within the Primary Care Networks is formally linking patients to a family physician and an interprofessional health care team within the Primary Care Network. This process is also referred to as attachment (AMA, 2013; Government of Alberta, 2014).
- At this time, there is no single model for a Health Home in Alberta (Government of Alberta, 2014).

The Family Care Clinic

- Family Care Clinics are a type of community health centre that were established in 2012 (The Conference Board of Canada, 2012). The objective of the Family Care Clinics 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 (The Conference Board of Canada, 2012). Family Care Clinics are local, team-based primary health care delivery organizations that provide individual and family-centred primary health care services that are aligned with the needs of their community (Anon, 2013; Government of Alberta, 2014). These clinics coordinate a comprehensive range of primary care services that cover an individual's lifespan from birth to death. One of its features is the ability to respond to unique community needs (Anon, 2013).

- Family Care Clinics provide direct access to the most appropriate member of a health care team who can address their health and social needs. Team members may include physicians, nurse practitioners, registered nurses, dietitians, pharmacists, mental health professionals and others (Anon, 2013). They provide extended hours of service and same-day appointments / access to care (Government of Alberta, 2014).
- There are currently three Family Care Clinics in operation: one in Edmonton, one in Calgary, and one in Slave Lake. In Edmonton, the FCC is in an area of the city where there is a large number of unattached patients (Anon, 2013). Another 24 communities were identified in June 2013 as having a high need for improved access to primary health care, as well as being ready and having the capacity to implement a Family Care Clinic (Government of Alberta, 2014).

Community Health Centres

- Community Health Centres are community-based organizations that provide a variety of primary care services, including primary care, education, health promotion, counseling, home care, and palliative care (Government of Alberta). These 148 centres are staffed by a variety of providers who may include health promotion facilitators, occupational therapists, physiotherapists, and registered dental hygienists. Most Community Health Centres are operated by Alberta Health Services, while others are independently operated. In addition to directly providing services, Community Health Centres provide assistance with navigating the health system, such as hospital discharge planning and coordinating continuing care placements.

Quebec

Local Community Services Centres / Centres Locaux de Services Communautaires (CLSC)

- The Local Community Services Centres were first established in 1972 by the Ministry of Health and Social Services. These primary health care practices were a form of community heath centre: they were entirely public, in terms of funding, infrastructure and resources, as well as governance (Breton et al., 2013; Hutchison et al., 2011). At the time, they were particularly innovative, as they incorporated interdisciplinary teams of health and social services providers that provide primary care services, social services, health promotion and disease prevention, rehabilitation, and public health services (Breton et al., 2013; Mable et al., 2012).

- Originally, the Local Community Services Centres were meant to become the main entry point into the health care system (Mable et al., 2012). However, physicians associations vehemently

opposed the practice conditions associated with this innovation, particularly the fact that Local Community Services Centres physicians were salaried. As a result, the Local Community Services Centres were consigned to minority status with regard to their coverage of the population's medical needs (Breton et al., 2013). Given the Local Community Services Centres' relative failure to attract physicians and the limitations of primary health care services organization at that time, in 2000, the Clair Commission proposed a new type of primary health care practice, the **Family Medicine Group**, to improve health care services' organization and delivery (Breton et al., 2013).

- In recent years, the Local Community Services Centres have merged into the **Health and Social Service Centres / Centres de Santé et de Services** and collaboratively provide primary health care and social services to a geographically defined population (Breton et al., 2013; Hutchison et al., 2011).

Family Medicine Groups

- Established in 2002, majority of the Family Medicine Groups are privately owned organizations that have contractual agreements with the provincial government (Breton et al., 2013; Hutchison et al., 2011; Levesque et al., 2010). Family Medicine Groups also have various contractual agreements between accredited clinics and other health institutions at the local, regional, and provincial levels. For example, each Family Medicine Group has a contractual agreement with **Local Community Services Centres** that enables them to benefit from the presence of a nurse (Levesque et al., 2010). These contractual agreements formalize the collaboration and sharing of resources among and within primary care clinics (Hutchison et al., 2011; Mable et al., 2012). Since Family Medicine Groups were inaugurated in 2002, the number of accredited practices has steadily increased (Breton et al., 2013).
- The objectives of the Family Health Team model are to (Mable et al., 2012):
    - Provide all residents of Quebec with access to a family doctor;
    - Increase the accessibility of services and enhance the quality of care;
    - Improve management, the continuity of care and the monitoring of registered patients;
    - Augment complementarily with other health care entities; and,
    - Promote and enhance the role of the family doctor.

- Family Medicine Groups consist of six to ten physicians who work in close collaboration with nurses and other providers, when required, to offer primary care services for registered patients, on a non-geographical basis (Breton et al., 2013; Hutchison et al., 2011; Levesque et al., 2010). The establishment of Family Medicine Groups does not require the creation of new structures because they are grafted into existing organizations (Breton et al., 2013).
- A Family Medicine Groups provides services both by appointment and on a walk-in basis. It aims at being accessible 24 hours a day, 7 days a week, through opening hours that extend into the evening and weekends, and through a regional on-call system for vulnerable patients when the clinic is closed (Levesque et al., 2010; Mable et al., 2012).

- Physicians receive remuneration primarily from fee-for-service payments, as well as a small annual fee for each registered patient, supplemental fees for registered patients from vulnerable populations, and payment for time spent attending meetings and completing paperwork (Hutchison et al., 2011). Funding also is available to support staffing, premises, and information technology (Hutchison et al., 2011). Furthermore, the Family Medicine Groups receives complementary funding in exchange for complying with certain organizational requirements identified in the Family Medicine Groups policy (e.g. extended opening hours).

- Early evidence suggests that the performance of Quebec's Family Medicine Groups is superior to that of other primary health care models (Breton et al., 2013).

- Family Medicine Groups are linked with **Health and Social Service Centres / Centres de Santé et de Services Sociaux** (Breton et al., 2013).

Health and Social Services Centres / Centres de Santé et de Services Sociaux (CSSS)

- Health and Social Service Centres represent a merger of local institutions, including one or more of the Local Community Service Centres, residential and long-term care services organizations, and hospital centres. The Health and Social Services Centre facilitates collaboration among these organizations under a single governance structure (Breton et al., 2013; Koren, Mian, & Rukholm, 2010; Mable et al., 2012s).
- They are focused on fostering inter-organizational collaboration within a specific geographically area in order to improve the coordination and integration of health services in Quebec (Breton et al., 2013; Levesque et al., 2010). This goal is supported by the creation of a **Local Health Network**, which encourages the establishment of formal or informal arrangements among various providers within its territory presently offering services (Breton et al., 2013). The Local Health Networks are composed not only of the facilities merged under Local Community Services Centres, but also of other health and social services providers, including privately owned medical clinics within their respective geographical area (Levesque et al., 2010).

Integrated Local Health Networks

- In 2004 the Quebec government initiated a large-scale redesign of its health system structure with the objective of improving accessibility, continuity, integration and quality of services for the population of a given area. Part of this redesign process was the establishment of **Integrated Local Health Networks** across the province (Breton et al., 2013). The Local Health Networks were created by the **Health and Social Services Centres** and are under contractual agreements with the regional health authorities (Breton et al., 2013; Hutchison et al., 2011).
- Network clinics are privately owned group practices that are typically larger private clinics than those that are eligible to become **Family Medical Groups** (Breton et al., 2013). They consist of an enhanced interdisciplinary team. They complement FMGs by providing extended hours of service (seven days a week) and on-site access to specialists and extended diagnostic services, such as imagery and laboratory testing (Breton et al., 2013; Hutchison et al., 2011; Levesque et al., 2010). The clinical settings within Network Clinics are more specifically targeted to ongoing

and integrated management of clients, particularly those considered "vulnerable" (Levesque et al., 2010). Physicians within the LHNs are remunerated primarily through fee-for-service (Hutchison et al., 2011).

- Although the policies regarding both **Health and Social Service Centres / Centres de Santé et de Services Sociaux** and **Integrated Local Health Networks** were proposed in 2002 and 2004, respectively, their implementation largely began in 2005 (Breton et al., 2013).
- Furthermore, both policies seem to have had an impact on strengthening inter-organizational collaboration. More specifically, the mandated creation of Local Health Networks improved inter-organizational collaborations within Local Health Networks for new type of primary health care, while collaboration appeared to have diminished in older medical clinic type (Breton 2013). These results suggest that the Local Health Networks reform has had a positive effect on territorializing collaboration by significantly reducing collaborations outside LHNs and, less significantly, for the emerging new type of primary health care and Local Community Services Centres, by improving collaboration among health organizations within the local health networks (Breton et al., 2013).

United States

For more information, see Medical Homes

Accountable Care Organizations

- New business models are needed to foster integration across the whole health system. One example is the Accountable Care Organizations (Crabtree et al., 2010).
- Formally arranged through contractual agreements, Accountable Care Organizations are alternative model of care that requires a strong network of physicians with similar values related to quality improvement, performance excellence, and cost efficiency (Highsmith & Berenson, 2011). They are clinically integrated groups composed of clinicians, hospitals, and other health care organizations that share mutual responsibility for improving the quality of care delivered and health outcomes, and reducing the costs and inefficiencies for a designated population (Highsmith & Berenson, 2011; Nielsen, Olayiwola, Grundy, Grumbach, & Shaljian, 2014). They are expected to have a strong base of primary care that is collectively accountable for quality and total per capita costs across the full continuum of care for a population of patients (Meyers, 2010). Accountable Care Organizations are expected to better coordinate the efforts of diverse health care providers to prevent fragmentation and gaps in health care delivery (Grant, 2012).
- Accountable Care Organizations are anchored by primary care networks can help meet the goals of health care reform by responding to changes in reimbursement, reducing fragmented care, and focusing on improving the quality of care for defined patient populations (Wexler et al., 2014). They do so by (Grant & Greene, 2012; Meyers, 2010; Nutting, 2012; Wexler et al., 2014):

- Explicitly bringing together in a shared business model services and resources that currently exist but do not necessarily collaborate within one another.
- Ensuring high-quality care coordination by incentivizing both cooperation across care teams and settings and the transfer of accountability and information.
- Facilitating transitions and aligning resources to meet the clinical care and care coordination needs of populations.
- Ensuring that specialty teams are ready, willing, and able to provide services when required.
- Developing and supporting systems for care coordination for patients who reside in non-ambulatory care settings.

- Patient-centred medical homes are integral to the Accountable Care Organization model, with the enhancement of a network, such as a medical neighbourhood, to support a continuum of care that includes specialists, hospitals, and community and social services (Grant & Greene, 2012).

- Furthermore, it is imperative that participating health care entities align with regard to payment, cost, and quality of care. However, while studies show that many health care administrators agreed that the Accountable Care Organization model has the potential to contain costs while improving quality of care, there were major barriers to establishing alignment among physicians and other key staff, as well as between primary health care and other sectors of the system (Grant & Greene, 2012).
- Health information technology systems are critical for the successful transfer of information (Meyers, 2010; Wexler et al., 2014). These systems, when used appropriately, can play a critical role in establishing and monitoring accountability. For example, an Accountable Care Organization could use health information technology to monitor the timeliness and completeness of information flows between primary care providers and specialists, and use the tracking information to incentivize high levels of responsiveness and collaboration (Meyer, 2010).

- Accountable Care Organizations are expected to save $5 billion during their first 8 years of existence (Wexler et al., 2014). Initial evaluation results suggest that many early adopters within Accountable Care Organizations have indeed improved the cost effectiveness of care delivery and received shared savings as a result (Nielson et al., 2014). After one year of Accountable Care Organization activity, the Centers for Medicare and Medicaid Services reported savings of $30 million. The expected savings will be driven by the increased provider accountability associated with Accountable Care Organizations (Wexler et al., 2014).

Medical Neighbourhoods

- The term “medical neighborhood” was coined relatively recently in the published literature as a key strategy to address potential barriers associated with the development of patient-centred medical homes in the United States (US) (Nutting, Crabtree, & McDaniel, 2012). It was expected that medical neighbourhoods would support the necessity of collaborating and

coordinating with specialists, hospitals, community and social services, and other types of providers required by the patient-centred medical homes (Taylor, Lake, Nysenbaum, Peterson, & Meyers, 2011). In fact, key roles of the medical neighbourhood are to enhance coordination of care, improve consultations and co-management, and create seamless transitions for patients moving through different components of the health care system (Kirschner & Barr, 2010).

- A medical neighbourhood is a network of diverse services and resources from all components of care, including primary, specialty, hospital, community and social services, local public health agencies, etc. These services and resources are not necessarily a geographic construct but instead are a set of relationships that revolve around the patient and his or her primary care unit, which is at the centre of the network (Nutting et al., 2012; Taylor et al., 2013; Wexler et al., 2014). The relationships, services, and resources that exist within the medical neighbourhood, can be mobilized to respond to the unique needs and preferences of the patients (Nutting et al., 2012; Taylor et al., 2011; Wexler et al., 2014). By connecting the patient to services that are specific to their own needs and preferences, care is being shifted from episodic to whole-person care (Wexler et al., 2014).

- The primary activity of a well-functioning medical neighborhood is delivery of coordinated care, which requires regular communication, collaboration, and shared decision-making across various actors in the system (Taylor et al., 2011). A high-functioning medical neighborhood is one that encourages the flow of information across and between clinicians and patients, to include specialists, hospitals, home health, long term care, and other clinical providers, as well as introduces some level of accountability to ensure that clinicians readily participate in that information exchange (Nielsen et al, 2014; Taylor et al., 2011). Further qualities of a well-functioning medical neighbourhood include (Taylor et al., 2011):

    - Clear agreement on and delineation of the respective roles of neighbors in the system (e.g. through care coordination agreements between primary care providers and specialty physicians, agreements on care transitions, referral and follow-up guidelines, etc.).
    - Sharing of the clinical information needed for effective decision-making and reducing duplication and waste in the system, supported by appropriate health information technology systems.
    - Care teams, typically anchored by the patient-centred medical homes, to develop individualized care plans for complex patients that describe a proactive sequence of health care interventions and interactions, followed by tracking and assisting to ensure that this takes place (including care transitions).
    - Continuity of needed medical care when patients transition between settings, with active communication, coordination, and collaboration among everyone involved in the patient's care, including clinicians, patient, and family.
    - A focus on the patient's preferences via the primary care provider or a dedicated care coordinator, who plays a key role in coordinating services and resources to ensure that patient preferences are incorporated into shared decision-making.

- The primary care unit is the first line of contact patients have with the health care system and as such, they are responsible for coordinating care and connecting patients to the required services and resources within the neighbourhood (Nutting et al., 2012; Wexler et al., 2014). Therefore, it is imperative that network members become adept and nimble at forming innovative care teams, both within the practice and across other service agencies within the health care neighbourhood (Nutting et al., 2012; Wexler et al., 2014). Partnerships are also essential with non-clinic partners, like community centres, schools, public health agencies, etc. (Nielsen et al, 2014). Fostering these relationships within the medical neighbourhood not only allows the network to respond to the needs and preferences of an individual patient, but also supports the network in incorporate aspects of population health and overall community health needs in its objectives (Taylor et al., 2011).

Barriers to Medical Neighbourhoods

1. No (or few) financial incentives or requirements for care coordination.
2. Lack of staff and time for investment in coordination (at the practice and broader community levels).
3. Limited primary care provider involvement in in-patient care.
4. Fragmented, diverse services, rather than an integrated delivery system.
5. Limited financial integration across most providers.
6. Limited health IT infrastructure and interoperability.
7. Practice norms that encourage clinicians to act in silos rather than coordinate with each other.
8. Complexity of coordination for patients with high levels of need and/or frequent self-referrals.

Taylor et al., 2011

- To support the functioning of medical neighbourhoods, changes in payment structure (i.e. reimbursement) are also required. For example, it is critical that payment structures provide reimbursement for leveraging care team members to improve care coordination and patient education, adopting population health management processes, exchanging health information across the medical neighbourhood, and using quality improvement tools to tract outcomes and success. Without payment for these services, it will be increasingly difficult to encourage broader adoption of the medical neighbourhood (Nielsen et al., 2014).

- The medical neighbourhood model has gain recognition as an effective model for bridging the gap between community support services and health care needs (Nielsen et al., 2014)

- The establishment of medical neighbourhoods is being highlighted in the literature. For example, in Canada, the College of Family Practitioners of Canada recommends medical neighbourhoods. They state that a primary care unit must be linked with other health care

services in the community, the region, and province, as well as hospitals and other health care institutions and health care services in the area.

Retail Clinics

- Retail clinics are located in retail outlets, such as pharmacies, grocery stores, and big-box discount stores. They consist of one or two private exam rooms with a waiting area, and equipped with the basic equipment and facilities characteristic of any medical outpatient office (McKinlay & Marceau, 2012). Most retail clinic hours are more convenient than a traditional doctor's office, as they operate seven days a week, twelve hours a day during the workweek and eight hours on Saturday and Sunday, and do not require previously scheduled appointments. Retail clinics are typically busier on weekends, in the evening and at lunchtime, reflecting their convenience and consumer-focus (McKinlay & Marceau, 2012).
- The existence of retail clinics is providing competition for the traditional office-based primary care, especially for those clinics that are extending evening and weekend availability, implementing open-access scheduling, and providing same-day consultations for relatively simple illness conditions (McKinlay & Marceau, 2012).

- Characteristics of retail clinics include (McKinlay & Marceau, 2012):
    - Led by certified nurse practitioners and physician assistants;
    - Costs 30-80% less than other health care (ER, urgent care, community clinics);
    - Treats limited list of acute, non-serious conditions, provides vaccinations, conducts physical exams;
    - Do not cover lab tests, electrocardiogram, treat chronic disease or diagnosis serious medical conditions;
    - Have local referral network of health care providers; and
    - Utilize portable diagnostic equipment and electronic medical records.

- Retail clinics should be distinguished from so-called urgent care clinics, which are usually stand-alone enterprises staffed by physicians and other providers and represent a half way house between a physician's office and a hospital emergency room (McKinlay & Marceau, 2012).

- Support for retail clinics has come from segments of the health care community, especially nurse practitioners (NP) and physician assistants (PA). This is due to the fact that within retail clinics, NPs and PAs are the primary care providers, thereby opening up long-awaited opportunities for professional development, public recognition, and more autonomous practice for these disciplines (McKinlay & Marceau, 2012).
- Retail clinics have also resurfaced dormant interprofessional struggles over turf, as evident by the opposition to retail clinics expressed by physicians and their professional associations. More specifically, opposition to retail clinics includes (McKinlay & Marceau, 2012):

- They drive patients away from their primary care physicians, disrupt the continuity of the doctor-patient relationship, cause serious underlying conditions to go undetected or untreated and they will produce a need for more early return visits.
- There are suggestions retail clinics may be unsafe.
- Retail clinics will eventually expand their scope to include more complex and life-threatening chronic medical problems.
- Frequently expressed concern of fragmentation and the quality of care provided in retail clinics.

- However, McKinlay & Marceau (2012) observed that those opposing retail clinics provide no data to support their expressed concerns, and even ignore evidence arguing for retail clinics as a viable new model for the delivery of primary health care. To address some of these concerns, the Convenient Care Association was formed in 2006. This association has been instrumental in promoting operational standards for retail clinics and approved the quality and safety standards developed for them by other physician-led groups (McKinlay & Marceau, 2012). While clearly not addressing all concerns, these standards appeared to dispel fears of competition and essentially dissipated physician resistance to retail clinics (McKinlay & Marceau, 2012). In fact, retail clinics are now developing referral relationships with nearby physician practices, urgent care centers and emergency departments so that referrals are beginning to flow both ways as overworked physicians send patients with quick simple issues to retail clinics (McKinlay & Marceau, 2012).

- Overall, retail clinics appear to have filled a national need for quick, convenient and affordable health care. Their popularity has caught on in the US, as evident by the fact that retail clinics now operate in all but five states (McKinlay & Marceau, 2012).

- Retail clinics have been shown to be highly effective and cost-efficient models for the delivery of primary care. They have been shown to have high levels of patient satisfaction with clearly circumscribed minor illnesses. Therefore, a next logical step would be for retail clinics to assume care for major chronic condition (McKinlay & Marceau, 2012).

United Kingdom

- The core strengths of primary health care in the United Kingdom include (Roland et al., 2012):
  - Universal registration with a primary care practitioner;
  - Relatively good access to primary care in terms of both distribution of GPs and speed of access;
  - Gate- keeping to specialist care;
  - Lifelong primary care records that follow the patient when they move practices; and,

- Care that is mostly free at the point of delivery.

England

- Health care in England is undergoing some major changes (Willcox et al., 2011). More specifically, in the future:
  - National Health Service hospitals, private health care providers, and family doctors would all compete for patients.
  - **Primary Care Trusts** and strategic health authorities would be scrapped, and instead GPs would form **consortiums** that control 80 percent of the NHS budget.
  - A new **National Commissioning Board** would oversee the consortiums and commission certain highly specialized health services.
  - An economic regulator called the **Monitor** would promote competition, regulate prices, and safeguard the continuity of services.

- Another reform strategy currently being considered in England is permitting patients to enroll in a nonlocal practice oppose to allowing patients to register with only one practice at a time (Willcox et al., 2011).

Primary Care Trusts

- Primary Care Trusts (or Primary Care Groups as they were originally called) were established by the incoming Labour government in 1999 as an alternative to the previous government's policy of fund-holding by individual general GP practices (Willcox et al., 2011). The purpose of Primary Care Trusts was to improve the health and wellbeing of the local population and reduce health inequalities (Willcox et al., 2011).
- Each Primary Care Trusts is responsible for allocating £80 billion (US$130 billion), or 80% of National Health Services budget, through contractual agreements with local services. Together, these services provide a comprehensive range of high quality, responsive, and efficient health services that span all service sectors (primary, secondary, and community health care) for a given population (Russell et al., 2010; Willcox et al., 2011).

- The Primary Care Trust involvement in local health planning, primary care development, and a range of secondary and tertiary care purchasing gives them a broader mandate than Australia's **Divisions of General Practice** (soon to be transformed into **Medicare Locals**) (Russell et al., 2010).

- Over the years, Primary Care Trusts and general physicians have experienced cyclical policy changes concerning the commissioning role of GPs versus that of Primary Care Trusts. This cyclical process formed the backdrop for health care reform in England. More specifically, in 2010, England announced the decision to abolish the Primary Care Trusts in favor of new **General Practitioner Consortiums** that are responsible for 80% of the entire National Health

Services budget (Oliver, 2010; Willcox et al., 2011). This new model gives general practice physicians more responsibility and accountability for commissioning services (Phillips, 2012). The government's rationale for giving GPs such power is that they have responsibility for defined populations and are therefore the best placed to identify and meet those populations' needs (Roland et al., 2012). This decision was also supported by evidence that GP fund-holders were able to improve services in England more effectively than Primary Care Trusts (Roland et al., 2012; Willcox et al., 2011). This decision however, has proven to be highly contentious among both professional and public bodies, and in April 2011 the government announced a two-month "listening exercise" to "pause, listen, reflect, and improve" the National Health Services reform plans (Roland et al., 2012; Willcox et al., 2011). Following this listening exercise, the government announced some refocusing of the proposed reforms. In particular, there is to be more balance between cooperation and competition, increased opportunities for clinical participation, and a phased and more flexible approach to the implementation of the reforms (Willcox et al., 2011).

- The British Medical Association appears to support the policy on the whole and seems to be cooperating with the government to make it work. Individual GPs however have shown, at best, a mixed reaction to whether they believe the reforms will genuinely improve National Health Service (Oliver, 2010). As one might expect, Primary Care Trusts are against the proposals, while academics have a mixed view. Some seem to believe that the new direction is revolutionary and evolutionary, and still others think that it is mostly a recycling of old ideas (Oliver, 2010).

General Practitioner Consortiums

- General Practitioner Consortiums are a newly proposed health care reform strategy in England. They are responsible for commissioning most National Health Services services, including acute hospital care, community health care, and rehabilitation services (Willcox et al., 2011). To do so, the consortia will be given control of 80% of the entire National Health Services budget (Roland et al., 2012). The size, organization and structure of the consortia will be for GPs to decide (Dunbar, 2011).
- GPs will be affected greatly by the development of consortiums, as they will now be expected to exercise more responsibility over the health care budgets, although the extent to which many of them have the time or abilities to do this is debatable (Oliver, 2010). The need for good managers performing essential functions will remain, but the consortia will be expected to operate within a maximum management allowance (Oliver, 2010).

- A newly formed **National Commission Board** will be responsible for overseeing the consortiums by allocated resources to each consortium, according to a person-based, risk-adjusted formula (Willcox et al., 2011). The consortiums will then, within these budgets, provide primary care and negotiate contracts with providers for the provision of hospital care (Oliver, 2010). They Board will also be responsible for commissioning certain highly specialized health services (Roland et al., 2012).
- The consortia will also be supported by an economic regulator called the **Monitor,** who will promote competition, regulate prices, and safeguard the continuity of services within the consortia (Oliver, 2010; Roland et al., 2012).

- England's reform strategies remain highly controversial in the eyes of both professional and public bodies. This is due in part to the expanded role given to general practice physicians with potential conflicts of interest between their dual roles as care providers and budget holders, and partly because of the increased opportunities for commercial health care sector that the reforms provide (Roland et al., 2012).

- Scotland, Wales, and Northern Ireland have concentrated their reform strategies on creating more integrated, area- based "single system working" structures that rely on encouraging professionally-led collaboration (Roland et al., 2012).
- It remains unclear which approach will deliver the best outcomes in the long run, but in all UK countries, past and present governments remain committed to keeping primary health care central to health care delivery in the NHS (Roland et al., 2012).

Australia

- Federal and state government are responsible for funding Australia's health care system. This split in funding has contributed towards a fragmented health care system, which has led to the development of a complex, rapidly changing, and impersonal health care system that is increasingly difficult and frustrating to navigate (Nicholson, Jackson, Marley, & Wells, 2012).
- In 2010, Australia launched its first national primary health care strategy. This strategy identified key building blocks and priority areas, including (Nicholson et al., 2012):
    - Regional integration;
    - Information technology (e.g. e-health);
    - Improved access and reduced inequity;
    - Chronic disease management;
    - Prevention;
    - Improved infrastructure development; and,
    - A focus on quality, safety, performance, and accountability.

Divisions of General Practice

- Divisions of General Practice are federally funded, not-for-profit corporations that were established in the 1990s (Russell et al., 2010; Willcox et al., 2011). Divisions arose from a need within general practices to address issues of isolation, fragmentation, and marginalization experienced by the practices. The Division structure provides a strong collective voice for general practices at a local level while allowing them to remain independent (Nicholson et al., 2012).

- The goal of the Divisions is to provide better access and quality of care to local communities based on individual need (Nicholson et al., 2012). Divisions however do not provide clinical care but rather infrastructure support to practices located within a geographical area, and are the means by which population and public health initiatives can be translated to primary care (Russell et al., 2010). Divisions also (Nicholson et al., 2012; Willcox et al., 2011):

    - Focus on meeting relevant primary care service gaps locally
    - Provide core programs that address issues related to access, prevention, and early intervention
    - Provide services and support for general practices at the local level (e.g. information technology funding and support, professional development, multidisciplinary education and training, accreditation)
    - Improve access to multidisciplinary care teams
    - Increase focus on population health and the better management of chronic disease
    - Encourage local networking between general practices and integration of general practices into the broader health care system
    - Promote GPs involvement in local health planning

- All general practices participating in the Divisions must undertake compulsory, ongoing quality improvement activities, which is supported by Divisions (Nicholson et al., 2012).
- The Divisions of General Practice has invested in building information technology infrastructure. As a result of this commitment, Australia has become one of the most computerized general practice sectors in the world, with 96% of practices in Australia currently being computerized (Nicholson et al., 2012).

- In more recent years, Australia has engaged in primary health care reform. A key building block for the reform was regional integration within primary health care and between primary health care and other sectors (Willcox et al., 2011). Underpinning this reform was the National Health and Hospitals Reform Commission recommendation to evolve the Divisions of General Practice into larger **Medicare Locals** (Willcox et al., 2011). A key difference between the two models is that the new Medicare Locals will have more diverse membership across the full range of primary care providers, as opposed to focusing on general practice alone (Willcox et al., 2011).

- The creation of the Medicare Locals also provide a key government platform to roll out the **National Primary Health Care Strategy** and allow greater representation from wider health professional groups, as well as the community, businesses, and management (Nicholson et al., 2012).

Medicare Locals

- Medicare Locals were established in 2011 (Willcox et al., 2011). It is anticipated that the Medicare Locals will account for $170 million (US$180 million) annually in core funding from the Australian government (Willcox et al., 2011).
- The Medicare Locals are responsible for providing an overarching regional governance framework for primary health care. They are also responsible for (Nicholson et al., 2012; Willcox et al., 2011):

    - Improving the patient journey through the development of integrated and coordinated services within primary care and between primary health care and other sectors.
    - Providing support to clinicians and service providers so as to improve patient care.
    - Undertaking local health planning and addressing service gaps.
    - Identifying the health needs of local areas and the development of locally focused and responsive services.
    - Facilitating implementation and successful performance of primary health care initiatives and programs.
    - Supporting the federal government's national electronic health record.

- Medicare Locals will work closely with the newly formed **Local Hospital Networks** to collaboratively identify and address population needs, improve patient care, and improve the quality and safety of health services (Nicholson et al., 2012). However, recent federally plans are currently short on details about specific processes to integrate primary with secondary care (Nicholson et al., 2012).

- The Australian Medical Association is opposed to Medicare Locals administering budgets and taking on a purchasing role, as the primary care trusts in England do (Willcox et al., 2011).

Netherlands

Regional General Physician Cooperatives

- Established around 2000, General Practitioner (GP) Cooperatives are regional entities that are usually located within or close to hospitals. GP Cooperatives grew out of the GP practices themselves and as such, each cooperative reflects their respective community needs (Willcox et al., 2011). Their main role of the GP Cooperatives is to provide after-hour care and coordinate chronic disease management, however, they have evolved to also provide support to GP practices (e.g. a range of administrative, information technology, and professional services) (Willcox et al., 2011).

- The success of Dutch GP cooperatives in achieving high-quality after-hours access can be attributed to several factors (Willcox et al., 2011):

- After-hours services are obtained through a single regional telephone number for each GP cooperative, with most services situated close to hospitals.
- Continuity of care is strongly promoted through shared electronic health records, with the patient's usual general practice receiving information on any after-hours consultations so as to ensure a complete patient record.
- Nurses undertaking telephone triage at the GP Cooperative have access to national evidence-based clinical guidelines.

- Payment reforms have been particularly driven by the goal of reducing inequity among patients. The challenge however has been to find the right balance between capitation and fee-for-service (Willcox et al., 2011).

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