

# Contractual Arrangements and Remuneration Methods for Interdisciplinary Teams in Primary Health Care in Public Payer Systems

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## A Framework

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## 1. INTRODUCTION – BACKGROUND TO THIS REPORT

This report is one of a series of two reports resulting from a study commissioned by Alberta Health. The purpose of the study is to support the development of team based delivery of primary health care in the province of Alberta. In particular, the ministry is interested in all aspects of compensation within a team of multidisciplinary health care providers, such as physicians, nurses, nurse practitioners, dieticians and/or pharmacists. The focus of the study is on the options for reimbursement that can be used to support a patient-centered team-based service delivery model. Three main research questions were identified by the client:

- a. What is the optimal methodology for the remuneration of team-based primary health care delivery to support the achievement of primary health care goals?
- b. Which compensation methods best support interdisciplinary team-based primary health care that is associated with improved health services delivery.
- c. What are some examples of successful team-based primary health care delivery and the compensation methods associated with them (both in Canada and internationally)?
- d. What lessons can be learned and recommendations made that are applicable to the Province of Alberta?

The study is divided into two parts, of which this is the first. The first part has three components: (i) an analysis of interdisciplinary team-based primary health care delivery in terms of conceptual and empirical scholarly literature; (ii) an analysis of the reimbursement methods used in Canadian jurisdictions, New Zealand and the United Kingdom; (iii) a resultant menu of options in terms of reimbursement of primary health care teams in a public health care system. Building on the results of this first part of the study, the second part of the project examines the Alberta context, including the current state of Primary Care Networks in Alberta and the desired goals. Within this context, recommendations are made for the adaptation of team compensation models.

### 1.1. Primary health care in Canada

Reform of Canadian primary health care (PHC) has been ongoing throughout the first decade of the 21<sup>st</sup> century. Calls for primary health care reform were made throughout the 1990's due to increasing pressures on the PHC system, such as funding pressures, and hospital restructuring leaving sicker patients being cared for outside of hospitals. (Pringle et al., 2000) There is substantial and varied international evidence that a strong primary care system is associated with better health outcomes for the population, including lower morbidity measures and lower mortality. (Starfield and Shi 2004)

To implement many of the sweeping changes that were needed to primary health care systems throughout Canada, the federal government introduced a one-time Primary Health Care Transition Fund of \$800 million. (Health Canada, 2007) The provincial and territorial funding was to be used to address one of the five objectives of the Transition Fund: (i) increasing access to primary health care; (ii) increasing emphasis on prevention and chronic disease management; (iii) ensuring 24/7 access for essential primary health care services; (iv) developing and implementing multidisciplinary primary health care teams; and (v) improve coordination between primary, secondary, tertiary, and emergency care. (Health Canada, 2004) Health Canada refined their goals for primary health care in Canada via the 2003 Health Accord, through which provincial and territorial premiers committed to making 24/7 access to a primary health care provider a reality for 50% of Canadians by 2011. (Health Canada, 2004)

In Alberta, the Primary Health Care Transition Fund allowed for the province-wide launch of Alberta Health Link in 2003, providing health advice to all Albertans 24/7, and through a Capacity Building Fund, developed and implemented many initiatives, such as increasing interdisciplinary curriculums for health science students and increasing provincial capacity to manage chronic diseases. (Letourneau, 2009) (Health Canada, 2007) In 2003, through a tripartite effort between Alberta Health and Wellness, Alberta Health Services (formerly Alberta Regional Health Authorities), and the Alberta Medical Association, the Primary Care Initiative began. (Government of Alberta, 2012) Through this initiative, interdisciplinary teams in Primary Care Networks ensure the five objectives identified through the Primary Health Care Transition Fund continued to be addressed beyond the lifecycle of the fund itself.

## 2. METHODOLOGY

The study is a qualitative analysis of academic and grey literature, and government websites. The academic literature was recovered using a rapid review approach (Ganann et al., 2010), which is an expedited systematic literature review. The grey literature and online resources were recovered using a semi-structured online search. Wherever necessary, information was supplemented with qualitative interviews with key informants.

The goal of the rapid review of literature was to highlight how teams in primary health care should be compensated. The study focused on publicly funded health care systems, including Canada, Australia, New Zealand, and the U.K. Studies of the US were generally not included, unless their results were to some extent transferable to Canada. The rapid review applied the following system to search and selection of literature. Details of the searches are available from the authors upon request.

A first search of the health services, health policy and health economics literature used the databases: Scopus, PubMed/Medline/ Ebscohost and Proquest. Searches included combinations of the terms: interdisciplinary (team based, multidisciplinary), remuneration (payment, capitation, salary, fee-for-service, incentive), and contract (employment, structure, hierarchy). Collectively all searches returned a total of 534 titles. A second search of the organizational design and organizational behaviour literature used the databases: Proquest/Ebscohost/Scopus/Science Direct and Social Sciences Citation Index. Searches included combinations of the terms: primary health care teams, interdisciplinary and multidisciplinary with remuneration, payment, reporting, employment, and contractual relationships. The secondary search returned a total of 223 titles.

Criteria for inclusion were that the article describe features of team based primary care in more than one setting, and the effects, challenges, lessons learned of these features. Excluded were studies that described one particular case study with no broader implications, focused on non-primary care, or focused on one specific type of health condition with no broader implications. The final number of articles included in the analysis was 49.

The review of grey literature and online resources had as a goal to characterize the nature of team based delivery of primary health care in Canada, in comparison to New Zealand and the U.K. Australia was excluded due to a current ongoing reform that has decreased access to online documentation. Canadian provinces with no indication of team based primary health care were not included. The search for information about each province began with a review of the provincial ministry of health and medical association, as well as a general online search. For each province, the search evolved according to the availability of online information. Two provinces engaged in the consultation to supplement online information (Prince Edward Island and Nova Scotia).

### 3. RATIONALE FOR PRACTICING IN TEAMS

Teams are solutions to system problems such as a growing patient population and shortages of trained personnel (Beckhard, 1972). Interdisciplinary teams can create conditions for improved health outcomes, provided that they well functioning, in the sense of cohesion (see discussion of team effectiveness in the next section) Interdisciplinary team delivery is a solution to growing need for chronic disease management, and recent emphasis of promotive and preventive health services (Bower et al., 2003; Ferrante et al., 2010; Hogg et al., 2009; Nutting et al., 2009; Proudfoot et al., 2009; Wagner, 2000) Teamwork also contributes to job satisfaction and accountability through shared decision making (Pearson et al., 2006; Proudfoot et al., 2009) For example, a Canadian study in Ontario shows that the addition of nurse practitioners and pharmacists to family physicians' practices improved the quality of chronic disease management and preventive care in terms of adherence to clinical guidelines, but did not result in improvements along some measures of chronic care management, health outcomes, and services utilization (Hogg et al., 2009). A study in the United States shows that the strength of the interdisciplinarity is positively associated with the receipt of cancer screening, lipid screening, influenza vaccinations, and behavioral counseling (Ferrante et al., 2010).

Well functioning teams, when compared to typical sole profession practices, can have a number of advantages in terms of health outcomes and health services delivery, as well as the quality of services and patient and provider satisfaction (see **Table I** for references). The typical advantages of team based interdisciplinary care are the three 'Cs' of comprehensiveness, continuity, and coordination. In well functioning teams (see next section) these are achieved by way of the diversity of skills and knowledge and the creativity of joint decision making that exceeds what is available to sole-profession practices.

The achievement of the three Cs has been linked to improvements in the case for chronic conditions (e.g. asthma, diabetes, hypertension), better clinical performance and higher health outcomes. Effective chronic illness care and management typically relies on coordinated care teams. (Wagner, 2000). A review of recent meta-analyses, as well as two detailed case studies concluded that teams including clinical pharmacists or advanced practice nurses are better equipped to and more effective in filling the needs of diabetic patients than standard physician care. (Willens et al., 2011)

In addition, teams appear to perform better in communicating with patients, offering promotive and preventive services, and whole person care. Furthermore, interdisciplinary teams are effective at supporting patient self-care.

**Table I - Effects of highly functioning teams**

	Sources
Higher quality care, diversity of skills and knowledge, more creative solutions	Khan et al. (2008); Rodriguez (2007); Schuetz et al. (2010)
Better clinical performance, better health outcomes	Bower et al., (2003); Rodriguez (2007); Schuetz et al. (2010); Lowe & O'Hara (2000); Shaw et al (2005);
Care coordination	Khan et al. (2008); Schuetz et al. (2010); Lowe & O'Hara (2000)
Care continuity	Pearson et al. (2006); Lowe & O'Hara (2000)
Improved whole person care, comprehensiveness	Khan et al. (2008); Rodriguez (2007);
Perform 40-90% better in care for chronic illness (diabetes, asthma, hypertension)	Schuetz et al. (2010)
Better health promotion	Khan et al. (2008);
Better illness prevention	Ferrante et al., (2010); Khan et al. (2008);
Improved patient self-care	Farris et al. (2004); Rodriguez (2007);
Better communication with patients	Pearson et al. (2006); Lowe & O'Hara (2000)
Better financial performance, improved resource use, lower overall cost of care per patient	Schuetz et al. (2010); Rodriguez (2007); Solheim et al. (2007); Lowe & O'Hara (2000)
Better job satisfaction	Lowe & O'Hara (2000)
Practice climate that features high degree of collaboration and teamwork	Schuetz et al. 2010
Lower provider workloads	Schuetz et al. (2010)

The well functioning team has advantages for providers, in addition to the advantages for patients as outlined above. A well functioning team offers a climate of collaboration and teamwork that has been linked to improved job satisfaction, and also reduced workloads for individuals.

## 4. DEFINITION OF TEAM PRACTICE

Several frameworks for interdisciplinary team based delivery are presented in the literature, including Primary Health Care, Community Oriented Primary Care, and the Patient Centered Medical Home. Each provides a justification for team based delivery, and describes relationships between health care providers, between providers and patients, and between providers and the community.

The Community Oriented Primary Health Care model integrates public health and primary care in an attempt to delivery services to a defined population (Lenihan and Iliffe, 2001). Health problems are addressed at the individual and at the community level, an approach followed in Canada by the Ontario Community Health Centres, for example.

Primary Health Care is differentiated from primary care and described as essential promotive, preventive, curative, rehabilitative and supportive care delivered to individuals, groups and communities. A core interdisciplinary team of a family physician, nurse and nurse practitioner is advocated as optimal for delivery of primary health care (Pringle et al., 2000). The literature is not definitive on the particular ratios of physicians to other health professionals.

The medical home is defined as a regular source of care, where the medical home could be a person (provider) or a place (Starfield and Shi 2004). To elaborate, the medical home as a central hub for the timely provision and coordination of a comprehensive menu of health and medical services, where the goal is to offer comprehensive and continuous high quality care by interdisciplinary teams (College of Family Physicians of Canada, 2011) The patient centered medical home is further described as providing access to a personal physician and physician led team, whose orientation is whole person centered, care is coordinated, and quality and safety are high (Ferrante et al., 2010) In addition, the patient centered medical home offers a relationship centered chronic care model (Nutting et al., 2009) Patients having a medical home has been associated in the literature with higher quality care, specifically better recognition of needs, earlier diagnosis, improved concordance, fewer visits to the emergency room and fewer hospitalizations, better prevention, better monitoring, fewer unmet needs, and improved patient satisfaction. (Starfield and Shi 2004)

A difference in the frameworks for interdisciplinary team based delivery lies in the hierarchical structure of the team. Where the patient centered medical home places great emphasis on the lead role of the medical physician, other frameworks emphasize the need for a non-hierarchical structure.

A team can be defined as a collection of individuals who share the responsibility of specified outcomes, and whose tasks are therefore interdependent (Cohen and Bailey, 1997). Typical interdisciplinary primary health care teams include physicians and nurses (registered, licensed,

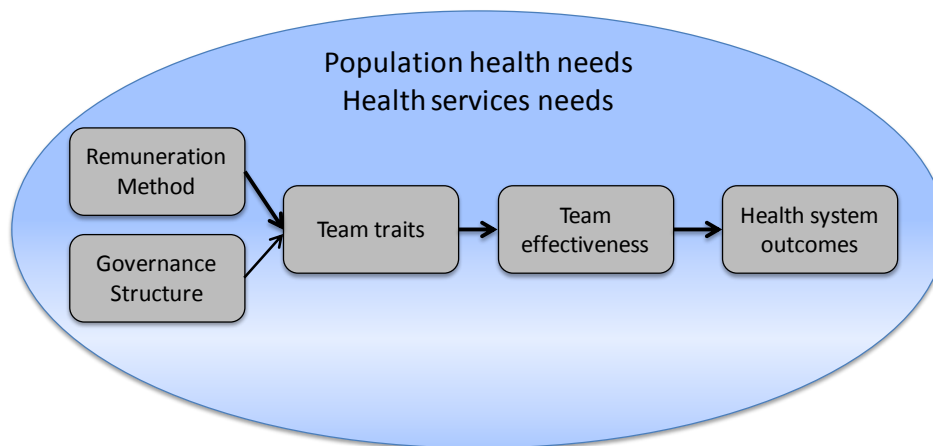
nurse practitioners etc.), and may also include dietitians, pharmacists, mental health workers and others. One study suggests a classification for the functions of primary health care team members: supplementary, complementary, or substitute to the physician (Wagner 2000). Supplementary functions are those that could be done by the physician, but possibly less efficiently, such as blood pressure measurement. Complementary functions are those that cannot be performed by the physician due to lack of time or skill. An example is nutritional counseling as a part of chronic care (Brauer et al., 2006). Substitute functions are traditionally performed by the physician, but shifted to other providers. An example is the recording of patient histories. When professionals less expensive than physicians take on supplementary or substitute functions, team delivery may result in improved efficiency (Grumbach and Bodenheimer, 2004; Lenihan and Iliffe, 2001). When complementary functions are added, the comprehensiveness and quality of care might improve.

## 5. TEAM EFFECTIVENESS: FACILITATORS AND BARRIERS

*“It is naïve to bring together a highly diverse group of people and to expect that, but calling them a team, they will in fact behave as a team.” (Rubin and Beckhard, 1972)*

Beginning in the early 1970s, scholars have been studying the features of teams that contribute to team effectiveness, and those that hinder team functioning. It is clear that teams that exhibit certain traits can be more effective than teams without those traits. (Beckhard, 1972; Rubin and Beckhard, 1972) **Table II** outlines the facilitators of team effectiveness as identified in the literature, and **Table III** outlines the barriers. The discussion of optimal team remuneration models, the focus of this report, is framed around their ability to support the facilitators and mitigate the barriers to team effectiveness. On the basis of state of knowledge in the literature, we developed a conceptual framework as shown in **Figure 1**. One strand of literature explores the effects of teams, as compared to other models of delivery, on health system outcomes. A second strand of literature investigates the associations between remuneration and governance structures and team traits or team effectiveness. We hypothesize that there exists a link between remuneration of teams and health system outcomes as mediated by the team characteristics.

**Figure 1 – Conceptual framework**



The organizational behaviour literature categorizes team effectiveness into three types (i) performance effectiveness that is measured in terms of productivity, efficiency etc.; (ii) member attitudes, measured in terms of satisfaction, commitment etc.; and (iii) behavioural outcomes, measures in terms of absenteeism, turnover rates and other similar indicators (Cohen and Bailey, 1997).

In terms of primary health care teams the literature tells us that well functioning teams can result in improved outcomes at three levels. First there is the potential for significant improvements in client health outcomes as a result of a comprehensive and coordinated approach to care delivery (Khan et al., 2008; Lowe & O'Hara, 2000; Rodriguez, 2007; Schuetz et al., 2010; Shaw et al., 2005). In addition to better client outcomes, providers themselves express enthusiasm for the team approach and report improved levels of job satisfaction when they are able to work in a truly collaborative team environment. (Drew et al., 2010; Lowe & O'Hara, 2000; Pearson et al., 2006; Solheim et al., 2007) Beyond the client and provider outcomes are well documented system outcomes that suggest more efficient and effective use of health care resources. (Lowe & O'Hara, 2000; Rodriguez, 2007; Schuetz et al., 2010; Solheim et al., 2007)

## 5.1 Facilitators of team effectiveness

The facilitators of highly effective teams can be grouped into four categories, between which there might be some degree of overlap, and which mutually reinforce one another (for references please consult **Table II**). We have identified in the literature four broad categories of team and contextual traits that contribute to team effectiveness: (i) transparency and clarity; (ii) togetherness; (iii) supportive processes; and (iv) institutional reinforcements.

Transparency and clarity are crucial components of effective team functioning in several areas. The explication of a vision, goals and measurable objectives, particularly when these are shared (a component of togetherness) gives direction to the whole team and all members within it. The explication of roles and responsibilities, as well as team processes related to decision making and clinical behaviours, mitigates conflict between team members, where conflict might arise due to misaligned expectations. A clear documentation contributes to team effectiveness by allowing all team members access to information about what has been done and what needs doing.

Togetherness is the category that captures traits that progress a group of individuals to functioning as a team. There are challenging to measure, as they are fairly elusive concepts. This category includes the sharing of the mission, and the sharing of decisions related to the organization and to clinical service. Teams that exhibit togetherness are inclusive of all interdisciplinary membership, where each individual feels a sense of allegiance not only to their individual profession, but also to their team.

Team composition is not extensively discussed in the literature. Wagner (2000) described the typical or desirable team members within the context of the US health care system. Research evidence, best practices or theory suggest that chronic disease management is improved with the involvement of

nurse case managers, medical specialists, clinical pharmacists, social worker, and lay health workers. (Wagner, 2000)

**Table II - Facilitators of team effectiveness**

**Sources**

Category	Component	Sources
<i>Transparency and clarity</i>	Explicit shared vision, goals, objectives, common purpose	Drew et al. (2010); Griffiths et al. (2004); Grumbach and Bodenheimer (2004); Proudfoot et al. (2009); Rubin and Beckhard (1972); Solheim et al. (2007); Hurst et al. (2002); Xyrichis & Lowton (2008); Shaw et al (2005);
	Clear definition of roles and expectations	Drew et al. (2010); Griffiths et al. (2004); Rubin and Beckhard (1972); Solheim et al. (2007) Hurst et al. (2002); Xyrichis & Lowton (2008);
	Explication of team processes (e.g. decision making processes; clinical processes)	Cohen and Bailey (1997); Grumbach and Bodenheimer (2004); Rubin and Beckhard (1972); Xyrichis & Lowton (2008);
	Clear documentation; measurable outcomes	Griffiths et al. (2004); Grumbach and Bodenheimer (2004); Pearson et al. (2006); Hurst et al. (2002)
<i>Togetherness</i>	Explicit shared vision, goals, objectives, common purpose	Drew et al. (2010); Griffiths et al. (2004); Grumbach and Bodenheimer (2004); Proudfoot et al. (2009); Rubin and Beckhard (1972); Solheim et al. (2007); Hurst et al. (2002); Xyrichis & Lowton (2008); Shaw et al (2005);
	Individual enthusiasm, allegiance to team (and own profession) or lack of buy-in as obstacle	Drew et al. (2010); Pearson et al. (2006); Solheim et al. (2007)
	Joint /shared decision making	Pearson et al. (2006); Rubin and Beckhard (1972); Solheim et al. (2007); Hurst et al. (2002)
	Team composition broad-based, inclusive, interdisciplinary	Solheim et al. (2007); Xyrichis & Lowton (2008);
<i>Supportive Processes</i>	Non-hierarchical structure, autonomy	Pearson et al. (2006); Solheim et al. (2007); Cohen and Bailey (1997); Hurst et al. (2002); Xyrichis & Lowton (2008);
	Good communication within teams (e.g. regular meetings)	Drew et al. (2010); Grumbach and Bodenheimer (2004); Pearson et al. (2006) Proudfoot et al. (2009); Rubin and Beckhard (1972); Solheim et al. (2007); Hurst et al. (2002); Xyrichis & Lowton (2008);
	Problem management and conflict resolution; non-autocratic management style	Griffiths et al. (2004); Proudfoot et al., (2009)
	Effective leadership	Griffiths et al. (2004); Proudfoot et al. (2009); Solheim et al. (2007); Rubin and Beckhard (1972); West et al., (2003)
	Coordination of activities	Grumbach and Bodenheimer (2004); Proudfoot et al. (2009)
	Education about teamwork	Murray et al. (2008); Schuetz et al. (2010); Solheim et al. (2007)
	Redistribution of resources (time, money, energy)	Drew et al. (2010); Nutting et al. (2009)
<i>Institutional reinforcements</i>	Clinical and administrative systems	Grumbach and Bodenheimer (2004); Grumbach and Bodenheimer (2004);
	Performance feedback	Johnston et al. (2011)
	Whole practice transformation, reimagination and redesign	Nutting et al. (2009)
	Esthetically leasing workspace with modern equipment, technology etc.	Hurst et al. (2002)

Supporting processes include processes for good communication, such as regular meetings and other fora, as well as the coordination of activities. Desirable processes also include effective non-autocratic leadership, conflict resolution, and a general non-hierarchical structure and autonomy for team members. The opportunity for education regarding effective teamwork has also been advocated as desirable.

Lastly, the institutional infrastructure further contributes to the degree to which teams function effectively. The change from isolated solo practices to interdisciplinary team practice is a whole system transformation that requires whole practice re-imagination and redesign. Resources, including human resources (time and energy), capital, and technology must be available to the process of change. Clinical and administrative systems, such as for instance electronic medical records, must be aligned with team processes. And finally, teams function better in esthetically pleasing clinic and office environments.

## 5.2. Barriers to team effectiveness

Barriers to the effective functioning of teams can also be classified into four broad categories, including: (i) mismanagement of resources; (ii) mismanagement of team diversity; (iii) miscommunication; and (iv) inappropriate education and training.

The effective management of resources creates the conditions outlined as facilitators of team effectiveness. Mismanagement is used here to indicate the failure to create those conditions by inaction or inappropriate action on the part of the managing authority. Examples of ineffective management of resources includes remuneration that does not reward prevention, collaborative activities, or patient education, the separation of team members into professional silos, and the creation of teams that are too large. Furthermore, insufficient resources to support the team members, such as limited physical space or lack of equipment, decreases team effectiveness.

The literature strongly suggests that interdisciplinary primary health care teams function best in non-hierarchical environments, where collaboration is supported and team members have valuable input into decision making.<sup>1</sup> A poorly managed interdisciplinary group in primary care may devolve into an undesirable management structure (e.g. hierarchical, with authority resting with one provider), as well as unjustified differences in status and pay.

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<sup>1</sup> Health care teams in other settings (e.g. hospitals) may benefit from a hierarchical structure.

The differences in educational and professional backgrounds need to be addressed with appropriate educational and training opportunities. Team effectiveness is hindered, when insufficient time and resources are devoted to training and innovation.

**Table III – Barriers to team effectiveness**

<b>Category</b>		<b>Sources</b>
<i>Mismanagement of resources</i>	Remuneration method does not address prevention, education, collaborative activities	Murray et al. (2008); Pringle et al. (2000); McDonald et al (2011)
	Limited physical resources such as cramped workspaces and lack of equipment	Hurst et al. (2002); Xyrichis & Lowton (2008);
	Insufficient human and material resources to support the professional team members	Hurst et al. (2002)
	Too large a team, although the optimal group size is varies between 2 and 6.	Griffiths et al. (2004); Grumbach and Bodenheimer (2004);
	Separation of roles into professional silos	Chesluk & Holmboe (2010); Jansen (2008)
	Differences in status and pay	Griffiths et al. (2004); Murray et al (2008);
<i>Mismanagement of diversity</i>	Power and authority resting with one provider (gatekeeper model) – this is also referred to as leadership and hierarchy	Ross et al (2000); Long (1996); Liao, et al (2010); Jansen (2008); Murray et al (2008); Shaw et al (2005);
<i>Miscommunication</i>	Misunderstanding of roles	Griffiths et al. (2004); Long (1996); Liao et al (2010); Murray et al (2008); Shaw et al (2005);
	Insufficient communication / lack of formal communications	Murray et al. (2008); Long (1996); Hurst et al. (2002); Shaw et al (2005); Jansen (2008); Murray et al (2008); Xyrichis & Lowton (2008);
<i>Education and training</i>	Differences in educational preparation	Griffiths et al. (2004); Murray et al (2008);
	Insufficient time, training, resources for innovations.	Murray et al. (2008); Jansen (2008)

Lastly, where clarity and transparency was a strong facilitator of team effectiveness, the lack of clarity creates a substantial barrier. The misunderstanding of roles, as an example, leads to differences in expectations that can results in conflict rather than togetherness. The lack of proper communication can also results in unfulfilled expectations that team members have of one another, and as a result, can lead to feelings of resentment and conflict.

## 6. TEAM BASED CARE IN CANADA, NEW ZEALAND, AND UNITED KINGDOM

This section of the report provides a description of team based approaches to primary health care delivery as used across Canada, New Zealand and the United Kingdom. **The focus here is on interdisciplinary care teams, and as such, we have not included teams that do not have an interdisciplinary component.** The data are derived from a scan of jurisdictional websites, and supplemental information from qualitative interviews with informants in jurisdictions, where online data was incomplete. Furthermore, academic and grey literature on team based PHC delivery in Canada is included. Appendix 1 provides a summary of the key features of team based primary health care delivery models by jurisdiction. Features tracked across all models include: the historical/ implementation context; the payment model; the degree of standardization across regions; the level of autonomy of teams; and contractual relations. This section provides a comparative analysis of these features.

Team based PHC models from eight Canadian jurisdictions are described, including British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia, and Prince Edward Island. In all eight provinces, team based PHC models were to a large extent funded by the Primary Health Care Transition Fund, and as such aimed in part or in whole to support the objectives of the Primary Health Care reform. This report focuses specifically on PHC teams with a suggested or required interdisciplinary component; physician group practices are not included.

**Table IV– Public health system models of team based PHC delivery**

<i>Jurisdiction</i>	<i>PHC health care team</i>
British Columbia	Primary Health Care Organizations
Alberta	Primary Care Networks
Saskatchewan	Primary Health Care Teams
Manitoba	Physician Integrated Network
Ontario	Family Health Teams;
Ontario	Community Health Centres
Quebec	Family Medicine Groups
Nova Scotia	Family Health Teams
Prince Edward Island	Primary Health Care Networks/ Family Health Centres
New Zealand	Primary Health Organizations
United Kingdom	General Medical Services

### 6.1 Implementation context

The implementation context is similar across Canadian regions, in the sense that the majority of physicians practice in a FFS environment, and the participation in team based care and the associated payment models is voluntary. The difference between provinces lies in the degree to which team based case and non-FFS payments have been explored in the past. As an example, Ontario has

undergone a series of province wide initiatives to reform primary health care in the last decade. Many physicians practice in FFS settings, but the culture of team care and non-FFS care is not new. Prior to the implementation of the FHTs, teams worked in Family Health Organizations and Family Health Networks, where all expenses were covered by the physician group. In contrast, Nova Scotia or Manitoba do not have a longstanding histories of team based models of care, therefore the participation in a Family Health Team is novel to most physicians.

**Table V – Implementation contexts across regions**

Region	History of team based care
British Columbia	Traditionally physicians were remunerated primarily through FFS. The Primary Health Care Organization allows for some FFS billings.
Alberta	The majority of physicians receive FFS payments, but the province has experimented with capitation based payments over the last decade. Participation in the Primary Care Networks is voluntary.
Saskatchewan	The majority of physicians works in a FFS environment. Moving to a Primary Health Care Team is voluntary, but requires acceptance of the conditions. To support team care, the province has offered financial and regulatory changes to the nursing profession, and has expressed openness to traditional healers.
Manitoba	The majority of physicians work in a FFS environment. The Physician Integrated Network began as a pilot program that accepted a small number of clinics. The adoption of the new model is voluntary.
Ontario – FHT urban	Many physicians practice in FFS settings, and a large proportion in team settings.
Ontario – FHT rural	Prior to the implementation of the FHTs, teams worked in Family Health Organizations and Family Health Networks, where all expenses were covered by the physician group. HSOs and CMCs were implemented in the 1970s.
Ontario - CHC	
Quebec	The province has a long history of negotiations surrounding team based delivery of care; the current model reflects outcomes of past negotiations. Before the team practice model was implemented, the majority of physicians received FFS payments.
Nova Scotia	Most family physicians practice in a FFS setting. The push toward team based delivery is relatively new. Many physicians are affiliated with the University, but these are primarily specialist.
Prince Edward Island	Prior to the development of the Primary Health Care Network, several government run health centres existed, but were not connected. Otherwise private FFS clinics were the norm.
New Zealand	The Primary Health Organizations are not-for-profit and replace the Independent Practitioners Association, which was a profit driven organization of practitioners. Participation is voluntary for groups of physicians and clinics.
United Kingdom	The United Kingdom has a long history of primary care reform, which is typically nation-wide and not voluntary. Primary Care Trusts, introduced in 1996, replaced the physician operated independent business model.

## 6.2 Degree of standardization across regions

The requirements with respect to team composition and interdisciplinarity can be standardized by a central payer, or be diverse across the same jurisdiction. Standardization offers clarity with respect to what is considered a sufficient level of interdisciplinary collaboration. The drawback is the inability to customize health care delivery to local needs. Standardized models are more likely to be developed by expert leaders, whereas diverse models are most likely to be customized by local health

providers. There is some evidence that centrally designed teams perform better in some circumstances (Rubenstein et al., 2002)

Of the ten jurisdictions compared here, three have an explicit requirement of interdisciplinarity, Ontario, Saskatchewan, and New Zealand (**Table VI**). The Family Health Teams and Community Health Centres in Ontario are interdisciplinary in nature; however, physicians who wish to practice in groups with no interdisciplinary component are able to do so in other types of organizations. The core composition of a Primary Health Care Team in Saskatchewan is predefined, whereas in New Zealand, the interdisciplinary requirement is vague.

**Table VI – Degree of standardization across regions**

Region	Team requirements
British Columbia	Some requirements apply to all Primary Health Care Organizations, including extended hours of service and continuous access. The composition of the team is at the discretion of the team, there is a recommendation of at least 3 physicians, and no interdisciplinary requirement.
Alberta	Team composition is at the discretion of the Primary Care Network. Target patient enrolment is 1500 per physician.
Saskatchewan	Team composition is decided at the level of the RHA, with the recommendation of 3-4 physicians and one nurse practitioner (larger in urban settings), where co-location is required. Other health professionals may join and need not be co-located.
Manitoba	A Physician Integrated Network site must have at least 5 full time physicians and at least 6500 active patients. Availability of space and scope to support other health professionals should be demonstrated, but there are no concrete requirements.
Ontario – FHT urban Ontario – FHT rural	Family Health Teams have an interdisciplinary requirement, unlike other group delivery models in Ontario (Health Services Organization, Family Health Group). Funding for interdisciplinary components is based on the number of registered patients. Extended hours and ongoing access to a tele-health advisory is required by the province.
Ontario - CHC	Composition is at the discretion of the CHC, but the essence is community involvement and interdisciplinarity that includes non health care providers (e.g. social workers). Community governance is a requirement.
Quebec	Recommended teams are 6-12 physicians with 1000-2200 patients each, and 2 nurses per 15000 patients. Interdisciplinarity is not a requirement.
Nova Scotia	Team composition is at the discretion of the team. To qualify for the collaborative practice program, the group must include at least 3 FTE physicians and 1 FTE other health care provider, and collaboration must occur weekly.
Prince Edward Island	Five Primary Care Networks operate in the province, each with specified membership. The number of physicians in a Family Health Centre determines eligibility for other providers, but interdisciplinarity is not required (interdisciplinarity is not costly to the clinic, therefore there is no disincentive).
New Zealand	Team composition is determined by the Primary Health Organization based on local needs. There is a requirement for interdisciplinary collaborate decision making, but requirements are broad.
United Kingdom	The pay-for-performance program includes incentives to reward interdisciplinary practice. Salaries of other health professionals are paid through the National Health Service, and as such, there is no cost disincentive to interdisciplinarity.

Interdisciplinarity is supported through financial incentives in all of the above models; however, in some instances, funds are earmarked specifically for interdisciplinarity (Manitoba, Nova Scotia, Prince Edward Island and the United Kingdom). In Manitoba, clinics must demonstrate that they are able to accommodate other health care professionals to qualify for the Physician Integrated Network. In Nova Scotia, physicians can qualify for the collaborative practice incentive payment through a collaboration of three physicians and at least one non-physician provider. In Prince Edward Island other providers are available to clinics that reach threshold sizes at no added cost to the clinic. The U.K. offers a substantive incentive to collaboration, and the addition of other health professionals to a clinic is funded through the National Health Service.

Interdisciplinarity is required in New Zealand, and Ontario models, with no specific earmarked incentive payments for collaboration. Interdisciplinarity is recommended, but not required in British Columbia, Saskatchewan, Alberta, and Quebec.

Some jurisdictions specify desirable ratios of patients to health care providers, or ratios of physicians to other providers (see Table VI), but these are guidelines rather than requirements or eligibility criteria.

## 6.3 Payment model

Payment methods to providers can include fee-for-service (FFS), capitation, and salaries, blends of the three methods, as well as bonus pay-for-performance models. The FFS method, which is the predominant form of payment to primary care physicians in Canada, creates the incentive to provide high quantities of care, as long as particular procedures are billable. The capitation method offers a fixed payment per time period per patient. Capitation creates the incentive to accept large numbers of patients, but from the purely financial standpoint, there is motivation to treat relatively healthy patients. A salary is a fixed payment per time period that is not related to the volume of service or the number of patients served. It does not motivate seeing large numbers of patients or offering large quantities of health care, but does provide stability and predictability of income. Increasingly across Canada, blended payments models are used that combine capitation with FFS or salaries with FFS, thereby combining their advantages. (Wranik and Durier-Copp, 2010) Furthermore, many provinces are adding pay-for-performance methods of remuneration that offer bonus payments for the achievement of targets in the provision of specific services. (Wranik and Katz, 2012).

The academic literature focuses on payment methods to individual providers, but offers less theory or conceptualization of payment methods offered to groups, and the payment flows within groups. This section describes the payments to groups and individuals within groups in Canadian primary care. Payment models offered to physicians and other health professionals vary between regions. In

some instances, clinics as entities receive payments, in other instances, individual health care professionals receive the payments. (Table VII) The payment models are closely linked with the contractual relations between Ministries, Regional health authorities, clinics, and individual health care professionals.

In Saskatchewan, Ontario and Prince Edward Island, physicians receive salaries from the Ministry or RHA. In both provinces, other health care professionals that are a part of the team receive salaries from the Ministry or RHA. In some instances, physicians in Saskatchewan work under contract rather than in an employment relationship, which is explored further in the next section. Some physicians in PEI continue to bill on a FFS basis. To work as a member of a Primary Health Care Network, however, they are required to contribute 30% of their billings toward the network. Only Community Health Centres in Ontario offer salaries to physicians, as well as other team members. Community Health Centres are one of four types of team models in PHC, their distinguishing feature being a community governance board.

Capitation in its pure form or blended with FFS is offered in five of the regions, including B.C., Alberta, Ontario, New Zealand and the U.K. The Primary Health Care Organizations in B.C. offer capitation payments adjusted for patient age, gender and past health services utilization directly to physicians for patients that are officially rostered. Non-rostered patients can receive services on a FFS basis, and FFS is paid for the provision of services not included in the standard basket. Other health professionals in the team are paid by the clinic as negotiated with the clinic. In Alberta, Primary Care Networks receive per capita payments based on formal and informal patient enrolments. Physicians are able to bill FFS (or are a member of an academic or clinical Alternative Payment Plan), whereas other health professionals receive mostly salaries from the capitation funding. Capitation is also offered in Ontario's Family Health Teams. It is supplemented with FFS carve-outs for specific services, and pay-for-performance payments for targeted services or services to targeted populations. In New Zealand, capitation is offered to physician for registered patients, and FFS for non-registered patients and for targeted services. Teams have the opportunity to take part in pay-for-performance plans. A similar structure is offered in the United Kingdom, where clinics receive capitation payments and are members of an extensive nationwide pay-for-performance program. The capitation payment is based on a complex formula (the Carr-Hill allocation formula), and constitutes the core funding for the practice (Rhys et al., 2010). All practice expenditures, including the overhead costs, and the payments to providers within a clinic must come from the income derived through core funding, the pay-for-performance program, or fee for services payments for enhanced services. Compensation arrangements between clinics and physicians vary, while other health professionals receive salaries.

In Manitoba, Quebec and Nova Scotia, physician that work in teams continue to bill FFS as a primary source of funding. Manitoba clinics who are members of the Physician Integrated Network are

eligible to receive start up funding, as well as bonus payments for the achievement of targets in chronic care. All other health professionals are paid out of the clinic's earnings. Physicians in Nova Scotia receive FFS payments, and can qualify for the collaborative practice incentive program by working with other providers. Physicians in Quebec receive FFS payments and pay-for-performance bonuses for targeted activities, as well as funding for collaborative and administrative activities. Other providers receive salaries directly from the Ministry.

A qualitative descriptive study of five interdisciplinary clinics across Canada reveals that these types of clinics operate in a variety of contexts, and specifically to this report, use a variety of remuneration approached to reward their staff. (Prada et al., 2005) Case studies

**Table VII – Payment arrangements across regions**

<b>Region</b>	<b>Payment method</b>
British Columbia	Physicians receive capitation adjusted for age, gender, utilization for rostered patients. FFS for services outside of the basket or to non-rostered patients. Other professionals paid by the clinic as negotiated at the clinic level.
Alberta	Physicians receive FFS or are a part of an Alternative Payment Plan. Clinics receive capitation that is based on formal and informal enrolments. Other health professionals receive salaries out of the capitation payments. Additional funding is available for business development and governance.
Saskatchewan	All team members, including physicians, are employed by the Regional Health Authority and receive salaries. Some work on contract with Regional Health Authorities. Funding is also available for relocation.
Manitoba	Physicians receive FFS. Bonus payments for the achievement of targets in chronic care paid to the clinic. Clinics are eligible for start-up funding. All other providers are paid out of the physicians'/clinic's earnings.
Ontario – FHT urban	The Family Health Team receives a blended capitation payment that is based on the number of enrolled patients and blended with FFS carve-outs, and bonus payments.
Ontario – FHT rural	The Family Health Team in rural or underserved areas receives a blended complement payment that is based on the number of physicians in the team, and blended with FFS.
Ontario - CHC	The Community Health Centre, and a rural FHT with community governance, offers salaries to physicians and all other team members.
Quebec	Physicians receive FFS and bonus payments for targeted activities. Collaborative and administrative activities are billable. Other team members receive salaries from the Ministry.
Nova Scotia	Physicians receive FFS and can qualify for a collaborative practice bonus payment when working in a team that includes at least one non-physician provider.
Prince Edward Island	Physicians and other providers receive salaries from the Ministry. Some physicians bill FFS, but are required to contribute 30% of their earnings toward the Family Health Centres, if they wish to participate in such.
New Zealand	Physicians receive capitation payments for registered patients, plus FFS payments for targeted services and non-registered patients. There is the option of taking part in a pay-for-performance program. Funding is available for office management.
United Kingdom	Clinics receive capitation payments and are a part of an extensive nation-wide pay-for-performance program that accounts for around a quarter of the earnings. Other providers are paid by the clinic, whereas overhead costs are paid through the Global Sum Payment.

## 6.4 Contractual relations

There is a strong linkage between the payment model and the contractual relations in practice. At the provider level, typically, salaried positions are offered in an employer-employee context, capitation payments or blended models are offered alongside a contractual agreement, and fee-for-service payments are associated with independent autonomous providers who operate as a business. As such, the fee-for-service model typically offers the most autonomy to individual providers in terms of the organization of the delivery of service, whereas the salary arrangement offers the least autonomy. Both a salaried position and a contract can of course have varying amounts of defined stipulations.

Contractual relations and payment arrangements between payer and the team, and within teams influence the degree of autonomy of individual health professionals within teams, the hierarchy within teams, and the degree of patient centeredness versus provider centeredness in care delivery. Literature has shown that hierarchical teams are less effective in the primary care setting, and in particular where such hierarchy impedes individual autonomy and ability to work to full scope of practice. A relationship between autonomy and patient centeredness is hypothesized below, although there is not current evidence to support this speculation.

In Manitoba and in Nova Scotia, the majority of physicians receive fee-for-service payments. The income of other providers within a team is funded, in full or in part, through the fee-for-services revenues. This arrangement results in a high degree of hierarchy, as well as a focus on the billable activities of a physician. This creates an environment where non-physician providers are not likely to practice to their full scope. They will not perform any activities that can be performed by the physician, as long as the physician is able to bill for those activities. Therefore the activities of the other professionals are limited to non-billable services that enable the physician to spend more time on billable services (e.g. taking of patient history). Patient centered care is not supported by this arrangement, as long as patients could benefit from complementary activities that are not billable (e.g. nutritional counseling).

Alberta and British Columbia utilize a model in which a clinic receives capitation payments, and the capitation revenues are used to fund most of the other health professionals' incomes. While there is interdependence between the incomes of team members, all team members contribute to the generation of capitation funding, particularly if the capitation is based on a patient roster. In a geographical roster system, all team members are equally non-responsible for the funding amount. This system can provide support for patient centeredness, specifically when coupled with clear allocation of roles and responsibilities in a system of whole patient care.

The emergence of the primary care groups in the UK in the late 1990s saw general practitioners take on what some describe as a gatekeeper role in these new entities. The general practitioner became the *de facto* leader and employer in the practice group meaning that the practice nurses as well as the others are in a direct employee-employer relationship with the physician. (Hurst et al, 2002; Ross et al, 2000).

The direct employment of the non-physician professionals by the payer mitigates the direct line of responsibility between non-physician and physician providers, and reduces the interdependence of providers' incomes. This approach is used in Quebec and currently in the United Kingdom.

Three regions employ a model, where all providers including physicians contract directly with the Ministry or RHA, Saskatchewan, Ontario (Community Health Centres), and Prince Edward Island. This arrangement eliminates vertical hierarchical relationships between providers, and eliminates all competition between providers for shared pools of funding. This arrangement supports patient-centered care, where each provider is able to focus on patient needs. On the other hand, the salary system does not provide an incentive for high productivity on the part of individual providers. Again, a clear definition of roles and responsibilities in an integrated system of whole patient care is of key importance.

## 6.5 Level of autonomy

The level of autonomy of teams within the system bears a direct negative relationship with the degree of standardization. More standardization in a region translates into a lower level of autonomy of each team, in the sense of designing the program and organization of delivery.

The level of autonomy of individual providers within teams is related to the hierarchical structure of a team, as well as the leadership style. An autocratic leadership style has been linked to lower team effectiveness, suggesting that the feeling of autonomy among individual providers is an important contributor to individual and team performance. Similarly, there is a positive association between non-hierarchical team structures and team effectiveness, rendering more support for a high level of autonomy of team members. Financial remuneration methods can support autonomy, as described in the next section.

## 7. COMPENSATION OF TEAMS

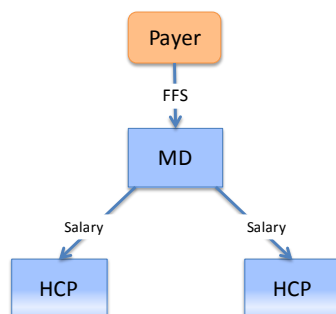
There is a paucity of scholarly literature that addresses the question of optimal remuneration in an interdisciplinary team context, despite a clear recognition that compensation is an important contributor to team effectiveness. The literature provides some discussion of how not to remunerate teams, and some general discussion that appropriate payment structures are required. What these appropriate payment structures are remains to be determined.

This section provides a functional conceptual framework that is based on the analysis of examples from Canada, New Zealand and the United Kingdom as described in the previous section. The framework outlines four broad models of contractual structures and remuneration in teams, and is populated with case studies. The section concludes with a discussion of the scant empirical evidence addressing the effects of contractual and remuneration models on health services and outcomes. References for the examples provided can be found in **Appendix 1**, which offers a description of team based health care in selected jurisdictions.

### 7.1. Conceptual Framework and examples

The framework provides four types of compensation models for interdisciplinary team based delivery of care. The models here are a broader conceptualization than the examples described above, in that several of the examples can fit within a model. The conceptualization uses four players in each model: (i) the payer, which is the provincial health ministry or regional health authority; (ii) the clinic, which is the whole group of health care providers and administrators; (iii) physicians (MD), who are the medical primary care physicians; and (iv) other health professionals (HCP), who are the other members of the team of health care providers, not physicians. The latter group can include nurse practitioners, nurses, physician assistants, pharmacists, nutritionists, dieticians, chiropractors, and others. Each model describes different contractual and payment relations between the players.

#### *Model 1 – Physician as the clinic*



This is a standard solo or group practice that has employed other health professionals. The physician bills the payer on a fee-for-service basis, and then enters into an employment contract with other professionals. Physicians might also receive blended payments, salaries, or be remunerated through an academic payment plan. The defining features are that (i) all revenues of the clinic depend on the activities of the physician, and as such there is not a clinic as a separate entity; and (ii) other professionals are paid from the revenues generated by the physician. This model creates a hierarchical structure, where the physician takes lead of all clinical decision making and the employment of the other health professionals directly depends on the physician's behaviour. Other health care professionals have the function of supporting the physician and it is in their best interest to create conditions, where the physician is able to maximize the quantity of services.

In this situation, tasks that can be performed by the physician and are billable will not be delegated to other health professionals. Tasks that are not billable will either be delegated, or not performed.

### *Model 1 – Examples*

The majority of physicians in Canada receive their income through fee-for-services payments, with as many as 86% of payments to physicians coming via fee-for-service payments in British Columbia, and as few as 53% in Ontario (CIHI, 2010). Most Canadian practices would therefore fall into this category. Discussed below are examples of interdisciplinary team practices that represent this model.

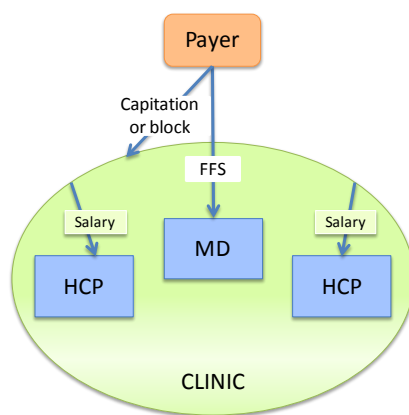
Ontario's standard (non-rural) Family Health Teams most closely fit into this category, although the payment to physicians is a blend of capitation, fee-for-service carve-outs, and additional pay-for-performance payments. As such, some Family Health Teams might fit into Model 2, as well. Additional funding is available to promote interdisciplinarity and to support administrative systems of teams. Other health professionals are compensated either through physician revenues, or through the clinic. The classification into model 1 or model 2 largely depends on the governance structure of the clinic. Where clinics are governed by a board of directors, in urban settings these are most commonly provider led, and de facto the clinic is the physician (or group of physicians). In rural settings, the board is community led, which separates the physician from the clinic (model 2).

The Rosedale Medical Group is a Family Health Team in Hamilton, Ontario (Prada, 2005). The practice began in the mid-1970s, was transformed into a Health Services Organization in 1986, and became a Family Health Team in 2005. The team consists of six physicians who receive a blend of fee-for-services and capitation payments. The physicians-as-clinic employ two nurse practitioners, one nurse specialist, seven registered nurses, and other professionals. Two chiropractors and two mental health counselors practice in the same space, but receive salaries from other funding sources. Given

the multiple funding sources and the partial capitation funding to the clinic, the Rosedale Medical Group is not a pure doctor-as-clinic model, but incorporates some elements of model 2.

Nova Scotia Family Health Teams are a near-perfect example of the physician-as-clinic model. Physicians are compensated primarily via fee-for-service billings and at times via contractual agreements. Physicians can qualify for a collaborative practice incentive program payment, if they practice with at least three other physicians and one other interdisciplinary health care professional. The health professional is paid through physicians' revenues, and supplemented with some funding for mentorship, team development and recruitment. Current Family Health Teams in Nova Scotia include physicians and nursing professionals, and in a few instances, pharmacists.

### *Model 2 – Physician as separate from the clinic*



In this model, the physician is remunerated separately and the clinic is remunerated separately, both directly by the payer. The clinic employs and pays other health professionals. The physician bills on a fee-for-service basis, while the clinic receives a lump sum payment per time period. The lump sum can be based on actual enrolments (capitation) or a geographical catchment (block).

This model de-links the activities of the physician from the incomes of the other health professionals, and as such affords greater autonomy and status to the other health professionals. The governance structure and decision making processes of the clinic would determine the degree of hierarchy within the clinic.

### *Model 2 – Examples*

Examples of the “Physician as separate from the clinic” model can be found in Ontario, Alberta, Manitoba, and the United Kingdom. The Ontario Family Health Teams, as described above, fit into this

category, when the board is not physician led, and as such, the physician is separate from the clinic as an entity.

Primary Care Networks in Alberta are good examples of model 2, where the clinic is separate from the physician (or group of physicians), but the income to the clinic to a large degree depends on the activities of the physician. Under the Local Primary Care Initiative, each physician in a participating site is an independent contractor; physicians are not employees of the PCN. Capitation and PCI-specific funding for Alberta's Primary Care Networks can take one of two forms, depending on the legal structure of the Primary Care Network. In the first legal structure, the physician non-profit corporation (formed by the individual physicians participating in the Primary Care Network) enter in to a joint venture agreement with Alberta Health Services. Under this structure capitation funding is directed to either Alberta Health Services, or the physician non-profit corporation. Likewise, non-physician health providers of the Primary Care Network are employees of either Alberta Health Services or the physician non-profit corporation. In the second legal structure, the physician non-profit corporation (formed by the individual physicians participating in the Primary Care Network) enter in to a joint venture agreement with Alberta Health Services, and a Primary Care Network non-profit corporation (PCN NPC) is formed through the joint venture agreement. Under this structure, capitation funding is directed to the PCN NPC, and all non-physician health providers are employees of the PCN NPC.

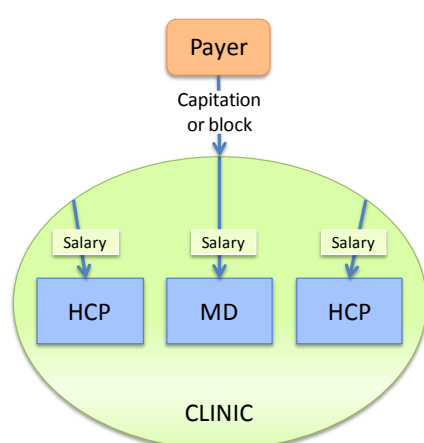
An example is the Chinook Primary Care Network, that includes three primary health care groups: Taber Associate Medical Centre, Pincher Creek Medical Clinic and Lethbridge Family Medical Practice. Some physicians in these clinics are remunerated via an alternative payment plan that blends salaries with fee-for-service payments, other physicians receive fee-for-service payments. The other health professionals are employed by the network or by individual clinics, and receive salaries. (Prada, 2005)

The Manitoba Physician Integrated Network offers compensation to physicians through the standard fee-for-services model. Other payment, including the quality based incentive funding, and funding for information management systems and plan implementation, are offered at the clinic level, however, which separates the physician from the clinic. Other health professionals are employed by the clinic on a salaried basis or are otherwise compensated.

The General Services Contract in the United Kingdom is an international example of model 3. Physicians are remunerated though a blend of capitation and fee-for-services payments. There is emphasis on the contractual relationship being between the clinic and the National Health Service, rather than with the individual physicians. The Quality and Outcomes Framework, a national and extensive pay-for-performance program, offers bonus payments to the clinics, not individual physicians, for the achievement of targets in several clinical and administrative areas, including

interdisciplinary practice. Other health care providers are employed by the practice, and their associated salaries are paid through the National Health Services Global Sum payment. The introduction of the Quality and Outcomes Framework was a conscious effort to break down the hierarchical structure of physician led clinics; the framework even allows for nurse-led practices.

### *Model 3 – Physician integrated into the clinic*



In this model, the clinic is remunerated as one entity by the payer, either on the basis of patient enrolments or the potential population of patients in a catchment area. The clinic enters into an employment contract with all team members equally and offers salaries.

### *Model 3 - Examples*

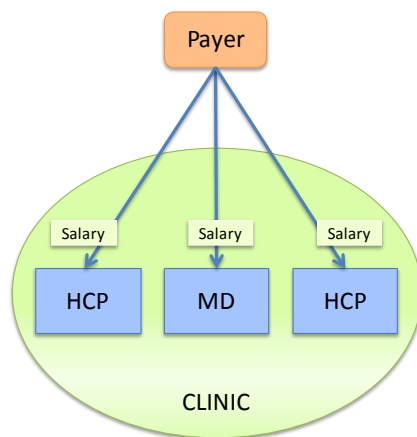
Unlike the Family Health Teams in Ontario, Community Health Centres are completely separated from the physician, and physicians are remunerated in the same manner as other health professionals. In most instances, physicians and other health care providers are offered salaries, and have employment agreements with the clinic. The clinic is governed by a community-led board of governors. The Community Health Centres receive funding from their Local Health Integration Network (rather than the Ministry).

Primary Health Care Organizations in B.C. are required to operate as entities separated from the physician. The organizations must have one Medical Services Plan payment number, and only one bank account for payment deposits. Therefore there is focus on ensuring that payments are made to the clinic, and not to individual physicians. All patient services rendered by any health care provider (physician or non-physician) in a Primary Health Care Organization are shadow billed. These shadow billings inform the patient Adjusted Clinical Group (ACG) data which determines the amount of capitation funding a practice receives. The capitation funding is then used to compensate the Primary Health Care Organization's team members. Payments to health professionals within the clinic may

take a salary form, or a different form, as per the discretion of individual clinics; the defining characteristic is that there is a contractual relationship between providers and the clinic as a separate entity.

Primary Health Organizations in New Zealand fit most closely into model 3, where the physician is integrated into the clinic on par with other health care providers. Guidelines regulating the Primary Health Organizations define service providers to be general practitioners, practice nurses, and a range of other health professionals, therefore the Primary Health Organization is not physician focused. The organization must be a not-for-profit entity, and as such is a separate entity from the physician, who is integrated into the clinic. The organization is responsible for funding its own employees, none of whom are employees of the Ministry of Health or the District Health Board. The payments to health professionals by the clinic are not standardized and clinics are able to determine the form of payment they offer. As such, health professionals might receive salaries (as illustrated above, or they might partake in a different contract. The defining characteristic is that the clinic as an entity contracts with all of its health professionals.

#### *Model 4 – Physician equivalent to other health professionals*



In this model, the payer contracts directly with all health professionals including the physician, and all are offered salaries. This model removes the hierarchical structure entirely. Decision making processes within the clinic could create a hierarchy, but as far as remuneration, this structure fully supports team effectiveness.

#### *Model 4 – Examples*

Saskatchewan's Primary Health Care Teams offer conditions that exemplify model 4. All providers within a team, including physicians and non-physicians, receive salaries. There are no fee-for-service billings available, once providers decide to join a Primary Health Care team. The employment

contacts are between the individual providers and the regional health authority, with negotiations being conducted between the regional health authority and the professional organization. As such, individual physicians do not hold bargaining power within the clinic or with the payer. In some circumstances, physicians might accept a contract rather than a salaried employment, the former retaining more professional autonomy.

Primary Health Care Networks and associated Family Health Centres in Prince Edward Island are not standardized across the province. Many, however, fall in the category of model 4, where physicians and other providers are compensated through salary. All team members, whether salaried or otherwise remunerated, are employees of Health PEI.

Examples of this model can be found also in other jurisdictions, although the model is not standardized across these provinces (Prada, 2005). The Nor'West Co-op Community Health Centre is a not-for-profit accredited health agency that is located in Winnipeg, Manitoba. The clinic is interdisciplinary, consisting of physicians, nurses, a reproductive health educator, a dietitian, and a number of other providers. Most providers within the clinic are paid salaries by the regional health authority, with some providers working on contract or receiving funding through other government sources. The Mid-Main Community Health Centre is a not-for-profit health centre located in Vancouver, B.C. The clinic is interdisciplinary and includes physicians, a nurse specialist, a clinical pharmacist, and a dietitian. All team members are salaried and employed by the regional health authority, with some other government sources of funding. The Dr. Charles L. LeGrow Health Care Centre is a multi-functional district health centre located in the town of Port aux Basques in Newfoundland. The clinic is interdisciplinary, and includes physicians, a recreational therapist, nurse practitioners, a physiotherapist, a social worker, public health nurses, and other health professionals. All team members are employed by the government and receive salaries. (Prada, 2005)

## 7.2 Effects of compensation on health services and outcomes

The question about team compensation has already been posed with respect to the teams emerging in the 1960s. "Payment systems failed to reimburse work performed by non-physician professionals members of the team, undermining the financial viability of teams." (Grumbach et al., 2004) As mentioned, our understanding of remuneration of teams is lacking, with little empirical evidence of which remuneration models work best in which contexts.

Cohen and Bailey (1997) briefly address the question of rewards in the context of factors that determine team effectiveness. Rewards are classified into collective and individual. Collective rewards motivate at the group level only when tasks are interdependent, whereas individual responsibilities are best incented with individual level rewards. (Cohen and Bailey, 1997) Using a

qualitative case study approach, Prada (2005) concludes that the key is to compensate health professionals for collaborative activities, such as meetings, consultations, team discussions, and team administration. There has also been some discussion around pay-for-performance programs being able to motivate team effectiveness, and concerns have been raised that these programs might not support care continuity, effective communication, or coordination across providers (Snyder and Neubauer, 2007). Bonus payments would have to be carefully designed to specifically reward collaborative activities, and indicators of communication and coordination.

Pay-for-performance programs have been implemented in British Columbia, Manitoba, Ontario and Nova Scotia. Payments can depend on the activities of the physician (Nova Scotia, Ontario, British Columbia) or the clinic as a whole (Manitoba, United Kingdom). A detailed discussion of these programs can be found in Wranik and Katz (2011). Pay-for-performance programs can include rewards for collaborative and patient centered activities (e.g. the mapping of patient care plans, including the assignment of services and providers), but can also crowd out those activities by shifting focus to targets in specific services (e.g. cancer screening test by physicians).

A \$1.2 million study, resulting in several scholarly publications, was initiated in 2004 in Ontario under the Primary Health Care Transition Fund (Hogg et al., 2009). The study compared team based to standard delivery of care (Hogg et al., 2009), and also drew several comparisons between four types of delivery models: standard fee-for-services clinics, Family Health Networks, Health Services Organizations, and Community Health Clinics. (Milliken et al., 2011, Muldoon et al., 2010, Russell et al., 2009, Tu et al., 2009)

Community orientation, defined as an ability to recognize and address social and environmental health determinants, was demonstrated in the Community Health Clinic setting, and not well demonstrated in standard physician led organizations that are remunerated via fee-for-service or capitation. Community activities were best performed by non-physician health care professionals within clinics (Muldoon et al., 2010). Fee-for-service physicians were least likely to work with nurses or nurse practitioners. (Tu et al., 2009)

Community Health Centres also had the highest overall performance in chronic disease management. Performance was also higher in practices working with nurse-practitioners (but not other health professionals), and in smaller practices. Patient loads in large practices were associated with lower chronic care performance, but also with lower costs. Qualitative findings suggest that longer consultations improve chronic disease management, and collaborative team practices increase the accuracy and comprehensiveness of charting. (Russell et al., 2009)

On the other hand, Primary Care Networks outperformed Community Health Centres and standard fee-for-service practices in the management of hypertension, as measured via screening rates,

treatment rates, and control rates. (Tu et al., 2009) Community Health Centres were also least efficient when measured as the ratio of inputs and outputs, in comparison with Family Health Groups and Health Services Organizations. This was attributed to an underused capacity within Community Health Centres. (Milliken et al., 2011) Fee-for-service practices were found to be most productive (Tu et al., 2009, Milliken et al., 2011) and also most efficient (Milliken et al., 2011).

## 8. CONCLUDING REMARKS

This report is the first of two in a series. The purpose of the first report is to provide an analysis of possible methods for the remuneration of teams and team members in primary health care. The purpose of the second report is to identify, which possible remuneration method is most suitable for which context, as defined by the current models of health care delivery, goals of health service delivery, and the patient population profile. Furthermore, the purpose of the second report is to identify the most suitable options for the province of Alberta. As such, the focus of the first report is on the methods of team remuneration in public payer health care systems, including nine Canadian jurisdictions, New Zealand, and the United Kingdom.

The delivery of primary health care services using interdisciplinary teams has long been advocated, and suggested as an improvement over services delivered by medical physicians in isolation. A body of academic literature is devoted to the discussion of the advantages of interdisciplinary teams as compared to sole-profession practices. The most common advantages of teams discussed are improvements in health promotion and chronic disease management, through improvements in collaboration, care comprehensiveness and care continuity. Further advantages lie in improved employment conditions and employee satisfaction. These advantages are realized by effective teams, only, and the literature offers good insight into the characteristics associated with team effectiveness.

Effective teams require transparency and clarity, including fora for communication, and explicit processes for clinical practice, collaborative activities, joint decision making and conflict resolution. Teams appear to be more effective when non-hierarchical, although solid leadership is required. Team effectiveness is supported by interdisciplinary education and training, well developed administrative and IT systems, and sufficient resources.

The method of remuneration of the team and of individual team members influences important team characteristics, and in particular the hierarchy of the organization, the autonomy of individual team members, and the opportunity to work collaboratively and respond to community needs. The scholarly evidence of the effects of remuneration methods on team effectiveness is scant. Based on a comparative analysis of active interdisciplinary teams in Canada, New Zealand and the United Kingdom, we have developed a framework that identifies four types of team structures, as defined by contractual relations and remuneration methods. There is some indication in the literature that models where all providers are working under the same type of employment agreement perform well along a number of criteria, including community orientation, chronic disease management, and collaboration. An example of this model is the Community Health Centre model in Ontario. On the other hand, this model appears least efficient in terms of resource use, possibly due to underutilized capacity.

It is clear that a panacea approach does not exist to the organization and remuneration of interdisciplinary teams in primary health care. The identification of most appropriate models for any jurisdiction is contextual and best done with a clear understanding of the goals to be achieved, the existing models of care delivery, and the political realities associated with the implementation of any recommendation.

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## APPENDIX 1: JURISDICTIONAL SCAN

### British Columbia

#### Primary Health Care Organizations

*British Columbia's 14 Primary Health Care Organizations are interdisciplinary practices that aim to improve the province's health outcomes through providing 24 hour access to primary health care services and connecting previously unattached patients to a Primary Health Care Organization.<sup>1</sup>*

**Payment Models** Primary Health Care Organizations are compensated through a blended funding model; population-based funding and fee-for-service funding.

- Population-based funding for core and extended services offered to registered patients is paid to the Primary Health Care Organization quarterly. Population-based funding is derived from the adjusted clinical group (ACG) daily rate for each patient. The patient ACG is assigned based on the patients' age, gender, and information gained through shadow billings.<sup>2</sup>
- Fee-for-service funding is provided to physicians for services given to non-registered patients and for services given to registered patients that are outside of the core/extended scope.<sup>3</sup>

#### Standardization Across Regions

All PHCOs must offer the following:

- Extended hours of service;
- 24-hour / 7-day access to core services through on-call availability; Primary Health Care Organizations can network with one another to create on-call groups to share this responsibility; and
- The composition of the team is determined by the individual clinic based on the local health needs.
  - It is recommended that the Primary Health Care Organizations have at least 3 physicians, and each physician service approximately 1500 patients.<sup>4</sup>

**Contractual Relations** The Ministry of Health Services provides funding to regional health authorities, who commit to performance agreements with the Ministry. Individual regional health authorities provide funding to Primary Health Care Organizations and in turn the Organization commits to a blended funding contract with the regional health authority.<sup>5</sup>

**Level of Autonomy within Teams** Primary Health Care Organizations are required to have only one Medical Services Plan (MSP) payment number and only one bank account for MSP to deposit payments. Thus payments are made to the clinic itself and not the individual physicians.<sup>6</sup> Other health professionals are employees of the Primary Health Care Organization.

**Historical Context and Implementation** Traditionally, family physicians were remunerated primarily through fee for service models. The transition to the Primary Health Care Organization allows for some fee for service billings, but is largely capitation-based.<sup>7</sup> Participation is voluntary for physicians participating in Primary Health Care Organizations.

**Additional Information** The Ministry of Health Services is unique in that it allows for non-physician service providers to shadow bill with the MSP. Thus the Primary Health Care Organization is not penalized in their capitation funding for services provided by other health care providers.<sup>8</sup>

# Alberta

## Primary Care Networks

*Alberta's Primary Care Networks increase patient access and care by coordinating services between physicians and other health care providers. Primary Care Networks can take the form of one practice, or many locations spread over a geographical area. There are currently 40 Primary Care Networks in Alberta.*<sup>9</sup>

### Payment Models

Physicians practicing in Primary Care Networks choose from either a fee for service or alternative payment plan remuneration model.<sup>10</sup>

Primary Care Network clinics receive capitation funding based on informally and formally enrolled patients (\$50 / patient / year). Informal patient enrolment is determined based on patient encounters, which can be with physicians or other health care providers.<sup>11</sup>

There are restrictions on the ways in which the capitation funding may be spent by the clinic. Restricted spending includes major infrastructure and physician remuneration that is already paid for through either fee for service or alternative payment plans; allowable spending includes salaries of other health care providers. Additional funding is provided to Primary Care Networks for business plan development (up to \$250,000 depending on size) and the governance of the Primary Care Network.<sup>12</sup>

### Standardization Across Regions

The composition of the team is determined by the individual Primary Care Network based on the local health needs. Target patient enrollment is 1500 patients / FTE physician.<sup>13</sup>

### Contractual Relations and Level of Autonomy within Teams

Primary Care Networks are based on one of two contractual models with Alberta Health Services.<sup>14</sup>

Model #1: Individual physicians form a non-profit physician corporation; this corporation enters into a joint venture agreement with Alberta Health Services. In this model, employees of the Primary Care Network can be hired by either the physicians' corporation or Alberta Health Services.

Model #2: Individual physicians form a non-profit physician corporation; this corporation enters into a joint venture agreement with Alberta Health Services, which forms a Primary Care Network Non-Profit Corporation. In this model, employees of the Primary Care Network are hired by the Primary Care Network Non-Profit Corporation.

### Implementation

Participation in a Primary Care Network is voluntary, and the physician(s) chose from which funding model they are compensated (FFS, APP).

### Additional Information

The number of encounters is typically calculated by multiplying the number of service providers (physician and non-physician) and the number of patients (exceptions are around large numbers of unidentifiable patients). For example:

1 patient meets with 3 providers = 3 encounters

2 patients meet with one provider = 2 encounters<sup>15</sup>

While target patient enrollment is 1500 patients/FTE physician, for those Primary Care Networks who are unable to achieve the target, (perhaps due to operating in smaller regions) grants are awarded to bring up capitation funding to the target levels. For example, if a Primary Care Network with 3 FTE physicians had a patient enrollment of 1000 patients/FTE physician, they would receive capitation funding (\$50/patient/year) for 500 patients, per FTE physician.<sup>16</sup>

## Saskatchewan

### Primary Health Care Teams

*Saskatchewan currently has 73 Primary Health Care Teams which aim to improve health care outcomes by providing patients with access to the most appropriate providers for treating, managing, or preventing illness and disease. Cost containment is also a goal of the program, and is pursued through encouraging interdisciplinary health care provision that utilizes appropriate scopes of practice.*

#### Payment Models

Physicians are paid on a salary or contract arrangement. Fee for service payment models are not offered to physicians who chose to enrol as a Primary Health Care Team.<sup>17</sup>

Physicians who chose to practice in a Primary Health Care Team can receive relocation funding to go towards the buy-out of their previous practices.<sup>18</sup>

#### Standardization Across Regions

The composition of the Primary Health Care Team is decided by the regional health authority based on community needs.

- The standard, recommended team is comprised of:  
3-4 physicians / 1 primary care nurse practitioner
- The recommended Primary Health Care Team for urban regions is comprised of:  
5-10 physicians / 1-2 primary care nurse practitioners

While some other health professionals (ex. pharmacists, dieticians) do not need to be co-located, the primary care nurse practitioner must be co-located with the physician group.<sup>19</sup>

#### Contractual Relations

Contracts are held between the Primary Health Care Team members and the regional health authority.

- Physician contracts are negotiated between the regional health authority and the Saskatchewan Medical Association. Physician contracts include performance expectations.
- Other health professionals' contracts are negotiated between the regional health authority and the Saskatchewan Association of Health Organizations.<sup>20</sup>

#### Level of Autonomy within Teams

All Primary Health Care Team members are contracted by, or employees of, the regional health authority.

#### Historical Context and Implementation

Physicians in Saskatchewan operate primarily on a fee for service contract. Moving to a Primary Health Care Team is voluntary and requires physicians accept an alternative payment system (contract or salary).

#### Additional Information

To further encourage the development of teams, the province offered bursaries to registered nursing students and changed regulatory frameworks that register nurse practitioners.<sup>21</sup>

Under the *Patient and Family Centered Care* framework, Saskatchewan aims to be culturally respectful by integrating traditional healers into Primary Health Care Teams.<sup>22,23</sup>

## Manitoba

## Physician Integrated Network

*In order to improve health outcomes, Manitoba's Physician Integrated Network offers pay for performance funding to groups of fee for service physicians; physicians are encouraged to use the P4P funding to employ other health care providers. There are currently 13 PIN sites.*

<b>Payment Models</b>	<p>Physicians participating in the Physician Integrated Network are compensated through a fee for service model, and receive quality based incentive funding (QBIF) in addition to their fee for service payments. QBIF is determined based on indicator clusters, (ex. diabetes management or coronary artery disease management) selected by the individual clinics based on local community health needs. Physician Integrated Network clinics receive a percentage of available QBIF based on the clinic's achievement of the indicators.<sup>24</sup></p> <ul style="list-style-type: none"><li>• In the development phase, Physician Integrated Networks also receive funding for establishing information management systems (\$5,000 per clinic, and \$5,000 per physician) and for plan implementation (\$40,000 per clinic and \$5,000 per physician)<sup>25</sup></li></ul>
<b>Standardization Across Regions</b>	<p>Each Physician Integrated Network site needs the following:</p> <ul style="list-style-type: none"><li>• Minimum 5 FTE physicians</li><li>• Minimum 6500 current, active, patient roster</li><li>• Ability to support multidisciplinary health providers (in both physical space and administrative operability).<sup>26</sup></li></ul> <p>While funding is intended to encourage physicians to hire and utilize other health care providers, there are no formulas or requirements regarding the type of other health care providers.</p>
<b>Contractual Relations</b>	<p>Physician Integrated Network sites are contracted by Manitoba Health, under the guidance of Physician Integrated Network Resource Team. QBIF is paid to clinics, not individual physicians; however, QBIF funding is divided based on the number of physicians practicing within the clinic.<sup>27</sup></p>
<b>Level of Autonomy within Teams</b>	<p>Other health care providers are employed by the clinic and physicians in the clinic.</p>
<b>Implementation</b>	<p>Participation in the Physician Integrated Network is voluntary. Participant physicians continue to receive fee for service remuneration.</p>
<b>Additional Information</b>	<p>An evaluation of the Physician Integrated Network, which included interviews with the participating physicians, revealed that some physicians / clinics, did not view the QBIF to be enough of an incentive to continue with the program long term; however the initial funding for the implementation was an incentive to participate. Due to the unreliability of QBIF, many service providers noted that they would not feel comfortable increasing overhead costs by hiring other health professionals.<sup>28</sup></p> <p>A specific amount of funding is allotted for QBIF and based on levels of indicator achievement, participating physicians are eligible to receive a percentage of the allotted funding. Therefore this funding arrangement provides more stability for Manitoba Health than for individual clinics.<sup>29,30</sup></p>

## Ontario Family Health Teams

*Over 200 Family Health Teams in Ontario aim to increase access to primary health care services and register previously unattached patients. Family Health Teams focus on improving health outcomes.*

## **Payment Models**

Family Health Team physicians have three remuneration systems (the governance, organization, and structure of the family health team dictate which funding type the family health team can receive).<sup>31</sup>

- Standard family health teams with 1-3 physicians are compensated through a blended capitation model, in which the team receives capitation based on rostering, with fee for service carve outs (10% of shadow billing for enrolled patients and 100% of billing for non-enrolled patients), additional incentives and premiums based on particular initiatives are also offered.
  - 2 capitation payments are paid to the FHTs monthly. The first is a Base Rate Payment / enrolled patient; based on age, sex, and health status. The second is a Comprehensive Care Capitation Payment / enrolled patient.
- Family health teams practicing in pre-defined rural and northern areas are compensated through a blended complement model, in which funding is allocated based on the number of physicians and their associated overhead costs to operate. Additional fee for service billing for particular services and other incentives and premiums are offered through this model.
- Physicians in Family Health Teams with community led or mixed governance will be compensated through a blended salary model in which the salary and physician's overhead costs are paid for.<sup>32</sup>

Family Health Teams apply to the ministry (through their ministry contact) for interdisciplinary funding; approval is based on the number of registered patients (formula below). Overhead costs associated with the interdisciplinary health care providers are also provided.<sup>33</sup>

Family Health Teams with 5+ physicians are eligible to receive additional funding (an office practice administration grant) to hire an administrative assistant, and lead physicians / group leaders are compensated for their administrative time with 1\$ per patient, per year, to a maximum of \$25,000.<sup>34,35</sup>

## **Standardization Across Regions**

All Family Health Teams must offer extended hours and 24 hour nurse staffed tele-health advisory service.

Funding for other health care providers is based on the following formulas:

- 10000 patients = 1 pharmacist
- 4000 patients = 1 registered nurse
- Expansion of 400 patients is expected
- 4000 patients = 1 nurse practitioner
- Expansion of 800 patients is expected<sup>36</sup>

## **Contractual Relations**

The Ministry of Health and Long Term Care provides funding for Family Health Teams. Family Health Teams are governed by boards, either provider led, community led, or mixed provider / community led. The majority of Family Health Teams are governed by provider led boards.<sup>37</sup>

## **Level of Autonomy within Teams**

Interdisciplinary health providers are employees of the physician group and individual Family Health Team.

## **Historical Context and Implementation**

Prior to the implementation of Family Health Teams, primary care was largely provided through Family Health Networks and Family Health Organizations which required most overhead costs, administrative costs, and human resource funding to be paid for by the physicians and physician groups themselves.<sup>38</sup>

Physician participation in Family Health Teams is voluntary. Family Health Networks

(blended capitation) and Family Health Organizations (blended capitation) are eligible to apply to participate in the standard Family Health Teams, which continue the blended capitation compensation model.

## **Ontario**

### **Community Health Centres**

*Ontario's Community Health Centres target vulnerable populations that typically have difficulty accessing primary health care services. Community Health Centres provide health*

*and social services in the same location to improve health outcomes with a focus on prevention. There are currently 73 Community Health Centres in Ontario.*

<b>Payment Models</b>	<p>Community Health Centre physicians and other health team members are compensated through salary.<sup>39</sup></p> <p>Salary funding is provided to the individual Health Centres based on maximum salary ranges established by the Local Integrated Health Networks.</p>
<b>Standardization Across Regions</b>	<p>The composition of the interdisciplinary health care team is the purview of the individual Community Health Centre, and their community-led board of directors, based on the community's needs.<sup>40</sup></p> <p>Community Health Centres must provide extended hours of service and 24 hour access to primary medical care.<sup>41</sup></p>
<b>Contractual Relations</b>	<p>Community Health Centres are primarily funded through their Local Health Integration Network, however funding is also received from community partner sources, such as the United Way.<sup>42</sup> Community Health Centres are governed by a community-led board of directors, and community engagement is essential in the implementation and operation of a Community Health Centre.</p>
<b>Level of Autonomy within Teams</b>	<p>All team members are salaried employees of the Community Health Centre.</p>
<b>Implementation</b>	<p>Physicians employed by Community Health Centres participate voluntarily.</p>
<b>Additional Information</b>	<p>In addition to interdisciplinary primary health care, community health centres provide access to other government services, such as social supports and programs. This integration allows community health centres to not only address primary health care needs, but also the causes behind many health needs, such as social factors.<sup>43,44</sup></p>

## Quebec

### Family Medicine Groups

*The Family Medicine Group model seeks to register previously unattached patients and increase access to primary health care services. In its development the model also sought contain costs by altering the current remuneration methods.*

## Payment Models

Physicians working in the Family Medicine Groups are remunerated primarily through fee for service compensation. Additional incentives and premiums are given for such activities as registering new patients, offering 24 hour telephone access and extended hours (for chronically ill patients, only). Funding is provided for the purchase of office computer systems and software. Additionally, funding is given to physicians in Family Medicine Groups to compensate for their time spent on administrative matters, and time spent collaborating with interdisciplinary team members.<sup>45</sup>

Other health care professionals are paid, through salary, by the Ministry. Funding for administrative support staff is also provided from the Ministry based on the number of FTE physicians.<sup>46</sup>

## Standardization Across Regions

The recommended team composition is:

6-12 FTE physicians (Allowable patient registration per physician: 1000-2200)

15000 patients = 2 nurses

10 FTE physicians = 2 administrative support staff<sup>47</sup>

## Contractual Relations

Compensation is not prescribed through one contract, but approximately 2500 contracts between individual Family Medicine Groups and the regional health authority in which they practice.<sup>48</sup>

## Level of Autonomy within Teams

Physicians are paid directly through fee for service and incentive payments; other health professionals are employees of the Family Medicine Group and their salaries are compensated by the Ministry.

## Historical Context and Implementation

Many of the original proposals for Family Medicine Groups (alternative payment plans, extended hours for all) were not implemented, due to strong opposition by the FMOQ (the association representing family physicians).<sup>49</sup> Participation in Family Medicine Groups is voluntary and physicians continue the fee for service remuneration model that they received prior to registering as a Family Medicine Group.

## Additional Information

Currently, Quebec is looking to create a new Primary Health Care network through the integration of existing Family Medicine Groups and Network Clinics. The integration model proposes much more detailed service agreements between the integrated networks and the Ministry. Detailed targets address how physician time is spent, clinic time dedicated to registered patients, and a thorough formula for FTE physician ratios to other health practitioners.<sup>50</sup>

## Nova Scotia

### Family Health Teams

*To improve health outcomes, Nova Scotia has over 100 collaborative teams operating throughout the province.*

<b>Payment Models</b>	<p>Physicians in Nova Scotia are compensated through a contractual arrangement or by fee for service. Instead of one over arching primary health care team model, Nova Scotia uses a variety of incentives for physicians and other health professionals to encourage interdisciplinary care teams.</p> <ul style="list-style-type: none"> <li>• The Department of Health and Wellness provides funding for a family practice nursing program to increase the scope of practice and the quantity of nurses in family practices. While the department does not provide direct funding to physicians to hire family practice nurses, they do provide funding for such things as mentorship, team development, and recruitment.<sup>51,52</sup></li> <li>• Interdisciplinary teams are also encouraged through a collaborative practice incentive program, in which physicians receive \$5,000/year for collaborating with interdisciplinary providers (eligibility requirements below).<sup>53</sup></li> </ul>
<b>Standardization Across Regions</b>	<p>The composition of the team is determined by the individual team based on the local health needs.</p>
<b>Contractual Relations</b>	<p>The eligibility requirements for physicians to receive the collaborative practice incentive program payment include:</p> <ul style="list-style-type: none"> <li>• A minimum of \$100,000 insured billings / year</li> <li>• Practice with at least 3 other eligible FTE physicians and one FTE interdisciplinary health care provider for a minimum of 6 months</li> <li>• Collaboration must occur weekly<sup>54</sup></li> </ul>
<b>Level of Autonomy within Teams</b>	<p>Other health care professionals are employees of the physicians or practice for which they are employed.</p>
<b>Additional Information</b>	<p>Current team structures in Nova Scotia are as follows:</p> <ul style="list-style-type: none"> <li>• Physician and Family Practice Nurse</li> <li>• Physician and Nurse Practitioner</li> <li>• Physician, Nurse Practitioner, and additional other health care providers, such as pharmacists</li> <li>• Inter-Professional Teams, focusing on chronic disease management and do not include physicians as core members<sup>55</sup></li> </ul> <p>For physicians who work collaboratively with nurse practitioners, the nurse practitioner is not required to be co-located.<sup>56</sup></p>

## Prince Edward Island

### Primary Health Care Networks / Family Health Centres

*9 Family Health Centres are coordinated through 5 Primary Health Care Networks in PEI. The organization and compensation model for these Centres encourage cost containment.*

## Payment Models

Family Health Centre physicians are primarily compensated through salary. There are some physicians in the Family Health Centres, however, that are paid through fee for service. These physicians are charged 30% of their billings towards associated billing (5%) and overhead costs (25%). Fee for service physicians then participate in the interdisciplinary team along with the salaried physicians and other health professionals.<sup>57</sup>

Interdisciplinary health care providers are paid through salary by Health PEI.

## Standardization Across Regions

PEI is divided into 5 Primary Health Care Networks, serving approximately 30,000 patients in each; Primary Health Care Networks operate the Family Health Centres. Each Primary Health Care Network is composed of:

- 1 network manager
- 1 nurse clinical lead
- 1 network administrative supervisor
- 1 medical director<sup>58</sup>

The Family Health Centres are comprised of physicians and other health care providers, based on the following formula:

- 1 licensed practical nurse to 2 FTE physicians
- 1 office administrator to 2 FTE physicians
- 1 registered nurse to 2 FTE physicians or to 2 FTE nurse practitioners<sup>59</sup>

## Contractual Relations

Physicians and other health professionals are salaried employees of Health PEI. Fee for service physicians enter into a contract with Health PEI that requires 30% of their billings be deducted, and is put towards the overhead costs of the Family Health Centre.<sup>60</sup>

## Level of Autonomy within Teams

Salaried physicians and other health professionals are employees of Health PEI.

## Historical Context and Implementation

Prior the network development, there were several government run health centres but they were not connected; autonomous private clinics preceded these individual health centres.<sup>61</sup> Participation is voluntary but requires most physicians to end the fee for service compensation model and adopt the salary-based model.

## Additional Information

Private practices that operate outside of the network system can participate in the Collaborative Family Practice Incentive Program that provides up to \$5,000 per year for collaborating with other physicians, and up to \$5,000 per year for collaborating with other health professionals.<sup>62</sup>

## New Zealand

### Primary Health Organizations

*New Zealand's 32 Primary Health Organizations are practices that target lower income earners and vulnerable populations. Through government subsidies and funding, Primary Health Organizations keep direct patient fees low.*

#### Payment Models

Primary Health Organizations are compensated through capitation based on

registered patients and fee for service payments are given for particular services, such as immunization, for registered patients, and for services provided to unregistered patients. Management fees are awarded to the Primary Health Organizations based on the number of enrolled patients and the size of the Primary Health Organization. Typical management fees range from \$5 to \$15 per enrolled patient.<sup>63</sup>

Primary Health Organizations can register to be a part of the Primary Health Organization Performance Programme, a pay for performance system. Change management funding (\$20,000 + per patient funding) is provided as compensation to establish participation. Participating Primary Health Organizations then target particular clinical indicators, such as vaccinations and breast cancer screening, to receive subsequent performance payments (to a maximum of \$6 / registered patient).<sup>64</sup> Additional funding is available for Primary Health Organizations that participate in the Care Plus Program, which targets high-use patients.<sup>65</sup>

### **Standardization Across Regions**

The composition of teams are decided by the individual Primary Health Organization based on community needs.

### **Contractual Relations**

Individual Primary Health Organizations are independent contractors of the District Health Boards, and contracts are between the two organizations. Primary Health Organizations must be not-for-profit entities. Primary Health Organizations must implement the vision and initiatives outlined in New Zealand's Primary Health Care Strategy, such as interdisciplinary collaborative decision making in governance of the Primary Health Organization.<sup>66,67</sup>

### **Level of Autonomy within Teams**

The Primary Health Organization may or not be the service providers themselves. The District Health Boards who fund the Primary Health Organizations require that the individual Primary Health Organizations fund their own employees; no team members are employees of the District Health Board or Ministry of Health.<sup>68</sup> Policies and guidelines regulating Primary Health Organizations define Service Providers as General Practitioners, Practice Nurses, and a range of other health care professionals. As such, Primary Health Organizations are not formally GP-focused.<sup>69</sup>

### **Historical Context and Implementation**

The not-for-profit Primary Health Organizations replace the GP organized, Independent Practitioners Association model, which was profit driven. Individual GP groups and clinics voluntarily became Primary Health Organizations, the capitation and management subsidies providing financial incentive for the switch. Physicians not participating in Primary Health Organizations are compensated through a fee for service model.

### **Additional Information**

Requirements of Primary Health Organizations are very broad, particularly concerning their interdisciplinary nature and structure. As such, the Primary Health Organization model has been criticized for not truly facilitating collaboration or making use of nurses and other health providers, and targeted, long-term, financial incentives towards a more interdisciplinary structure have been suggested by commentators, particularly those representing nurses.<sup>70</sup>

## **United Kingdom**

### **General Medical Services**

*The pay for performance component that was introduced through the General Medical Services Contract aims to improve health outcomes, while containing costs.*

### **Payment Models**

Primary health care physicians in the UK are compensated through a blend of capitation and fee for service payments.

The Quality and Outcomes Framework that was introduced by the National Health Services in 2004 is a pay for performance mechanism that accounts for up to 20-25% of family physician's and clinic's income.<sup>71</sup> Quality and outcomes framework funding is based on the achievement of indicators; there are a total of 150 indicators, 56 of which are regarding the practice's organization.<sup>72</sup>

## **Standardization Across Regions**

To encourage interdisciplinary primary health care teams, the quality and outcomes framework has a series of indicators that reward primary care providers who work in multidisciplinary teams.

## **Contractual Relations and Historical Context**

Traditionally, family physicians operated as isolated, independent businesses. The Primary Care Trusts, introduced by the National Health Services in 1996, established a more integrated contracting scheme between primary health care practices and the NHS.<sup>73</sup>

The introduction of the general medical services contracts and quality and outcomes framework further cemented the reporting relationship between practices and the NHS. The general medical services contracts emphasize practice funding rather than physician funding.<sup>74</sup>

## **Implementation**

Participation in the new general medical services contract is not voluntary, however participating in the quality and outcomes framework is voluntary. Due to the large financial incentives associated with the quality and outcomes framework, participation is required for the financial viability of the practice.

## **Level of Autonomy within Teams**

The composition of the primary health care team is the purview of the individual clinic, or physician group. Other health professionals are employed by the physicians or practice; associated salaries and overhead are paid through the NHS's Global Sum Payments.

## **Additional Information**

Some commentators have asserted that the introduction of the quality and outcomes framework aimed to break down the traditional hierarchies found in general practices, between family physicians and other health professionals.<sup>75</sup> Funding for general practices is now largely based on patient or community need, not the composition or number of physicians in the general practice; this has emphasized the role of practice nurses and other health professionals.<sup>76</sup> Furthermore, the general medical services contract allows for nurse-led practices.<sup>77</sup>

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