

# **How Best to Pay Interdisciplinary Primary Care Teams?**

## **Funding and Remuneration: A Framework and Typology**

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## **How Best to Pay Interdisciplinary Primary Care Teams? Funding and Remuneration: A Framework and Typology**

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The content of this study is based on academic and grey literature, as well as primary data collected as a part of this study. The results of the study do not express the official position or opinion of the institutions, with whom the authors are affiliated. The authors declare that they do not have a conflict of interest.

## Key Messages

### What is the problem or issue?

- The delivery of primary care in Canada is changing: we are moving from a sole-practitioner model to an interdisciplinary team model;
- The key to successful delivery is collaboration and care sharing among providers;
- Funding bodies of primary care are interested in creating a financial environment to support collaboration and care sharing;
- The financial environments of interdisciplinary primary care teams across Canada are varied and have not been systematically described or assessed;

### What evidence-informed options were identified to address the problem or issue?

- We differentiate between the funding of teams and the remuneration of providers within teams;
- We describe funding and remuneration approaches as implemented in three Canadian provinces (Alberta, Manitoba, and Nova Scotia);
- We identify three broad types of approaches to the funding of teams that potentially motivate, discourage, or have no impact on collaboration and care sharing;
- We identify three broad types of approaches to remuneration of providers that potentially motivate, discourage, or have no impact on collaboration and care sharing;
- We discuss the combinations between funding and remuneration, and their potential impact on collaboration and care sharing;
- We provide an assessment of the merits and demerits of the approaches used in Canada, as perceived by key stakeholders (decision-makers within government, directors/managers of primary care teams).

### What are the key considerations for implementation?

- The options for implementation are constrained by the geographical context, where some funding and remuneration models are not feasible in rural/remote settings;
- The financing options are coupled with corresponding lines of accountability, which can act as a motivator or barrier to collaboration and care sharing;
- The implementation of some preferred funding/remuneration models requires a particular strategy for patient attachment;
- The basket of services included in any funding model requires careful consideration, with special attention to be paid to the overhead costs of primary care practice, such as space and equipment;

## Executive Summary

### How Best to Pay Interdisciplinary Primary Care Teams? Funding and Remuneration: A Framework and Typology

#### Research Summary

##### *Introduction – Issue and Context*

Primary care in Canada is shifting toward delivery via interdisciplinary teams of primary care providers. There is some evidence to suggest that this delivery approach is superior to the traditional sole-practitioner model in terms of care comprehensiveness, continuity and quality. Collaboration between providers is at the heart of successful primary care delivery.

Canadian provincial and territorial governments are responsible for the funding of health care in their jurisdiction. Decision makers in the ministries of health are concerned with the optimal approaches to the funding and remuneration of such teams. Their goal is to create a financial environment that supports the goals of collaboration and sharing of care, and does not contradict non-pecuniary incentives. Further, they wish to create effective funding and remuneration approaches that support overarching primary care strategic priorities.

##### *Definition of the Problem*

Traditionally, primary care physicians in Canada practice as self-employed entrepreneurs in a fee-for-service environment. They may use fee-for-services revenues to hire additional care providers, but there is no financial incentive to do so. Furthermore, this traditional model creates an environment that is not conducive to collaboration and sharing of care.

Recognizing the limitations of the traditional model, decision-makers have implemented a variety of alternative funding and remuneration approaches across Canada. These have not been systematically examined in the academic literature. Approaches have not been described, nor has their merit been assessed with reference to the goals of improved collaboration and care sharing. The goal of this project is twofold:

1. To describe the funding and remuneration approaches used across Canada to pay interdisciplinary primary care teams.
2. To provide a qualitative assessment of the merits and demerits of these approaches as perceived by stakeholders in decision-making and/or team-leading roles.

A description of approaches is a first step to any type of evaluation. The description aims to create a consistent terminology, define the meaning of concept, the relationships between them, and the linkages between concepts and their broader context. This understanding of options is required in advance of any meaningful discussion of the strengths and weaknesses of the options.

The assessment of merits and demerits provides a preliminary understanding of the potential for success of the various approaches. The discussion centres on the experiences that team leaders have had, as well as on implementation issues experienced by both team leaders and decision-makers.

### *Short description of research methods*

We conducted a scoping review of the literature related to the funding and remuneration of interdisciplinary primary care teams. We also reviewed online sources on the topic, specifically focused on Alberta, Manitoba, and Nova Scotia.

We interviewed executive directors, directors, and/or managers of interdisciplinary primary care teams and/or networks in three provinces: Alberta, Manitoba, and Nova Scotia. Interviews were conducted on the phone between April and June 2014. We interviewed six respondents in Alberta, seven respondents in Manitoba, and five respondents in Nova Scotia. In NS and AB, several of the respondents were in charge of more than one team. Furthermore, we surveyed 102 health care providers who team members were using an electronic questionnaire that was distributed by the interview respondents.

We analysed interviews using a qualitative content analysis approach to identify characteristics of funding and remuneration models used in the three provinces. We also described approaches to governance (relations between teams and government), accountability, management of teams, and management of patient care, as well as operational characteristics, such as location, space and team composition. We developed an initial typology of models.

The interim analysis and report were discussed during a Roundtable meeting of key stakeholders from the three provinces. The case study descriptions and the typology were discussed. The Roundtable discussion also focused on implementation issues.

We analysed interview and roundtable data jointly using content analysis and a three-level coding approach. We developed a framework of financial flows and lines of accountability between payer, teams and providers. We also developed an improved version of the typology of models. Both are used to discuss the case studies from the three provinces, and in order to draw general conclusions about the desirability of funding and remuneration approaches in the context of collaboration and care sharing.

### **Evidence-based policy options for addressing the problem (based on analysis)**

The literature does not provide evidence with respect to our research question – how best to fund interdisciplinary primary care teams, and how best to pay providers within them. The literature notes several non-pecuniary characteristics that create an environment conducive for interdisciplinary collaboration. The literature mentions the importance of aligning the funding and remuneration methods with goals, making no distinction between funding and remuneration, and offering no specific strategies for such alignment.

We identify three types of funding arrangements for teams, and three types of remuneration arrangements within teams. There are eight possible combinations of funding/remuneration arrangements, each with different speculated incentive effects on collaboration and care sharing. The choice of funding/remuneration arrangement is in part determined by the geographical context of the team. Furthermore, we develop a general framework of possible funding and remuneration flows that is adaptable to specific contexts.

Funding options that positively support collaboration and care sharing are those, in which funding is linked to the activities of the whole team. When funding is linked to the activities of specific providers,

typically the physician(s), collaboration and care sharing are discouraged. When funding is not linked to activities, but for example calculated on the basis of estimated costs of salaries, the incentive effect on collaboration and care sharing is neutral.

Central to the linking of funding to activities is the approach to patient attachment. When patients are attached to teams, and funding is calculated on a per patient basis, collaboration and care sharing are encouraged. When patients are attached to physicians, and funding is calculated on a per patient basis, collaboration and care sharing are discouraged. When patients are attached to teams on the basis of geography, and funding is calculated on per patient basis (directly or indirectly through an estimation of provider needs), collaboration and care sharing are not influenced by the funding model.

Another key concept related to funding is the question of the expenses that are covered by the funding model. Of particular concern is the issue of practice space. When space and equipment are to be paid for through the income of particular providers, such as physicians, a link between the funding and the activities of these providers is created. This is a dis-incentive to collaboration and care sharing.

Provider remuneration arrangements within teams can create three types of dependence between provider incomes: a balanced interdependence, independence, and an unbalanced or hierarchical interdependence. A balanced interdependence is created when providers have equal opportunity to receive an income (or income supplement) that is a proportion of a total available to the team. An example is the opportunity for all providers to earn a bonus for the achievement of targets in a pay-for-performance program. This approach motivates collaboration to provide the care that is most likely to result in target achievement. Independence is created, when all providers receive an income that is not linked to their own or their colleagues' activities. An example is the payment of salaries to all providers. This approach is neutral with respect to motivating collaboration. A notable caveat is that collaboration is hampered, when the salaries originate with different funders, thereby creating differential lines of accountability. An unbalanced or hierarchical interdependence is created, when providers have an unequal opportunity to receive an income (or bonus) from a total available, or when the income of one provider fully depends on the income of another provider. An example of the first scenario is when physicians are able to receive pay-for-performance bonuses for their own activities, but other providers are not. An example of the second scenario is when physicians' incomes (or fee for service revenues) pay for the salaries of other providers.

The issue of patient attachment is important in the context of provider remuneration. Pay-for-performance programs that offer bonuses for the achievement of targets at the population level (e.g. a threshold percentage of all patients received blood screen tests) must develop appropriate patient attachment strategies.

In rural contexts, often the patient population base is low. Funding models cannot be based on estimations of per-patient costs, and remuneration cannot be based on a fee-for-service models. Both of these approaches would result in funding and remuneration levels that would be insufficient to attract and retain providers. Geographical attachment is a necessity in rural areas, as is the use of salaries for providers. Therefore, the funding/remuneration model is not likely to serve as a tool to encourage collaboration and care-sharing. Other non-pecuniary incentives need to be relied upon. These can include: clear statements of shared goals, clear explication of roles, expectations and processes, and the inclusion of all providers in the setting of strategic directions, goals, and patient care plans.

## Table of Contents

	<b>Page</b>
The Issue and Context	8
Research Questions and Methods	9
Results	
Literature	10
General Framework of Financing and Accountability	11
Typology of Financial Models	13
Team Managers' Perceptions of Merits, Demerits and Implementation Issues	15
Individual Providers' Perceptions of how Goals are Supported	17
Case Study – Alberta Primary Care Networks	19
Case Study – Manitoba MyHealth Teams and Physician Integrated Networks	24
Case Study – Nova Scotia Primary Care Teams	28
Conclusions	33
Bibliography	35

## Full Report

### The Issue and Context

From Integrated Health Networks in British Columbia to Family Health Centres in Prince Edward Island, provinces are moving towards team-based models of primary care (PC). We know that interdisciplinary teams have advantages in terms of health services goals, such as comprehensiveness, continuity, coordination and quality. We do not know, however, how best to support these teams via organizational structures. There is a paucity of evidence to identify optimal models for the financing and management of interdisciplinary primary care (IDPC) teams. Using a participatory approach with decision makers, the goals of this research project are:

1. To describe the funding and remuneration approaches used across Canada to pay interdisciplinary primary care teams;
2. To provide a qualitative assessment of the theoretical and practical merits and demerits of these approaches as perceived by stakeholders in decision-making and/or team-leading roles;

We developed a framework of financial flows and lines of accountability between the funder, the team and the provider. The framework is useful in the assessment of differences and commonalities between approaches, and the conflicts in objectives between funders, teams and providers that can arise on account of the financial flows and accountability structures.

We develop a typology of funding and remuneration approaches, and combinations between them. The typology is useful in the assessment of potential incentives created by the approaches, as well as the implementation feasibility of the approaches in a variety of contexts.

Both the framework and the typology are developed on the basis of the evidence collected as a part of this study. We provide an assessment of strengths and weaknesses of the models used in the three provinces, as perceived by the stakeholders involved in this study.

### Key Stakeholders involved in the project

The core research team consists of three academic researchers and two decision maker partners. Specifically, Dr. Dominika Wranik is the principal investigator, and Maryna Korchagina is the Principal Knowledge User. Dr. Alan Katz and Dr. Adrian Levy are co-investigators. Jeanette Edwards is a knowledge user.

The research is participatory and relies on a number of key stakeholders in the primary care system that were involved via in-depth interviews, online questionnaires, and/or a roundtable discussion. Details of this methodology are outlined in the next section. The research also draws on the discussions from a Roundtable with key decision makers from three provinces: Nova Scotia, Alberta, and Manitoba. The Roundtable is took place in October 27<sup>th</sup> and 28<sup>th</sup>, 2014 in Halifax, Nova Scotia.



## Research Questions and Methods

This project has a descriptive component the results of which are presented as a framework of financial flows and lines of accountability, as well as a typology of funding and remuneration models. The project also has an evaluative component that addresses questions and the merits and demerits of such models in specific contexts.

We address four principal research questions:

- What models are currently used for the financing (funding and remuneration) of IDPC teams?
- How are other important characteristics of IDPC teams incorporated (accountability, management of teams, management of care, location, space, and team composition)?
- What are the merits and demerits of models currently used?
- What practical implementation issues need to be considered alongside the theoretically preferred funding/remuneration models?

These questions are addressed using a qualitative approach, for which we use four types of information sources: (i) academic literature; (ii) non-academic literature (e.g. government documents, websites etc.); (iii) directors and managers of IDPC teams and/or networks; and (iv) members of IDPC teams. All information sources serve both the descriptive and scoping component of this research.

### ***Review of academic literature***

Two types of literature reviews were conducted. A scoping review was used to address broad issues around the management of IDPC teams. A systematic literature review was conducted around a narrow question of remuneration methods of IDPC teams.

The scoping review included academic literature that addressed questions of how IDPC teams are organized, how they are managed and funded, and also what kinds of factors make teams effective. The review also identified several advantages of practicing primary care in ID teams. The systematic literature review included academic literature focused on the remuneration methods of IDPC teams, including their description and analysis of effect.

### ***Review of non-academic written sources***

The review of non-academic written sources included materials available online that described the status of the organization and/or remuneration of ID PHC teams, or provided any assessment with respect to their appropriateness or effectiveness. Sources included websites of governments, websites of specific teams or networks, non-academic reports relating to the subject matter, and other such information.

### ***Interviews with directors and managers***

Interviews (n=19) were held in three provinces (Alberta, Manitoba, and Nova Scotia) with individuals who were able to provide general information about the structure, organization and remuneration of ID PHC teams in the region. In Alberta, we interviewed executive directors or directors of Primary Care Networks. In Manitoba, we interviewed directors of PHC teams involved in the Physician Integrated Network and those operating health centres under service purchase agreements with RHA. In Nova Scotia, we interviewed Directors of District Health Authorities and/or team managers.

Interviews were transcribed and analyzed using thematic coding methods. Two codes were developed. The first was based on the interview questions (a top-down approach to analysis) and the second was based on the interview responses (a bottom-up approach to analysis). Results of both were triangulated.

### ***Online surveys for team members***

An online survey was distributed to IDPC team members by the directors and/or managers of teams, who had participated in qualitative interviews. Not all interview respondents distributed the survey. The survey asked team members questions around the method of remuneration that they receive, their perceptions of the functioning of the team, and whether the remuneration method supported team functioning. 102 providers responded to the questionnaire.

### ***Roundtable discussions with key stakeholders***

The Roundtable is a qualitative data collection approach that brought together some of the interview respondents and study authors to discuss interim results, and fill emergent gaps in knowledge around the remuneration and management of ID PHC teams. The roundtable was held on October 27<sup>th</sup> and 28<sup>th</sup>, 2014. The goals for the roundtable were to identify cross-provincial lessons and to discuss implementation challenges.

## **Results**

### **Literature**

For more than four decades, it has been proposed that team-based care offers solutions to system problems such as a growing patient population and shortages of trained personnel (3). Well-functioning teams, when compared to typical sole profession practices, appear to have a number of advantages.

First, well-functioning IDPC teams can create conditions for improved health outcomes, improved clinical performance and higher quality of care. This is largely a result of improved coordination and comprehensiveness of care delivery (4, 20, 24, 32, 35, 41, 42).

The growing needs for chronic disease management and recent emphasis of promotive and preventive health services are best supported by IDPC teams (4, 12, 16, 20, 30, 34, 46). Effective chronic illness care and management typically relies on coordinated care teams (46). The addition of non-physician providers, such as pharmacists, advanced practice nurses, or nurse practitioners has been linked to more effective care for diabetic patients (48), particularly in terms of adherence to practice guidelines (16).

Second, interdisciplinary teams are favoured by patients, who perceive improvements in communication (24, 32), and are more keen to engage in self-care (11, 35). Third, providers favour the team approach and report improved levels of job satisfaction, improved practice climates, and more manageable workloads (10, 24, 32, 34, 41, 43). And fourth, system level outcomes suggest more efficient and effective use of health care resources (24, 35, 41, 43).

Studies have identified a number of factors that influence the functioning of IDPC teams. Facilitators of team functioning include supportive, clear and transparent processes, institutional reinforcements, and a more elusive sense of togetherness. Barriers to team functioning include insufficient education and training, the mismanagement of resources and team diversity, and miscommunication.

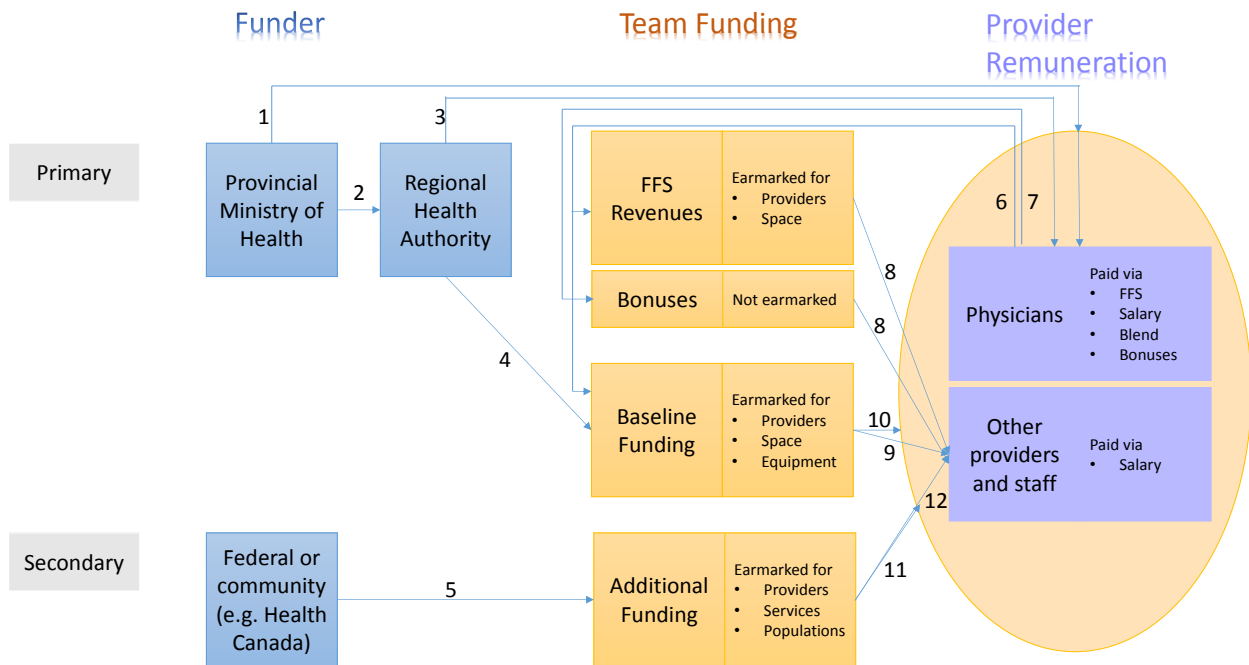
The explication of team processes, a clear goal, a clear definition of roles and clear documentation are key aspects of effective team functioning (8, 10, 14, 15, 17, 32, 34, 39, 42, 43, 50). The explicit statements of shared goals, as well as shared decision making, add to the sense of common purpose and improve the buy-in of individual team members to the team process (8, 10, 14, 15, 17, 32, 34, 39, 42, 43, 50). Processes and institutional structures that create a supportive environment include a non-hierarchical organization coupled with effective leadership (8, 14, 17, 32, 34, 39, 43, 47, 50), the coordination of activities (15, 34), processes for conflict resolution (14, 34), and education about team work (30, 41, 43).

A number of characteristics create barriers to effective team functioning. Among them is the mismanagement of the diversity of the team. This includes the separation of roles into professional silos (7, 18), the vesting of authority and decision making with one provider (18, 22, 23, 29, 36, 42), and allowing for differences in pay and status (14, 29). The method of remuneration is considered important (26, 30, 33) although none is listed specifically as optimal. A failure to create effective communication about roles and decisions and differences in educational preparation are factors that stand in the way of effective teams (17, 18, 23, 30, 42, 50). Lastly, team sizes that are too large can impede functioning (14, 15).

### General Framework of Financing and Accountability

The general framework was developed on the basis of interviews with our respondents, as well as the literature. The general framework presents the financial flows to interdisciplinary teams, as well flows within teams. The purpose of a general framework is to provide a description of options, and to lay the foundation for comparative studies between jurisdictions.

Figure 1 – Funding and Remuneration Flows – General Framework

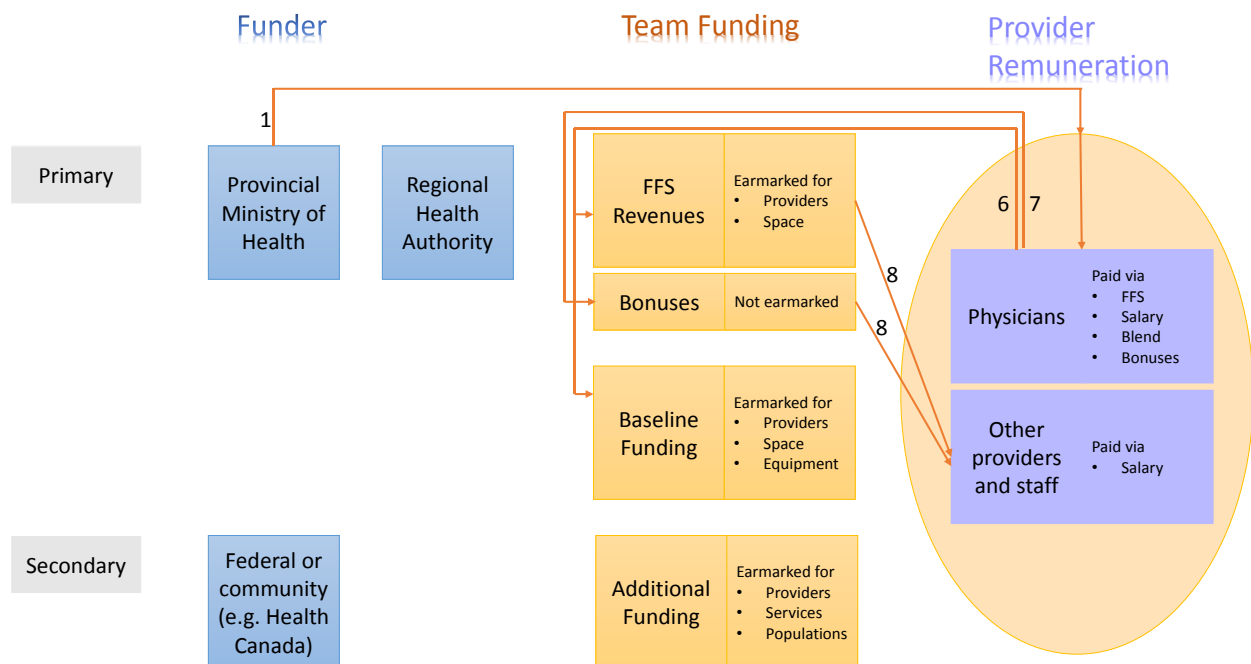


**Figure 1** shows the possible streams of funding and remuneration that can exist between the funder and providers, as well as the corresponding lines of accountability that run counter to the financial flows. Individual case studies typically include some, but not all of these streams. The framework is useful for the discussion of multiple funding sources, and conflicts that may arise between funding and remuneration, and between lines of accountability.

A distinction is made between funding of teams, and the remuneration of individual providers. Teams can receive funding that is allotted to the team as an entity, or they can consist of a group of providers who receive independent remuneration, but share some costs. This distinction can be more or less clear in practice. The primary source of funding is the Ministry of Health, who may or may not channel funding through a Regional or District Health Authority. Funding can also originate with secondary funding sources, such as Federal departments or community organizations. The general framework can be used to show the flows within a specific model as used in a specific context.

The traditional model is shown in Figure 2 as an example. This model is present in all Provinces, but was not sampled in our study. This is the model to which Provinces are making an effort to find alternatives. In his model, physicians receive remuneration directly from the Ministry of Health via fee-for-service payments (stream 1). The FFS revenues are the only form of team funding that pays for the salaries of other staff and space (streams 6 and 8). An extension of this model makes available bonus payments to physicians, who can use them to supplement the team funding (streams 6, 7 and 8) (e.g. Quality Based Incentive Funding in Manitoba, teams in Ontario).

Figure 2 – Funding and Remuneration Flows – Traditional Model



In other models, a block funding amount is made available to the team as a whole (stream 4). The amount pays for the salaries of providers, and space (stream 9). A distinction is often made between physicians and other providers. In many models, physicians continue to receive FFS payments from the Ministry of Health (Alberta) (stream 1). In other cases, physicians receive salaries (or contracted annual

payments), but these originate from the Regional Health Authority (Nova Scotia and Manitoba) (stream 3), and not the block funding provided for teams. It is also possible that baseline funding is used to pay for all providers including physicians (stream 10).

Additional funding can be available from secondary sources (stream 5). It is typically earmarked for specific providers (e.g. midwives), specific services (e.g. HIV care), or for specific population (e.g. Aboriginal peoples), therefore it can be used to pay providers, pay for space and/or equipment. Additional funding can be used to pay for activities or space of all providers (stream 11), or to pay only specific, typically non-physician providers (stream 12).

The financial streams in the model define the lines of accountability. Providers and teams/networks are accountable to their funders. In cases where funding is provided by multiple funders (e.g. Provincial Ministry of Health and Health Canada), teams and providers are accountable to multiple stakeholders. This is a challenge, when the goals, priorities and accountabilities of the various funders do not align.

In addition, there is a thirst for the involvement of communities and patients in primary care. Communities can be involved in the strategic planning of teams, whereas individual patients can be involved in their individual care plans. Accountability structures are more complicated, teams need to balance priorities of communities, patients, Provincial funders, and secondary funders. A further complication is introduced, when individual providers are accountable to different bodies. This is the case, for example, when physicians are paid a salary by the Regional Health Authority and have a contractual relationship with the RHA directly, whereas other providers are paid through the baseline funding for the team, and have a contractual relationship with the Executive Director of the team.

### **Typology of Financial Models in Interdisciplinary Primary Care Settings**

This typology is central to our study, which is concerned with financial (funding and remuneration) models and their effects on interdisciplinary collaboration. The typology is developed along two variables, also described in the financial flows framework: (i) funding – the approaches to financial compensation of the whole team (and degree to which this is isolated from remuneration), and (ii) remuneration – the approaches to the financial compensation of providers within teams. Each cell presents a combination of funding/remuneration (a model type), and describes the hypothesized impact on collaboration.

#### ***Funding***

The central question is whether the funding to the team is based on the activities of the team, the activities of selected providers within the team, or not linked to the activities of providers.

A funding formula is not linked to the activities of providers (retrospectively or prospectively) when the number of services delivered or the number of patients served is not included in the formula. A good example is funding that is based on the geographical roster of patients, or the estimated number of providers and their salaries, or both. In either case, funding does not change, whether all or no patients receive services. Funding based on budget priorities is another example, in which case the amount is a proportion of a fixed broader healthcare budget.

A funding formula that is linked to the activities of the team (all providers) allocates funding on the basis of the number of patients served or number of services provided by the team as a whole. An example is

a capitation based funding that relies on the attachment of patients to the team. Pay-for-performance schemes that rely on the attachment of patients to the team are also good examples. Another example is a situation, where an institution receives fee-for-services payments for services provided. We have not found examples at the primary care level, but this model is used in hospitals.

A funding formula can also be linked to the activities of one core provider (or group of providers). Typically in practice, this is the physician. The traditional model is a good example, where the physician’s fee-for-service billings are equal to the team fund. Another example is a capitation based funding, or pay-for-performance funding, that relies on the attachment of patients to individual physicians.

**Table 1 – Financial models to support interdisciplinary collaboration**

		Remuneration to Providers			
		Balanced interdependence between providers’ incomes	Independence of providers’ incomes from each other and activities	Imbalanced or hierarchical interdependence between providers’ incomes	
		<i>Impact on Collaboration</i>	<i>Positive</i>	<i>Neutral</i>	<i>Negative</i>
Funding to teams	Funding depends on the activities of the whole team	<i>Positive</i>	<i>Patient attached to team, providers receive a fixed share.</i>	<i>Patients attached to team, providers receive fixed salaries.</i>	<i>Patient attached to team, P4P to individual providers.</i>
	Funding is delinked from provider activities	<i>Neutral</i>	<i>Geographical attachment, providers receive fixed share.</i>	<i>Geographical attachment, providers receive fixed salaries.</i>	<i>Geographical attachment, P4P to individual providers.</i>
	Funding depends on the activities of a core provider	<i>Negative</i>	<i>Not possible.</i>	<i>Patients attached to physician, providers receive fixed salaries from team.</i>	<i>Providers attached to physician, physician pays others.</i>
* Cells provide examples, not an exhaustive list.					

We argue that a team-based funding formula positively motivates collaboration, a provider-based funding formula discourages collaboration, and a delinked funding formula is neutral in its impact on collaboration.

**Remuneration of team members**

Similar to the team funding, the approaches to remuneration of individual providers within the team can have a positive, negative or neutral incentive effect on collaboration. We propose that a situation where

providers' incomes are independent of each other and of activities is neutral in terms of motivating collaboration. A situation where all providers receive fixed salaries is an example.

The introduction of interdependence of provider incomes creates an incentive effect on collaboration. The effect is positive, when the interdependence is equally balanced among providers. The effect is negative, when the interdependence is imbalanced or hierarchical. For example, a balanced interdependence is created when all providers receive a share of the total fund in pay-for-performance bonuses (not necessarily an equal share, but a fixed share). The interdependence becomes imbalanced, when some but not all providers receive a share of the total pay-for-performance bonus, for example. The interdependence is also imbalanced, when the income of some providers is a function of the income of other providers, such as is the case in the traditional model.

The typology can be used by decision-makers based on the type of funding/remuneration model that exists in their jurisdiction, and an ideal type that would best support collaboration. To create a financial environment that is conducive to interdisciplinary collaboration, the goal is to move away from the bottom right cell, as much as is feasible given contextual constraints. In the cells, we provide examples of models (other examples are possible).

The contextual constraints that drive feasibility are of central importance in Canada, and particularly in the discussion of the IDPC teams, which often have been developed in response to these very constraints. In rural or remote contexts, for example, the only feasible approach to patient attachment is geographical. The decision-maker could, however, think about offering a component of funding that depends on activities, such as a pay-for-performance scheme.

### **General Findings – Team Managers' Perceptions of Merits, Demerits and Implementation Issues**

This section is based on the qualitative analysis of interviews with IDPC team managers and directors, as well as on the roundtable discussions. The purpose is to report on the perceived strengths and weaknesses of funding, remuneration and governance mechanisms, as well as related issues flagged by the respondents. The discussion revolves around team functioning and processes with reference to the goals of collaborative cohesive teams, incentives for collaboration, and moving away from a physician focused to a patient focused practice.

Roundtable participants unanimously agreed that the ultimate results of importance are patient outcomes. Roundtable participants emphasized a need for the definition and measurement of relevant patient outcomes, but recognized that this was outside of the scope of this study.

#### ***Funding***

Team funding is most often based on a projection or estimation of costs. Two common approaches are to estimate resource use and costs (e.g. number of providers and salaries) or to estimate service needs (number of patients and services they require). In rural and remote contexts with low patient numbers, the preferred of the two approaches is the resource based estimation, since service-based budgets might be insufficient to attract and retain providers. Not surprisingly, teams prefer predictable annual budgets. Secondary funding sources, while appreciated for the increased opportunities they offer, create additional lines of accountability, additional expectations, and additional concerns with the sustainability of services.

A core concept at the centre of a service-based estimation is patient attachment<sup>1</sup>. Patient attachment refers to the linking of patients to specific providers. Patient attachment serves two functions: (i) it supports the building of long-term relationships between providers and patients, thereby improving care continuity, and (ii) it supports budgeting and some remuneration methods. Patient attachment comes in three forms: attachment to a core provider, typically the physician (e.g. Alberta, Manitoba), attachment to the team (e.g. Nova Scotia), and geographical attachment (e.g. Nova Scotia).

In the team setting, attachment to the physician places the physician in the centre of the team, which shifts away from the patient-centered care model. Care approaches are adjusted to ensure that the attachment to the physician is retained, especially in contexts where some competition for patients exists. For example, respondents suggested that physicians “drop-in” on visits between patient and dietitian in order to record that the patient was seen by the physician, but not because the “drop-in” was medically necessary. Attachment to the physician impedes the free delegation or sharing of tasks, as the physician works to record care activities to retain attachment.

Geographic attachment or attachment to a team do not pose a similar barrier to sharing of care responsibilities within the team. The geographic attachment does not have an element of competition; teams do not stand to lose patients to other teams. The attachment to a team introduces some competition over patients with other teams. Teams have the incentive to retain patients, ideally by providing high quality care, and also have the incentive to share care within the team. With reference to the typology, this is an example of a funding model that has a positive impact on collaboration.

In addition to the determination of the budget amount, respondents also discussed the definition of the basket of goods and services funded. Negotiators have influence over the subject of the funding negotiation, which can be either team composition (when negotiation is about the basket of resources) or service mix (when negotiation is about the basket of services). Day-to-day adjustments to services provided are easier, when the funding agreement defines the basket of resources, not services. As such, the resource-defined budget is preferred, as it offers more flexibility in responding to population needs. It is also the more feasible approach in the rural context. In either case, negotiations are more responsive to needs, if done in close collaboration with the team and/or providers.

Respondents from Alberta and Manitoba expressed irritation with the distance between the budget negotiations and the frontline provision of care. Teams would prefer more relative flexibility to adjust care delivery to meet specified goals and objectives in their unique contexts.

Concern was expressed with the need for and variability of funding for space and equipment. If space and equipment are not included in the base funding, they become the responsibility of providers. Respondents discussed some *ad hoc* solutions (such as using community space), but identified that in most cases, physicians’ revenues become the source of funding for space and equipment. This places the physician’s activities back in the centre and reduces the opportunity for physicians to share care.

### ***Remuneration of Team Members***

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<sup>1</sup> Alternatively, the terms *patient roster*, *patient list* or *patient panel* are used. This varies by jurisdiction. We choose the term *attachment* given that it also means relationship between provider and patient.



Respondents, including physicians, and roundtable participants indicated a general satisfaction with the salary model, and concerns with the fee-for-services approach. Salaries support care sharing, and they offer sustainable sources of income in rural and remote contexts.

The fee-for-services payments model to physicians is seen as an impediment to sharing of care and patient centered collaboration, as it places the physicians' activities at the centre of attention. This is exacerbated when the physicians' revenues are expected to fund space, equipment and salaries of other providers.

In addition, the source of funding of physician's remuneration, be it fee-for-service or salary, is often distinct from the source of funding for other providers' incomes. For example in Nova Scotia, physicians are paid through the Physicians' Services Unit within the Department of Health and Wellness, whereas funding of other providers originates with the Primary Care Unit. This introduces separate lines of accountability for physicians and other providers, and can impede team functioning. Managers expressed concern that their authority over physicians was different and weaker when compared to other providers.

Respondents noted that bonus payments for the achievement of targets were preferred if offered for achievements of the whole team, as opposed to the achievements of individual physicians. This is consistent with our typology.

### ***Governance and Accountability***

Teams follow a fairly standard structure in terms of how they relate to government. Typically, every team falls under the purview of the provincial health authority(ies). Teams have varying degrees of participation in decision-making and strategic planning, such as the *ex-ante* negotiation of services, and/or the autonomy to adjust day-to-day services to objectives.

None of the teams/networks that participated in our study had formal structures for the active engagement of non-physician providers in the planning processes. Informal engagement existed in several teams in the form of e.g. meetings.

Respondents noted an emerging conflict around the issue of decision-making. Increasingly, it appeared that health authorities strive to be the decision-makers, and governments are pushing for standardization of care. This was perceived in conflict with the concurrent general push to involve communities and patient populations in the care-planning processes. Respondents identified these as contradictory forces, and emerging contradictory lines of accountability to the funder, to the patients and to the community. The funder as government being, of course, accountable to the public.

### **General Findings - Individual Providers' Perceptions of How Goals Are Supported**

The questionnaire to providers offered limited insight into the relationships between remuneration of providers, team structure, and ease with which goals are pursued. 102 providers attempted the questionnaire, 95 completed a sufficient proportion to be used in analysis<sup>2</sup>. The majority of respondents (81) received a salary, which limits the extent to which we can analyse variation in remuneration

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<sup>2</sup> The numbers provided in this paragraph exclude those, who did not respond to a particular question, resulting in discrepancies in the total number of respondents, and the total number of responses to any particular question.

method and its relationship with other aspects of practice. The majority of respondents (69) were from Alberta, 10 from Nova Scotia and 16 from Manitoba. The majority of respondents (43) were registered nurses (one licenced nurse), 11 were physicians, 8 nurse practitioners, 6 pharmacists, 6 counsellors, and 7 others. Tables 1 and 2 describe the sample.

**Table 2 – Remuneration method by province**

	Salary	FFS	Other	Total in each province
Alberta	49	4	5	58
Nova Scotia	8	0	1	9
Manitoba	12	1	1	14
Total of each remuneration method	69	5	7	81

**Table 3 – Remuneration method by type of provider**

	Salary	FFS	Other	Total in each province
Physician	6	4	1	11
Nurse Practitioner	8	0	0	8
Nurse	37	1	5	43
Pharmacist	6	0	0	6
Counsellor	5	0	1	6
Other	7	0	0	7
Total of each remuneration method	69	5	7	81

When asked whether their current compensation method supports their pursuit of explicitly stated goals, 76 providers indicated that it did, and 16 indicated that it did not. Basic chi-squared tests revealed that their assessment was not associated with the method of remuneration, their profession, or their province. Respondents were also asked to identify who was designated as clinical team leader. 31 respondents indicated that it was a physician, 34 indicated an administrator (director, manager), 10 indicated a different health care provider and 6 indicated that there was no leader. 75 respondents thought that the team structure supports the pursuit of stated goals.

In all Provinces, collaboration, continuity and interdisciplinarity were most frequently identified as explicitly stated goals. All goals were selected being explicitly stated by at least half the respondents (collaboration, continuity, comprehensiveness, interdisciplinarity, care for specific populations, and care for specific conditions).

## Case study – Alberta Primary Care Networks

Alberta's move toward team-based primary care is a provincial effort led by the Department of Health as a part of Alberta's Primary Health Care Strategy. Alberta has 42 Primary Care Networks (PCNs) with over 2,800 physicians practicing in interdisciplinary teams with other providers, such as nurses, dietitians, mental health professionals, pharmacists, and others. Of all 42 PCNs approached, six agreed to participate in this study. We interviewed Directors or Executive Directors of the six PCNs. The description below is based on the interviews, as well as information/knowledge provided by the co-author of this report who works with Alberta Health. PCNs in Alberta operate as independent, not-for-profit entities. Physicians are either shareholders (co-owners) or they are contractors who sell their services to the business. Baseline funding is distributed annually or semi-annually through Alberta Health.

### Primary Care Goals

Alberta's Primary Health Care Strategy frames the operations of the Primary Care Networks, the objectives are specified in the Five Year Health Action Plan (1). The guiding principles include a commitment to person-centered, accessible, continuous, proactive, collaborative, accountable, sustainable, equitable care of high quality. PCNs work to achieve five goals:

- To increase the proportion of Albertans with ready access to primary care;
- To manage access to appropriate round-the-clock primary care services;
- To increase the emphasis on health promotion, disease and injury prevention, and care of patients with complex problems or chronic diseases;
- To improve the co-ordination of primary care with hospital, long-term and specialty care;
- To facilitate the greater use of multi-disciplinary teams in primary health care.

### Funding

A PCN is created through a Joint Venture Agreement (JVA) between a group of family physicians, who form a non-profit corporation (NPC), and Alberta Health Services (AHS). The physician NPC and AHS jointly govern the PCN. The NPC must comply with the requirements of their grant agreement to be eligible for funding from AH. PCNs submit three-year business plans to AH, which set out how the PCN will meet the primary health care needs of its community and fulfill service responsibilities and key objectives (including details of team composition, roles, location of care, care coordination, and services). PCNs also submit regular reporting to AH, including annual budgets, mid-year reports, and annual reports. AH reviews each report to ensure financial accountability and compliance with program policies and objectives. Teams may adjust the service plan to meet patient need at their discretion, as long as associated changes in spending are under \$100,000. Larger changes must be approved by Alberta Health Services (AHS)<sup>3</sup>.

PCNs receive grant funding from AH to hire non-physician health providers and to deliver services and programs that are not included in the Schedule of Medical Benefits. AH provides PCNs with per-capita grant funding of \$62 per patient per year, which goes to the physician NPC. The \$62 is a negotiated amount. Baseline funding is therefore determined on the basis of the number of physicians that

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<sup>3</sup> Alberta Health Services is a recently amalgamated body previously comprised of twelve separate health entities; nine health authorities and three provincial initiatives targeting specific care services

participate in the network and the number of patients attached to those physicians (stream 4). This blends a capitation (payment per patient) and a complement (payment per provider) model. (46). Although the PCNs also must report through the business planning cycle and have their business plans and budgets approved, the payment of per capita funding is not conditional upon demonstrated commitment to satisfy the strategic directions laid out by the province.

The baseline block funding is used primarily to pay non-physician providers and administrative staff who work with physicians. Increasingly, PCN monies are also being directed toward providing subsidized team clinic space.

Patient panels are created on the basis of physician billings, where a four-gradation system is used to allocate patients to physicians (46). The patient is assigned to that physician, whom they have visited most during their last five primary care visits. If a patient visits a different provider three to five times, the patient is removed from their initial physician's panel (46). If the other provider is a team member who is not a physician, the team can lose the funding allotment for that patient. This type of a panel is created primarily for administrative purposes, and is not necessarily equivalent to the patients who are attached to the team and with whom providers work in their practices.

In addition to block funding, three PCNs drew on alternate streams of funding designated around specific community needs (stream 5). These monies were used to remunerate providers and to offset administration costs. In one instance, Health Canada supported medical care targeting First Nations populations. In two others, AHS supported mental health care programs.

From the AH perspective, the funding based on physician encounters does not provide an incentive for PCNs to reach out to the community beyond their patient panel. There are instances where some of the individuals most in need receive no services, because they are not paneled with the PCN in their catchment area.

## **Provider Remuneration**

PCNs include provider teams comprised of networks of doctors, nurses, dietitians, pharmacists and other health care professionals, working in collaboration with Alberta Health Services (AHS) to provide primary health care to Albertans. Team members include the core team, who provide direct patient care, as well as a broader team, who provides the administrative and organizational support (executive director and office staff).

### *Physicians*

There are variations between the specific remuneration approaches used within PCNs; some teams might use different forms of payment depending on their location or service focus. Within the sample, five of six PCNs indicated that physicians in their networks are paid using a primarily fee-for-service, which they bill directly from the Ministry of Health (stream 1). One team used a blended model in which physicians receive a base-line salary as well as additional funding per patient visit. If a patient assigned to this physician attended a walk-in clinic, the primary provider was responsible to cover the costs of that external visit. The sixth PCN sampled used an alternate relationship plan (ARP) that remunerated physicians on an hourly basis. It is common for contract specialists to be placed on sessional fees. All FFS amounts, salary and sessional rates are determined by negotiation between Alberta Health, and the

Alberta Medical Association, and are specified in the Master Agreement and the Schedule of Medical Benefits.

Physician team leads bill the PCN an hourly rate for activities related to this role. Physicians may also bill the PCN for time spent attending meetings or educational activities on behalf of the network. The rate for this hourly billing was \$284 per hour based upon an agreement with the Alberta Medical Association.

### *Non-Physicians*

Other providers, such as nurses, psychologists, or dietitians, and staff typically receive a salary from the PCN budget (stream 9). One site (R12) deviated from this trend, allowing for dietitians the choice to bill the PCN hourly. In some instances, secondary sources of funding were used to cover practitioner wages around targeted services.

In order to attract and retain employees, PCNs aim to set competitive remuneration rates. These are guided either by union contracts, or, in the case of non-unionized professions, by professional association standards and/or market rates as benchmarks. Calculations of rates often incorporated geographic location, job description, and seniority, and in some instances, annual performance.

One team, for example, offered pay rates that increased with skills and experienced, similar to the corresponding union rates. In addition, team members could qualify for bonus payments that were determined on the basis of performance relative to other team members. In the context of our typology, this created a balanced interdependence of provider incomes, assuming that all had equal opportunity to qualify for the bonus payments. This was coupled with a separate and unbalanced income stream for physicians, however.

### **Governance and Team Management**

The core governance structure of Alberta PCNs is fairly standardized, with sufficient flexibility to accommodate contextual needs. Each PCN is a joint venture partnership between a group of family physicians and AHS. There are two legal models for governance. In the first model, PCNs operate as a joint venture between the physician non-profit corporations (NPC) and AHS with a Governance Committee that includes AHS staff and physicians. In the second model, the physician NPC and AHS jointly form a PCN NPC. These PCNs are governed by the PCN NPC's Board of Directors, which is composed of physicians. Alberta is working to incorporate community board members into the governance structure, but at this point governance consists primarily of physicians who also provide care, and AHS members.

The PCN executive lead (director) is responsible for operations of the PCN teams, financial management, grant management with Alberta Health, program evaluation and measurement, and human resource decisions. Many decisions are made in collaboration with physicians and other team representatives. There is, however, considerable variability in the financial, operational and programming decisions across the PCNs.

Approvals of expenditures under \$100,000 are the responsibility of the executive director and the board. To varying degrees, non-board physicians, other providers and other staff members are included in the process. In two PCNs, for example, the ED consulted with team managers to better understand population needs. In another PCN, members typically engaged in rounds of drafting/approving strategic

planning. Spending that exceeds \$100,000 must be approved by an external governance committee comprised of two members of AHS and two board members.

## **Accountability**

As noted in the description of the general framework, the lines of accountability typically run counter to the funding streams. In other words, an entity is typically accountable to its funder. In the case of primary care, an important added layer is the accountability of governments and primary care providers to their patient populations. This section describes the mechanisms used in Alberta to support accountability.

Executive Directors and board members of PCNs are accountable to Alberta Health and to fulfill the objectives laid out in the PCNs three year rolling grant agreement. Their task is to ensure plans respond to these objectives. They must do annual or semi-annual reporting to Alberta Health. One team employs evaluations coordinators who measure team performance according to objectives.

A dichotomy exists in the accountability of individual providers. While non-physician providers are accountable to the PCN (Executive Director, manager), physicians are accountable to Alberta Health directly. Furthermore, the non-physician provider typically enters into an employee-employer relationship with the PCN, while the physician typically is an independent self-employed contractor. The activities of the physician have an implication for the base funding received by the PCN.

In addition, PCNs are taking steps to become more responsive to and engaged with their patient population. Three respondents noted an effort to engage other community service providers such as Alberta Health Services and community sites. By March 2015, community members are to be included in PCN boards to represent the patient population. At the time of interview, teams were preparing to adjust their structure to accommodate this. By April 2015, PCNs were expected to have a plan for more direct community engagement for the following year in place. The creation of Community Advisory Councils whose purpose is to facilitate communication between PCN and their service population is a key goal for teams practicing in the province (2).

Teams are also accountable to any alternate funders who provide them support. These funds are specifically earmarked for service streams. In two instances, support came from AHS to provide mental health care. Another received monies through Health Canada to support care in two First Nations communities.

## **Location and space**

The base funding to PCNs does not typically include space and equipment. Most often, teams practice out of private offices of the physicians, in which the costs are paid for through the physician's FFS revenues. In many cases, the PCN also includes a central office that houses the administrative staff. This is the dispersed model, in which non-physician providers practice in whichever space is available, "sometimes little more than a closet", as one respondent noted. It is typical for psychologists, caseworkers, and other non-physician providers to travel to physicians' clinics to provide care. Team meetings are often held within the physicians' clinic, or the central office. In one case, for example, midwives travelled to First Nations communities and offered care out of the on-site clinics. Respondents noted that travel time between locations can take up to several hours, but travel costs are not included in the PCN budget.

There is some movement toward including space as an allowable expense in the PCN budget. Teams practicing in PCN owned spaces revolve around the physician/nurse practitioner, but other non-physician providers practice in the same location. In these situations, physicians pay a proportion of the overhead costs that is lower than what they would pay in private settings, and non-physician team members are offered reliable spaces within which to practice.

In our sample, four PCNs practiced in dispersed pattern, operating out of private member physicians' offices. Of them, two operated solely in rural areas with the other two in mixed rural/urban environments. One PCN provided funding for space to two First Nations communities. One PCN had four teams owned and operated clinic spaces where physicians payed some overhead costs with staff being remunerated through the PCN. Another PCN was planning to open two clinics at the point of interview.

### **Team Composition**

Team composition varied between clinic and PCN. Commonly, each team was composed of physicians (leads), nurse practitioners, dietitians, LPNs, and pharmacists. These teams expanded as required to include counsellors, psychiatrists, social workers and/or midwives in response to perceived need. Each PCN also had a director or executive director, and some combination of administration staff, sometimes including an evaluator or liaison officer, tasked with maintaining the smooth function of the network and patient care.

### **Care Management**

There is considerable variation in how care is managed across the PCNs in Alberta. AHS does not traditionally have a strong role in care management, but is getting more involved now in providing direction with regard to population health needs and outreach. From the AH perspective, the involvement of AHS has been insufficient, contributing to some overlap and duplication. This section describes care management as approached by the PCNs interviewed for this study, as well as discussed during the roundtable.

PCNs aim to provide well targeted, community oriented, patient engaged health care services. The Health Home itself places the patient and physician at the center of the care process, with the former being engaged by the latter through motivational interviewing and communication about their care map. Teams also work with other community services and organizations such as AHS and First Nations health clinics to integrate their services. There is a growing recognition of the importance of gathering data on the target population. As discussed at the roundtable, PCN care is still evolving in AB and at the outset teams were providing service to populations whom they had little information about. Moving forward, using patient surveys, EMR data, and other measures to gain more specific data on the patient population is viewed as integral to designing the best targeted programming possible.

Care management plans account for three factors: whether a team is based in a rural or urban setting; site of practice; and patient acuity. Decisions with respect to patient care are typically reached in conference with the team and board members. Team meetings are held during which patient care coordination is discussed. Useful coordination tools include the use of Health Homes and patient care charts that clearly track patient history, their treatment plan, and the responsibility of each team member.



In order to enter a PCN, a member physician accepts a patient. The patient and physician form the basis of a Health Home. After an initial assessment, the physician consults additional providers in the development of the care plan and then closely monitors its implementation. In some instances, care coordinators and management staff are included in the process of selecting and managing alternate providers on a day-to-day basis. In each case, the team is constructed around individual patient need. When a patient is referred into a stream of service, such as chronic pain management, they still remain closely connected to the physician through whom they entered the PCN. Participants widely noted the importance of being able to be flexible in their approach to designing programming and selecting practitioners, asserting that autonomy supports their ability to most efficiently construct patient centered teams.

In teams that practice in a dispersed fashion, it is not always possible for each care provider involved in patient care to be present in the private space. In these instances, meetings where patient care is discussed are sometimes held in a PCN administrative office. It is especially important for a care plan to be well mapped and for each person involved in it to clearly know their roles and responsibilities to one another and the patient. In one instance, care coordinators were being employed to facilitate flows of providers throughout the team as needed.

In teams practicing in dispersed or centralized locations, physicians take a leading role managing the implementation of the care plan. In instances where a dispute arises over the direction of patient care, there is widespread preference for team members to reach consensus amongst themselves. In some instances, the executive director helps to mediate the process. The physician acting as lead has the final authority in these instances.

## **Case study – Manitoba My Health Teams and Physician Integrated Network**

In Manitoba, the face of team based care is changing. Two sampled teams participated in the Physician Integrated Network (PIN) and five participated in the My Health Teams (MyHT) approach, which is built on the PIN model. Both approaches aim to link patients with an interdisciplinary team. The PIN approach allows physicians to create a clinic specific team of providers, which patients are able to access. The MyHT approach allows the participating physician groups to customize the team of providers to suit their collective patients' care needs. This section is based on information provided by the respondents and roundtable participants from Manitoba, as well as the co-author who works with Manitoba Health.

### **Primary Care Goals**

The goals of the PIN program and the MyHT approach overlap in their focus on access to high quality interdisciplinary primary care for patients. In addition, the PIN program strives to improve providers' access to and use of information and work-life balance. The MyHT approach strives to achieve patient centered seamless primary care, and a more efficient and sustainable system by encouraging groups of clinics to collaborate.

### **Funding**

Healthcare in MB is administratively broken into regions, with Regional Health Authority (RHA) being responsible for the allocation of funding to individual teams. Four of the sampled teams were operating under a service purchase agreement with their RHA.



Under the PIN program, there is no designated baseline funding. Physicians practicing in private fee-for-service settings are able to participate in the program. This allows them to receive supplementary funding to support interdisciplinary team practice. The use of the supplementary funding is at the discretion of the physician. It can be used for salaries of non-physician providers (e.g. nurses or dietitians).

For participating PIN sites, supplementary funding is available through the Quality Based Incentive Funding (QBIF), which is a performance based payment scheme. QBIF payments are allocated on the basis of performance indicators in targeted service areas, such as prevention and management of diabetes, asthma, congestive heart failure, hypertension or coronary artery disease. A patient roster is created on the basis patients attending the site, allowing for population level bonus payments.

Under the MyHT approach, the collective group of participating receive funding to a maximum amount. Plans by the collective must be pre-approved by government. Allocation of administration dollars is fixed. Staff are hired by the RHA but provide services to each participating clinic in the MyHT

Each sampled team except one receives additional streams of funding from organizations such as Health Canada, Addictions Foundation of Manitoba, and Manitoba Health. This funding was earmarked for specific services, such as mental health, teen health, women's health, and addictions. Funding can be used to fully or partially pay for the salaries of appropriate care providers, such as counsellors, or respiratory technicians. One team also received private grants.

## **Provider Remuneration**

### *Physicians*

Most physicians in both models continue to bill the traditional fee-for-service directly from the Ministry of Health (Manitoba Health, Healthy Living and Seniors). The fee schedule is set in the Manitoba Master Agreement that is negotiated between the Ministry and Doctors Manitoba. In addition, MyHT partners can include salary (contracted medical services). For example, two teams offered salaries to some of their physicians, specifically those focusing on particular services. Within these clinics, physicians can choose the method of payment. The salaried physicians were on contract with the regional health authority or funded via the clinic. The physicians who receive salaries are not eligible for QBIF payments as PIN focused solely on fee-for-service physician engagement.

### *Non-physician providers*

Teams funded through the PIN program have no standardized approach, as the QBIF allocation is distributed at the discretion of the managing physicians. MyHT teams are funded through formal Agreements and pay salaries to their non-physician providers. Staff at MyHT are employees of regional health authorities and are paid the salary rates are set on the basis of union contracts. Distribution of funds and team composition is negotiated through the MyHT Agreement. One team also uses a volunteer dietitian. In the PIN blended clinics, non-physician providers also received salaries determined by the group.

## **Governance and Team Management**

The PIN and MyHT programs, while similarly focused, are structurally different. The PIN clinics are owned by physician shareholders, who sign up for the program and receive financial support. Within this model, strategic planning is discretionary to the physician team. In the two clinics we interviewed, it is primarily done through collaboration with team member physicians and a clinic administrator. The clinic administrator works with physician committees to implement programming and to manage human resource decisions. One clinic was receiving funding from both the PIN and MyHT sources, indicated that the governance structure was still being planned.

As such, PIN teams have relative autonomy in terms of service planning, team composition and care management, provided they serve the four main PIN objectives. Given that QBIF funding is based on the meeting of QBIF performance targets, the clear incentive is to focus activities on the achievement of those targets.

The MyHT teams are collaborative partnerships between a regional health authority (RHA), the community, and some or all of the independent primary care practices operating within the health region (25). They are not-for-profit entities governed by the participants through a formal MyHT Agreement. The Partnership works closely with a local RHA Director in areas of care planning, which also takes into account community partners. The MyHT partnership is responsible for the planning which defines the service mix and team composition. All planning and decision are subject to approval by the RHA and ultimately Manitoba Health.

### **Accountability**

Following the funding flows, accountability within the Manitoba Teams differs between the PIN and the MyHT approaches. Furthermore, similarly to the PCNs in Alberta, physicians and non-physician providers have differential lines of accountability.

Within PIN, physicians are independently self-employed. They are accountable to the Ministry of Health only to the extent that they provide the units of care for which they bill. Through participation in the PIN and QBIF, physicians agree to focus their activities on those captured by the QBIF performance measures, which are developed to support quality of care. They are accountable to other providers, with whom they enter into the employment contract, insofar as they are responsible for paying their salaries. Other providers report to PIN physicians.

FFS Physicians within the MyHT model continue to be accountable to the Ministry of Health. Providers who are contracted by the RHA and receive alternate funding remain accountable to the RHA with whom they have a contract. MyHT teams are accountable to each other via the MyHT Agreement.

In both models, recipients reported being accountable to provide specific types and forms of care in return for secondary forms of financial support. Teams receiving mental health program funding used those monies to provide salaries for appropriate practitioners.

### **Location and space**

Teams we interviewed practiced in spaces funded through FFS revenues of member physicians. In these instances, all physicians and the majority of non-physician providers included in the team were located in one site. MyHT non-physician practitioners may work out of one central location and/or visit partner clinics (similar to Alberta)

While primary care clinics span the province of Manitoba, the bulk of the respondents in this study were in Winnipeg and southern rural Manitoba. The majority of teams operated at a single site with a linkage in EMR (PIN) and some not-for-profit agencies had multiple sites. Many physicians also provided services at the local emergency room, especially in rural areas.

### **Team composition**

Within PIN, the teams consisted of a core group of physicians and other providers and staff as hired using QBIF funding. Some teams involved more physicians than other providers, while other clinics had a more diverse membership, including nurse practitioners, counselors, pharmacists, and others. One respondent associated the former a transactional leadership style and the latter with a transformational leadership style.

Primary health care teams provide a wide range of primary care services through the life course (as one respondent described: “womb to tomb”). In addition to the basic primary care services, some sites offered extensive programs in addictions, sexual health, mental wellness, and targeted specific disadvantaged populations within their programs.

The panel size of a clinic varied with some sites being able to offer an average per provider, or a total for the clinic. Several respondents noted that calculations of panel sizes should account for the complexities and acuity of the patient population. Further study of patient population social complexities is currently underway in Manitoba.

### **Care Management**

In sampled teams, care plans are developed and managed through frequent interaction between providers working together with a particular patient. This plan is managed closely by the physician, particularly in the PIN program, which regards them as responsible to coordinate care. Co-location within the same clinic is regarded as supporting fluid patient care, with practitioners being able to easily refer patients to one another and regularly discuss their care. In addition to the use of EMRs and the Health Home concept, teams hold case meetings where specific client care is discussed.

In terms of day-to-day operations, typically the executive director oversees operations, working closely with managers (when present) and physicians to ensure the team is meeting objectives. When there is a care coordination dispute, teams preferred to have providers involved come to a mutual conclusion. Team management or the physician lead facilitate this process, with the latter having final authority in regard to patient care. Team wide meetings are important venues through which objectives and potential service planning are discussed.

Roundtable participants indicated a desire for teams to more directly and specifically engage their patient populations into planning processes, as is the case in AB and NS. The process for how this will be done is in the process of being determined.

## Case study – Nova Scotia Primary Care Teams (PCTs)

Respondents in Nova Scotia considered the team to include providers and administrative staff supporting the team. There are no larger networks of teams within the province, which makes the identification of team members relatively straightforward.

### Primary Care Goals

At the point of data collection, provincial Primary Healthcare objectives were being negotiated every four years by the director of Primary Healthcare, the District Department of Family Practice who worked in a co-leadership model with health services managers representing all service areas and initiatives in the province. These objectives serve as the base drivers underlying programming throughout the provinces' nine administrative districts which are run by DHAs. A key objective has been to support the development of team based care and to facilitate cooperation with a wide range of community services and care providers to work on factors such as wait time reduction and chronic disease management and prevention.

In NS, primary care teams (PCTs) are designed to provide patient centered care, facilitating patient linkage with “the right provider at the right time in the right place” (30). A key objective is to coordinate care with community members and a wide range of health care providers. Here, integration of team care with pre-existing community programming and to effectively coordinate care with a diverse range of providers is key.

### Funding

At the time of interview, NS health care was administratively divided into districts. Each team received annual block payments from their District Health Authority ([stream 4](#)). The terms of this budget are negotiated by the program manager of a team and the District Health Authority. In some instances, one person would play the role of director/manager of the team and the district health authority.

The annual budget is based on projections of service provision costs. The cost estimation is based on a virtual geographic patient panel, and the health/disease profile of the patient population. Cost projections account for salaries of non-physician providers, administrative staff, and space.

In addition to block payments, three teams received secondary support from alternate sources, either in the form of funding and/or provider services. For example, a public health nurse employed by Public Health was available to offer services in a team. Funding is often earmarked for specific populations or types of care, such as addictions services, or Women's health.

### Provider Remuneration

#### *Physicians*

Within the PCTs, physicians are paid either via the traditional fee-for-service approach, or via salary<sup>4</sup>. Those receiving salaries are required to shadow bill their services to demonstrate to the Ministry of

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<sup>4</sup> As in all provinces, the typical primary care physician is self-employed and receives FFS payments. These traditional clinics are not the focus of this project.

Health at least 60% of their salary in billable activities. According to one respondent, the salaried physicians in their PCT receive \$226,000 per annum. All payment rates to physicians are negotiated between Doctors Nova Scotia and the Ministry of Health, and set in the Provincial Master Agreement. All payments to physicians are made directly by the Ministry of Health ([stream 1](#)).

The decision to offer salaries is typically based on the geographic location of the practice. Physicians practicing in sparsely populated regions were offered salaries, given that the population base would be too small to allow for sufficient fee-for-service income. Physicians practicing in less isolated areas would receive fee-for-services payments. Salaried physicians are able to bill hourly for services not related to patient care, such as reporting, care planning and team lead activities. All primary care physicians, salaried and those billing fee-for-service, are eligible for a number of additional payments that are a part of a small pay-for-performance program (e.g. the Chronic Disease Management program, the Complex Care Visit fee, etc.).

Each sampled team used some form of non-FFS contract, typically the salary. One team uses the salaries as the sole remuneration strategy, given that the practice is located in a rural area. Another team relies on international doctors to provide services through the International Medical Graduates program, due to ongoing challenges with attracting and retaining physicians. These physicians are offered a salary.

Patients are attached to clinics by virtue of geographical location. There is no penalty to a team, if a patient decides to consult another physician.

#### *Non-physician providers*

Many non-physician providers and staff working in a collaborative interdisciplinary team receive a salary that is directed to them by the District Health Authority ([stream 9](#)), either through the team administrative structure or directly. Other providers' time is transferred to teams on an in-kind basis. Providers are employed by the Ministry of Health and released to provide services within the teams. For example, nurses and nurse practitioners may receive a salary from the Department of Health and Wellness Primary Healthcare Branch ([stream 3](#)).

Many non-physician providers are paid from alternate funding sources. In the majority of cases, they receive salaries.

Salaries are also offered to Executive Directors, team administrative staff and support staff. For unionized providers, rates are negotiated between the Ministry of Health and professional associations. Other rates are set based on market standards. Executive directors and administration payment rates are set by the District Health Authorities.

### **Governance and Team Management**

District Health Authorities are responsible for funding distribution and programming in their region. District Health Authorities are accountable to the Department of Health and Wellness. At the time of interviews, there were nine District Health Authorities. Since April 2015, there are two, including Capital Health.

The formal governance structure surrounding collaborative interdisciplinary teams is relatively uniform.

The Primary Healthcare Director works out of the DHA and works with Primary Healthcare Manager of that district to oversee CIT and care centres in the region. In some instances, a CIT employs a team manager. When this position exists, the Primary Healthcare Manager will work with that team manager who in turn, coordinates day-to-day activities for the CIT. In some cases, this position no longer exists (as a result of restructuring pre-interview). In these instances, the Primary Healthcare Manager works team managers, and also directly with team leads and/or front-line managers to coordinate services.

As discussed under funding, annual budgets are negotiated between the District Health Authority (Primary Healthcare Director) and team managers. There are no formal standardized processes to involve providers in budget planning, strategic planning and programming decisions. In some cases, whole teams are involved in discussions, in other cases, smaller sub-groups are formed, often composed of physicians and directors. Ideas may be brought to the full team for deliberation. In yet other cases, ideas discussed during team meetings related to patient care are carried forward to budget planning sessions. Respondents also noted a move increased collaboration with community health boards, referring to upcoming province wide implementation of more formal tools of community engagement in setting objectives for primary care.

Approaches to human resources management vary between teams. The Primary Healthcare Manager is involved in all hiring and termination decisions. In one team, it is the sole responsibility of the Primary Healthcare Manager to make all staffing decisions, except those dealing with physicians. In another team, the hiring and firing is more collaborative and involves the Primary Healthcare Manager, community members from the board, and team members. The hiring and firing of physicians is the specific responsibility of the Chief of Staff of Physician Services (Department of Health).

In terms of day-to-day operations, decision making and authority of care and administrative staff are the responsibilities of team leads (where present) and front line managers. Leads and front line managers report to the team manager. The team lead position is filled by a physician in some teams, and by a nurse practitioner in other teams. Within each team, collaboration is strongly encouraged with respect to patient care. It is the role of the program director to reiterate the principles of collaborative care in cases of role confusion or disagreement.

Regular meetings (weekly to monthly) provide opportunities for coordination and decisions around patient care and information sharing. The meetings also provide fora for conflict management and programming discussions. Many teams rely on electronic patient records for improved care coordination and continuity, as well as on established clinical and procedure guidelines. In instances of sustained dispute over patient care, physicians typically have the decision authority.

### **Accountability**

As in previous discussions, accountability runs opposite to funding flows. Teams are accountable to District Health Authorities, who are accountable to the Ministry of Health. Teams and District Health Authorities are responsible for the satisfaction of primary care objectives.

Several mechanisms exist to support accountability. Strategic planning is a collaboration between the District Health Authorities and teams. Teams provide annual reports to their District Health Authority, including expenditure reports. Teams are also accountable for the provision of services as agreed upon with alternate funding sources, and to use contributions of provider time as specified in a release

agreement. Regular team meetings and planning sessions are used to communicate care expectations, set specific objectives and monitor ongoing service delivery.

Increasingly, teams are becoming accountable to communities via the implementation of community boards. Comprised of community member volunteers, they are to be integrated more closely into team service planning, serving as key liaisons between care providers and community members. At the point of interview, some teams were reporting to boards on service planning.

As in other provinces, physicians are administratively separate from teams and are accountable to Physicians' Services. This is the case for physicians who receive salaries, and those who bill on a FFS basis. The latter are accountable to provide the services for which they bill. Physicians receiving salaries are required to demonstrate to the Ministry of Health at least 60% of their salary in shadow billing. Some physicians are also required to provide services outside of the teams, for example in community emergency centres. Teams communicate standards around desired patient volume, but have no mechanism to enforce compliance on the part of physicians.

### **Location and space**

Teams practice in three types of spaces: DHA owned facilities, community sites, and private physicians' offices, or combinations thereof. Five teams used DHA owned spaces for at least part of their services, with two practicing entirely in these facilities. In at least two sampled districts, physicians pay a rent to the DHA, and in return, the DHA provides the necessary staff, space and equipment. Three teams used private physicians' offices not funded through the DHA budget. Teams also operated in community sites including hospitals, an integrated care center, a community emergency center and a Women's Center. The latter types of arrangements predominated in rural areas.

### **Team composition**

Teams vary in size and composition depending on the types of services provided and their geographic location. Potential services include family medicine, pediatric care, chronic disease management, mental health and/or addictions counseling, and long term care. Some teams include a physician, a nurse practitioner, and a supporting staff person. Others also include midwives (e.g. Women's clinic), dieticians (e.g. diabetes care), counselors (e.g. addictions services), and other providers. In some teams, public health nurses provided some of the services.

In instances where teams operated in DHA spaces, physicians and the full range of interdisciplinary team members were typically in these locations. In family practice instances, physician/nurse combinations acted as 'base', with alternate practitioners being brought in to practice in these spaces as necessary. In some instances where rural care is being provided, PHT members oscillate between care spaces, providing coverage as required.

Patient panels are not formalized in Nova Scotia. Projections of patient volume used in funding allocations are based on geographical location and population size. Patients are geographically attached to physicians. In some areas, patients have been attached to non-physician providers, or to clinics, though which various providers rotate.

## Care management

In NS, a patient typically enters a team through a member physician and/or a nurse practitioner. In some rural contexts, alternate attachment strategies such as the tri-located team and practice of attaching patients to clinics described in the previous section are used.

The care plan is developed after the initial assessment by a patient care team, the composition of which is determined by the physician and/or nurse practitioner. Care is delegated to the most appropriate provider, overseen by a physician lead. Some patients are referred to a particular stream of services, such as diabetes care.

When patients received care in DHA owned spaces, they were typically referred to other providers or streams practicing in house. In these spaces, providers typically meet several times a week, if not daily, to address and manage care. EMRs are also used to track and manage care.

When patients received care in private physicians' offices, they were referred to other providers (or streams), who traveled between spaces. In these instances, providers were often not present in a given space simultaneously. EMRs, care maps, teleconferencing and weekly to monthly meetings were used to facilitate communication around patient care.

The importance of engaging the patient and target communities as active participants in the process of designing and implementing care plans was widely noted. For individual patients, teams are working on providing support to "facilitate patient ownership of and participation in the healing or management practice" (R03) including motivational interviewing and direct inclusion in the care planning process. In terms of community needs, teams are working increasingly closely with community boards and other service providers in the region to identify care needs and respond to them in meaningful and effective fashion. Teams are also beginning to data mine EMR records and to construct patient surveys whose purpose are to render the patient population more visible which will then facilitate the design of well targeted programming. Within this model, it is important for PHT staff to have the flexibility to recognize care needs and to plan services accordingly.

In terms of day-to-day operations, decision making and authority around care are the responsibilities of team leads (where present). The team lead position is filled by a physician in some teams, and by a nurse practitioner in other teams. In other instances, there is no lead. Rather, decision making around care is a collaborative process. In cases where resolution cannot be met, the physician has final authority. Team management may mediate the resolution process as well as help manage the care plan, particularly in dispersed conditions. Teams also use monthly or bi-monthly meetings to bring team together, discuss service objectives, and provide or receive feedback on care related issues.



## Conclusions

We identify three types of funding arrangements for teams, and three types of remuneration arrangements within teams. There are eight possible combinations of funding/remuneration arrangements, each with different speculated incentive effects on collaboration and care sharing. The choice of funding/remuneration arrangement is in part determined by the geographical context of the team.

Funding options that positively support collaboration and care sharing are those, in which funding is linked to the activities of the whole team. When funding is linked to the activities of specific providers, typically the physician(s), collaboration and care sharing are discouraged. When funding is not linked to activities, but for example calculated on the basis of estimated costs of salaries, the incentive effect on collaboration and care sharing is neutral.

Central to the linking of funding to activities is the approach to patient attachment. When patients are attached to teams, and funding is calculated on a per patient basis, collaboration and care sharing are encouraged. When patients are attached to physicians, and funding is calculated on a per patient basis, collaboration and care sharing are discouraged. When patients are attached to teams on the basis of geography, and funding is calculated on per patient basis (directly or indirectly through an estimation of provider needs), collaboration and care sharing are not influenced by the funding model.

Another key concept related to funding is the question of the expenses that are covered by the funding model. Of particular concern is the issue of practice space. When space and equipment are to be paid for through the income of particular providers, such as physicians, a link between the funding and the activities of these providers is created. As discussed, this is a dis-incentive to collaboration and care sharing.

Provider remuneration arrangements within teams can create three types of dependence between provider incomes: a balanced interdependence, independence, and an unbalanced or hierarchical interdependence. A balanced interdependence is created when providers have equal opportunity to receive an income (or income supplement) that is a proportion of a total available to the team. An example is the opportunity for all providers to earn a bonus for the achievement of targets in a pay-for-performance program. This approach motivates collaboration to provide the care that is most likely to result in target achievement. Independence is created, when all providers receive an income that is not linked to their own or their colleagues' activities. An example is the payment of salaries to all providers. This approach is neutral with respect to motivating collaboration. A notable caveat is that collaboration is hampered, when the salaries originate with different funders, thereby creating differential lines of accountability. An unbalanced or hierarchical interdependence is created, when providers have an unequal opportunity to receive an income (or bonus) from a total available, or when the income of one provider fully depends on the income of another provider. An example of the first scenario is when physicians are able to receive pay-for-performance bonuses for their own activities, but other providers are not. An example of the second scenario is when physicians' incomes (or fee for service revenues) pay for the salaries of other providers.

The issue of patient attachment is important in the context of provider remuneration. Pay-for-performance programs that offer bonuses for the achievement of targets at the population level (e.g. a

threshold percentage of all patients received blood screen tests) must develop appropriate patient attachment strategies.

In many rural contexts, the patient population base is low. Funding models cannot be based on estimations of per-patient costs, and remuneration cannot be based on a fee-for-service models. Both of these approaches would result in funding and remuneration levels that would be insufficient to attract and retain providers. Geographical attachment is a necessity in rural areas, as is the use of salaries for providers. Therefore, the funding/remuneration model is not likely to serve as a tool to encourage collaboration and care-sharing. Other non-pecuniary incentives need to be relied upon. These can include: clear statements of shared goals, clear explication of roles, expectations and processes, and the inclusion of all providers in the setting of strategic directions, goals, and patient care plans.

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