Burnaby Division of Family Practice
A GPSC initiative

GPSC
General Practice Services Committee

Neighborhood Networks

Strengthen Primary Care Through Physician Networks

February 2022

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Abbreviations and Acronyms

BC	British Columbia
BDoFP	Burnaby Division of Family Practice
CHSA	Community Health Service Area
FP	Family Physician
GPSC	Family Practice Services Committee
MH	Mental Health
PCN	Primary Care Network
PMH	Primary Medical Home
PSP	Practice Support Program
RN	Registered Nurse

Executive Summary

The case study is one of several created as part of the General Practice Services Committee's evaluation of the Patient Medical Home in British Columbia. These case studies provide a closer look into community projects deployed across the province that help build a provincial picture of Patient Medical Home innovation and implementation.

This case study explores the development and implementation of three neighborhood networks in Burnaby, BC. In Burnaby, a neighborhood network is comprised of family physicians working in a defined geography, along with Burnaby Division staff functioning in supportive roles. Funding for the networks is provided by the Division. The neighborhood networks were developed with the goals of:

1. Building and improving interconnectivity between family physicians
2. Providing opportunities for family physicians to collaboratively plan for primary care networks
3. Enabling family physicians to share care with other providers and practice to their full scope
4. Improving patient access to medical care

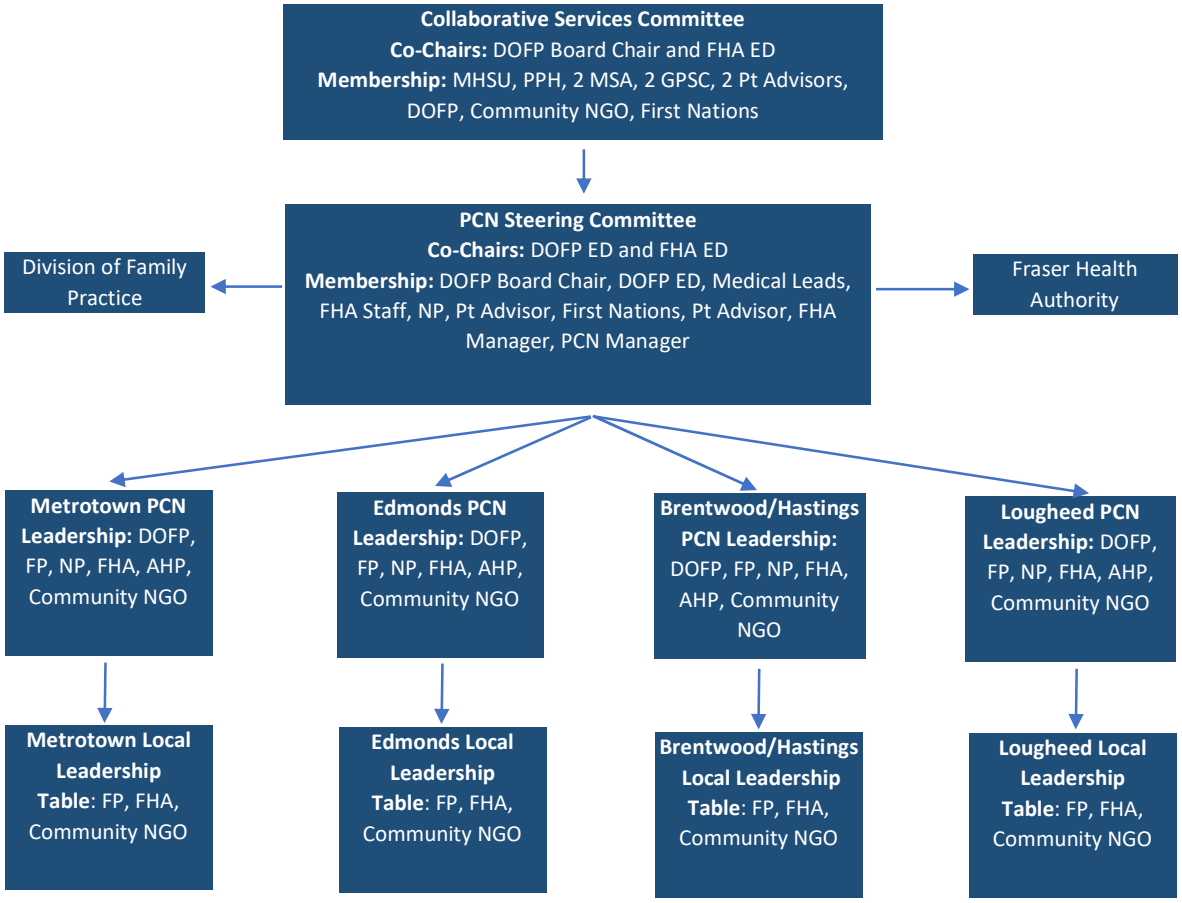
The case study used data collected across multiple sources, including a literature review, review of project documents, twelve interviews, and two network meeting observations.

Background. The creation of neighborhood networks in Burnaby was prompted by family physicians who recognized the need to bring together family physicians from across local communities to increase their interconnectedness, provide opportunities for local Primary Care Network planning, and enable methods for sharing care with each other, all with the larger aim of improving patient access to medical care across Burnaby. A key contributor to the successful formation of the neighborhood networks was the special attention physician leaders and Division staff paid to constructing neighborhood network meetings that were focused, efficient, engaging, and, ultimately, perceived by physician participants as a valuable use of their time.

Outcomes. The interviews with family physicians and Division staff indicate that the neighborhood networks have made progress toward their overall goals. The neighborhood networks have become an important venue for bringing Burnaby FPs together to plan local primary care delivery and improvements. The networks have supported FPs to meet each other, in some cases for the first time, and have also supported important informal relationships to develop outside of formal neighborhood network meetings. Burnaby's neighborhood networks have supported family physicians to learn from each other, identify options for locum coverage and after-hours care, and support referrals to specialist care throughout the networks.

A key outcome of the neighborhood networks was the development of a set of neighborhood network-specific Local Leadership Tables to interface with the corresponding Primary Care Network (PCN) in order for neighborhood networks to contribute to the design and implementation of healthcare delivery through the PCN. The proposed governance structure is shown, below, in Figure 1.

Figure 1: Proposed Burnaby Primary Care Governance Structure



Most importantly, family physicians were able to increase patients' access to care by referring patients to their family physician peers, expanding their use of locums, working on the development of an Urgent and Primary Care Clinic, and procuring additional healthcare resources for the neighborhood networks.

To summarize, around a quarter of full-time Burnaby FPs attend the neighborhood network meetings, an attendance level encouraged by communicating a strong vision, leveraging engaged physicians leaders, sustaining Division support, and continuing to promote the neighborhood networks to family physicians throughout Burnaby. Maintaining the progress of the neighborhood networks through continued support by the Division and Fraser Health, establishment of the Local Leadership Tables, completing the health data integration, and increasing efficient provider to provider communication will work to solidify Burnaby's neighborhood networks as a critical component of the local healthcare delivery system.

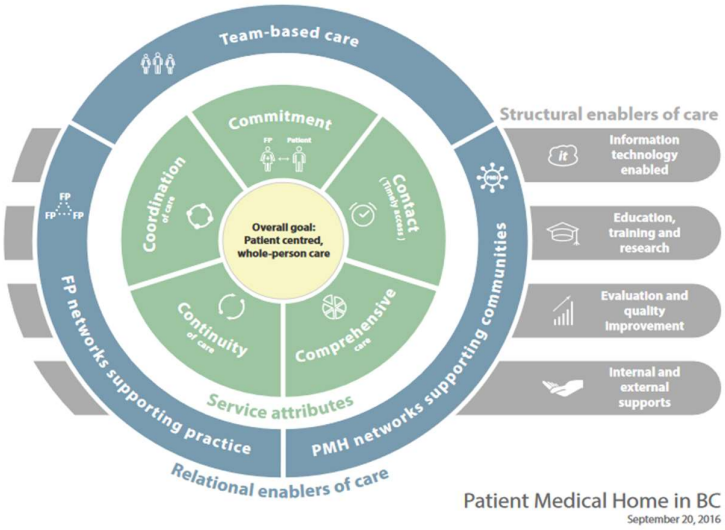
Introduction

The case study is one of several created as part of the General Practice Services Committee's evaluation of the Patient Medical Home in British Columbia. These case studies provide a closer look into community projects deployed across the province that help build a provincial picture of Patient Medical Home innovation and implementation.

In British Columbia, family physician networks are a key component of the Patient Medical Home (PMH) and Primary Care Networks, shown below in Box 1.

Box 1. Patient Medical Homes, Primary Care Networks, and physician networks

Patient Medical Home: The Patient Medical Home (PMH) is a team-based primary care practice, supported to provide timely, comprehensive care. Physician networks are named as a key enabler within the provincial attributes of the PMH (as presented below), as they support each PMH to plan resource needs across a geography, aligned with community need.



Primary Care Network: A PCN is a clinical network of local primary care service providers located in a geographical area, with patient medical homes (PMHs) as the foundation. A PCN is enabled by a partnership between the local division of family practice and health authority, along with local First Nations. In a PCN, physicians (via patient medical homes), other primary care providers, allied health care providers, health authority service providers, and community organizations work together to provide all the primary care services a local population requires.

Prior to the start of Burnaby's neighborhood networks, family physician networks had been developed in communities across BC, for example family practice networks in the city of Richmond and the Thompson region. Although the locations operate differently, these networks have the similar goal of bringing family physicians together for a range of purposes. In Burnaby, the Burnaby Division of Family Practice (the Division) and Burnaby family physicians (FPs) developed three neighborhood networks to assist Burnaby FPs with four main objectives:

1. Building and improving interconnectivity between family physicians
2. Providing opportunities for family physicians to collaboratively plan for primary care networks
3. Enabling family physicians to share care with other providers and practice to their full scope
4. Improving patient access to medical care

The case study used data collected across multiple sources, including a literature review, review of project documents, twelve interviews, and two network meeting observations. It will cover the development process and implementation of the neighborhood networks, key outcomes related to the four main objectives, and conditions of success identified through interviews that contributed to the initial success of the neighborhood networks.

Methods

The case study used primary and secondary data, collected across multiple sources. The data collection methods, scope and timing are described below in Table 1.

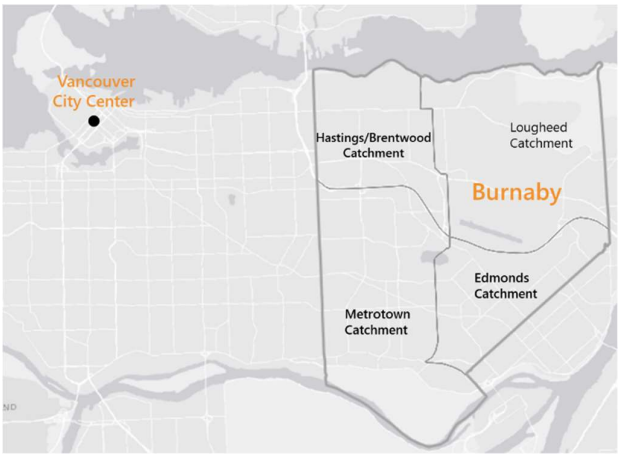
Table 1: Case study methods

Method	Description
Literature Review 	The literature review explored the implementation of physician networks in Canada and internationally. It had three areas of focus: 1) the history of physician networks; 2) experiences of physician networks delivery; and 3) factors that support successful implementation. In total, 28 documents were reviewed, from academic journals and grey literature. See Appendix 1 for full details of the literature review methods.
Review of project documents 	The document review helped situate the case study in context and to construct a clear timeline of network development and delivery. Documents reviewed included: documentation on Burnaby network attendance; agendas for network meeting; and broader Burnaby PMH and PCN planning and funding documentation.
Key informant interviews (x 12) 	Phone interviews were undertaken with key stakeholders involved in the set-up, delivery and management of neighborhood networks in Burnaby, BC. Interviewees included three representatives from the Burnaby Division of Family Practice, and six FPs who participated in the networks in Burnaby. The interviews focused on understanding the planning and implementation in each network, and experiences of participation and network impacts. Phone interviews were also conducted with individuals involved in implementing physician networks elsewhere in Canada, including in Richmond BC, Alberta and Ontario. The interviews focused on their experiences of implementing the networks, their impact, and what they felt had made them successful. Interviewees are listed in Appendix 2.
Network meeting participant observations (x2) 	Two neighborhood network meetings in Burnaby were observed by the researchers: a meeting in Metrotown (September 12, 2019), and a meeting in Hastings/ Brentwood (September 24, 2019). The observations provided an opportunity to witness how the meetings were run and for informal discussions with physicians and others attending these meetings.

Burnaby's Neighborhood Networks

Burnaby Demographics

Figure 1: Burnaby and its catchment areas



Burnaby is the third largest city in British Columbia by population, located immediately east of Vancouver (Figure 1). It has a population of more than 230,000 people (Census, 2016), and has seen significant growth in recent years, with an expected 2.1% annual growth expected by 2021 (City of Burnaby, 2019).

It also has the second highest population of seniors in BC (36,860), and a highly diverse population: half of Burnaby residents are immigrants (50.5%) and many are new immigrants (8.9%), the largest populations in the province of BC proportionally (Census, 2016). This raises significant challenges in ensuring the strong provision of primary health care services for a population with growing, complex and diverse needs. Such complexity and diversity makes the potential for physician networks particularly valuable for Burnaby. As noted by a Burnaby physician:

> We are serving a distinct group of patients here. We have older patients with growing health needs, we have young mothers who don't speak English as a first language. I was hopeful that the networks would bring [FPs] together as a community of practitioners to consider how we can provide the best service for this range of health needs. – Burnaby FP

There are currently around 130 FPs practicing full-service family practice in Burnaby on a full time-basis[1], working in a range of large and small clinics. When asked in 2017 40 FPs reported planning to retire by 2030 (Burnaby Division of Family Practice PMH Funding Submission, 2017). In order to prepare for the planned retirement of so many FPs, the Division was interested in using the neighborhood networks as a space to discuss and plan for the retirement and transition of patient panels from long-serving physicians to physicians new to primary care.

The Neighborhood Networks

Burnaby has one Regional City Center (Metrotown) and three Municipal Town Centers (Brentwood, Edmonds, and Lougheed)[2]. Networks were established in three of these four areas[3] in 2017/ 18, which correspond to three of four Community Health Service Areas in Burnaby:

1. Metrotown (October 2017)
2. Edmonds (October 2017)
3. Hastings/ Brentwood (July 2018)

[1] Information provided by Burnaby Division of Family Practice: there are estimated to be up to 242 FPs working in Burnaby when including locums and those working part-time. (Health Sector Information, Analysis and Reporting data, 2019).
[2] As defined by Metro Vancouver's Regional Growth Strategy.
3 There are future plans to implement the fourth and final neighborhood in Lougheed, based on learnings from the first three neighborhood networks.

The three neighborhood networks were funded and delivered as part of the Division's Patient Medical Home (PMH) initiative and were overseen by the Division. Each network has a different composition and specific issues they were designed to address.

Table 2: Overview of the three networks

Metrotown	Metrotown is the largest of the three neighborhoods, with around 60 active full-time FPs, and incorporating Burnaby's city center. Many physicians here operate in locations close to each other (largely around the city center), but work in solo or smaller practices, and/or work part-time in communities outside of Metrotown. Physicians report that the fragmentation of practices contributed to physician's disconnectedness. Given the size of the area supported, and the number of active physicians, this neighborhood presented significant opportunities for improving cross-coverage and partnerships.
Edmonds	Edmonds is the smallest neighborhood by geographic area. Edmonds has around 25 active full-time FPs; this includes one large clinic, employing more than half of these physicians (14 physicians), and seven solo or small practices. While the larger clinic had systems in place to work with other physicians within this clinic, there were opportunities to improve communication across all clinics in this neighborhood.
Hastings/ Brentwood	Hastings/ Brentwood amalgamates two areas in Burnaby with around 44 active full-time practicing FPs. The Hastings area is more contained, while the Brentwood area is a geographically large and dispersed area, with FPs located far from each other making relationship-forming more difficult.

Physician Recruitment. The first step by the Division and physician leaders in recruiting physicians was setting and articulating the vision for the neighborhood networks and linking it to the PMH model. A clear vision helped FPs and providers see the value of the networks by linking participation in the networks to broad primary care goals that were high priority for FPs: providing good quality patient care; expanding team-base care opportunities; and increasing access to the resources and supports they needed to do their job well. As an FP stated:

> When we were thinking about the networks, it was clear how it fit within the broader strategic direction, particularly the provincial vision for shared and team-based care. So, we knew it needed to happen. We just needed to decide the 'how.' — Burnaby FP

The Division identified and recruited FPs in Burnaby to lead each local network. The FPs were known leaders, involved in existing leadership roles as a FP, such as leading a PMH working group or work area, and were well known to other FPs in the area. The physician lead was a physician working in that neighborhood who chaired each neighborhood network meeting, and who worked with the Division to oversee the networks across Burnaby. These physicians were champions for the networks, helping to promote the concept and recruit other physicians. Family physicians and Division staff noted that the leadership and credibility of physician leaders was important in engaging other FPs in the networks. As two interviewees described, having local physician leaders reach out to other physicians, rather than Division staff, was perceived as more persuasive to their physician colleagues in boosting participation.

Once the physician leaders were in place, work began on engaging a core group of FPs to attend the networks. In Burnaby, interviewed FPs said it was important that a 'critical mass' of FP participation was reached, so that a range of views were incorporated into decisions made about the networks. As one physicians stated:

> You do need that cooperation and input from a strong proportion of physicians. If you have too small a number deciding on things that affect the area, then your decisions

> may be skewed or you might not have as efficient a model as you would like. — Burnaby physician

Division staff and physician leaders shared their vision for neighborhood networks at local PMH and PCN engagement events, and spoke directly with FPs about the importance of the networks. To raise awareness of the networks the Division promoted the networks via multiple channels, including: Division events (such as Continued Medical Education events); direct promotion to FP practices; targeted reminder emails; and having physician leads promote the networks to their colleagues.

One Division staff member also noted that, although it was important to engage as many FPs as possible in the change, not every FP needed to participate. More important is that physicians involved in networks were supported to communicate their positive network experiences to other FPs, so that others were encouraged to participate in the longer-term. In addition to selecting network physicians leaders, Burnaby also created leadership opportunities in the networks by establishing network working-groups to work on specific agenda items in between meetings.

Maintaining Physician Participation. Compensating physicians to participate in networks was a clear theme in interviews and exploration of other BC family physician networks. In family practice networks in the Burnaby, Richmond and Thompson Divisions, FPs were compensated for their time spent attending network meetings at the current sessional rate (Richmond Division of Family practice, 2016b; Thompson Division of Family Practice, 2018). In Burnaby, the division reimbursed physicians for one hour of a 2.5-hour session. Burnaby physicians noted the importance of reimbursement for their time, particularly for physicians who are less engaged or unsure about the concept of physician networks, and would potentially be less inclined to participate without appropriate compensation. One physician also noted that incentives encourage FPs to participate in longer working hours on days when meetings are scheduled:

> Physicians are very sensitive to the fact that these activities are in the evening and that they are tired during the day. If they are not paid for their time, then [physician participation] could fizzle out. – Burnaby FP

As an additional strategy for recruiting and retaining network participants, adapted from Richmond Division, Burnaby Division provided participating FPs with access to additional allied health resources through the network, for example, chronic disease nurses, pharmacists, a psychiatrist, and a consultant geriatrician. The resources are attached to the networks and not available to FPs outside the network community.

Network Meetings

Network meetings were coordinated and managed by the Division. Division staff oversaw meeting invitations, agendas, organized meeting spaces, and coordinated action between meetings, supported by physician leads.

Successful Meeting Characteristics. Meetings were held in the evenings, outside of clinic hours for around 2.5 hours. Food and refreshments were provided as part of each meeting. Burnaby physicians and Division staff highlighted the elements of network meetings that supported their successful implementation:

- Meetings were arranged well in advance so FPs could carve out time to attend.

- Meetings were held in the evenings, when FPs would not need to find work cover for their clinics.
- Meetings were catered, which supported busy working FPs to attend.
- Meetings were held at appropriate intervals (around every 6 weeks), which made committing to them easier for FPs.
- Meetings were structured around completed actions items from previous meetings to keep meetings purposive and a valuable use of FPs time.
- Meetings were held in a location away from FP clinics, which helped FPs to remain focused and provided an appropriate space for creativity and group discussion.

Meeting Content. Initial neighborhood network meetings focused on building relationships between physicians and included group discussion of the challenges FPs faced in their practices. As neighborhood network implementation advanced, planning meetings evloved from initial relationship development to more sophisticated topics, such as the use of panel analysis[4] and EMR data to find insights to identify current service gaps and community care needs. A range of issues were discussed at network meetings, which varied depending on each community. Common issues discussed across the three networks included, but not limited to, the following:

- EMR training, use and integration
- Locum coverage
- Gaps in service for patients, such as diabetes, hypertension, mild to moderate mental health support immunizations, frail/elderly care
- Supporting transition for retiring FPs
- Composition of allied health teams in each neighborhood
- Shared deployment of allied health resources across neighborhood practices
- Operational effectiveness of deployed team-based care allied health resources
- After-hours call and coverage options
- Population-Based Funding

External facilitators were used when needed to manage group discussions and debate, and to ensure participants were contributing equally. Local experts, such as representatives from Fraser Health and the Practice Support Program were invited to provide broader insight and support into regional strategy, information on available regional support, and to help guide the delivery of key actions. From the start, network meetings were also used to seek FP input into the formation of PCNs, related service plans, and funding applications[5].

Meeting Attendance. The Metrotown and Edmonds networks each met seven times from the fall of 2017 to the fall of 2019. The Hastings/ Brentwood network met five times from the summer of 2018 to the fall of 2019. This meeting frequency equates to around once per quarter, which participants stated was an appropriate frequency given all the other work-life responsibilities they needed to manage. The Division aimed to only arrange subsequent meetings when required actions from previous meeting had taken place. The biggest gap between network meetings was between February and September 2019, which was due to significant work being undertaken between

[4] Panel analysis is where details of a clinic's patient panel are reviewed, to better understand the panel attributes and clinic needs.

[5] In the neighborhood networks, FPs were supported to work together to deliver service and implementation plans for the PCN. FPs used the networks to discuss the needs of their individual communities, the vulnerable populations they felt could be better served, and the resources needed in primary health care and beyond.

meetings to develop PCN programs, including a Chronic Disease Prevention Program and a Mild to Moderate Mental Health Program in Burnaby. The number of physicians attending each meeting across all three networks ranged from nine to 20 physicians, with an average of 15 physicians in attendance. Representatives from the Divisions reported that, despite challenges in engaging all FPs to attend the network meetings, they had been successful in engaging those who were not already actively and regularly engaged in Division events and activities in Burnaby:

> The people coming to the networks were not the regulars, they were heads down in their practices: we are getting to that outer circle. — Burnaby Division representative

In addition to scheduled meetings, physicians began using group messaging applications, informal social gatherings and events, and small working groups to stay connected and make headway on action items. Messaging apps and informal gatherings provided a mechanism for physicians to continue the conversation in between network meetings, as well as to pose questions related to clinical practice and receive a rapid response. A physician noted "….[physicians] have a WhatsApp group where they are asking: 'This is going on; how can I resolve this? Are you accepting patients?' The networks were so important in creating that collegiality." The messaging groups serve one of the key intended outcomes of physician networks within the Primary Medical Home (PMH) model: providing clinical support between physicians for clinical matters.

Role of Burnaby Division. All physicians from Burnaby interviewed for this case study highlighted the crucial role that Burnaby Division played in overseeing, coordinating and organizing neighborhood network meetings. All FPs said this was a key factor that enabled the neighborhood network's success in Burnaby. The Division set aside dedicated time for FPs away from their clinical duties to help facilitate and guide meetings, undertake logistic and administrative tasks, and to support regular engagement with the health authority and other potential network partners. As one Burnaby physicians noted:

> The admin support from the Division, in terms of arranging a meeting place, coordinating meeting times, and reminding people about meetings, has been critical to making the meetings work. It has been probably the main factor needed to ensure that the networks would be a success.—Burnaby FP

This is consistent with findings from the delivery of physician networks elsewhere. The evaluation of physician networks in Thompson BC showed that having a dedicated person responsible for the day to day management of the networks was critical to their success (Thompson Division of Family Practice, 2018). In Richmond, having a central person to manage each network was said to have supported FPs to focus on sharing ideas and plans (Richmond Division of Family practice, 2016a).

Maintaining Momentum

In order to maintain physician interest in the work of the neighborhood networks, Division staff and physicians noted the importance of having a balance of quick wins (to demonstrate neighborhood network effectiveness) and long-term goals (such as PCN planning) to maintain momentum. A Division representative noted that for family physicians "There has got to be that clear and quick return on their investment. Why would physicians do this otherwise, when they constantly have high volume, fee-for-service nipping at their heels." To help maintain momentum, the Division promoted physician's neighborhood network participation with gaining access to opportunities for panel clean-

up, sign-up for Primary and Community Care Nurse resources, and funding for additional allied health resources through PCN funding. Physicians stated that the long-term progress made towards securing allied health resources was, for them, the most significant outcome of the networks to date.

Monitoring Implementation. During interviews, physicians noted the importance of having clear performance indicators for the networks, potentially linked to broader provincial performance indicators for PCNs, so that networks can monitor their implementation progress in a tangible way. As a physician noted, having indicators and metrics in place is helpful for articulating progress toward the network's goals:

> What are you hoping to achieve? What are your measures of success? How are you going to be held accountable for money spent, grants spent? So once again you really need a good accountability mechanism that spans the role of the network of the payer, of the health authority. – Burnaby FP

Having a well-defined set of indicators was particularly true for when networks began to have resources and funding attached to them as part of Burnaby's broader PCN implementation effort.

Outcomes of the networks

Physician Interconnectivity

To counteract potential reluctance of physicians to participate, physicians said they promoted the neighborhood networks as a forum to build stronger and more sustainable working relationships with other FPs in their community. For example:

> I wanted the networks to build collegiality across FPs working in the same geographic neighbourhood. We were all very siloed…..We saw our own patients at our own clinics, and we didn't talk to each other. — Burnaby FP

> Having a forum to come together, to get to know each other, to communicate both formally and informally. The power of that should not be underestimated. — Burnaby FP

Physicians noted that there have been challenges in connecting with other Burnaby FPs in the past, despite having a strong desire to do so. They implicated busy work schedules, a lack of suitable communication forums, and FPs historically seeing other clinics as "competition" as barriers to connecting.

> We were all swamped with the day to day; collaboration was not something that was prioritized. Some of us were desperate to connect with each other, but we lacked the time or the means to do so. — Burnaby FP

> Historically, we're not used to working together. We aim to attach patients to our panel, and many of us enjoy the personal one-to-one relationship we have with our patients. This made it hard for FPs to understand the potential value of collaboration for patient care…They were frightened of losing that connection, that holistic understanding of their patients' health needs. — Burnaby FP

However, despite the challenges noted above, interviewees noted how the networks had enabled less experienced FPs to connect with more experienced ones. As a Division staff member noted:

> The community had a lot of new family physicians in the area, and also many long-standing physicians, but they didn't know each other. So the neighbourhood networks enabled them to come together and learn from each other. And these were physicians practicing in the same area, streets away from each other. —Division interviewee

In addition to improving physician interconnectedness, physicians acknowledged that the networks had helped improve physician connections with the local health authority. The FPs noted that without the networks most physicians would not have regular contact with the health authority. They believed that having a health authority representative at network meetings helped build a dialogue essential planning for Primary Care Networks, and for enabling effective local primary care delivery in general:

> The networks helped move the relationship between FPs and Fraser Health to one that was two-directional. In the past, Fraser Health might send an email bulletin and we were just

> asked to accept everything. There wasn't a mechanism for us to question or to discuss how that information might be applied. — Burnaby FP

PCN Planning

Both Burnaby FPs and Division staff believed that starting the neighborhood networks before the PCN planning process had helped the networks gain traction among FPs by linking the neighborhood networks to a significant and concrete initiative in which FPs wanted and needed to be involved. A physician observed that "The entire PCN/ PMH plan has been responsive to the doctors on the ground, and that has been managed almost entirely through the networks."

The neighborhood network meeting format that supported FPs to engage in panel analysis and identify community needs were directly used to inform PCN planning. One FP reported that identifying community needs was the most significant impact from attending the neighborhood networks:

> It was probably one of the first times that FPs from the community had got together, to identify the needs of their community, as a collective. Before this, we all had our own individual ideas of what was needed….we needed to work together if we were going to do anything about our ideas — Burnaby FP

Overall, physicians in the neighborhood networks believed that active engagement in PCN planning, enabled through the network meetings, had helped them to feel more influence and ownership over their local PCN.

Increased Access to Patient Care

Physicians were able to increase patient access to care by referring patients to their family physician peers, expanded use of locums, working on the development of an Urgent and Primary Care Clinic, and procuring additional healthcare resources. Interviewees reported having used the networks to identify other FPs that they could refer their patients to for quicker care for a variety of reasons. For example, physicians reported sending patients to physician colleagues for specific conditions such as pain management, intrauterine devices, and pre- and post-natal maternity care. In other instances physicians were able to refer patients to colleagues who they knew were accepting patients. Physicians noted that prior to the development of the neighborhood networks such organic referrals would have been less likely to occur.

Physicians reported having used the networks to identify locum coverage, or to discuss how to support each other when locum support was not available. Physicians reported using their network to support equitable access to locums. For example:

> As a large clinic, we are often approached by locums. We might not need them, but it felt wrong to just send them away. We assumed that other practices in the community, potentially ones with older doctors who were reducing their hours, might require this resource. We had no way of knowing what the need might be across the community [before the networks were put in place]. — Burnaby FP

A recent development of after-hours care provision in Burnaby has been the opening of the Edmonds Urgent and Primary Care Clinic which provides care 5pm-9pm Monday-Friday, 2pm-8pm Saturday and 12pm-6pm Sunday. The neighborhood networks were used to vet the concept of the

Urgent and Primary Care Clinic (UPCC) and arrive at a UPCC model for Burnaby that the FPs both endorsed and had a sense of collective ownership. The UPCC physician rotation schedule was also devised through consultation with each neighborhood network. Future work for the neighborhood networks will include after-hours care arrangements between FPs, where patients could phone in and speak with a FP at times when community clinics are normally closed.

Finally, through the neighborhood networks, Burnaby FPs identified a need for additional support for patients with mild to moderate mental health and/ or substance use concerns. Supports for patients experiencing mild to moderate mental health concerns can now be served through a program included part of Burnaby's PCN funding, described below in Box 2.

Box 2. PCN Mild to Moderate Mental Health Program

After a Task Group, which included FPs from across the three neighborhood networks, drafted a service delivery model for mental health and substance use disorders, Burnaby was allocated eight PCN Mental Health and Substance Use (MHSU) clinicians through PCN funding. The clinicians provide services to patients who do not need specialist mental health or substance use services, but who may not have access to extended health benefits. The patient receives up to six visits with the MHSU clinician. The clinician will provide feedback to the FP to discuss the patient's progress and potential next steps, for example, a referral to other Burnaby MHSU services or a return to FP care.

The neighborhood networks have also been used to alert FPs to existing shared care resources in Burnaby. A Primary and Community Care nurse was introduced at the Norburn Medical Centre in the Hastings/Brentwood area. The availability of the nurse resource was communicated to FPs during network meetings, with FPs signing up for this support immediately at the neighborhood network meeting, with 12 more nurses subsequently being funded across Burnaby through the PCN. As noted by a Division representative:

> In other communities they are trying to create primary care nurses that connect practices. Through the neighborhood networks we were able to sign-up doctors en masse. Because physicians trust each other – when one says they are doing it the other one says they are. We signed up 60 physicians to get access to these nurses.– Division representative

In addition to increasing patient access to healthcare, implementation of the neighborhood networks helped facilitate physician identified improvement in their work-life balance, and connections to local health providers with specialized knowledge. For example, physicians reported that the networks had improved their satisfaction with their working life by providing opportunities to seek assistance from their peers. For example, they could receive (and provide) practical guidance and support on challenging topics, such as the increasing number of patients needing assistance with language services, and the increase in the number of patients with mild mental health concerns. For Division staff, they hoped that physicians would feel more connected with the health and wellbeing community through the neighborhood networks as they become more linked to a broader PCN governance structure.

Lastly, physicians reported using the neighborhood networks to learn from each other, particularly to learn about health and well-being resources available in their community, such as the availability of local homecare nurses, low-cost counselling services, and occupational therapists. One physician

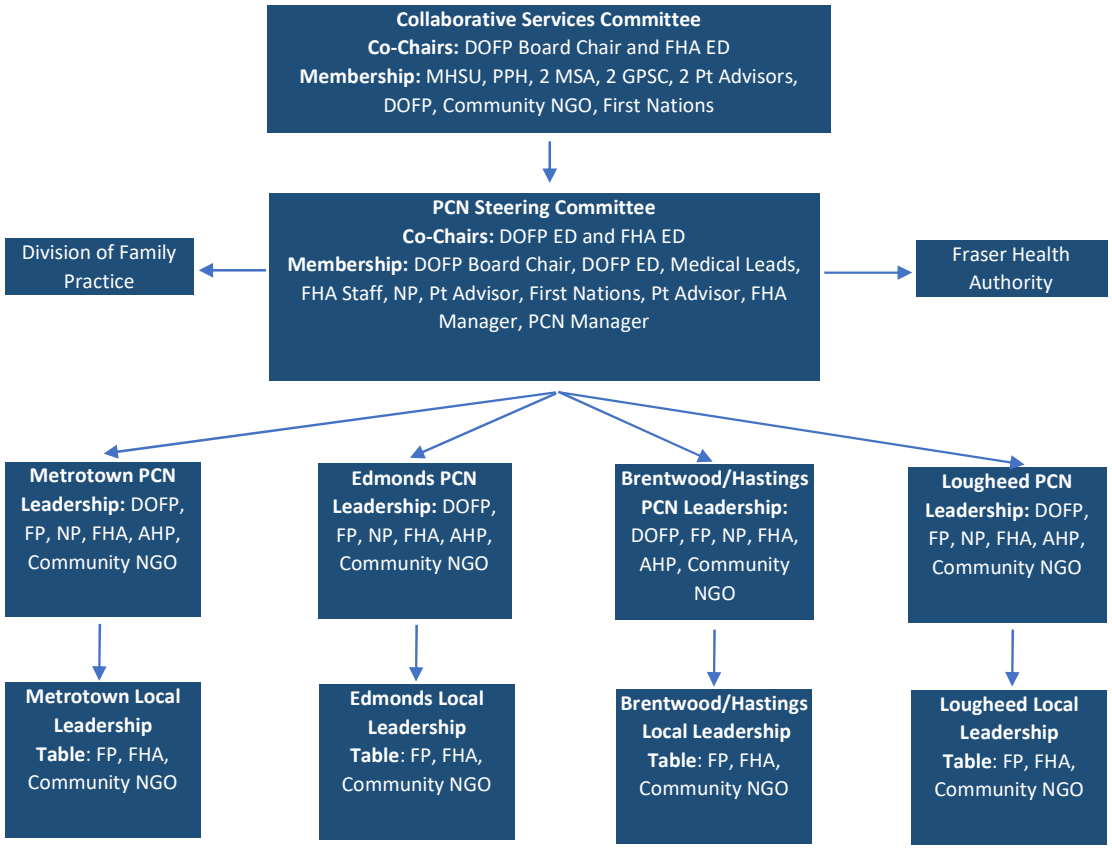
new to working Burnaby, who had just attended their first network meeting, noted how the meetings had provided them with a good understanding of local challenges in Burnaby and local resources and supports available that they would not have known about otherwise.

Neighborhood Networks: Future Goals

Strengthen Governance Structures

The neighborhood networks have become critical platforms to ensure the collective physician voice is at the table for each local PCN. As Burnaby works towards implementing its PCN, they are considering how neighborhood networks will fit within broader PCN governance structures. In the proposed primary care governance structure, in Figure 2 below, each neighborhood network in Burnaby will have a PCN Local Leadership Table comprised of six members: two physician representatives from the relevant neighborhood network; two community partners; and two Fraser Health representatives.

Figure 2 : Proposed Primary Care Governance Structure



Functionally, the Local Leadership Table (LLT) physician representatives will represent their colleagues and bring their interests forward. The LLTs will oversee local decision-making of health and wellness services of their PCN, requiring the physician LLT representatives to use neighborhood networks as a platform to discuss primary care issues that can be brought directly to their local LLT and influence PCN services and programs.

One FP felt that further discussion and clarification was needed to determine what should be managed at the local level, and what should be provincially managed. As noted by a family physician, "We are debating this now. Can counsellors be spread across quadrants? At this moment, we have not decided what will be the neighborhood quadrant responsibility vs. higher-level responsibility."

Improve Health Data Integration

All network physicians interviewed noted the importance of creating shared data systems (e.g. EMRs) as part of their collective goal of an integrated primary care system. FPs stated that integrated data systems would enable better coordination of on-call and after-hours services, and help them to work more efficiently with other care professionals, by sharing patient information with them, and knowing their work schedules. A physician stated:

> I would hope, in a years' time, we would have technology integration, computer system integration, and we would have a streamlined process where patients can be directed to the best care options immediately, and everyone will be kept in the loop about what is happening with that patient. —Burnaby FP

However, Burnaby FPs noted current challenges raised by physicians in sharing data through EMRs: clinics use different EMRs; the technical process of data integration; concerns about patient privacy; and concerns about potential misuse of patient information by other providers. To address these challenges, the Burnaby Division is working with two EMR service providers (Telus and OSCAR) to explore how they could support the EMR integration process. Also part of the data integration plan is to utilize the technology services provided by the GPSC Practice Infrastructure team. The Division and the local networks will continue the data integration work as part of the PCN funding.

Increase Provider to Provider Communication

In Burnaby, allied health professionals funded through their PCN have been invited to the network meetings. The current plan is that neighborhood networks will be used as a forum for allied health professionals of all types to gather together to discuss issues when needed. However, it is unclear how such neighborhood network participation will be supported as allied health resources grow and become more attached to clinics and to neighborhoods. Issues related to scheduling, scope of involvement, compensation for participation, etc. will need to be adequately resolved. Fortunately, the Division is exploring several options and are hopeful that new billing codes will allow for allied health professionals to participate by phone or in-person.

Maintain Stakeholder Relationships

During interviews, network stakeholders communicated the need to maintain the partnerships neighborhood network participants had developed with representatives from Fraser Health, local PCNs, and GPSC. For example, Fraser Health has the mandate to manage recruitment of new healthcare provider positions to the networks. By continuing to invite Fraser Health representatives to neighborhood network planning meeting, physicians believe they will be able to inform the decisions around where the new provider positions would be located, their roles, responsibilities, work standards, and working hours. Also, the work neighborhood network participants began with their local PCNs will be important in finalizing the governance structure, above, giving networks a voice in the implementation of PCN. Finally, maintaining the network's relationship with GPSC will

provide the networks with technical support for projects related to data integration, EMR functionality, clinic optimization, and quality improvement.

Conclusion

The creation of neighborhood networks in Burnaby was prompted by family physicians who recognized the need to bring together family physicians from across local communities to increase their interconnectedness, provide opportunities for local PCN planning, and enable methods for sharing care with each other, all with the larger aim of improving patient access to medical care across Burnaby. A key contributor to the successful formation of the neighborhood networks was the special attention physician leaders and Division staff paid to constructing neighborhood network meetings and engagement opportunities that were focused, efficient, interactive, and ultimately perceived by physician participants as a valuable use of their time.

In sum, the interviews with family physicians and Division staff indicate that the neighborhood networks have become an important venue for bringing Burnaby FPs together to co-plan local primary care delivery and improvement. The networks have supported FPs to meet each other, in some cases for the first time, and have also supported important informal relationships and interactions to take place outside of formal neighborhood network meetings. Burnaby neighborhood networks have supported family physicians to learn from each other, identify options for locum coverage and after-hours care, and support referrals to specialized care throughout the networks.

A key outcome of the neighborhood networks was the development of a neighborhood network-specific Local Leadership Table to interface with the corresponding PCN in order for neighborhood networks to contribute to the design and implementation of healthcare delivery through the PCN. Most importantly, family physicians were able to increase patients' access to care by referring patients to their family physician peers, expanding their use of locums, working on the development of an Urgent and Primary Care Clinic, and procuring additional healthcare resources for the neighborhood networks.

Around a quarter of full-time Burnaby FPs attend the neighborhood network meetings, an attendance level encouraged by communicating a strong vision, leveraging engaged physicians leaders, sustained Division support, and continual promotion of the neighborhood networks to family physicians throughout Burnaby. For next steps, maintaining the progress of the neighborhood networks through continued support by the Division and Fraser Health, establishment of the Local Leadership Tables, completing the health data integration, and increasing efficient provider to provider communication will work to solidify Burnaby's neighborhood networks as a critical component of the local healthcare delivery system.

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Appendix 1: Details of interviewees

Interviewee	Position
Georgia Bekiou	Executive Director, Burnaby Division of Family Practice
Erica Corber	Director, PCN and PMH Initiatives
Manny Sohota	Program Administer, CME and MOA Program Coordinator
Denise Richards	Executive Director, Richmond Division of Family Practice
Dr Brad Bahler	Medical Director for Primary Care Network Evolution, Alberta
Dr Rick Glazier	FP, Ontario; Scientist, Li Ka Shing Knowledge Institute
Dr Charlene Lui	Burnaby PMH physician chair
Dr Baldev Sanghera	FP, Edmonds Network
Dr Marvin Lecke	FP, Metrotown Network
Dr Davidicus Wong	FP, Edmonds Network
Dr Thomsa Wu	FP, Hastings/ Brentwood Network
Dr Bill Rife	FP, Metrotown FP Network

Appendix 2: Research framework

Evaluation question	Sub-questions	Methods
1. What underpinned the development of the Networks, and how has this informed delivery of the networks in practical terms?	a. How did the design of the networks come to be? b. What was the context that suggested neighborhood networks would be successful in Burnaby, and at this point in time?	• Review of PMH/ PCN documentation (provincial) • Review of NN documentation, Burnaby • Interviews with Burnaby DoFP staff • Interviews with Burnaby physicians
2. What activities and processes have helped form neighborhood networks?	a. To what extent have local factors affected how each network has been delivered, and led to differences in each network's implementation? b. How important has effective physician engagement been to network success? c. What challenges have been faced, and how were they overcome? d. In what areas could the project have been improved, for better delivery and outcomes?	• Interviews with Network leads in other provinces • Interviews with Burnaby DoFP staff • Interviews with Burnaby physicians • Literature review of best practice
3.How well are networks progressing towards their intended aims, and what factors are, or will, affect their sustainability?	a. How well are physicians engaging with the networks, working together to address community needs, and feeling less stress and burn-out? b. What can be learned from the delivery of the first three neighborhood networks, that can help delivery of future networks in Burnaby and beyond?	• Network meeting observations (x2) • Review of EMR data • Interviews with Burnaby DoFP staff • Interviews with Burnaby physicians • Literature review of best practice