



# **The Future of Family Medicine**

## **Nova Scotia family physicians' vision and priorities**

FINAL RESEARCH REPORT | DECEMBER 2021

 **Doctors**  
Nova Scotia

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December 2021

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## Acknowledgments

With thanks to the members of Doctors Nova Scotia's **Section of Family Doctors Council, Policy and Health Issues Committee** and **Senior Leadership Team**, who provided feedback on this project.

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# Executive summary

## Background

The practice of family medicine in Canada is changing, as are the types of people becoming family physicians. Women now make up a majority of family physicians, and international medical graduates who immigrate to Canada increasingly practise family medicine rather than any other specialty. These demographic changes are notable, as physicians' gender and race/ethnicity can affect how they interact with patients and how they structure their practices. Significant changes in Canadian medical education may have also effected generational differences in family medicine practice. Overall, family physicians continue to provide comprehensive care, but they may work collaboratively with other physicians and health-care providers to meet patient needs, rather than relying on the model of a single family physician who offers a full range of services. Patients' needs are changing, too, with increasing patient complexity necessitating greater health-system coordination. As Nova Scotia begins to explore new ways of remunerating and organizing primary care, it is crucial to understand how family physicians want to practise medicine and what their visions for the health system look like.

## Methods

This research project engaged family physicians across the province of Nova Scotia to better understand how they envision the future of family medicine. An advisory council of physician investigators was established to guide the research design and data interpretation. The project issued two open-ended online surveys and conducted eight focus groups with family medicine learners and family physicians (early to later-career).

## Demographic survey

### Gender

- Physicians who are women or gender diverse (i.e., gender identities that exist outside a binary) are much more likely to practise family medicine than any other medical specialty. Among family physicians, there are proportionally more women and gender-diverse physicians in earlier-career cohorts (up to 15 years in practice) than later-career cohorts (16 or more years in practice).

### Race and ethnicity

- There is no significant difference between the ratio of racialized family physicians and white family physicians in earlier cohorts and later cohorts.

### Practice settings

- There is no significant difference between the number of earlier-career versus later-career family physicians practising in rural areas (50% or more of practice time) compared to urban areas, or practising in hospital settings (50% or more of practice time) compared to community settings. This means that earlier-career and later-career family physicians are equally likely to practise rural medicine and community medicine, and disproves the assumption that younger family physicians do not want to practice in rural areas and prefer hospital work.
- There is a significant difference between the number of urban family physicians practising in hospital settings (50% or more of practice time) compared to rural family physicians, with fewer urban family physicians practising in hospital settings.

## Payment

- Early-career physicians are more likely to use a combination of payment models or a single payment model that provides a more stable annual income, such as an alternative payment plan (APP) or Clinical/Academic Funding Plan (C/AFP), rather than a fee-for-service (FFS) payment model.
- Gender does not have a significant impact on which payment models are used, but family physicians who are men are more likely than family physicians who are women or gender diverse to use FFS only. Notably, there is a higher proportion of female and gender-diverse physicians in the early-career cohort. This consideration suggests that female and gender-diverse physicians who are early in their career might prefer non-FFS-only payment options.

## Focus groups and surveys

### What do family physicians do in Nova Scotia in 2021?

Nova Scotia's family physicians provide patient-centred care, coordinate comprehensive care, manage operations for clinics and participate as leaders in the health system.

### What challenges do Nova Scotia family physicians currently face?

- Balancing patient volume and care quality
- Administrative burden
- Discrepancy between the work that is involved in family medicine, and what is remunerated

### How do Nova Scotia family physicians currently work with health-system stakeholders?

- Foster rewarding, longitudinal patient relationships
- Collaborate with other family physicians: Lots of differences of opinion, but desire a critical mass of fellow family physicians
  - It is, however, challenging to connect with consultant physicians working outside of family medicine
- Take on positions of leadership in the health system, although other forms of engagement may be more accessible to all family physicians, such as meaningful consultation and targeted problem-solving

### What should family medicine look like in the future?

Nova Scotia family physicians' vision for the future of family medicine focuses on collaborative, community adaptive care in a system that places high value on that work.

- **Collaborative care:** Physicians prioritize collaborative care, with a clear vision for complementary scopes of practice between professions, and the e-health and physical clinic infrastructure to facilitate collaboration. Grassroots relationships are leveraged to their full potential for effective and happy primary care teams. Collaboration is flexible, and includes diverse types of family medicine practice.
- **Community adaptive care:** Family physicians are providers and facilitators of community adaptive care, where they know their patients, their communities and their practices best, and are given the space and supports to meet all of these needs. Family physicians' versatility and knowledge of their patients is leveraged to plan and deliver comprehensive care. Family physicians are also afforded the flexibility to take on focused aspects of practice that interest them and serve a patient need.

- **Valuing family medicine:** Family physicians are valued by the health system for their provision of continuous patient care built on strong relationships, and their leadership in adapting care to patient and community need. This value is demonstrated through remuneration that reflects their work, and measures of accountability which fairly evaluate family physicians' work.

### How can we get there?

The Nova Scotia Health (NSH) Health Home Model provides a pathway to the future of family medicine, but it is not without its challenges.

- **Barriers:** Lack of role definition for each provider in the system; inadequate e-health infrastructure; over-emphasis on FFS payment models; no critical mass of other family physicians; unknown variable of patient choice
- **Facilitators:** Organically strong relationships between care team members; family physician autonomy at the practice level; family physician engagement in system-level decision-making; reduced administrative burden; personal connections to patients; access to APP, C/AFP or Blended/Capitation (B/C) payment models; training on collaborative practice and role definition for all providers; clear catchment areas and scopes of health home networks; teaching and mentorship between family physicians

### Health system priorities

- **Integration:** The health-care system, including primary care and beyond, must be connected across the province. Communication mechanisms must be accessible, and stakeholder goals should be aligned. ***There are two primary barriers to integration: the lack of a primary health care system vision that has been developed agreed upon by all stakeholders, and the lack of needed e-health supports to ensure that providers can easily communicate with one another and with their patients.***
- **Population health (equity):** Family medicine in Nova Scotia has become a receptacle for patient needs that go unmet in nearly every other aspect of the social safety net and health-care system (i.e., the social determinants of health). Family physicians working in community clinics are tasked with the most complex components of primary care, and feel that they are left with the “worst of primary care” as a result. While their role as the “quarterback” of primary care makes them ideal for tackling complex medical cases, in many cases they do not receive the support or resources required to provide the care their patients need. Family medicine practices must be equipped to address these needs, family physicians must be fairly remunerated for their work, and Nova Scotia must prioritize health equity by addressing the social determinants of health.

## Key messages

### 1. Provider well-being

**The future is female and gender diverse.** It is important to understand what that means for family medicine and respond accordingly.

**Opportunities for productive collaboration are key.** Family medicine is inherently collaborative, and well-coordinated access to primary care team members is needed.

## 2. Patient experience

**The best care is rooted in community.** Primary care works best when it is responsive to community needs, and when communities of providers and patients are working together to meet these needs.

## 3. Optimizing costs

**Reflective evaluation and compensation is needed.** Family medicine is complex, versatile and multi-faceted, but the tools used to evaluate it do not always capture every facet or reflect its nuanced value.

## 4. Population health

**It is time to address the impact of social determinants of health on primary care.** Family physicians want to help their patients, but are not always equipped to support health needs that must be addressed through a social safety net, public health promotion and community resources outside the health-care system.

# Background

## Introduction

### Purpose

Family physicians are not a homogenous group, and consequently, their practice choices are varied. A diversifying workforce ensures increasing variety in practice types, suggesting the need to predict and define future visions in particular contexts. Variety in family medicine delivery is not detrimental to the success of primary health care; in fact, it can facilitate the flexibility needed to adapt care to different patient needs. This research project will determine Nova Scotia family physicians' perspectives on the future of their field, to guide policy decisions that align with physician priorities and visions. Although this work captures physicians' perspectives, it centres patient and community needs, using the Nova Scotia Health (NSH) Health Home and primary care evaluation framework as a foundation. This research will help define family physicians' planned and desired practice types within the Nova Scotia primary care system.

The research aligns with the Triple Aim for primary care (Jackson et al., 2013), which was recently expanded to the Quadruple Aim: improve population health, improve patient experience, reduce health care costs and improve the work life of primary care practitioners (Bodenheimer & Sinsky, 2014). The present study focuses on the fourth aim as the primary outcome, but considers the first three aims as natural outcomes that result from these efforts. The research also answers NSH's (2019) call for continued and further evaluation of primary care in Nova Scotia, and examines key enablers of the NSH (2017) "health home" (HH) model (including the profile of the workforce, remuneration aligned with models of care and the use of electronic medical records, or EMRs).

### Background

Family medicine is evolving, not just in terms of the clinical care provided, but also in the ways that family physicians choose to practice. In 2018, the College of Family Physicians of Canada (CFPC) defined comprehensive family medicine as being inclusive of primary care, emergency care, home and long-term care, hospital care, and maternal and newborn care. While this is a broad scope, the CFPC clarifies that the care provided across these settings is a collective achievement, not necessarily a requirement of each individual family physician. One of the broader shifts in family medicine may be the narrowing of scope of practice among individual physicians and, consequently, less comprehensive services (Bitten, 2018; Weidner & Chen, 2019).

Comprehensive care is a priority for Canadian health care, as it is one of five tenets of the Canada Health Act (1985), however, there is no universally agreed-upon definition of comprehensive primary care or the role of the family physician therein (Grudniewicz et al., 2019). This suggests that comprehensive family medicine is a malleable concept, open to adaptation as needed for patients, communities and physicians alike. There is more definition in the Canadian context, where the CFPC outlines the scope of the specialty, but the work of defining how that scope is shared among family physicians across a health system is ongoing. Throughout the last two decades, the CFPC has suggested strategies for implementing the family physicians' scope via the Patient Medical Home (PMH) (CFPC, 2000, 2004, 2011, 2019). In Nova Scotia, similar work on the Health Home model has adapted the PMH for the provincial context (NSH, 2017), but details of implementation from a family physician perspective continue to be developed.



In health-system stakeholder consultations held in early 2020 (prior to the arrival of COVID-19 in Nova Scotia), Doctors Nova Scotia (DNS) determined that a major consideration for the practice of family medicine is the community in which the practice exists. Community needs and priorities inform and sometimes dictate the best ways for family physicians care for their patients. Family medicine must continue to be a responsive and malleable discipline, and cannot adopt a one-size-fits-all approach for either physicians or patients. Despite being a small province with centralized health care administration, Nova Scotia features diverse approaches to practising family medicine. This research project will explore how a changing and dynamic family physician workforce envisions the future of family medicine in Nova Scotia.

### Changes to family medicine in Canada

The ways in which family physicians choose to practise are changing, but this is not surprising, given that the demographic composition of family physicians is also changing (Simkin, Dahrouge & Bourgeault, 2019). Canadian evidence supports the claim that the practice of family medicine has broadly changed over time (Lavergne et al., 2014), but research also suggests generational differences between recent cohorts of physicians and their predecessors (Glauser & Tepper, 2016; Rowland, 2014). For example, there is evidence that early-career Canadian physicians currently trend toward more focused areas of family practice (Hedden et al., 2021; National Physician Survey, 2013; Slade et al., 2016).

Family physicians in Canada (and Nova Scotia specifically) are increasingly female (from 39.1% in 2014 to 42.1% in 2018), and the majority of these female physicians are now under the age of 40 (58.6%) (Canadian Institute for Health Information [CIHI], 2018). The proportion of female physicians in the physician workforce has also risen over time, from 11.1% in 1978 to 42.1% in 2018, and consequently, older physicians (age 60 and older) are more likely to be male (CIHI, 2018). The number of family physicians who received their MD degree outside Canada, known as international medical graduates (IMGs), has decreased slightly over time (from 33.4% in 1978 to 29.9% in 2018), but IMGs are now more likely to be family physicians than other specialists; only 22.7% of specialists in 2018 were IMGs (CIHI, 2018).

Changing family physician workforce demographics have led to care being provided in different ways than previous generations, based on factors that did not apply to a predominantly white, male, Canadian-trained physician workforce in the past. Evidence shows that female family physicians and residents practise differently than their male counterparts due to factors such as spending more time with patients (Bogler, Lazar & Rambihar, 2019; Linzer & Harwood, 2018) and the demands of parenting young children (Lavergne et al., 2019; Hedden et al., 2014; Sharma, Thind & Chu, 2011). A study of physician billing in Ontario showed that female physicians bill less than their male counterparts under the FFS payment model; although not specific to family physicians, it's possible that female physicians in other specialties and jurisdictions do the same, resulting in smaller incomes (Merali et al., 2021).

There is limited research on the practice patterns of racialized physicians; findings indicate that physician-patient perceived racial concordance improves patient experiences of care (Street et al., 2008; Strumpf, 2011), but Canadian racialized physicians also experience racism from patients (Vogel, 2018). Some racialized physicians in Canada may be IMGs, who face barriers to practice including communication (e.g., language, culture) and knowledge of Canadian health care (Triscott et al., 2016), as well as licensing delays (Van Horne, 2018). However, IMGs still make important contributions to family practice in Canada, such as enhancing the physician workforce and offering new perspectives on medical culture (Triscott et al., 2016).

Aside from gender and location of medical training, age and generation may play a role in physician practice choices. For example, the North American medical curriculum has continuously evolved over

the course of the last century, progressing toward a more holistic perception of medicine (rather than focusing on biomedicine alone) that integrates social sciences and is taught using more applied methods (CFPC, 2008). Family medicine curriculum changes in Canada were formalized in the “Triple-C” Curriculum (comprehensiveness, continuity, centred in family medicine) in 2010 (Organek et al., 2012). Recent research findings show that this curriculum may be starting to lead to increased family physician intentions to practice comprehensively across multiple clinical domains (e.g., family clinic, long-term care, rural care, etc.) (Zhang et al., 2019).

Policies outside medical education may also affect family physician practice choices. Overall, the early to mid-2000s saw an increase in federal interest in and funding for primary care across Canada, and a commitment to the notion that no single approach to primary care policy ensured success in the Canadian context (Hutchison et al., 2011). The \$800-million Primary Health Care Transition Fund (2000) and \$16-billion First Ministers’/Canada Health Accord (2003/2004) promoted specific priorities in family practice, including collaborative/team-based practice models, e-health infrastructure, and patient access to care across the provinces and territories (Government of Canada, 2006; 2007). Similar priorities were promoted within provinces and territories to varying degrees, focusing on aspects of care such as system coordination and integration, patient-centred care, electronic medical records (EMRs), management of chronic and complex diseases, and, to a less consistent degree, broader goals including population health and community-responsive care (Hutchison et al., 2011).

The stage of a family physician’s career may also lead to specific practice patterns, with implications for the make-up of the workforce and medical services offered. Younger, early-career family physicians in Nova Scotia and Canada overall have reported more interest in focused practice (e.g., child and adolescent health, emergency medicine and maternity care) than mid- or later-career family physicians, although some areas of focused practice are equally served by mid- and later-career physicians (e.g., addiction medicine, mental health and palliative care) (National Physician Survey, 2013). Elsewhere in Canada, early-career family physicians in Alberta increasingly practice as locums as their entry to practice, often to gain experience before committing to a particular form of family practice (Myhre et al., 2010). In British Columbia, early-career family physicians were found to be working more hours overall than those with an established practice, but only 21% provide community-based primary care full time, practising in focused practice, hospitalist work and clinic administration instead (Hedden et al., 2020).

Later-career physicians also practice in unique ways. Mid-career physicians tend to take on the highest care volumes, working more hours and more evening calls (Dyrbye et al., 2013). Late-career physicians tend to begin reducing practice scope and volume. For example, in Ontario, family physicians aged 55 years and older tended to gradually reduce their provision of clinical services and comprehensive care prior to full retirement, focusing instead on aspects of care such as inpatient and surgical assist (Simkin, Dahrouge & Bourgeault, 2019). In Nova Scotia, the practice of home-visits – a medical service that is especially important for frail, older, rural-dwelling adults – is primarily conducted by older, male physicians (Andrew, Burge & Marshall, 2020).

Another factor potentially affecting changes in the practice of family medicine is the increasing complexity of patient care needs (i.e., multimorbidities), and the resulting coordination of care required amongst various health-care providers and institutions (Jutesen et al., 2021; Mount et al., 2015; Upshur, 2016). There is consensus that patient complexity is increasing (Turner & Cutler, 2011), with potential contributing factors including an aging population, developments and advancement in available clinical therapies, and more detailed clinical practice guidelines for physicians to follow (Upshur, 2016). The concept of complexity is relatively new, but Upshur (2021) suggests that “a complex patient is one

whose needs exceed the temporal and information capacity of any single provider at a particular point in time (26).” As the gatekeepers to and coordinators of health care, family physicians may have been greatly affected by an increase in patient complexity in recent years.

In summary, the family medicine workforce is changing, as are family physician practice patterns. These shifts also interact with the individual trajectories that occur over the course of a physician’s career. Importantly, different types of physicians appear to meet different patient and community needs. By recognizing the diversity inherent in the family physician workforce, health-care systems can plan for complementary practice patterns, shared among all family medicine providers. More research and physician engagement are needed to understand the future of a diverse family medicine workforce in the Nova Scotia context.

## Family medicine models

### *Remuneration models*

Appropriate remuneration models are required to support a PMH model of care (CFPC, 2000, 2004, 2011, 2019), and accurately reflect the work of family physicians. Fee for service (FFS) has been the traditional option for physician remuneration in Canada, but other payment models, including alternative payment plans (APPs) have also been introduced by many provinces. Uptake of APPs by physicians has increased over time, with proportional uptake in Nova Scotia exceeding other provinces since the province introduced APPs in 1997 (CIHI, 2019); uptake among Nova Scotia family physicians has increased by 39% in the last five years (NSH, 2020). The impact of the COVID-19 pandemic, which saw patients using primary care services less, has newly presented APP options as preferable to FFS, given the financial precarity created by the latter (Glauser, 2020).

Different remuneration models offer different benefits and drawbacks for both physicians and governments, but in exploring future innovations for family medicine, the blended/capitation (B/C) payment model emerges as the next national trend. Both the CFPC (2019) and DNS (2017, 2019) have identified the B/C model as ideal for supporting the care of complex patients, chronic disease management and collaboration between health-care providers. The B/C model for Nova Scotia was negotiated by DNS in the 2019 Physician Services Master Agreement, and is set to be developed in partnership with government. The model will provide fixed remuneration in the form of a capitation rate per patient per year (age- and sex-adjusted capitation weights; designed to represent 70% of earnings), as well as a fee for service paid at a rate of 30% of services billed and an incentive to ensure timely patient access to care.

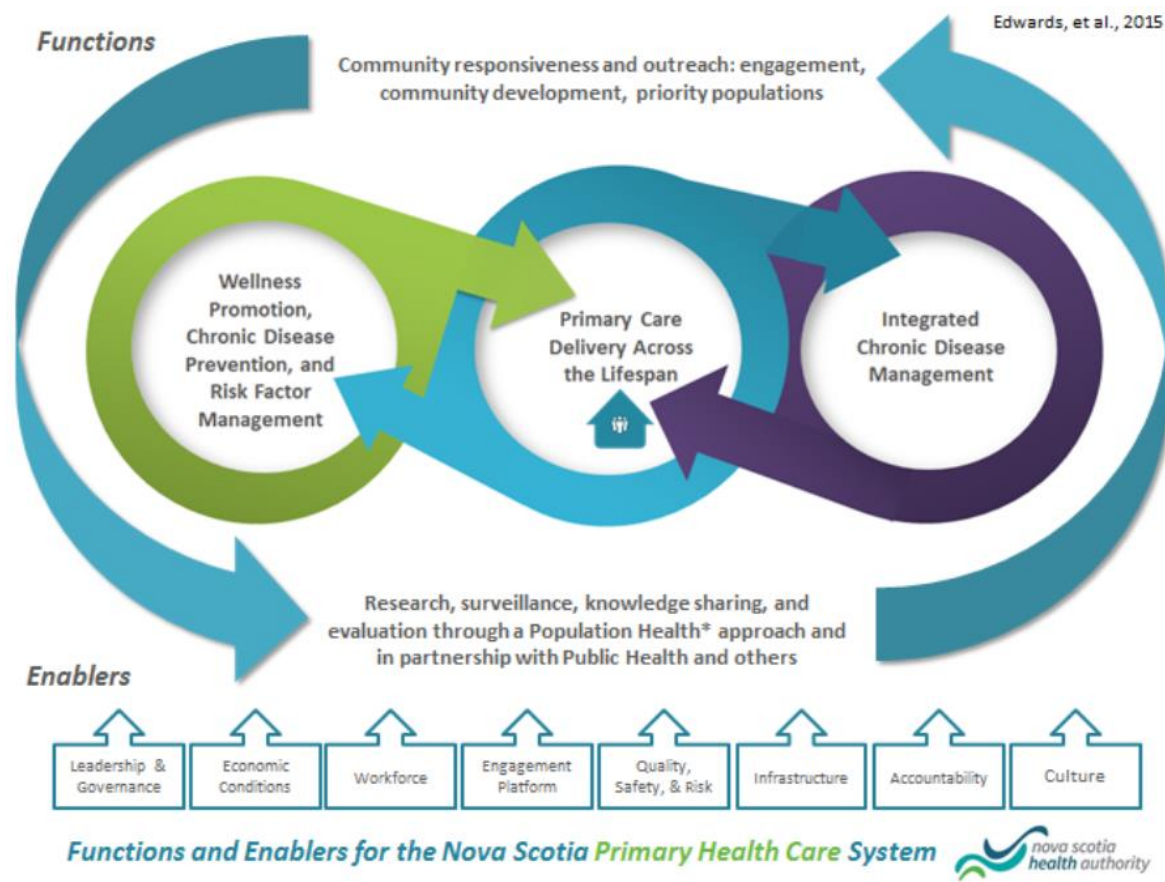
### *Models of care*

Remuneration is only one of multiple health-system enablers and supports that can ensure optimal primary care. The size and makeup of family medicine practices in Canada has shifted over time, as practitioners have moved from solo family physicians in smaller practices to more collaborative options that see family physicians practising alongside one another and co-managing practices. This shift was initiated in part by the Canadian First Ministers’ Health Accord in 2004, which sought to promote and incentivize collaborative primary care through federal transfer payments to provinces, targeted for spending on specific aspects of health care (Government of Canada 2007, 2014). The move to new forms of family medicine practice, namely collaborative or team care models, and new options for physician remuneration, are validated in attracting new family physicians to family medicine and ensuring patient access to care (Miedema et al., 2016; Strumpf et al., 2012; Zygmunt, Asada & Burge, 2017).

The CFPC PMH (2019) proposes a model for care that can be adapted to fit any type of practice, from solo, rural family physicians to large, urban team practices. In this way, it enables flexible solutions that fit the needs of the community or patient population, and the practice choices of the family physician. As a baseline, the PMH requires patient access to an interprofessional team of providers, timely appointments and coordination of other medical services, supported by the family physician and team using an EMR, with a model of remuneration that supports the model of care, and the necessary system supports for ongoing evaluation and quality improvement (CFPC, 2011). It should be grounded in community need and adaptive to the sociocultural contexts of the patients it serves, including population characteristics, health priorities, and available health-care infrastructure and resources (CFPC, 2019).

The PMH is a Canadian vision for primary care championed by national actors and implemented by provincial governments. Despite having been introduced two decades ago, provincial progress toward achieving the goals of the PMH was slow as of 2017, although Nova Scotia indicators scored slightly higher than the national average (Katz et al., 2017). Efforts to implement the PMH continue to evolve across the country, with dedicated support infrastructure including the ACTT Team in Alberta (Alberta Medical Association, 2019) and the General Practice Services Committee in British Columbia (GPSC, 2020).

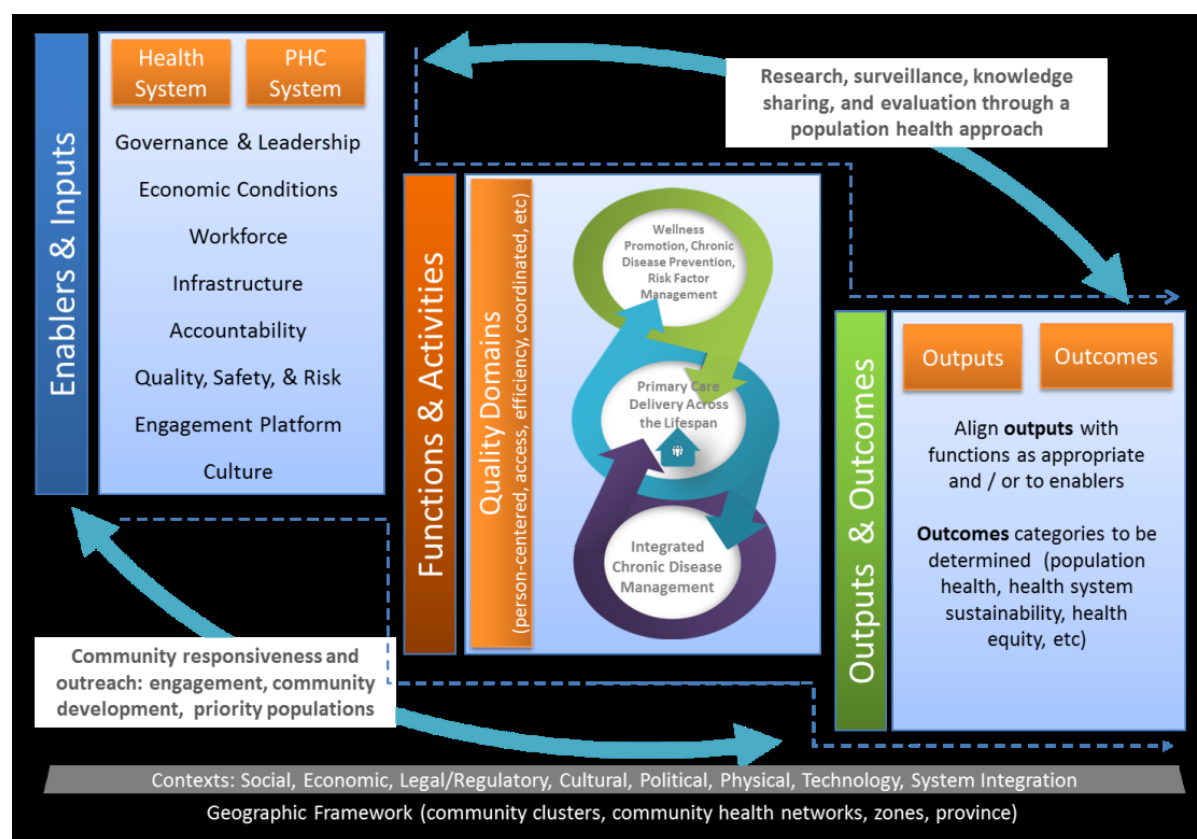
Figure 1. Functions and Enablers for the Nova Scotia Primary Health Care System (NSH, 2017).



The PMH has been adapted to fit Nova Scotia in the form of the Health Home (NSH, 2017), which describes a vision for interprofessional comprehensive primary care in Nova Scotia (Figure 1). Flexible implementation and adaptability are maintained in the Health Home model by providing physicians with a choice of three practice governance options: a contracted services model, a co-leadership model or a turn-key model. Each offers different degrees of autonomy and shared responsibility for practice management.

Nova Scotia Health (2019) has also developed an evaluation framework to expand on and track Health Home implementation in the province (Figure 2). Some initial measures indicate growing uptake of collaborative practice options by family physicians in Nova Scotia, with a growth rate of 137% between 2015 and 2021 (NSH, 2021). Even so, the Health Home model is in its infancy, and physician involvement has not yet been explored in-depth. Notably, the Health Home framework does not yet identify explicit role definitions for different providers within a given HH, which are necessary to determine how family physicians will provide their patients with a comprehensive scope of care, per the CFPC definition (2018).

Figure 2. NSH PHC System-Level Evaluation Framework (NSH, 2019).



## Context

The provincial context for health and health care in Nova Scotia presents some important considerations for the practice of family medicine. Social determinants of health can predict not only population health but also health-care system costs and utilization, as factors including income and education level may indicate the likelihood of a patient requiring high-cost health services in future (Fitzpatrick et al., 2015). For example, according to 2013 data from Statistics Canada, Nova Scotians have high rates of chronic

obstructive pulmonary disease (COPD) (4.8%), diabetes (7.6%) and mental illness (10.3%) compared to national rates (4.3%, 6.6% and 7.6%, respectively) (Statistics Canada, 2014). Health behaviours impacting chronic health are also elevated, with the Canadian Community Health Survey reporting rates of smoking (17.9%) and heavy drinking (20.8%) in Nova Scotia in 2018 that were higher than the national averages (16.0% and 19.3%, respectively) (Canadian Institute of Health Information, 2020).

Nova Scotia also reports high rates of social inequities that impact overall health, such as child poverty. According to the 2017 Canadian Income Survey, Nova Scotia has the second-highest rate of child poverty in Canada based on the Low-Income Mark-After Taxes and is the only province that experienced an increase in child poverty between 2015 and 2017. One in four children in this province live in poverty (2019 Report Card on Child and Family Poverty in Nova Scotia) and, according to the Canadian Community Health Survey, in 2018, 15.4% of Nova Scotian households were food insecure, the highest rate outside the territories (Tarasuk & Mitchell, 2020).

Concerns about chronic disease are compounded by the reported lack of access to family physicians among Nova Scotian patients (Cooke, 2019; Maclean, 2020). As of October 2021, 77,696 Nova Scotians were registered on the waitlist for a family physician or nurse practitioner, with an overall increase in registrants from January 2020 (NSH, 2020). The number of unattached patients in Nova Scotia has traditionally been lower than the national average, but has increased steadily since 2015 to match the national average (14.5%) in 2019 (NSH, 2021). The demand for primary care is compounded by an inadequate supply of providers, as physician resource planning projections indicate that Nova Scotia must recruit approximately 1,000 physicians to the province, equally split between family medicine and other specialities (NS DHW, 2016).

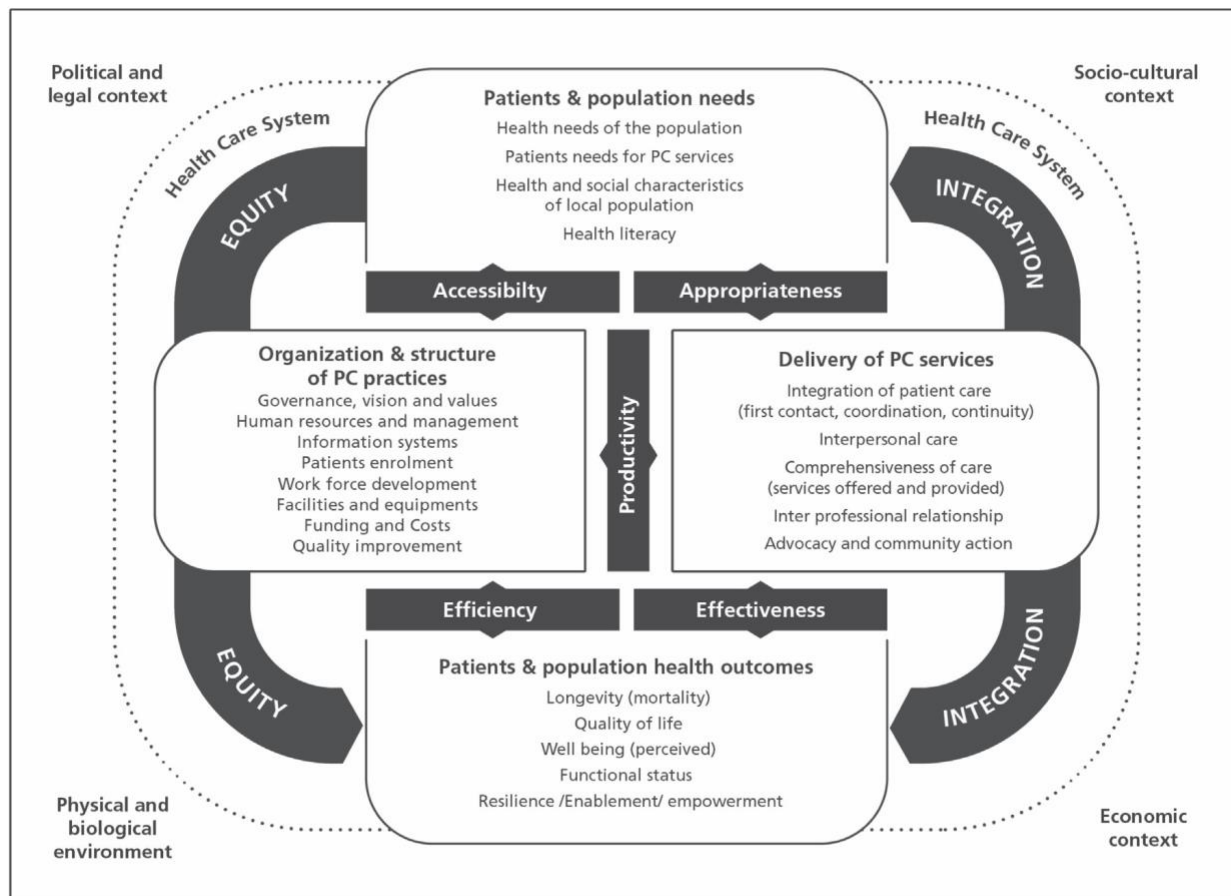
Despite challenges, Nova Scotia is at a turning point in primary care progress. Prior to the COVID-19 pandemic, DNS negotiated a new Master Agreement for Physician Services with the government of Nova Scotia, introducing new policy options for family physicians such as the B/C model; increased ME=CARE comprehensive care visit, inpatient and obstetrical delivery fee codes; increased emergency department hourly rates; a new community hospital in-patient program for larger community hospitals; and a new primary maternity care model. The Dalhousie University Faculty of Medicine also launched revisions to their undergraduate medical curriculum, seeking to emphasize family medicine learning experiences early in the program. The provincial response to COVID-19 introduced further practice developments, including a major expansion of virtual care, leading to ongoing commitments to virtual care funding from the provincial government. In 2021, TELUS Med Access and QHR Accuro continue as the two provincially approved EMR systems for family physicians. Planning work progresses on the program known as “One Person One Experience” (formerly “One Patient One Record”), which will initially replace antiquated hospital clinical information systems with powerful, integrated technologies and also provide an opportunity for the health system to re-evaluate the role that EMRs should play in Nova Scotia’s future.

### Theoretical framework

The relationship between provider outcomes and other primary health system goals is described in a paper from Senn et al. (2020). They provide an international synthesis of primary care evaluation frameworks and present a consolidated framework (Figure 3), where patient and population health outcomes are the ultimate goals, but are impacted by numerous factors. For example, external to the primary care system, there are sociocultural, political, economic and physical contexts. The framework also discusses the organization, structure and delivery of primary care services, placing them at the centre of the framework so that they affect and are affected by all aspects of patient health needs and outcomes.



Figure 3. Consolidated framework assessing primary care organization and performance. (Senn et al., 2020)



The Senn et al. framework (2020) and the NSH Primary Health Care System-Level Evaluation Framework (2019) work in tandem as the foundation of the present study. The NSH evaluation framework integrates many of Senn et al.'s framework components, such as the contexts in which primary care occurs, the identification of system measures (e.g., governance, workforce, infrastructure), and the outcomes of patient and population health. The research questions and focus group interview guide sought to more deeply understand how family physicians foresee the development of the organization and structure and delivery components of Senn et al., many of which are also reflected in the enablers and inputs of the NSH evaluation framework. The literature review, policy scan and discussion of findings account for the contexts described in the two frameworks (e.g., social, economic, and physical—namely COVID-19). The Senn et al. framework will be further adapted to the Nova Scotia context by centring the NSH Health Home model's enablers as points of measurement. For example, the NSH Health Home names the primary care workforce profile as an enabler; this will be measured via a demographic survey of family physicians in Nova Scotia. The Senn et al. and NSH frameworks have been combined and adapted to serve the present project (Figure 4), with a list of potential factors serving as both a theoretical framework and as a tool for data collection (see Methods).

Figure 4. Potential factors affecting Health Home implementation in Nova Scotia (adapted from Senn et al., 2020, and NSH, 2017, 2019).

<p><b>Factors affecting Health Home (HH) implementation in Nova Scotia</b></p> <ul style="list-style-type: none"> <li>• Governance mechanisms, vision and values of health system* (e.g., Department of Health and Wellness [DHW], NSH, clinic owners) <ul style="list-style-type: none"> <li>○ Workforce development (recruitment and retention)*</li> <li>○ Patient attachment mechanisms</li> <li>○ Quality improvement (evaluation and research, physician accountability)*</li> <li>○ Funding and costs (economic conditions)*</li> <li>○ Advocacy, community action, and engagement*</li> </ul> </li> <li>• Infrastructure* <ul style="list-style-type: none"> <li>○ Human resources and management (clinic administration)</li> <li>○ Facilities and equipment</li> <li>○ Information systems (virtual care and e-health)</li> <li>○ Continuity and coordination of care</li> </ul> </li> <li>• Culture* <ul style="list-style-type: none"> <li>○ Integration of patient care</li> <li>○ Equity, diversity and inclusion in care (interpersonal care, patient- and caregiver-centred care, patient–provider relationship)</li> <li>○ Comprehensiveness of care (services offered and provided by physicians—prevention/ health promotion, chronic and palliative care, acute care, psychosocial care)</li> <li>○ Interprofessional relationships and collaboration</li> </ul> </li> </ul> <p>*Enablers to Health Home model (NSH, 2017, 2019)</p>
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## Research questions

1. What are the current practice and demographic characteristics of the family physician workforce in Nova Scotia?
2. How do family physicians in Nova Scotia perceive the current practice of family medicine in the province?
  - a. What do family physicians consider to be the current scope of family medicine in Nova Scotia in terms of direct patient care, practice administration and health system involvement?
  - b. What do family physicians consider to be the current options for family medicine practice models in Nova Scotia, and how do they perceive family physician access to practice in these different models?
3. In future, how do family physicians in Nova Scotia envision the ideal practice of family medicine in term of structure and delivery of services?
  - a. What are the factors (i.e., barriers, facilitators) that could impact how and whether this vision is achieved?
  - b. Where do these desires align with the Health Home (HH) vision for Nova Scotia?

Where do these desires diverge from the Health Home vision for Nova Scotia?



## Demographic survey: Quantitative findings

A survey was issued to the full DNS membership, with a response rate of 19% (n=566) overall. This rate is commensurate with response rates to past DNS membership satisfaction surveys. The family physician response rate was approximately 27% (n=236), based on the total number of DNS family physician members as a denominator. The 236 responses include retired family physicians as well as currently practising physicians. Data were tested on SPSS (Statistical Package for the Social Sciences) for statistical significance using Pearson's Chi-square (two variables) and Loglinear (three variables) tests. Results are reported as Chi-square statistics. *(Please contact Doctors Nova Scotia to inquire about data collection tools.)*

### Survey sample demographics

Figure 5.

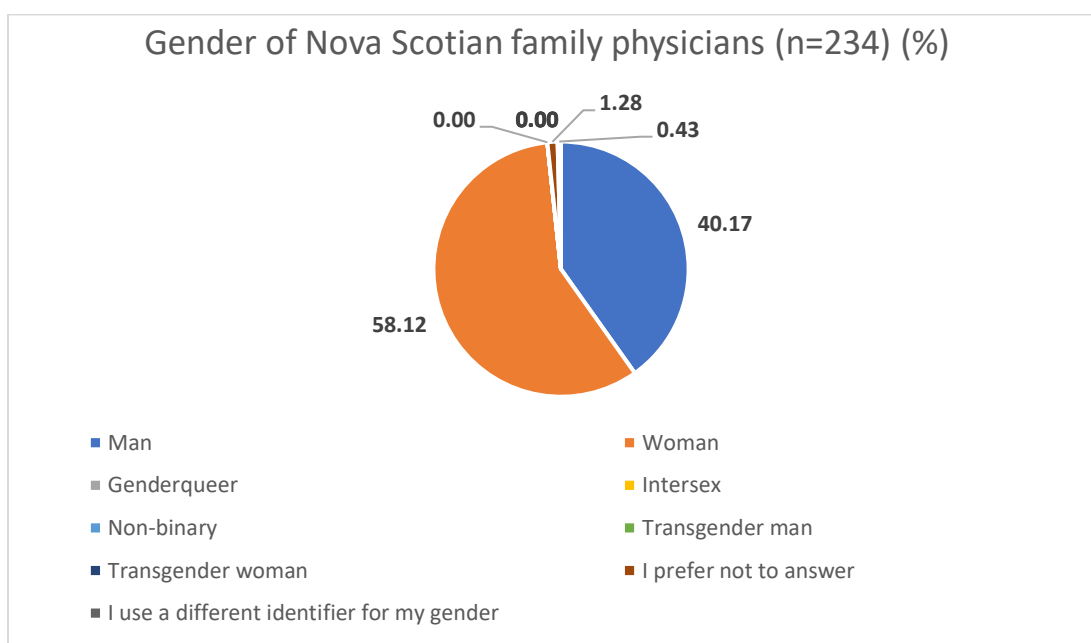


Figure 6.

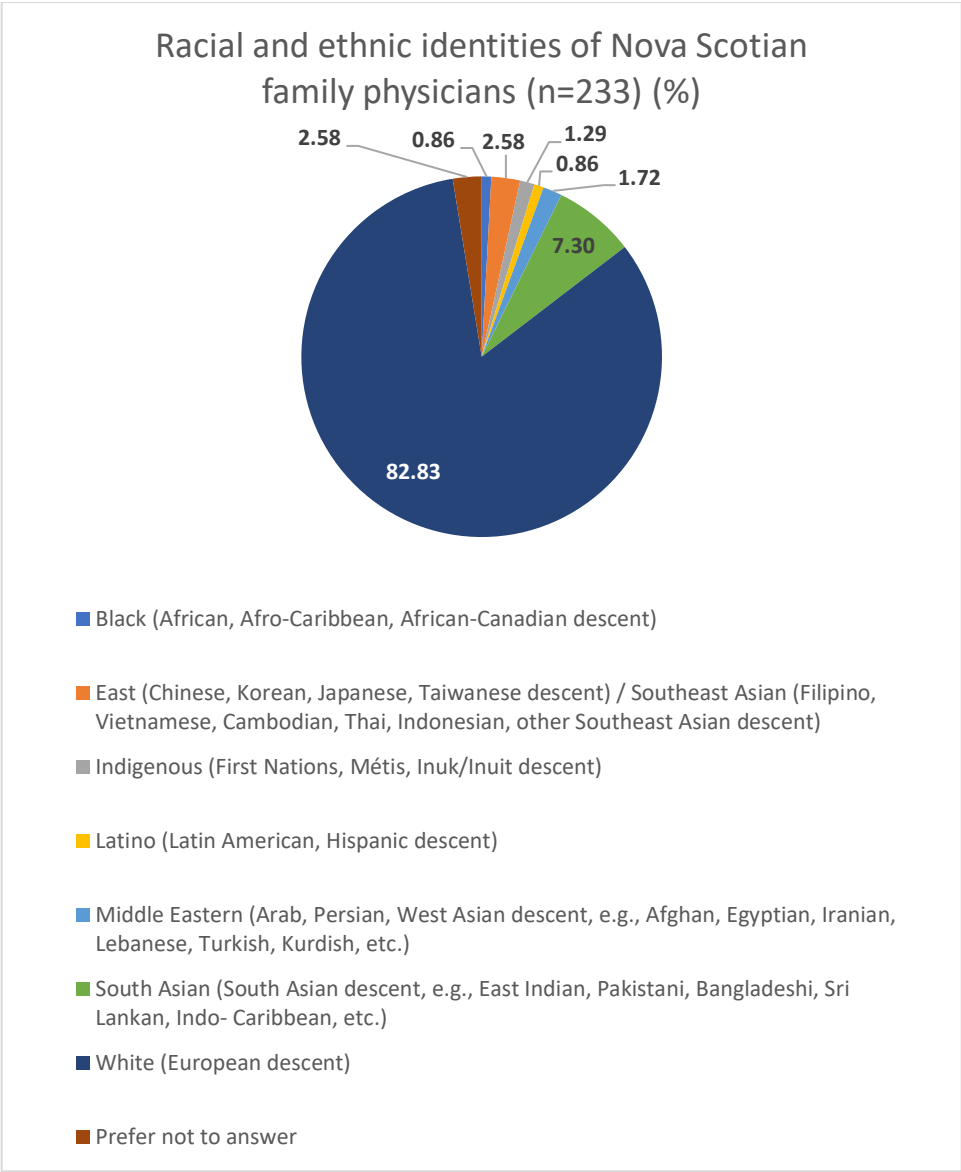


Figure 7.

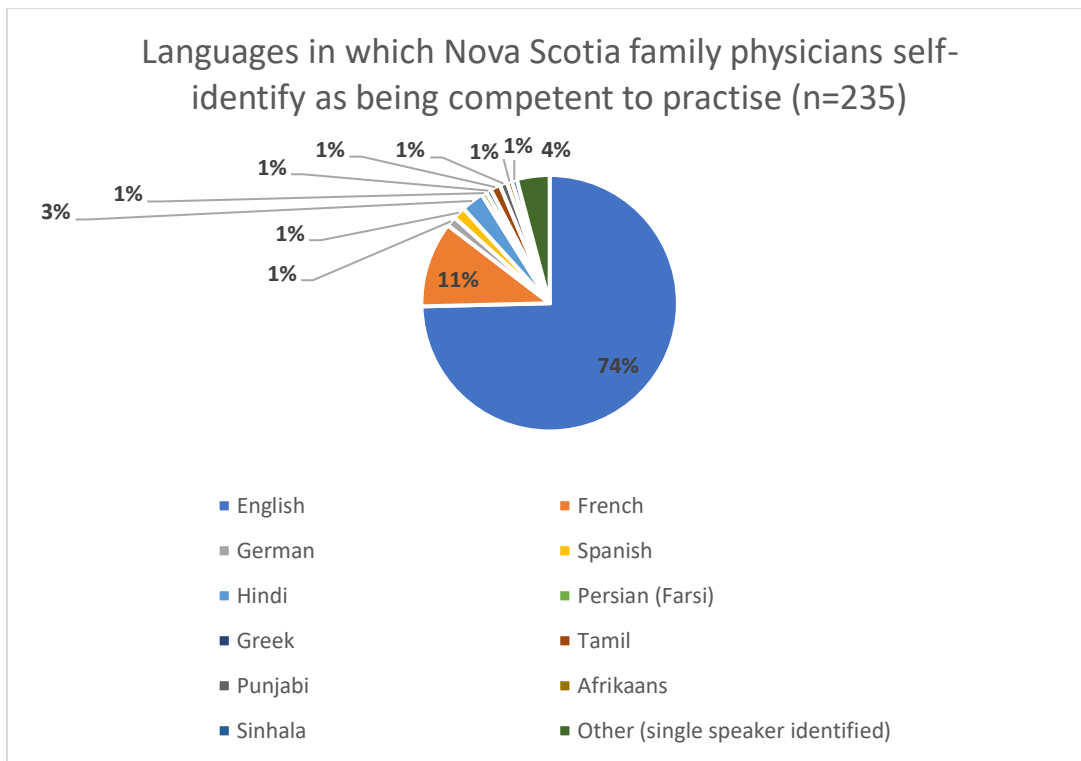


Figure 8.

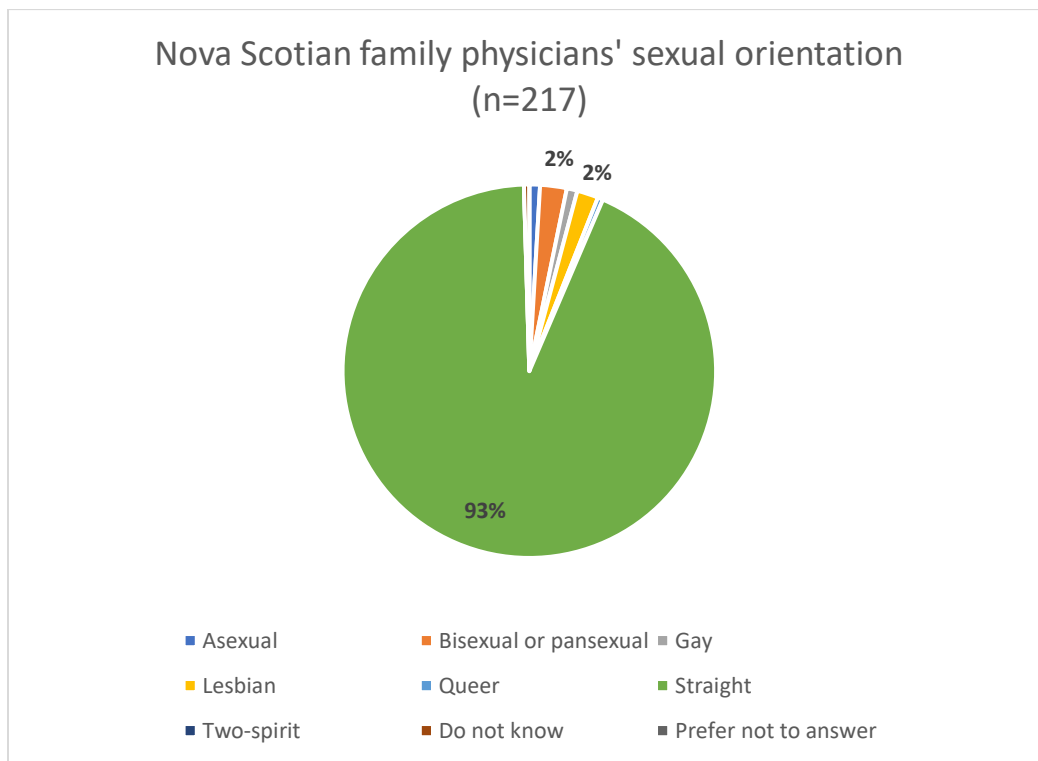


Figure 9.

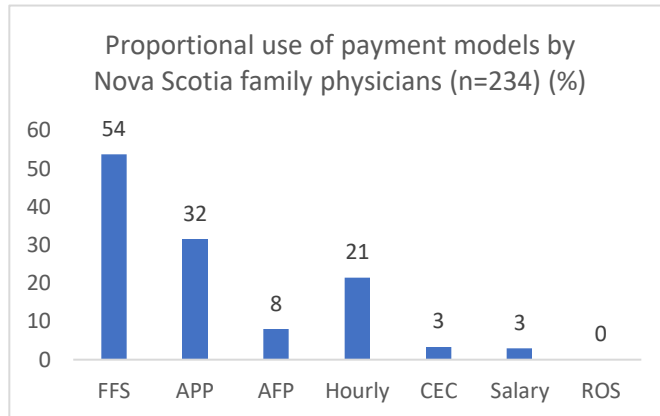
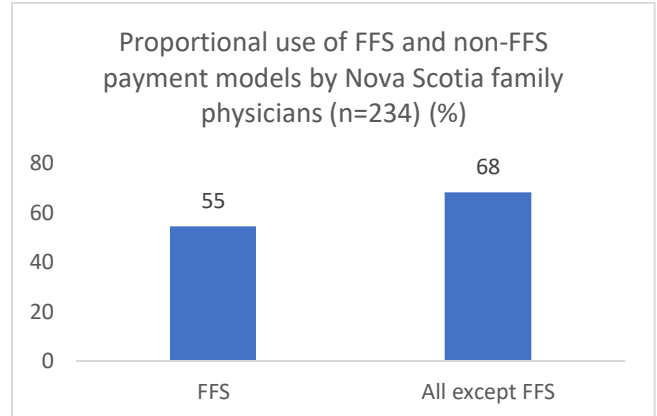


Figure 10.



## Detailed findings

### Gender

**Physicians who are women and gender diverse (i.e., gender identities that exist outside a binary) are much more likely to practise family medicine than any other medical specialty ( $\chi^2(1) = 13.96, p < .001$ ). Among family physicians, there are proportionally more women and gender-diverse physicians in earlier-career cohorts (up to 15 years in practice) than later cohorts (16 or more years in practice) ( $\chi^2(1) = 9.39, p = .002$ ).**

Figure 11.

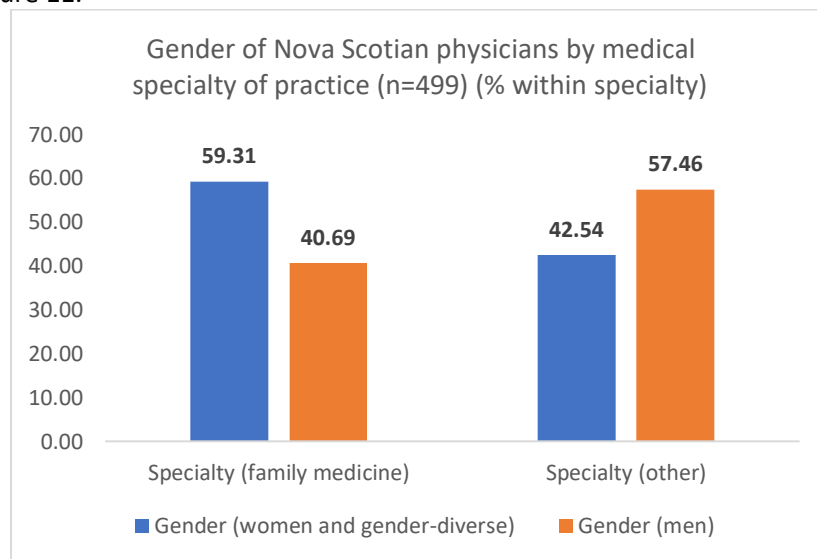
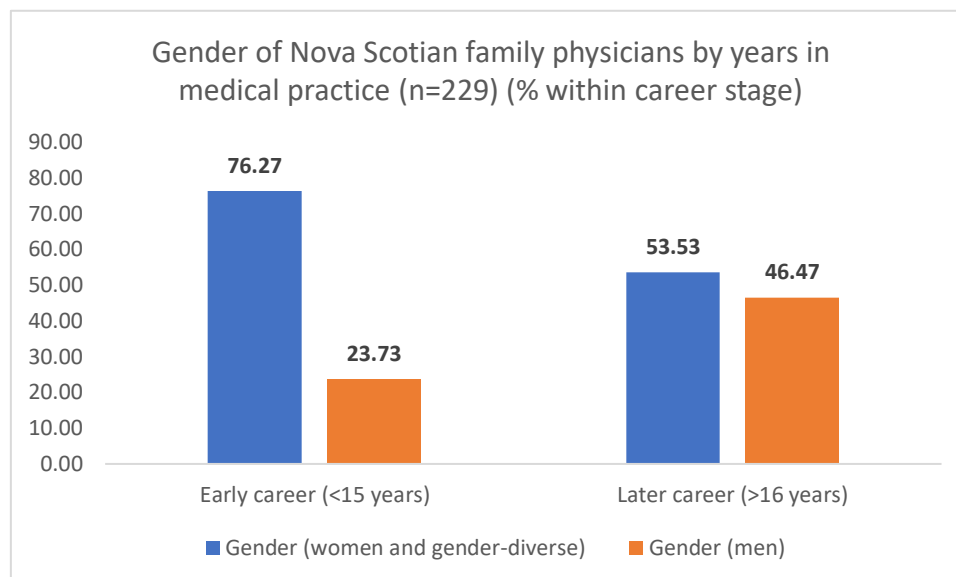


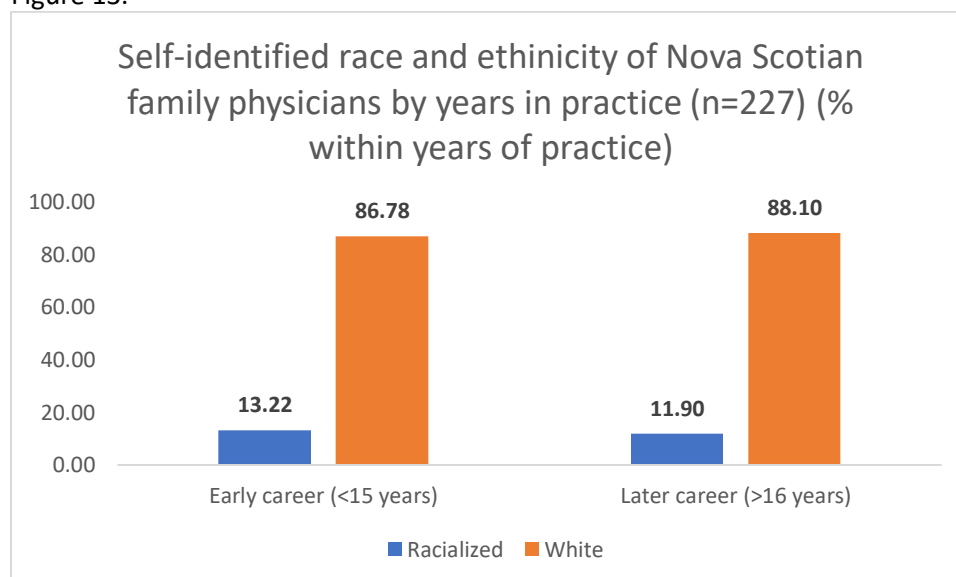
Figure 12.



### Race and ethnicity

**There is no significant difference between the ratio of racialized family physicians and white family physicians in earlier cohorts and later cohorts ( $\chi^2(1) = .97, p=.33$ ).**

Figure 13.

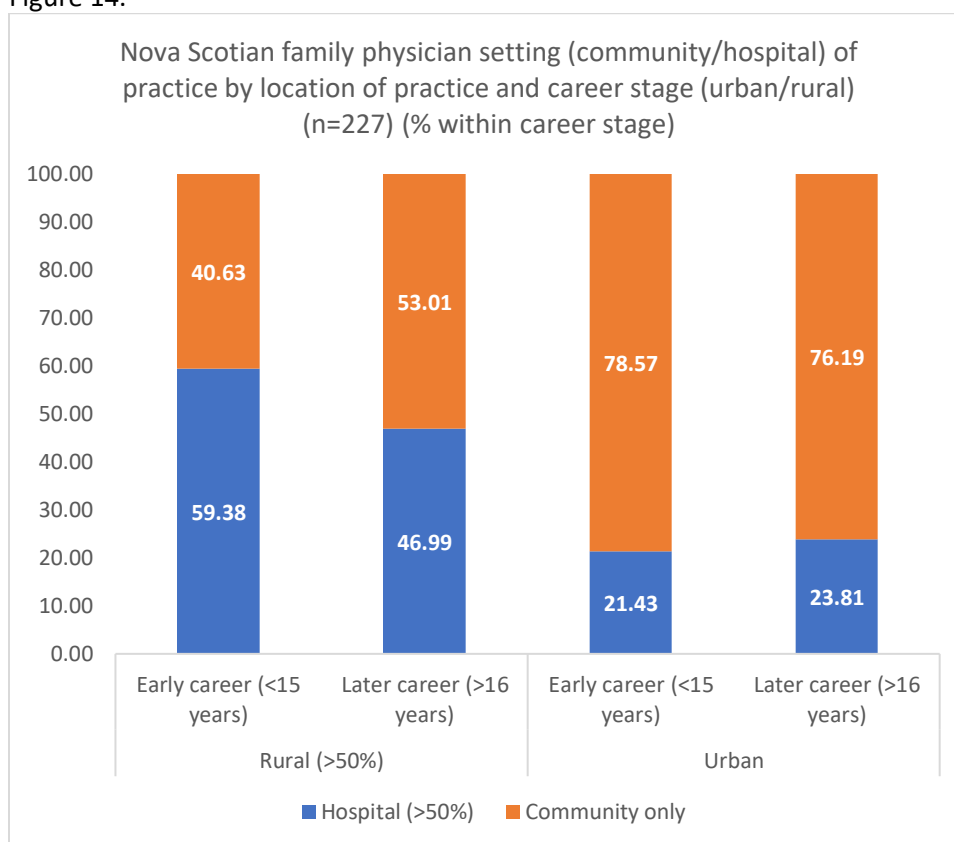


The similarity in distribution across career stages could be due to the recruitment of IMGs from all career stages. The lack of racial and ethnic diversity overall may also limit the degree to which there are any differences between career stages. Notably, Dalhousie University Medical School has recently invested in more programs to recruit students who are Black, Indigenous and people of colour (BIPOC).

## Practice settings

**There is no significant difference between the number of earlier-career versus later-career family physicians practising in rural areas (50% or more of practice time) as compared to urban areas ( $\chi^2(1) = .06$ ,  $p=.80$ ), or practising in hospital settings (50% or more of practice time) compared to community settings ( $\chi^2(1) = 0.58$ ,  $p=.45$ ). (Significance at second order of interaction ( $K=2$ ), denoted at the alpha level of .01 ( $\chi^2(3) = 19.21$ ,  $p<.001$ .) This means earlier-career and later-career family physicians are equally likely to practise rural or community medicine, and suggests younger family physicians do not disproportionately choose urban practice over rural, and do not prefer hospital work over community practice. There is a significant difference between the number of urban family physicians practising in hospital settings (50% or more of practice time) compared to rural family physicians ( $\chi^2(1) = 18.22$ ,  $p<.001$ ), with rural physicians being significantly more likely to practise in hospitals.**

Figure 14.

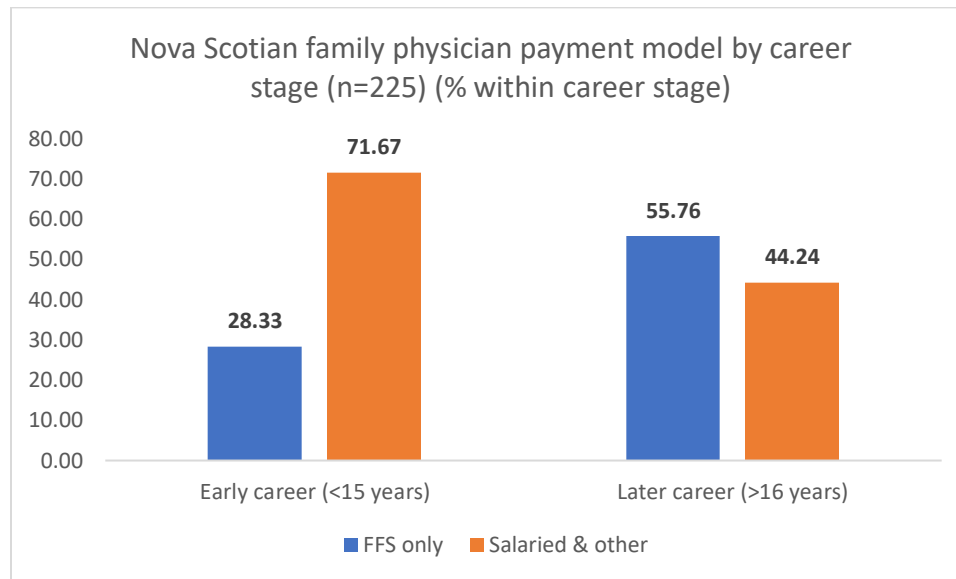


One focus group participant noted that, “‘Hospitalist’ means one thing in one community, and another thing in another community. And they do different work. It’s a challenge here in Nova Scotia. There isn’t consistency. Now, three-quarters of patients are treated by hospitalists that do that exclusively. It’s so hard to advocate for doctors when everyone is doing it differently and has different expectations for hospitalist [work] and practice.”

## Payment model

**Early-career physicians are more much likely to use a combination of payment models or a single payment model that is salaried (e.g., APP, C/AFP), as opposed to an FFS payment model alone ( $\chi^2(1)$ , 13.25,  $p<.001$ ).**

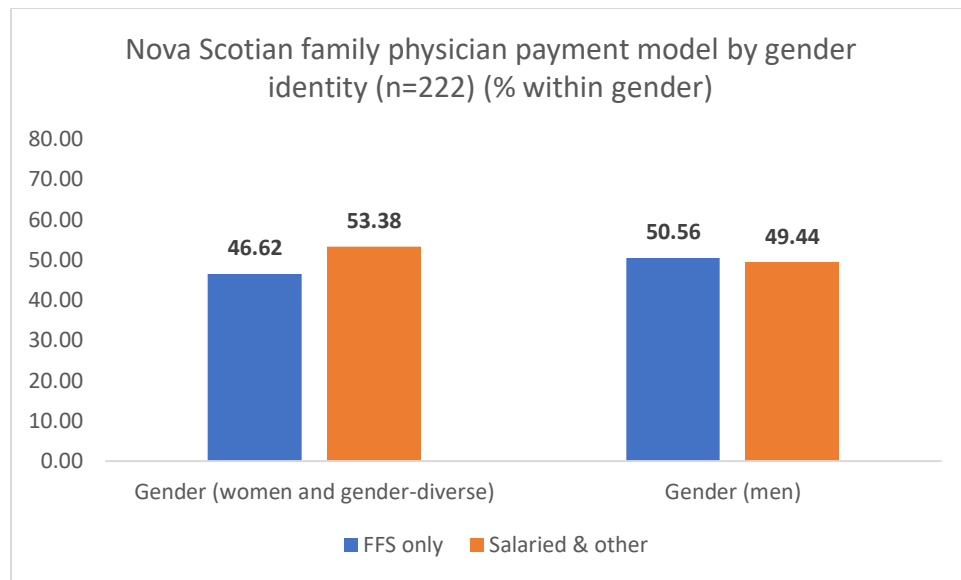
Figure 15.



These results can be further contextualized with qualitative findings. Early-career focus group participants (15 years of practice and under) described access to APPs as a major priority for promoting good family medicine practice (e.g., adequate time spent with the patient), and preventing family physician burnout. Conversely, late-career focus group participants held a perception that family physicians using an APP or other salaried models did not work as hard as FFS family physicians. This perception was often justified by the number of patients cared for by a given family physician, with late-career FFS physicians reporting that they care for a higher patient volume. Some focus group participants reported concern about the degree to which APP and salaried models can limit flexibility of practice.

**Gender does not have a significant impact on the use of FFS-only versus salaried models ( $\chi^2(1)$ , .33,  $p=.56$ ). That said, it is important to consider the earlier finding that there is a higher proportion of female and gender-diverse physicians in the early career cohort, as compared to the later-career cohort.** Loglinear analysis to examine the relationship between gender, years in practice and payment model was not possible due to case counts for early-career male physicians practising FFS only being >5. Odds ratio calculations indicate that family physicians who are women and gender diverse are 0.87 times (or, less than 1 times) more likely to use FFS only versus salaried, whereas family physicians who are men are 1.02 times (or, more than 1 times) more likely to do the same. This means that family physicians who are men are more likely than family physicians who are women or gender diverse to use FFS only.

Figure 16.



Also of note are the constraints under which payment models are chosen by family physicians. Payment models (and combinations of models) are selected by physicians in consultation and negotiation with representatives of the provincial government. Not every payment model is made available to every physician, and other factors besides personal preference may affect the model used by any given physician.

### Quantitative conclusions

The family medicine workforce in Nova Scotia is not diverse in terms of demographic measures other than gender. Where gender is concerned, it is disproportionately filled with women, especially in earlier-career cohorts. This demographic profile means that policies made to govern the work of family physicians are (and will increasingly be) governing women, suggesting the need to apply gender-based analysis (GBA+) in family medicine policy-making. The demographic data do not support the notion that earlier-career cohorts are practising significantly differently from later-career cohorts, outside of differences in preferred payment models. These findings suggest that the measurement and evaluation of family physicians' work must shift to better suit non-FFS models.



## Focus groups and surveys: Qualitative findings

The findings presented here were collected through focus groups (n=8) which hosted family physicians from across Nova Scotia (n=43), as well as two qualitative surveys run in December 2020 and January 2021 (respondent n=135) and May and June 2021 (respondent n=37). Data were coded and analyzed using thematic analysis (Braun & Clarke, 2006). Focus group notes and survey responses were coded in Nvivo software using a codebook generated by DNS staff and the physician investigator team. Focus groups notes were coded first, and the researcher (MM) determined they reached saturation. Survey responses were then coded using the same codebooks, and no new codes were needed to capture these data within the coding structure. Themes in the data were confirmed by the researcher (MM) using note taking and review throughout the coding process. Participants were from all four Nova Scotia Health zones: Western 1 (n=11), Northern 2 (n=6), Eastern 3 (n=4), Central 4 (n=17). *(Please contact Doctors Nova Scotia to inquire about data collection tools.)*

There are some important contextual considerations for the qualitative findings: The surveys and focus groups were conducted within one to two months of the second and third waves of COVID-19 in Nova Scotia, and were issued prior to the election of a new provincial government. COVID-19 fatigue may have impacted response rates and tone, and family physicians' perception of the health system may have since shifted based on priorities and policies of the province's new Progressive Conservative government.

### What does family medicine look like in Nova Scotia right now?

What do Nova Scotia family physicians do in 2021?

Family physicians provide care that is versatile, in the sense that they can adapt their practice settings and focuses to both patient needs and their personal strengths. They can also coordinate with other physicians or primary care providers to source care for patients that lies outside their own competencies or resources. They both plan and deliver comprehensive care, sometimes as individuals, and sometimes as teams. Family physicians:

- Develop and maintain relationships with their patients in the context of the individual, the family and the community. They identify patient needs and gaps in care, and work to fill them. These needs vary widely and can range from surgical specialist care to lifestyle coaching to social income and housing supports.

“Favourite things about family medicine are variety, diversity, and continuity – you can fill in your own gaps.” – *Early-career physician*

“Favourite components of practice are following people over their lifetimes, knowing their stories, and providing longitudinal care. Seeing the babies I deliver and how that impacts entire families. Putting illness in the context of patient's families and backgrounds.” – *Mid-career physician*

“Challenge is not being able to get patients into specialist care or diagnostics/testing, it's very demoralizing.” – *Early-career physician*

- Practise in multiple settings (a single physician often practises in two or more settings), including:

- Community clinics
- Emergency departments and Collaborative Emergency Centres
- Hospitals
- Long term care facilities
- Patients' homes
- Operate their clinics as businesses, managing patient care billing, ordering supplies, hiring and management of staff, and clinic infrastructure maintenance.
- Work with the Nova Scotia health system through leadership (e.g., NSH, DNS), teaching (e.g., preceptorships) and research.

### What challenges do Nova Scotia family physicians currently face?

Family physicians in Nova Scotia face a variety of challenges that can make it difficult to practise at full capacity. These challenges include patient access and attachment, administrative burden and remuneration.

- **Patient access and attachment (provider capacity to support patient care):** Family physicians are pressured to attach more patients than they have the capacity to care for. Furthermore, capacity differs depending on patient population, type of practice, payment model and so on. Support from clinic nursing staff (e.g., family practice nurse, nurse practitioner) does not necessarily improve a physician's capacity to take on more patients.

“Forcing a certain number of patients on a clinic has nothing to do with quality of care. It is impossible to determine a known quantity of patients per physician, because it depends entirely on who those patients are, and what their needs would be. Time in practice [is] needed to know what a provider's capacity would be.” – *Early-career physician*

- **Administrative burden (health system capacity to support patient care):** Family physicians face significant administrative work as part of their clinical practice, including patient charting and finding and coordinating specialist referrals for patients. Family physicians also take on administrative work related to the operation of their clinics as businesses, and engage with health system administration leadership.

“[I want] better use of technology to improve patient care and reduce paperwork/administrative burden in preventing burn out. – *Survey respondent*

“[I want] practice management that is co-led by physicians with input by managers and not strangled by bureaucratic red tape. – *Survey respondent*

- **Discrepancy between payment and work:** The FFS pay model is largely not of interest to more recent family physician cohorts, who prefer APPs or B/C so that the unbillable work of patient care and running a practice (e.g., administration, team meetings) is captured in their pay. Neither FFS nor shadow-billing accurately capture the work family physicians do, and are thus inadequate measures of health-system outcomes. Some earlier-career family physicians did prefer FFS as a way of ensuring flexibility in their practice, when they had multiple focused components of practice.

“Rx refills and paperwork should be paid time. In no other profession do you volunteer paperwork time. Some jobs are 100% paperwork and yet still paid positions. I hate nickel and diming. I hate rushing patients. I feel like I've had to give up the parts of this job I love to keep a schedule.” – *Survey respondent*

“I want to do good medicine but DHW [is] looking at your billing numbers. Hard to keep up to date on billing changes and modifiers and the so many random rules. It's exhausting.” – *Early-career physician*

“I think someone somewhere is going to really have to sort out what is an equitable payment for family doctors versus specialists and how to deal with 30% burden of unpaid time ‘running a business’ that many hospital specialists don't have.” – *Survey respondent*

#### How do Nova Scotia family physicians currently work with health-system stakeholders?

Primary care cannot and should not function with family physicians isolated from other health-system players. Relationships within the health system are both the lifeblood and central pain point of family medicine. The maintenance and negotiation of these relationships is a major facet of family physician practice.

- **Foster patient relationships:** Family physicians say their favourite aspect of practice is patient relationships, but they also report needing to manage patient expectations about what care they can provide, and the constraints under which family physicians work (e.g., billing). A family physician's capacity to provide a given volume of patient care hinges entirely on their practice's patient population and even individual patient needs and preference.

“I enjoy comprehensive family practice, which is about connections and people. Face-to-face, day-to-day interactions are important.” – *Early-career physician*

- **Collaborate on family physician interrelationships:** Family physicians themselves differ in opinions on and preferences for nearly every aspect of practice. Their perceptions of one another's work plays a role in their perceptions of the health system as a whole, and family physicians prefer to work with others who are like-minded. That said, family physicians desire a critical mass of other family physicians with whom to collaborate on comprehensive care, call groups and leave coverage, and advocacy. Focus group participants reported feeling disconnected from other family physicians for different reasons at different career stages. For example, early career physicians might be new to a community, and mid- and late-career physicians may have colleagues moving away or retiring. Teaching and mentorship were seen as facilitators of strong family physician relationships, as were shared payment models. Practices with family physicians working on different payment models experienced strain.

“One of the biggest attractions of family medicine is the diversity of the work and the ability to augment your practice by finding a niche of interest – such as prenatal and obstetrics, addictions medicine, sexual health, etc. You can then refer to your colleagues in a consultation model.” – *Early-career physician*

“We need people. We need people who do general medicine...we don’t have the economy of scale to have so many specialist family medicine practitioners.” – *Mid-career physician*

“Succession planning is a significant barrier to retirement, made even more challenging for older physicians by lack of CCFP certification, which then means they cannot teach and find new grads to take over their practice.” – *Late-career physician*

- **Collaborate on family physician–consultant physician relationships:** Family physicians say they find it challenging to connect with consultant physicians working outside of family medicine, particularly in community settings where referrals and consultations must be coordinated by the family physician. Later career physicians remarked on a perceived increase in physician collaboration, whereas in the past family physicians would care for patients without consulting with other physicians.

“Collaboration with other specialists has increased over time – family physicians now regularly talk with specialists and sub-specialists about most medical decisions – this did not used to be the case.” – *Late-career physician*

- **Demonstrate leadership in family physician–health system relationships:** Family physicians’ relationships with the health system are strained, but the strain is not new, and there is no evidence to suggest this relationship has ever existed free of challenge or conflict. Notably, family physicians did not perceive the presence of physicians in government leadership roles to have a positive impact on family physician consultation or inclusion within government decision-making. Family physicians largely did not have an interest in taking on the (largely unremunerated) work of health-system administration themselves, but identified meaningful consultation and targeted problem-solving as potential roles for family physicians in health policy.

## What should family medicine look like in the future?

There is not just one future of family medicine. There is too much diversity among family physicians and among their patients for there to be only one answer. Even within career-stage cohorts, as reported in the focus groups, there tend to be differences of opinion and preference. As the family physician workforce and our understanding of patient health diversify, these differences are to be expected. The following three vision components are broad, and necessitate adaption and flexibility within themselves.

### Nova Scotia family physicians’ vision for the future of family medicine

1. **Collaborative care: Collaborative care is the way of the future, with a clear vision for complementary scopes of practice between professions, and the e-health and physical clinic infrastructure to facilitate collaboration. Grassroots relationships are leveraged to their full potential for effective and happy primary care teams. Collaboration is flexible to include diverse types of family medicine practice.**

Collaborative practice was identified as a future goal and priority through survey responses and through family physician and stakeholder engagement during the development of this research. Focus group participants discussed collaborative care both in the context of feedback on the NSH Health Home model, and in the context of current and past practice. Collaborative care is not a new concept in Nova Scotia family medicine, and has taken many forms over the years. Many later-

career family physicians noted that the Health Home and Collaborative Family Practice Teams existed informally throughout their careers, and they often practised in formal teams toward the ends of their practices. Even solo practitioners had collaborative components to their practices, leveraging relationships with local hospitals to provide patients with continuity of care, or co-locating with other family physicians to share overhead costs. Medical learners all identified collaborative practice as their preferred and planned practice model.

“As someone who loves variety, I can acknowledge that it’s hard to stay current in all areas (geriatrics, palliative, obstetrics, etc.). Hence my dream vision has a group, each provider with areas of specialty or interest, and they support one another and as a collective they cover the community need.” – *Mid-career physician*

“In many ways physicians in communities around Nova Scotia worked this way...the way of the HH, they figured it out, organized their own call schedules, etc., for many years.” – *Late-career physician*

“[I want a] collaborative practice in which people are remunerated fairly for their time and expertise. Fair work hours and good access through a nurse practitioner and pharmacist with MD consultations as needed [...] full spectrum care provided by a collaborative team.” – *Survey respondent*

Despite support for collaborative care overall, focus group participants largely showed reticence toward the NSH Health Home model. This was not due to a distaste for the vision itself, but rather a concern that needed supports and leadership were unavailable to ensure implementation. Survey respondents also noted barriers to collaborative care. These barriers are more fully explored in the next section of this report, but one key concern was the challenge of fitting preconceived models of care onto existing, successful models in community family medicine. Avoiding disruption to strong solo practices or drawing on the efficiency of teams of providers who know and trust one another will be the way to best leverage family physicians’ patient and community relationships.

“NSH wants co-leadership, team meetings, etc. But none of that is funded. And the main driver of my evaluation is shadow billing. Yet none of that is billable. You have to remove shadow billing if you want physicians to jump into the NSH vision of their Health Home clinics.” – *Mid-career physician*

“Remuneration is horrible in Nova Scotia. I’m thinking about leaving. I wish family medicine allowed practitioners time to have meaningful conversations with people. In fee for service it’s almost exclusively 15 min appts. That’s barely enough time to solve problems, never mind build relationships. Asking patients to rebook for more issues is so silly. They’ve taken time off work to see us and we have a weird arbitrary limit. Fee for service should really be fee for problem. Then we could give each issue the time it deserves instead of squishing everything together.” – *Survey respondent*

- 2. Community adaptive care: In the future of family medicine, family physicians are providers and facilitators of community adaptive care, where they know their patients, their communities and their practices best, and are given the space and supports to meet all of these needs. Family physicians’ versatility and knowledge of their patients is leveraged to plan and deliver comprehensive care.**

Patient and community relationships are not only family physicians' favourite aspects of their practice, but they are also crucial to the work of family medicine, which involves caring for people longitudinally, in the context of their families and communities. Family physicians may also have long-term relationships with other primary care providers in the community, who they have come to know and trust over time. Community knowledge is also important to family physicians' leadership in the health system, where they identify and advocate for community needs and services. Family physicians also want to be afforded the flexibility to take on focused aspects of practice that interest them and serve a patient need (this is more pronounced among early and mid-career family physicians).

Family physicians' role in primary care, now and in the future, will be defined by their ability to draw on their versatile practices and patient relationships to tailor care to localized needs. The mechanisms through which this tailoring occurs are as yet undefined, and the challenge for health systems is to balance best practices in primary care with local practices and needs. Above all, family physicians prioritize the care they provide to their patients, with a holistic picture of patient health informing all their decisions. As long as they know what factors (e.g., lab values, social/family context, patient health history) are informing a patient's health outcomes, the family physician can plan and deliver care based on both their own skills and the services available elsewhere in the health system. In this way, comprehensiveness of care is more adaptable, while continuity is essential to the work of the family physician.

"I believe it's better to work in hospital through the day to put out fires. Family physicians know our own patients best, the hospitalist model is a double-edged sword, depending on how you are doing it, you can be missing out on your own patient health journeys." – *Early-career physician*

"When I entered a smaller practice, we decided to each do a day or two a week in the evening and I also do Sat mornings. Patients loved it and it works for us. I think it's here to stay and go forward in the future." – *Mid-career physician*

"[I'm an] old fashioned GP, office is in [my] home. Patients bring pets with them to their appointments." – *Late-career physician*

"My small 2-doc practice has been able to be nimble during COVID exactly because we are small. We never had to stop seeing patients in office." – *Survey respondent*

"Currently, I'm tied into an FFS practice that has provided collaborative care to underserved populations (addictions, LGBTQ) for >10 yrs; [...] Gov is interested in innovation [...] without investing in what's working well – experienced family doctors who have nimbly adapted to the torrent of change over the past 5-7 yrs." – *Survey respondent*

- 3. Valuing family medicine: Family physicians envision a future where they are valued by the health system for their provision of continuous patient care built on strong relationships, and their leadership in adapting care to patient and community need. This value is demonstrated through**

**remuneration that reflects their work and measures of accountability which fairly evaluate and oversee family physicians' work.**

In both surveys and focus groups, family physicians shared that they do not feel valued by the health system. They feel that their skill sets are not understood, the totality of their work is not captured in evaluations and their voices are not prioritized in decision-making. Many referred to lacking time to do all that is needed in their practice, which suggests inadequate remuneration and a lack of billing codes that capture the totality of family practice. With billing data as the main or only source of evaluation of family physician performance, family physicians are left feeling inadequate, and the health system is left without a fulsome understanding of the services offered in family medicine.

“We are still seen as business owners and told to pay for our own initiatives when we come up with ideas.” – *Early-career physician*

“Family physicians need a stronger voice. They must take an active role in provincial leadership work, however, that doesn't mean an official title. It may best be achieved by allowing them to take leadership of work that is of specific interest to them so they can continue their clinical work and stay connected to on the ground realities.” – *Early-career physician*

“In the past I was told that physicians don't want to have a voice, but now physicians are being managed and morale is getting ruined, and we need and want to have a voice. They need to hear from physicians more.” – *Mid-career physician*

## How can we get there?

### Achieving the NSH Health Home Model

Nova Scotia family physicians desire to practise in collaborative care models and use collaboration to deliver optimal patient care. That said, there are many different ways in which physicians can collaborate. The NSH has presented the Health Home model as a way forward, but to ensure successful implementation of this model in the future, it is essential that family physician perspectives on the proposal are accounted for. Family physicians shared perceived barriers and facilitators to working within a Health Home and to the model's overall success:

- **Barriers**
  - Lack of role definition means there is no shared understanding of which primary care providers fill which roles in patient care
  - Rigid frameworks within which collaborative practice models and networks must fit to receive system supports, such as Collaborative Family Practice Team (CFPT) status
  - Lack of e-health infrastructure or payment of virtual work
  - Fee-for-service billing (when FFS compensation – i.e., fee codes – does not represent the given patient population) and/or mixed payment models within a practice or network (between family physicians; between family physicians and allied health providers)
  - Payment and other evaluation mechanisms of physicians' work that do not capture the complexities of practice management and patient care
  - Lack of a critical mass of physicians with whom to collaborate on call groups and patient care



- Patient choice preference for one location or group of providers, as well as patient mobility and transience over time and geography (within Nova Scotia and across Canada)
- **Facilitators**
  - Existing and/or organically strong relationships between care team members
  - Flexibility to adapt practice as needed to fit patient need, and form networks that exist outside a traditional CFPT structure
  - Family physician autonomy at the practice level, and engagement in system-level decision-making/vision development (to enable community-adaptive care)
  - Reducing/addressing family physician burnout through reduced administrative burden and maintained connections to patients (seeing patients in person, not just their paperwork)
  - Using APP or C/AFP (combined with appropriate measures of accountability) or Blended/Capitation (to be confirmed through B/C pilot) payment models
  - Physician evaluation and remuneration consider and reward aspects of family medicine outside direct patient contact
  - Training and role definition for allied health providers
  - Defined geographic catchment area for patients, to clarify the breadth and scope of Health Home networks
  - Teaching and mentorship to build family physician relationships that facilitate career transitions and leave coverages

### Evaluating Nova Scotia family medicine using the Senn et al. (2020) framework

This research is grounded in the Senn et al. (2020) framework (Figure 3), which features numerous components. Contextual factors, such as politics and economics, affect domains of primary care. Two forces connect the domains and affect the ultimate indicator of patient health outcomes: equity and integration. These two forces act to shape the present and future of primary care in Nova Scotia.

### Equity: Health promotion and preventative health care

In addition to the pillars of equity and integration, the framework features four essential domains of primary care systems: organization and structure of primary care practices; delivery of primary care; patient and population needs; and patient and population outcomes. This research focused primarily on the first two components, defining their present and envisioning their future in terms of family physician relationships with health-system actors and provision of care to patients.

But the latter two components of the framework are equally important to consider when evaluating the present state of family medicine in Nova Scotia, and planning for the future. Patient and population needs (e.g., prevalence of chronic disease and mental illness health literacy) in Nova Scotia are widely unmet. Social determinants of health, such as food insecurity and child poverty, are higher in Nova Scotia compared to other Canadian provinces. Family physicians see patients who seek system supports that extend beyond the traditional scope of family medicine, and turn to family physicians as a source of guidance on income, housing, food security and mental health. They also present with chronic diseases that require lifestyle changes that may be unattainable (e.g., due to food insecurity) and/or referrals to consultant physicians who have lengthy waitlists or simply do not practise in the region. Many family physicians participating in this research noted the desire to have social workers and mental health practitioners as part of their collaborative practices.



Family medicine in Nova Scotia has become a receptacle for patient needs that go unmet in nearly every other aspect of the province's social safety net and health-care system. Family physicians working in community clinics are tasked with taking on the most complex components of primary care, and feel that they are left with the "worst of primary care" as a result. While their role as the quarterback of primary care puts family physicians in the ideal position to manage and coordinate care for complex medical cases, they are not supported or resourced to facilitate many, if not most, of the care solutions required. Furthermore, complex and chronic disease care is not always well remunerated.

Notably, family physicians with experience practising in the military noted satisfaction with the delivery of complex care to their military patients. It is important to consider that this patient population is also provided with a guaranteed salary and fully funded health services that are not publicly funded for civilians (including dentistry, mental health care, physiotherapy). Family physicians in this context are also caring for a smaller number of patients. For military patients, solutions to primary health needs are largely within reach.

The family medicine practice of the future cannot continue to position family physicians as the sole point of support for all matters of health. Comprehensive care must be understood in the context of the social determinants of health, and patient health outcomes as a measure of primary care performance should be understood within the Senn et al. framework, where patient needs impact upon all other facets of the primary care system. Family medicine practices must be equipped to address these needs, family physicians must be remunerated for their work, and Nova Scotia must prioritize health equity by addressing social determinants of health.

"Patients are sooo complex in their issues and needs. The 15 minute appt is a joke and becoming useless except for bandaids. I think docs need fewer patients with compensation to manage these ever-increasing needs. On top of medical needs, the mental health issues are huge and time consuming." – *Survey respondent*

"In our collaborative, we (docs and nurses) have common areas, we talk and can ask questions all day long with easy access to others for opinions. Really important in an area with broad demographic. [...] In FFS model there is no value added talking to parents whose children have been taken away, figuring out how to pay for things patients need. In collaborative practice on salary we can spend extra time to get patients into programs and find funding sources. [...] I can't see someone in 10 minutes to solve their issues – their situations are often so complex." – *Early-career physician*

I would like to see [family medicine] moving to a more collaborative model, but I don't want [...] us [to be left] with more and more complex and difficult patients and conditions unless that is reflected in an increase in pay." – *Survey respondent*

"[The future of family medicine should have] more focus on preventative health providing resources to patients in a timely manner." – *Survey respondent*

#### Integration: Health system planning and Health Home implementation

Integration is essential to the primary health care system functioning. This research indicates that family physicians perceive a total lack of integration across all facets of the health system. For example, as discussed above, family physicians face barriers to sourcing and facilitating consultant physicians for

their patients. Regardless of consultant physician supply and availability, family physicians are challenged to even locate and contact other physicians in the Nova Scotia health system. Family physicians also report a disconnect with the health system, and uncertainty around the goals for complementary scopes of practice across primary care providers and definitions of collaborative teams.

There are two primary barriers to integration:

- 1) Lack of a primary health care system vision, agreed upon by all stakeholders

“I’m now under an NSH collaborative care structure and it feels less collaborative. We are constrained by the funding model – things we have to do that don’t make sense just because of funding. We have two family practice nurses but only NSH funding for one so we need FFS to fund second nurse. We have to spend more energy on making the clinic model still work. It’s frustrating, we bring in other services so they have access to other disciplines, for example they have access to social workers through OAT, because it’s a different funding pocket.” – *Early-career physician*

“Current system is slotting providers into artificial boundaries when they haven’t organically formed those relationships, when practice populations don’t fit within the boundaries it’s problematic. The primary care model should provide more latitude for groups to organize themselves in a way that makes sense geographically, based on interests and speciality would make it more successful.” – *Early-career physician*

- 2) Lack of needed e-health supports to ensure that provider can easily communicate with one another and with their patients

“I would like a single, secure, funded communication system between myself and patients and myself and other specialists. I would like a centralized service for seeking out consultants that is maintained for areas of interest as well as availability of specialized services by my family physician colleagues.” – *Survey respondent*

“[I want a] patient medical home style full scope shared and collaborative care. Compensated in an APP method with incentive bonuses. Integrating inpatient, with synchronous and asynchronous virtual care. This will require increased shared information and less siloing of tasks in different private clinics, pharmacies, etc.” – *Survey respondent*

“Health homes/collaborative practice requires better electronic information sharing and communication integration – EMR integration (a medical home record) with specialists and other health professions.” – *Early-career physician*

Both of these barriers need to be tackled in terms of family physician relationships with other physicians, with allied health, and with the health system. Although the shared goal among all stakeholders is to put the patient first, each differs in their interpretation of how that goal might be achieved.

### Qualitative conclusions

Family physicians’ visions of family medicine will only grow in their diversity as the workforce grows in its diversity. The health system must be prepared to leverage diversity as a strength. The questions for the health system now become: How can primary care be measured and accounted for, without

compromising versatility or adaptability? And, in measuring and evaluating family physicians' work, how can the demands on their time, both inside and outside of direct patient care, be better captured and rewarded? Collaborative, team-based care is desired and is possible, but appropriate supports are needed—namely, the time, space and funding for family physicians to ensure success.

# Key messages

## Alignment with the Quadruple Aim (Bodenheimer & Sinsky, 2014)

The Quadruple Aim lays out health-system priorities for primary care moving forward. Nova Scotia family physicians have provided options for addressing each aim in the provincial context. Each component of these priorities also maps onto the Senn et al. (2020) framework pillars of equity and integration. These connections between the Quadruple Aim and the Senn et al. framework are individually noted below.

### 1. Provider well-being

**The future is female and gender diverse** (Senn et al.: Equity) – It is vital to understand what that means for family medicine and respond accordingly to adapt remuneration models for primary care, physician resource planning (i.e., clinical services planning and physician FTE allocations), and system supports for physician wellness (e.g., programs to support parental leave, vacation, flexibility in hours).

**Opportunities for productive collaboration** (Senn et al.: Integration) – Family medicine is inherently collaborative, and well-coordinated access to primary care team members is needed. Collaborative models should strive to improve, not worsen, provider well-being, and leveraging existing relationships between trusted professionals is key. Strong relationships between primary care team members are essential to team functioning and the delivery of optimal care (Noel et al., 2013; Soubhi et al., 2010).

### 2. Patient experience

**Rooted in community** (Senn et al.: Integration) – Primary care works best when it is responsive to community needs, and when communities of providers and patients are working together to meet these needs. Flexibility and choice (balanced with appropriate measures of accountability to the system) are needed to allow physicians to be responsive in their practice; that flexibility should include remuneration models, how their clinics are operated and the focused areas of practice included in their work. Miller et al. (2010) suggest that primary care practice rooted in responsive patient and community relationships – where the complexity of family medicine is embraced and accepted – enables family physicians and clinics to be resilient, robust and offer high-quality, cost-efficient care.

### 3. Optimizing costs

**Reflective evaluation and compensation** (Senn et al.: Integration) – Family medicine is complex, versatile and multi-faceted, but the tools we use to evaluate it do not always capture every facet, or reflect its nuanced value. By better understanding what is needed to deliver optimal patient care (e.g., complex and chronic disease management, time for coordinating and sourcing care and resources for patients, care team engagement and team building), we can ensure that health-care spending helps primary care professionals work effectively. Additionally, primary care outcomes should be determined using data that are nuanced and that capture the full range and depth of services provided by family physicians. Kiran et al. (2019) suggest options for family physician-led, practice-specific evaluation of family medicine practice, including optimizing change management, prioritizing patient-centred indicator, and using a variety of data sources (e.g., EMR, patient survey). Similarly, Orkin et al. (2017) propose the three-way integration of population health surveillance,

community adaptive care policies and care outcome evaluations as a key to improved primary care practice.

#### 4. Population health

**Impact of social determinants of health on primary care** (Senn et al.: Equity)— Family physicians want to help their patients, but are not always equipped to support health needs that must be addressed through a social safety net, public health promotion and community resources outside the health-care system. Some solutions to addressing population health are available at the level of the family physician and/or family medicine practice. These solutions might include supporting and enabling family physicians to screen patients for social determinants of health and related supports (Pinto et al., 2019; Purkey et al., 2019); spend time collaborating with patients on addressing poverty within disease self-management (Loignon et al., 2015); and embed some social services (e.g., social workers, legal services) within primary care clinics (Drozdal et al., 2019).

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