

PRIMARY CARE PHYSICIAN COMPENSATION REFORM: A PATH FOR IMPLEMENTATION

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SUMMARY

The 2019 MacKinnon report, commissioned by the Alberta government, recommended ending fee-for-service (FFS) as the model for paying primary care physicians because of its significant and inherent inefficiencies. Since then, the COVID-19 pandemic has also demonstrated the value of moving Alberta's family physicians to an alternative payment (APP) model.

While the MacKinnon report was in favour of enacting legislation to change the compensation model, this paper instead recommends offering physicians a choice of alternative payment programs as an incentive to move on voluntarily from an FFS system.

Other provinces have attempted to reform physicians' pay using a quadruple aim model for health-care improvement, which identifies the major points policy-makers must examine in instituting a replacement for FFS.

The quadruple aim model is four-pronged and encompasses patient experience, population health, care team wellbeing and cost reductions. Alberta Health Services already uses the quadruple aim model to improve patient care and quality outcomes, although the MacKinnon report focused primarily on reducing costs. However, reforming doctors' compensation is not just about the amount they should be paid; it must also consider that the method of compensation has a profound impact on both cost and quality of care received.

Meanwhile, the self-isolation and social distancing measures for both doctors and patients, established with the arrival of the COVID-19 pandemic, have put Alberta's doctors on a policy roller-coaster. Applying the FFS compensation

model during the pandemic has resulted in the use of virtual care codes such as telehealth billing and in-person limited assessment codes. However, these codes were immediately problematic because they do not adequately account for complex patient care that requires longer visits, after-hours premiums and the Rural Remote Northern Program.

During a pandemic is not the right time to embark on physician compensation reform. This gives the government time to reconsider the controversial approach taken prior to the COVID-19 pandemic. The need for compensation reform in Alberta is driven by the reality that Alberta has the highest proportion of physicians on FFS along with some of the highest FFS payments per physician in Canada. Meanwhile, family physicians in other provinces are now more likely to be covered by an APP rather than the former FFS system.

The problem with FFS is that it tends to encourage physicians to create volume in number of patients seen per day, in order to increase compensation. Thus, it also encourages more diagnostic testing, which increases costs to the health-care system. In general, physicians compensated under FFS have much less incentive to consider costs when treating patients.

The argument for legislating pay reform is poorly justified. No other province has legislated physicians out of the FFS system, and that is not a route Alberta should take, either. Nova Scotia has brought in a one-size-fits-all APP, while Ontario implemented a menu of higher paying APPs that produced greater downstream cost savings, making APPs an increasingly attractive payment option to family physicians. Ontario's approach would be better for Alberta because it improves patients' overall experience with primary care, their care outcomes and the wellbeing of those who care for the patients.

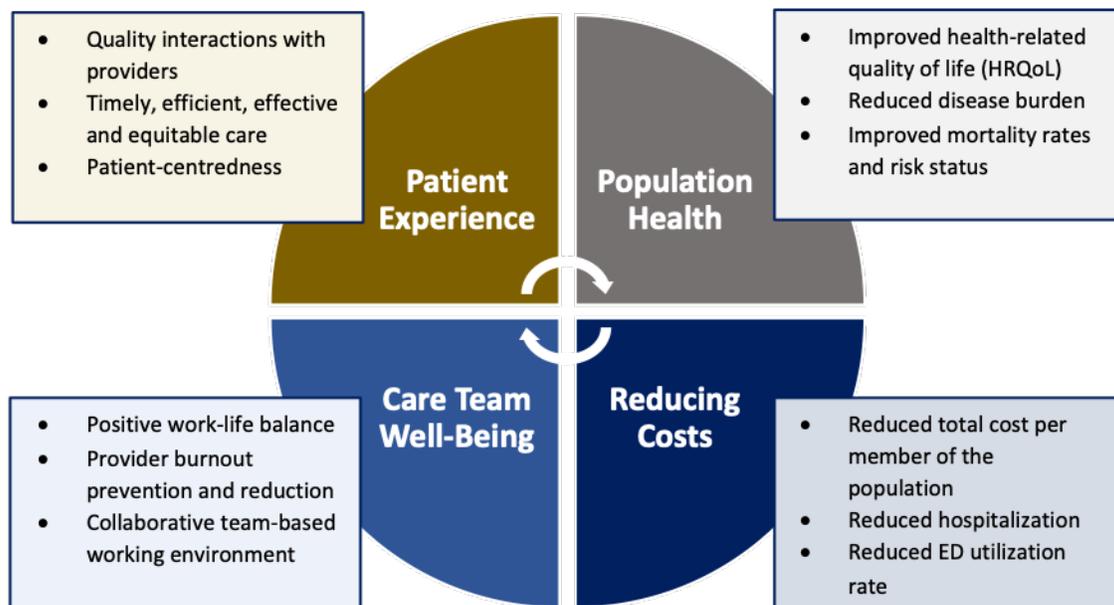
Alberta should offer a menu of APP models tailored to primary care so that the family doctors themselves can choose the best model for their own practices. As this paper has demonstrated in its comparison of the experiences of other provinces, and as the COVID-19 affirms, the menu approach is the model most strongly aligned with the goals of quadruple aim.

1. INTRODUCTION

Canada’s health-care system contains many cost drivers associated with the delivery of publicly funded health services. A major longstanding concern, especially recently in Alberta, has been the ever-increasing costs of physician services. Physicians in Canada typically rank among the top three largest health budget items (CIHI 2019a, 4). In Alberta, a 2019 report by a blue ribbon panel on the province’s finances – the MacKinnon report – found that the average clinical payment to physicians is among the highest in Canada. It also found that physician spending per capita and the annual rate of increase in physician pay are the highest in Canada but health outcomes and access to health services are no better than provinces that spend less (Government of Alberta 2019, 29–32).

Policy-makers have been trying to steer toward balancing the need to maximize health outcomes per dollar spent, while maintaining provider wage subsistence to ensure that system-wide staffing levels meet demand. The Alberta government must consider a multitude of factors as it contemplates the next steps for reforming physician pay. The quadruple aim is a model that many health-care institutions, including Alberta Health Services, have adopted to help improve patient care and quality outcomes. Health-care institutions have to balance the need to maximize outcomes and patient experience per dollar spent, while ensuring physician compensation and contracts meet demand. The four-pronged criteria referred to as the quadruple aim approach to health-care improvement provide an excellent framework to assess reforms to primary care physician compensation (Figure 1).

FIGURE 1: THE QUADRUPLE AIM MODEL FOR HEALTH-CARE IMPROVEMENT



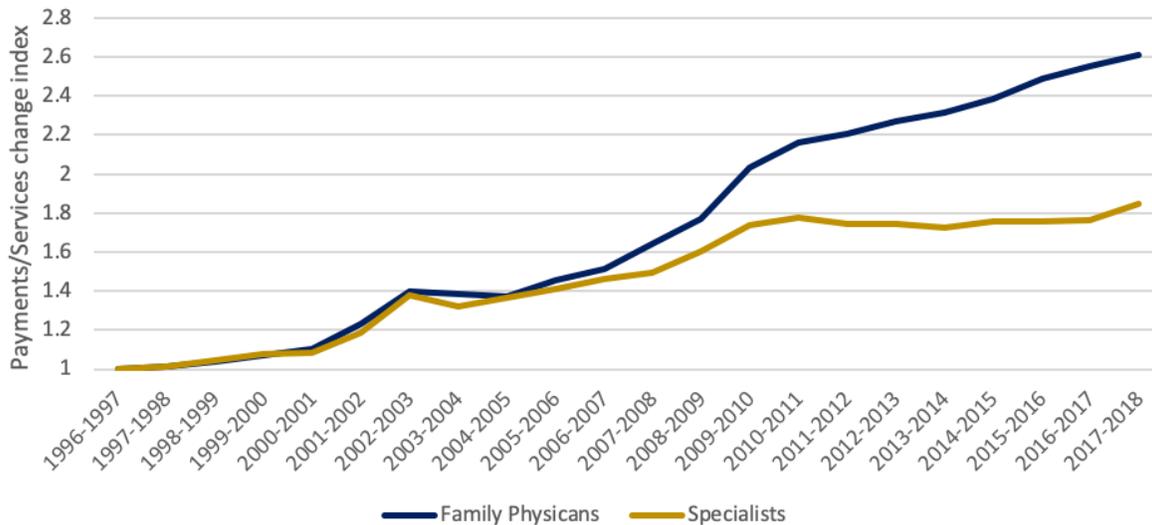
Sources: Bodenheimer and Sinsky (2014), and Alberta Health Services (n.d.).

To achieve good value in health care, the amount of compensation per physician is not all that matters, but the method by which physicians receive compensation has a profound impact on both the overall cost and quality of care received (Bodenheimer 2005; Yan et al. 2009, 23). This conclusion comes after decades of scrutinizing the standard fee-for-service (FFS) approach to physicians' compensation in Canada. Progress toward implementing a replacement for FFS has been incremental. No government in Canada has been successful in broadly moving physicians away from the established FFS model, but today, family physicians in most provinces, compared to specialists, are now more likely to be paid under an alternative payment program (APP) (CIHI 2019b, 34).

Alberta has the highest proportion of physicians on FFS and some of the highest FFS payments per physician in Canada. The MacKinnon report criticized the FFS model as a significant source of inefficiency and unnecessary cost to Alberta's health system, and suggested legislating out FFS as a possible solution. The report further expressed the need to focus this reform on primary care physicians (PCPs) (Government of Alberta 2019). FFS tends to incentivize volume, in particular more consultation and diagnostic testing. Empirical evidence suggests that primary care physicians face little incentive under FFS to consider costs when treating their patients (Sweetman and Buckley 2014, 2). FFS may be appropriate in some specialty and ambulatory care settings (Government of Alberta 2019; Innes et al. 2018), but in a primary care setting where the objectives are to provide ongoing chronic care maintenance, cost control and better care quality, moving away from FFS is warranted (Sweetman and Buckley 2014). If pursued, based on the report's recommendations, Alberta could become the first province in Canada to legislate a forced switch from FFS to an alternative model for primary care physicians. This raises significant policy questions about what the optimal approach is to move to a more APP-dominant system of PCP compensation.

The MacKinnon report's call for PCP compensation reform is centred primarily around the quadruple aim's cost-reduction goal. This raises the question: Why should PCPs be singled out, since specialist fees under FFS are typically higher than in primary care service (CIHI 2019, 37)? In Alberta's FFS-dominant system, total payments per services between PCPs and specialists have increased annually at remarkably different rates. Since the early 2000s, PCP pay per service in Alberta has significantly outpaced specialist pay per service, which has drawn the government's attention toward reforming compensation for primary care specifically (Figure 2).

FIGURE 2: CHANGE IN TOTAL PAYMENTS PER MEDICAL SERVICES IN ALBERTA (1996/97 - 2017/18)



Source: CIHI (2019c), Table D.1.3.

This trend in escalating PCP pay can be partially explained as part of a crisis in recruitment of primary care staff (Government of Alberta 2001). The 1990s saw a large increase in Canadian family doctors emigrating to the U.S. and the early 2000s saw fewer and fewer Canadian medical graduates choosing careers in family practice. As this crisis peaked, the quick-fix solution was often to enrich the provincial fee schedules and since then, more graduates are choosing family medicine (Deschner, Kwolek and Yu 2015) and the number of Canadian physicians practising in the U.S. is at an all-time low (Freeman et al. 2016), though this may not be entirely attributed to the enriched fee schedules. Despite the province benefiting overall from these trends, rural areas in Alberta have continued to suffer acute shortages of primary care providers. To rectify this, the government established financial incentives on top of FFS payments to retain rural physicians; however, this has had the (perhaps justifiable) effect of adding additional expense and further increasing the relative cost of providing primary care in rural areas. In this diverse province-wide context, there has been a clear failure to contain primary care costs, or at the very least, ensure that increased expenditure has reliably and verifiably improved both access to and quality of care. It could be argued that if the rationale for previously hiking the rate of annual increase in fee schedules was to stop the brain drain, now that it has dissipated (Freeman et al. 2016) that same logic would suggest that family physician compensation should start to plateau along with specialty care.

With the MacKinnon report’s recommendations, the policy-makers face a potential series of key decisions that will impact the implemented outcome of such a lofty reform. The first decision, as the report laid out, is whether or not to adopt command-and-control policies – the legislative approach – for eliminating FFS in primary care, or to encourage PCPs to voluntarily move away from FFS. To identify further decision points and potential options, this paper examines several notable strategies other provinces have taken to reform PCP pay, using the quadruple aim model as a guide to apprise which policy direction is optimal.

2. COMPENSATION REFORM IN ALBERTA

Before diving into the experiences of other Canadian provinces, it is important to analyze the work Alberta has undertaken on PCP pay reform. Moving PCPs into APP models has long been the focal point of health spending discussions in Alberta. During Ralph Klein’s premiership, policy advisors began to raise concerns over rapid increases in service billings with little to no increase in care quality. At that time, there was a growing understanding that FFS was likely an ineffective method of encouraging more face-to-face time between physician and patient, or encouraging physician leadership in system management and academia. A voluntary set of FFS alternatives was recommended (Government of Alberta 2001). After the Romanow Commission emphasized FFS weaknesses as particularly detrimental in primary care, subsequent departments in the Alberta government narrowed their focus to pursuing compensation reform in primary care (Table 1).

TABLE 1: KEY GOVERNMENT COMMITMENTS ON PRIMARY CARE PHYSICIAN COMPENSATION REFORM

Report	Year	Author	Findings and Concerns	Recommendations
A Framework for Reform	2001	Premier’s Advisory Council on Health for Alberta	Growing burden of health care on tax system. Health-care access is a growing concern. System shortage of physicians and other providers.	Introduce alternative physician payment options for physicians to opt into. Pursue a blended model of alternative compensation.
Building on Values: The Future of Health Care in Canada	2002	Commission on the Future of Health Care in Canada (Privy Council Office)	Poor continuity of care between primary, secondary and long-term care. Current system does not foster team-based collaborative care. FFS incentivizes quantity not quality of service.	The establishment of a primary health-care transfer to catalyze pan-Canadian reforms, including FFS alternatives. Note: Recommendations are not specific to Alberta but would impact the federal-Alberta health accord.
Health Policy Framework	2006	Government of Alberta	Different care providers are remunerated differently (nurses on salary, doctors on FFS), hindering team-based care. APP program scope is limited and does not encompass all care-provider disciplines.	Create new compensation models that incentivize greater care quality, efficiency and interdisciplinary teamwork. Extend APP to all members of multidisciplinary teams.
Alberta’s Primary Health Care Strategy	2014	Government of Alberta	30 per cent of Albertans have at least one of seven select chronic health conditions. Use of ER for multiple chronic conditions accounts for 60 per cent of ER costs. Current FFS inhibits collaborative team-based practice, and does not reward performance.	Employ compensation models that support team-based primary care. Models must be flexible, sustainable and demonstrate service improvement.

Better Healthcare for Albertans	2017	Auditor General of Alberta	Typically, family physicians work solo and in small group practices, and look after chronic disease patients and non-chronic disease patients in the same office-based practices. Chronic and non-chronic patients are treated on an episodic basis. Team-based primary care collaboration has not been achieved.	Incentives need to be structured into any alternative payment model to ensure that physicians are not disincentivized from taking on higher needs patients. Unlike FFS, compensation needs to support the entire interdisciplinary care team.
MacKinnon Report on Alberta's Finances	2019	Alberta Treasury Board and Finance	Alberta has excessively higher spending on physicians than other provinces, and no better outcomes. FFS has remained dominant despite offering APP models. Alberta has the lowest adoption of APP in Canada.	Limit the increasing cost of physician services by providing incentives for physicians to move to alternative payment plans. Government should consider legislative options if negotiation fails.
A Case Study Evaluation: Crowfoot Village and Taber Clinic	2019	Health Quality Council of Alberta (HQCA)	Alternative funding model enables team-based care. Both clinics under capitation-based funding provide cost-effective care and save up to \$7.2 million a year.	A provincial alternate funding framework is needed to support the development and implementation of future alternate funding agreements.

Alberta has produced many reports and set several lofty goals around phasing out FFS to foster collaborative and performance-driven primary care. To date, few of the goals or recommendations have been implemented beyond pilot programs. One such pilot program centred around primary care has been Alberta Health's capitation-based model that the Health Quality Council of Alberta (HQCA) recently evaluated. In 2019, the HQCA reported multi-million-dollar cost savings from the two primary care clinics funded through a capitation-based APP, making the pursuit of more primary care APP desirable to a government bent on balancing the provincial budget. However, it is important to note that these are downstream savings to the health system, not a direct multi-million-dollar subtraction from the physician compensation line item in the provincial budget. For example, in both clinics studied, the HQCA found that family doctor FFS costs were lower than in the rest of Alberta, but capitation costs were higher, in that the rest of Alberta had none. This means that when FFS and capitation costs were added together, the total cost was higher than for family doctors receiving the blend of FFS and capitation versus family doctors receiving just FFS (HQCA 2019, 49–50). Major savings come from lower emergency department and inpatient costs of patients seen by the blended capitation practice. So, while emerging FFS alternatives in Alberta show promise in delivering better quality of care and saving the health system money downstream, PCP pay levels may not be decreased just because more move off FFS.

Beyond the current blended capitation pilot, Alberta has put forward several types of alternative payment models over the years. At one point, the newly established primary care networks offered capitation contracts to PCPs (Ludwig 2011) or introduced additional performance payments. Yet these mechanisms failed to incent the desired behaviour from participating physicians that could have improved the primary care system's performance (Spenceley et al. 2013, 27). Today, the PCN funding policy is to allow member physicians to freely choose their method of remuneration for providing

insured medical services (Government of Alberta, 2018), with most PCPs choosing to remain FFS (Table 2). Currently, Alberta offers two main APPs – referred to as clinical alternative relationship plans (ARPs): sessional clinical ARP (hourly rate pay) and annualized clinical ARP (block-funded salary). Both these models are available for physicians to voluntarily apply for. There is no limit to the amount of accepted applications to be funded under sessional or annualized clinical ARP.¹ Meanwhile, blended capitation clinical ARP remains in the second phase of pilot testing with only a select amount of primary care clinics.

Sessional clinical ARPs and annualized clinical ARPs in Alberta have not been well utilized by PCPs or specialist physicians. Between 2009 and 2014, the number of PCPs paid through a clinical ARP has gradually increased but still accounts for only five per cent of the province’s PCPs (Table 2). Now, with the MacKinnon report suggesting Alberta consider a forced transition, policy-makers need to recognize the potential challenges of implementing such a sweeping reform. A reflection on how other jurisdictions have introduced FFS alternatives, appraised through the quadruple aim model, can highlight avoidable pitfalls in the implementation process and address the question of whether or not sweeping legislation is in order.

TABLE 2: GENERAL PRACTICE PHYSICIAN HEADCOUNT IN ALBERTA BY PAYMENT CATEGORY

Year	FFS		Clinical ARP		Both FFS & Clinical ARP	
	Count	Per Cent	Count	Per Cent	Count	Per Cent
2009/2010	3130	90.0	120	3.5	226	6.5
2010/2011	3199	87.8	137	3.8	309	8.5
2011/2012	3281	86.6	153	4.0	353	9.3
2012/2013	3427	86.2	167	4.2	383	9.6
2013/2014	3634	87.2	178	4.3	355	8.5
2014/2015	3819	87.1	190	4.3	374	8.5

Source: Government of Alberta (2020).

In recent months, Alberta Health has moved aggressively to change the status quo of physician remuneration. In late February 2020, the government cancelled the current collective agreement with the Alberta Medical Association and instituted a new physician-funding framework. The framework, which prior to the COVID-19 pandemic was to come into effect March 31, 2020, does not replace FFS, but rather augments it with a series of billing restrictions. Clinical ARPs are still voluntary FFS alternative programs, with no tailored focus toward primary care (Alberta Health 2020). As this paper discusses possible options to move Alberta onto a more APP-dominant primary care system, one must bear in mind that changes have been occurring at a considerable pace, and consideration of this paper’s findings may require policy-makers to be open to adjusting the new physician-funding framework.

¹ Email correspondence between authors and Alberta Health from January 7, 2020.

3. COMPENSATION REFORM OUTSIDE ALBERTA

Across Canada, provinces have rolled out a variety of APP models, resulting in considerable analysis of the benefits and trade-offs between FFS and each type of APP. Provinces have seen a range of participation in APPs by various physician disciplines. The highest proportion of APP payments to family physicians was in Ontario, with Nova Scotia close behind. For total physicians, Alberta has the lowest overall distribution of APP payments in the country at 13 per cent (Table 3) underscoring the MacKinnon report’s concern that FFS dominates Alberta’s primary care more, relative to other provinces. To address the overarching question of how best to improve Alberta’s APP participation, this section examines how several jurisdictions outside of Alberta implemented a noteworthy shift away from FFS in primary care. For brevity’s sake, this paper focuses on Ontario and Nova Scotia, which have the highest distribution of APP payments to PCPs, and also on British Columbia (B.C.) which next to Alberta has one of the lowest distributions of APP payments to PCPs (Table 3).

TABLE 3: PERCENTAGE DISTRIBUTION OF ALTERNATIVE CLINICAL PAYMENTS BY MEDICAL DISCIPLINE (2017-2018)

Specialty	NL	PEI	NS	NB	QC	ON	MB	SK	AB*	BC
Family Physicians	21.6	33.4	48.4	38.5	27.7	55.6	35.8	41.7	NR	18.2
Medical Specialists	54.3	54.3	69.5	42.1	16.5	20.1	26.9	39.0	NR	22.6
Surgical Specialists	28.9	18.4	41.2	16.0	10.5	16.5	16.5	25.4	NR	14.5
Total Physicians	34.9	36.4	54.5	34.4	20.1	35.8	29.0	37.1	13.0	19.5

*Alberta did not provide the National Physician Database discipline disaggregated data on APP payments. Source: Canadian Institute for Health Information (2019), Table A.2.3.

3.1. ONTARIO AND THE MENU OF PATIENT MEDICAL HOME MODELS

Ontario experimented relatively early on with APP models with strong success and is a key comparator for Alberta. Between 2002 and 2004, Ontario launched family health networks (FHNs), which compensated PCPs through blended capitation; family health groups (FHGs), which compensated primary care physicians through enhanced FFS; and family health teams (FHTs), which compensate through sex/age-based capitation (Rosser et al. 2010). Later, in 2006, Ontario also launched family health organizations (FHOs), which compensated PCPs through a larger scale blended capitation scheme (Rudoler et al. 2015). These models were designed around the principles of the patient-centred medical home, which emphasizes co-ordination of care through team-based practice, patient connectedness with their physician team through all life stages and value-linked physician payment (Rosser et al. 2011, 167).

Ontario’s implementation strategy was to offer a menu of APP models specifically to PCPs which they could voluntarily choose over a traditional FFS practice. Each model has been subject to rigorous evaluation, touching on the four points of the quadruple aim. Some models have out-performed others in different aims. For example, FHO physicians were more likely to meet preventative care targets than FHG physicians despite

performing fewer services per day than the latter. This resulted in a general substitute of quantity for quality of care (Kantarevic and Kralj 2011). Rudoler et al. (2015) examined patient cost distributions and morbidity across Ontario's FFS, enhanced FFS, blended capitation and capitation models. Their findings demonstrated clear differences in both morbidity and cost distributions among each model. Blended capitation physicians were more likely to treat low-cost, healthier patients, and any high-cost complex needs patients were inconsistently rostered (Rudoler et al. 2015).

Overall, despite outcome variations between specific APP models on the menu, Ontario's reforms have made family medicine a more attractive practice option for many physicians. Since the launch of Ontario's menu of patient medical home models, the family physician supply has stabilized and access to care has dramatically increased since 2003 (Government of Ontario 2014). Provider experience appears strongly aligned to the goals of the quadruple aim. Overall patient experience and population health improved (Kantarevic and Kralj 2011) along with PCP experience (Thind et al. 2009).

The cost-containment aim has been difficult to substantiate in Ontario's approach. While the mean gross clinical payment per family physician has declined in recent years (CIHI 2019, Table D.3.), getting physician buy-in required an initial increase in mean clinical payments under the non-FFS models. As mentioned before, FHO physicians were more likely to reach preventative care targets while reducing the overall quantity of services provided, compared to FFS physicians (Kantarevic and Kralj 2011). However, despite fewer services being provided under the FHO model, overall compensation rates for FHO physicians were even higher than FFS (Government of Ontario 2018), resulting in little to no immediate cost-containment post-reform.

The Ontario experience demonstrates that in order to cultivate uptake, any immediate cost-containment goals may need to take a back seat, however much provider experience, patient experience and overall population health have been shown to improve as a result of implementing a finely crafted menu of FFS alternatives. While Ontario was relatively successful at incentivizing large numbers of physicians to voluntarily opt into a medical home model, Ontario doctors required high compensation rates to incent a voluntary move away from traditional FFS. Furthermore, Ontario has never seen full eradication of FFS in family medicine. Just over 55 per cent of family medicine clinical payments were under APP in 2017/18 (Table 3). So, while Ontario made great innovative strides through various medical home models, the quadruple aim's goal of cost reduction could not be assured.

3.2. NOVA SCOTIA AND SALARY CONTRACTS

While Ontario took a voluntary "menu" approach to implementing APP, Nova Scotia took a comparatively more simplistic one. In 1997, Nova Scotia rolled out an alternative funding initiative (AFI) that initially targeted three medical disciplines: medical specialists, emergency room physicians and rural general practitioners. In each discipline, an AFI contract serves as a complete replacement for any traditional FFS that physicians might otherwise receive (Auditor General of Nova Scotia 2000). AFI was a voluntary program where participating physicians were remunerated on what was called a fixed-fee contract, analogous to a salary APP model.

Nova Scotia's salary model design has largely remained the same since its introduction and is now offered to all physician practice types. Originally, salaried contracts were offered to only three targeted medical specialties, but Nova Scotia eventually extended the program to all physician practices (Auditor General of Nova Scotia 2006, 147-152) with a targeted emphasis on family medicine and rural specialists (Doctors Nova Scotia 2019a). It should also be noted that in addition to salaried contracts, the province has offered some sessional-based fee programs for highly specific clinical settings like prison physicians and detox centres, but salaried contracts remain the dominant form of APP in the province (Wranik and Durier-Copp 2010, 45-51). All contracts are voluntary for physicians to enter into and FFS remains the default payment method under the Physician Services Master Agreement² (Doctors Nova Scotia 2019b, 2-9) and the *Doctors Nova Scotia Act* 1995-96, C12.

From 2000 to 2005, the percentage of total physician payments from APP rose dramatically from 27.9 per cent to 41.5 per cent (Wranik and Durier-Copp 2010), rising to 54.5 per cent in 2017/18 (Table 3). Nova Scotia has become the only province with over half of total physician payments paid under APP. A closer look at PCPs specifically shows that only 15 per cent of PCP payments were under APP in 2005 (Wranik and Durier-Copp 2010), but as the program was expanded to include more family practice settings, the PCP APP payment distribution rose to 48.4 per cent in 2017/18 (Table 3).

Nova Scotia's APP implementation strategy is a voluntary model that appears to be one-size-fits-all. While salary contracts are negotiated between physicians and the government on a case-by-case basis (Doctors Nova Scotia 2019a), physicians are still left with only two major options for compensation method: salary or FFS. As mentioned, salary is a model that has shown promise in specialty care (Quinn et al. 2018). Furthermore, an external audit of the AFI program in 2005 considerably praised what the program had accomplished for specialty care. The salary model was credited as a success in the recruitment and retention of specialists to Nova Scotia (North South Group Inc. 2005, 15). The APP implementation strategy for PCPs following the success of salary in specialty care was to apply the program directly to primary care without any noticeable regard for the nuanced characteristics that make specialty care different.

Despite APP now accounting for almost half of total PCP payments, PCPs have not been as receptive to the model as specialists. In a 2017 position paper, Doctors Nova Scotia recommended the implementation of a patient-rostering model for primary care providers; specifically, a blended FFS and capitation model. Since that paper's release, Doctors Nova Scotia has gone further, suggesting that the persistence of FFS-payments has generated a brain drain of Nova Scotia physicians to adjacent jurisdictions. In a statement to CBC News in 2018, Doctors Nova Scotia asserted that while FFS in family medicine remains dominant in Nova Scotia, all the best alternative models exist in neighbouring provinces, causing an exodus of family physicians (Bradley 2018). This is a key lesson for provinces looking to phase out FFS: the emerging primary care workforce has shown increasing contempt for the old ways of doing things, and if the alternatives are

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It should be noted that the 2019 master agreement includes a commitment by the government to develop a new blended capitation model, potentially to be rolled out by April 2021 (Doctors Nova Scotia 2019c.).

well-designed, physicians will adjust their practices, and even relocate their practices to participate. Reflecting on the quadruple aim criteria, Nova Scotia's approach appears to have had positive care team well-being impacts for specialists, but not as much for PCPs.

Reflecting on other aspects of the quadruple aim, patient experience with primary care does not appear to have improved between 2005 with low PCP APP participation, to 2017/18 with higher PCP APP participation. Nova Scotians face particularly acute difficulties attaining a family physician, compared to many other Canadians. A 2018 report discovered that 4.8 per cent of the population had no family doctor (Nova Scotia Health Authority 2018). Compared to the rest of Canada, the ratio of family physicians to specialists is considerably lower: around 42 per cent family physician and 58 per cent specialist (Government of Nova Scotia 2019). Overall, primary care in Nova Scotia has been characterized by low accountability and alignment with performance goals (Peckham et al. 2018, 8). Doctors Nova Scotia (2017, 7-8) has also concluded that the current funding models (FFS and the current APP model) do not positively support preventative medicine or chronic disease care. It is difficult to attribute the exact role compensation policy has played in these outcomes, but the lack of observable improvement during the last two decades of payment reform suggests a weak alignment with the patient experience and population health improvement goals of the quadruple aim. The cost impact of APP in Nova Scotia has been difficult to assess. The 2005 audit of APP in specialty care was unable to substantially confirm a positive or negative cost impact (North South Group Inc. 2005).

3.3. BRITISH COLUMBIA AND ADJUSTED FEE-FOR-SERVICE

British Columbia is a noteworthy case where total physician payment contained the lowest distribution of APP pay next to Alberta. Overall, only 19.5 per cent of physician pay was received through APP in 2017/18, which is well below the Canadian average (Table 3). PCP's APP pay share was only 18.2 per cent and a recent study found that only four per cent of B.C.'s PCPs were fully compensated through an APP, suggesting that APP pay in B.C. is more of a part-time supplement to FFS PCPs (Hedden et al. 2017). As with most provinces, medical specialists in B.C. received the largest distribution of APP. In a 2013 auditor general's report, APP funding in B.C. was available to psychiatry, oncology, addictions treatment, emergency rooms and primary care programs, but only accounted for roughly 11 per cent of total physician funding (Auditor General of British Columbia 2013). B.C.'s APP arrangements are not intended to phase out or fully replace FFS. APPs in B.C. fund part-time practice, contracts for complex-care patients, or areas where FFS could not sustain a physician practice due to service volume demand. B.C. has no overt arrangement to move PCPs off FFS. Instead, payment reforms have been designed to have a supplementary/supportive role to the status quo (Lavergne et al. 2014).

British Columbia has, however, implemented policies that have shifted general practice medicine onto a kind of enhanced FFS model. The traditional FFS model has been augmented to include both extra incentive pay (Cavers et al. 2010) and limits to the daily billing reimbursement rate of office visits, office counselling and complete office examinations (Government of British Columbia 2019a, 7-1). The rate by which fees are reimbursed to the general practitioner is subject to the number of patients seen in a

24-hour period (Table 4). This is referred to as the daily volume payment rules. Both incentives and daily volume rules speak to different aspects of the quadruple aim. The former is intended to improve care quality and outcomes, while the latter is an apparent cost-containment measure.

TABLE 4: BRITISH COLUMBIA GENERAL PRACTITIONER DAILY VOLUME PAYMENT RULES

Daily Patient Headcount	Fee Payment Rate
0 to 50	100%
51- 65	50%
66+	0%

Source: Government of British Columbia (2019).

B.C. is a case of policy-makers attempting to “fix” the broken bits of the status quo despite the emergence of APP models as viable FFS replacements. Incentives added to primary care FFS were intended to make PCP clinics a one-stop shop for a full range of medical services. During the observed period that incentives were implemented, patient access, comprehensiveness of care and continuity of care tended to decline in B.C. family medicine (Lavergne et al. 2014). This finding is not an outcome exclusive to B.C.-based physicians. A recent Ontario-based study found that payment incentives in community psychiatry failed to increase patient access, especially after a psychiatric hospital discharge or a suicide attempt (Rudoler et al. 2017). B.C.’s mix of incentives and FFS appears weakly aligned with the goals of the quadruple aim and, to be fair, studies beyond B.C. support the argument that pay incentives and minor adjustments to the status quo model have been limited in their ability to address systemic issues in care that impact patient experience and outcomes (Lavergne 2017; Li et al. 2014).

In terms of the cost-containment element of the quadruple aim, capping the daily number of patients for whom a PCP can bill 100 per cent of the service fee will certainly decrease upstream clinical costs, but these restrictions also run the risk of disincentivizing higher patient volume. If a physician cannot be fully remunerated past 50 patients in a day, the rational choice is to start closing the clinic doors at around the 51st patient, thus impeding further patient access. As a cost-saving reform, this mechanism was simple to implement with clearly communicated payment expectations to physicians – i.e., physicians know that after 65 patients they will not make any more money on consultations each day. This is a blunt instrument that is potentially effective in containing costs, but likely generates a number of unintended consequences. For instance, this arrangement seems to preference part-time practice and likely discourages practitioners willing to work long hours from continuing in or choosing to practise as a PCP.

While it is difficult to link the impact of both incentives and daily value payment rules to the outcomes of the patients in B.C., it is clear that the care team experience has been adversely affected by both. A goal of the quadruple aim is to provide a collaborative team-based care environment and reduce burnout. Rather than establish a team-based environment, incentive payments have been designed to encourage PCPs to do everything for their patients themselves, a concept policy-makers refer to as a “full-

service family practice” (Lavergne et al. 2014). PCPs in B.C. have also complained that the general practitioner fee schedule is poorly constructed and an outdated policy that directly discourages greater patient rostering. B.C. has graduated increasingly more physicians, but more graduates are choosing to specialize rather than pursue general practice (Brend 2017). Furthermore, survey evidence suggests that newly practising B.C. physicians prefer a complete alternative to the present system of FFS remuneration (Brcic et al. 2012). At present, B.C. has not produced a phase-out of FFS, but a potential phase-out of general practitioners.

In terms of implementation, B.C.’s approach to compensation reform is two-fold. On the one hand, a subset of APPs is offered voluntarily to medical specialists and some part-time PCPs, while on the other hand with FFS as the legislated default payment model, the Ministry of Health has crafted two major mandatory augmentations to traditional FFS. B.C. is a policy example where legislative instruments have only been used as a discrete adjustment mechanism to the status quo. Any attempts to steer physicians onto an APP have been voluntary and non-specific toward primary care. Interestingly, the B.C. government could use the observed discontentment with its existing FFS model as an asset to encourage APP adoption, especially in its newly graduated workforce, if a well-crafted primary care-focused APP were put forward.

4. KEY DECISION POINTS AND OPTIONS FOR IMPLEMENTING PCP PAY REFORM

This paper’s review of previous policy work around physician compensation reform has focused upon four key decision points that the Alberta government will face on its path toward reforming PCP payment. The MacKinnon report touched on the first point, which is the choice to pursue pay reform by command-and-control legislation, or on a voluntary physician-choice basis. As previously mentioned, no government in Canada has pursued FFS replacement through legislation, so the case studies presented in section 3 offer no direct evidence for or against the legislative approach. It is important to consider that the voluntary route has not been altogether fruitless. In both Ontario and Nova Scotia, nearly half of the total PCP pay has been made under APP, and several other provinces have made significant strides in this regard (Table 3). A concern regarding the legislative option is that where it has been attempted, the process has been fraught with political discontentment. For example, in the U.S. a decision to forcibly switch cardiac physicians to bundled payments instead of FFS was reversed in late 2017 because of practical and political uncertainty about the strength of bundled payments (Wadhera et al. 2018, 2-3). Given the political discontent between Alberta physicians and Alberta Health’s presently proposed adjustments to the current FFS model, it is difficult to imagine that a legislated forced switch to a menu of APPs will positively impact care-team wellbeing.

The next decision point identified further defines strategy. The MacKinnon report’s wording around legislation of alternative payments is vague and quite non-specific in this regard. If legislation is to be pursued, it could be crafted to produce a gradual mandatory transition off FFS or it could mandate an immediate switch. The nearest example to such a legislated transition is when the U.S. state of Massachusetts signed chapter 224 (the

health-care cost-containment law of 2012) into law. Among the many aspects of health-care reform that became law in 2012, the move to FFS alternatives by both Medicaid (MassHealth) providers and private insurance providers' groups was mandated (Mechanic et al. 2012). While the legislation was immediate, MassHealth embarked on a transitional process away from FFS by July 1, 2015, while the decision to move to APP models was left up to the private sector's discretion (Garlick 2017, 241-242, 332).

Unfortunately, MassHealth's implementation of chapter 224 has not been associated with strong population health outcomes. The Massachusetts state auditor found in 2018 that in places where system-change effects occurred, there were more negative changes than positive ones (Bump 2018). If Alberta still chose to follow this path, despite its lack of previous success in other jurisdictions, both phased and immediate mandatory switch options would entail an amendment to the current enabling statutes that establish FFS as the primary form of physician compensation in the province. Yet, an immediate forced switch could involve physicians being left overnight without the option of FFS billing. This approach is fraught with the potential for political volatility. The phased option eases in physicians to a new practice environment and without causing significant disruptions to patient access or quality.

If the voluntary approach is chosen over the mandatory legislative approach, the second decision point is how best to facilitate APP enrolment by PCPs. Status quo negotiations between provincial governments and physicians have almost exclusively produced sustained fee increases, and in some instances, there have been short-term fee freezes, but rarely do they involve deep cuts (Ariste 2015). With an ever-increasing fee schedule, the most well-designed FFS alternative is unlikely to elicit uptake by physicians who are highly accustomed to the status quo. This echoes concerns raised by the MacKinnon report that excessively high FFS fee schedules deter a voluntary switch to APP (Government of Alberta 2019). It was also previously noted Ontario proceeded with FFS negotiating as status quo, but to incent APP enrolment, PCP pay levels under APP had to be higher (Government of Ontario 2018). Alberta could take Ontario's approach or incent APP enrolment by implementing gradual reductions or freezes in FFS schedules, such that APP becomes a progressively more attractive option. Fee schedule reductions should be targeted toward fees commonly billed in primary care practice settings, rather than a global reduction that could impact specialties where FFS may be a better payment approach than the current suite of APP models available.

The third decision point is common across all possible preceding decisions. Whether it is through legislation or voluntary choice, the government of Alberta must decide if payment reform will be introduced as a menu of APP models (the Ontario approach), or as a single one-size-fits-all APP model (the Nova Scotia approach). The B.C. approach to focusing reforms on adjustments to FFS do not fit with the previous recommendations of the MacKinnon report, nor previous calls to action by Alberta health leaders (Table 1). As evidenced by this paper's analysis using the quadruple aim, these approaches have seen different impacts on costs, patient and provider experiences, and population health (Table 5).

TABLE 5 QUADRUPLE AIM EVALUATION OF IMPLEMENTATION CASE STUDIES

Case Study Example	Aim: Reducing Costs	Aim: Patient Experience	Aim: Population Health	Aim: Care Team Wellbeing
Alberta (FFS dominant)	Poor	Poor	Poor	Neutral
Ontario (Menu Approach)	Neutral	Positive	Positive	Positive
Nova Scotia (Single APP Approach)	Neutral	Poor	Neutral	Poor
B.C. (FFS Adjustment Approach)	Neutral	Poor	Neutral	Poor

Notes: Poor denotes observed impact fails to improve upon the given aim. Positive denotes observed impact improves upon the given aim. Neutral indicates that either no change related to the aim was observed or that the evidence could not substantiate the role of the payment scheme in relation to the aim.

Evidence from Nova Scotia suggests the one-size-fits-all APP model that was not originally intended for primary care (Auditor General of Nova Scotia 2000) has not improved PCP experience (Bradley 2018; Doctors Nova Scotia 2017) nor patients' ability to access primary care (Government of Nova Scotia 2019; Nova Scotia Health Authority 2018). Any impact, either positive or negative, on cost containment or population health outcomes directly attributable to this approach is not evident. Ontario's menu approach has had a positive impact across all aspects of the quadruple aim, except for cost containment. In the face of a highly lucrative FFS system running parallel to APP, incenting voluntary enrolment in APP can often necessitate higher levels of pay.

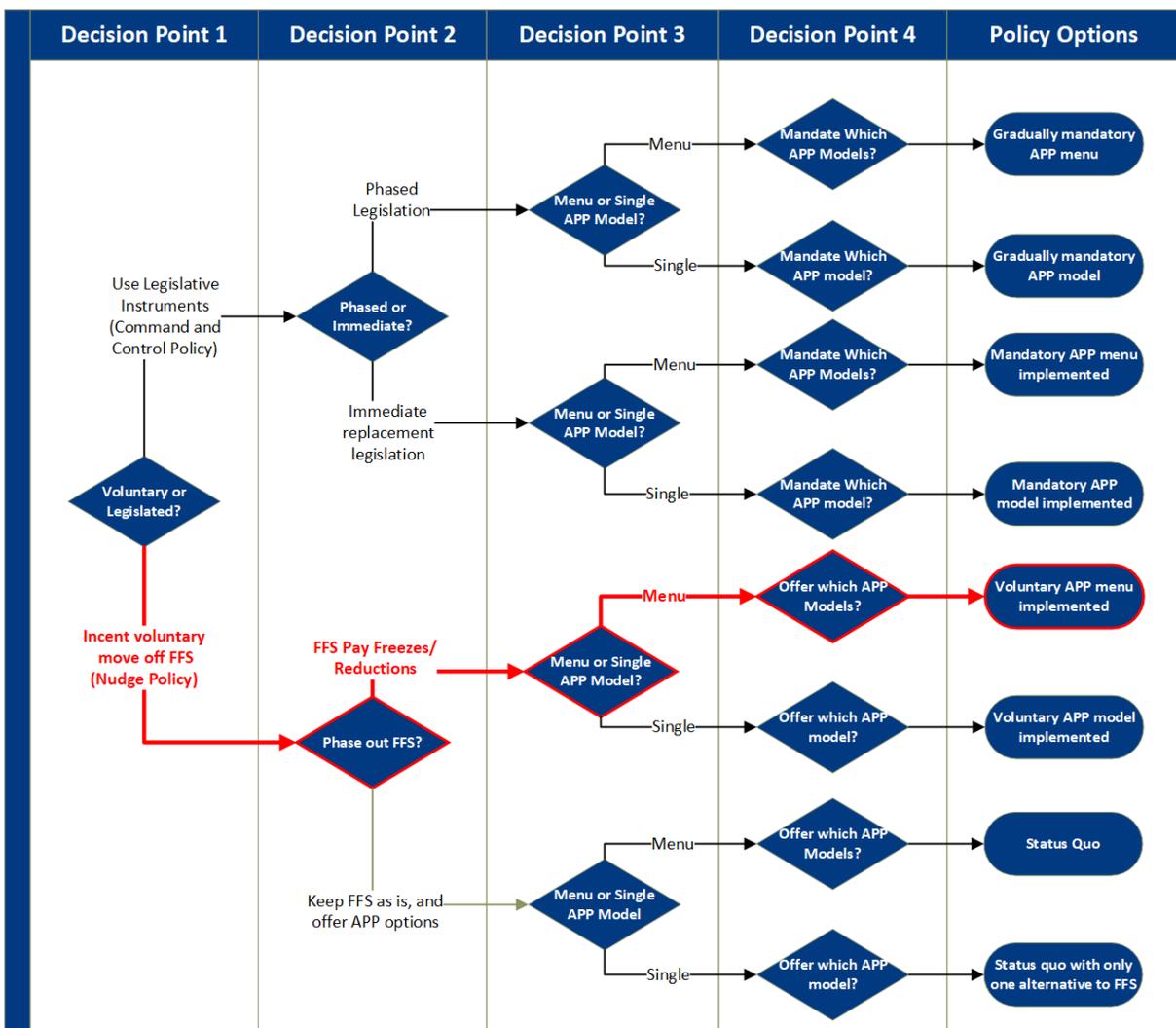
B.C.'s approach to augmenting the status quo has been similarly neutral in terms of cost impact. Incentives create extra pay on top of FFS while daily volume rules reduce the potential amount a PCP could have billed in a given day past a certain number of patients per day. It is unclear if the two mixes of incentives and pay caps have created a net increase or decrease in physician costs. It is also unclear in the literature what impact on population health outcomes pay caps and incentives have produced, but it is clear that both physicians (Brcic et al. 2012; Brend 2017) and patients (Lavergne et al. 2014) have not benefited from this approach.

Whether it is a menu or a one-size-fits-all APP model, policy-makers still face an all-important fourth decision about which APP model or models are worth implementing for primary care. Previous decision points have been higher level policy actions, but this question is highly technical. It is important to note that no alternative payment model used in medicine is without its limitations. The Institute of Health Economics provides a comprehensive review into the various models of physician payment. In capitation-based models, physicians are remunerated per individual patient rather than per service. However, there is a risk of physicians selecting patients into their practice with less complex care needs. In a sessional-based model, physicians are paid hourly or daily for time spent on patients, but the risk is that there is no incentive to use such time efficiently to generate best care outcomes (Yan et al. 2009, 6-8). A physician can

also be remunerated through salary, which might seem a more efficient mode of cost containment by having every physician on a fixed annual budget, but salary still provides no incentive to the physician to consider the cost-effectiveness of various treatments nor the quality of care provided (Léger 2011, 5).

The limitation of this analysis is that it cannot identify a specific APP model that outperforms all others in terms of the quadruple aim. However, that is not this paper's objective; rather, it is to review the existing literature on PCP pay reform to provide Alberta policy-makers with a map of the potential key decisions and recommend a path forward. Figure 3 provides such a map, describing the four key decision points on the path toward implementation. The recommended path of this paper is outlined in red and the rationale is presented in the following section.

FIGURE 3: DECISION TREE OF IMPLEMENTATION OPTIONS FOR THE PROVINCE OF ALBERTA



5. RECOMMENDED IMPLEMENTATION APPROACH FOR ALBERTA

This paper's analysis through the quadruple aim was unable to establish a positive or negative cost impact between Ontario's APP menu approach and Nova Scotia's single APP approach (Table 5). Therefore, the choice must be considered based upon the other three aims. The menu approach that Ontario implemented is recommended as it improved patients' experience overall with primary care, their care outcomes and the care team's wellbeing. The MacKinnon report noted that Alberta does offer several APPs for physicians: an annualized block funding model, a sessional model and a pilot blended capitation model. However, unlike Ontario's approach, most of these are not as tailored toward the context of primary care.

On the choice regarding legislation or incentivization, there is little academic literature to indicate whether or not legislation is the optimal approach to ending FFS, since very few jurisdictions have attempted it. Instead, the literature notes that a mandatory switch of one dominant model to another single model carries significant risk for unintended consequences and that it is nearly impossible to arrive at a total consensus between policy-makers and physicians on which single model is the best choice for all.

The MacKinnon report suggested the abnormally high FFS fee schedule is a possible deterrent from clinical ARP enrolment, given that most clinical ARPs are open for physicians to voluntarily apply for. Since current fees are so lucrative and the Schedule of Medical Benefits imposes no restrictions on volume or activity (as is the case in B.C.), Alberta physicians are comfortable with the status quo and are incentivized to resist the uncertainty associated with transitioning to APP models (Government of Alberta 2019). Experience from across the country demonstrates that when presented with a viable alternative to FFS, physicians will enrol, but for that alternative to be viable the status quo must not retain the upper hand. For Ontario, incenting enrolment meant compensation in the medical home models had to out-compete traditional FFS (Government of Ontario 2018). The evaluation of two capitation-based ARPs in Alberta suggest that per-patient primary care cost is higher than in FFS. It is important to note, however, that this evaluation did not directly measure PCP pay (HQCA 2019). While this fact could potentially recruit Alberta PCPs away from FFS, the province could also go a step further by pursuing phased reductions or freezes in the Schedule of Medical Benefits, as it pertains to primary care. By doing so FFS becomes less lucrative, and in the face of more attractive APP models PCPs will be incentivized to enrol.

The government of Alberta should evaluate the quadruple aim impacts of the various APP models currently being offered or piloted when crafting its primary care APP menu. When it has been determined which models best achieve both a balance of cost reduction and quality improvement, an incremental phase-in of APPs through systematic reductions in pay levels under FFS should be pursued while promoting the evaluated APP models. Curiously, the new physician-funding framework planned to commence on March 31, 2020 prior to the COVID-19 pandemic, does paint FFS in an undesirable light for physicians, but for PCPs where the justification of APP is strongest, there is no tailored APP model currently available for them to move into. The blended capitation model is still in pilot testing. So while it may appear the government is heading down the implementation path highlighted in Figure 3, it is missing an extremely important side of

the equation, which is having a well-crafted menu of APPs validated for the primary care needs of Alberta that PCPs can be incented to opt into. Without this part, PCPs may just be incented to opt into a different province.

As health care has become the largest line item in the Alberta budget, it is not surprising that physician payment has been the subject of so many government reports over the last two decades (Table 2), especially in the MacKinnon report. PCP payment reform is fraught with technical nuances and trade-offs. No single payment model can be everything everyone wants of it. This paper has reflected on the implementation strategies of several noteworthy provinces in Canada and on Alberta's progress to date. The findings of this paper's review, using the quadruple aim as a critical lens, offer a pathway to implementing a much-needed change to how this province remunerates its physician staff in primary care.

REFERENCES

- Alberta Health. 2020. "Physician Funding Framework." Accessed March 16, 2020. <https://www.alberta.ca/physician-funding-framework.aspx>.
- Alberta Health Services. n.d. "Primary Health Care Integration Network: Integrated Care Partnerships." Accessed January 5, 2019. <https://www.albertahealthservices.ca/info/Page15358.aspx>.
- Alternative Relationship Plan Physician Support Services (ARPPSS). n.d. "Blended Capitation Model Overview." Accessed November 18, 2019. https://arppss.albertadoctors.org/uploads/source/Blended_Capitation_Model_Fact_Sheet.pdf.
- Anthony, Barbara. 2017. "Beyond Obamacare: Lessons from Massachusetts: A Brief History of Health Care Reform in Massachusetts." *M-RCBG Associate Working Paper Series 82*. https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/82_BeyondObamacare.pdf.
- Ariste, Ruolz. 2015. "Fee-Schedule Increase in Canada: Implication for Service Volumes among Family and Specialist Physicians." *Journal of Health and Human Services Administration* 38(3): 381-410. <https://www.jstor.org/stable/43948679>.
- Auditor General of Alberta. 2017. "Better Healthcare for Albertans." Accessed on October 14, 2019. https://www.oag.ab.ca/documents/87/2017_-_Better_Healthcare_for_Albertans_Research_Material_-_May_2017_qWLNsvc.pdf.
- Auditor General of British Columbia. 2003. "Alternative Payments to Physicians: A Program in Need of Change." Accessed October 7, 2019. <https://www.bcauditor.com/sites/default/files/publications/2003/report4/report/alternative-payments-physicians.pdf>.
- . 2013. "Physician Funding Models." Accessed January 2, 2020. <https://www.bcauditor.com/online/pubs/775/779>.
- Auditor General of Nova Scotia. 2000. "Health - Physician Alternative Funding Initiatives." Accessed October 6, 2019. <https://oag-ns.ca/sites/default/files/publications/2000%20-%20Ch%2009%20-%20Physician%20Alternative%20Funding%20Initiatives.pdf>.
- . 2006. "Payments to Physicians." Accessed October 6, 2019. <https://oag-ns.ca/sites/default/files/publications/2006%20-%20June%20-%20Ch%2010%20-%20Payments%20to%20Physicians.pdf>.
- Bodenheimer, Thomas. 2005. "High and Rising Health Care Costs. Part 1: Seeking an Explanation." *Annals of Internal Medicine* 142(10): 847-854. doi: 10.7326/0003-4819-142-10-200505170-00010.
- Bodenheimer, Thomas, and Christine Sinsky. 2014. "From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider." *Annals of Family Medicine* 12(6): 573-576. doi: 10.1370/afm.1713

- Bradley, Susan. 2018. "Doctors Nova Scotia Blames Doctor Shortage on Fee-for-Service System." CBC News. Accessed October 28, 2019. <https://www.cbc.ca/news/canada/nova-scotia/fee-for-service-payments-system-doctor-shortage-1.4476407>.
- Brcic, Vanessa, Margaret J. McGregor, Janusz Kaczorowski, Shafik Dharamsi, and Serena Verma. 2012. "Practice and Payment Preferences of Newly Practising Family Physicians in British Columbia." *Canadian Family Physician* 58(5): e275–e281. <https://www.cfp.ca/content/cfp/58/5/e275.full.pdf>.
- Brend, Yvette. 2017. "We're Graduating More Doctors than Ever, So Why is It So Hard to Find a GP?" CBC News. Accessed October 13, 2019. <https://www.cbc.ca/news/canada/british-columbia/bc-doctor-shortage-medical-fees-1.4100251>.
- Bump, Suzanne M. 2018. "Evaluation of the 2012 Health Care Cost Containment Law in Massachusetts – Follow-up Report (2012 -2016)." Accessed March 16, 2020. https://www.mass.gov/files/documents/2018/07/17/FINAL_OSA_Chapter224_REPORT_July2018.pdf.
- Canadian Institute for Health Information (CIHI). 2019a. "National Health Expenditure Trends 1975 to 2019." Accessed October 14, 2019. <https://www.cihi.ca/sites/default/files/document/nhex-trends-narrative-report-2019-en-web.pdf>.
- . 2019b. "Physicians in Canada 2017: Summary Report." Accessed October 15, 2019. https://secure.cihi.ca/free_products/Physicians_in_Canada_2017.pdf.
- . 2019c. "National Physician Database 2018 Data Tables." Accessed November 19, 2019. https://secure.cihi.ca/free_products/npdb-data-tables-2018-en.zip.
- Cavers, William J.R., Valerie H.F. Tregillus, Angela Micco, and Marcus J. Hollander. 2010. "Transforming Family Practice in British Columbia: The General Practice Services Committee." *Canadian Family Physician* 56(12): 1318–1321. doi: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3001931/pdf/0561318.pdf>.
- Clarke, Alison M. 2019. "Initial Thoughts on Blue Ribbon Panel Report." Alberta Medical Association. Accessed October 29, 2019. <https://www.albertadoctors.org/services/media-publications/presidents-letter/pl-archive/mackinnon-panel>.
- Commission on the Future of Health Care in Canada. 2002. "Building on Values: The Future of Health Care in Canada." Accessed October 18, 2019. <http://publications.gc.ca/collections/Collection/CP32-85-2002E.pdf>.
- Deschner, Max, Stephanie Kwolek, and Dorothy Yu. 2015. "Family Medicine and Primary Care: Committing to the Future." Canadian Federation of Medical Students. Accessed November 2, 2019. <https://www.cfms.org/files/position-papers/2015%20Family%20Medicine%20and%20Primary%20Care.pdf>.
- Doctors Nova Scotia. 2017. "Fixing Nova Scotia's Primary Health Care Problem: Physicians' Recommendations to Improve Primary Care in Nova Scotia." Accessed November 3, 2019. <https://doctorsns.com/sites/default/files/2018-04/PrimaryCarePosition.pdf>.

- . 2019a. “Alternative Payment Plans.” Accessed October 10, 2019. <https://doctorsns.com/contract-and-support/billing/alternative-payment-plans>.
- . 2019b. “Physician Services Master Agreement.” Accessed January 4, 2020. https://doctorsns.com/sites/default/files/2019-12/MA-Execution-Copy-SIGNED-Dec_9_2019.pdf.
- . 2019c. “Blended Capitation Funding Model.” Accessed January 30, 2020. <https://doctorsns.com/contract-and-support/master-agreement/programs-funding/blended-cap>.
- Dryden, Joel. 2019. “Rural Doctors Worry Proposed Changes Could Lead to ‘Brain Drain.’” CBC News. Accessed January 10, 2020. <https://www.cbc.ca/news/canada/calgary/matt-mcisaac-rural-doctors-alberta-mike-beach-1.5388373>.
- Flodgren, Gerd, Martin P. Eccles, Sasha Shepperd, Anthony Scott, Elena Parmelli, and Fiona R. Beyer. 2011. “An Overview of Reviews Evaluating the Effectiveness of Financial Incentives in Changing Healthcare Professional Behaviours and Patient Outcomes.” Cochrane Database of Systematic Reviews. <https://doi.org/10.1002/14651858.CD009255>.
- Freeman, Thomas R., Stephen Petterson, Sean Finnegan, and Andrew Bazemore. 2016. “Shifting Tides in the Emigration Patterns of Canadian Physicians to the United States: A Cross-Sectional Secondary Data Analysis.” *BMC Health Services Research* 16(678). doi:10.1186/s12913-016-1908-2.
- Garlick, Monica C. 2017. “Understanding How State Legislators Define Problems: The Case of High and Rising Healthcare Costs in Massachusetts.” Dissertation. University of Massachusetts.
- Gerein, Keith. 2018. “Pilot Project on New Doctor Pay Model Failing to Get Buy-In.” *Edmonton Journal*. Accessed October 3, 2019. <https://edmontonjournal.com/news/local-news/pilot-project-on-new-doctor-pay-model-failing-to-get-buy-in>.
- Gosden T., F. Forland, I. Kristiansen, M. Sutton, B. Leese, A. Giuffrida, M. Sergison, and L. Pedersen. 2000. “Capitation, Salary, Fee-for-Service and Mixed Systems of Payment: Effects on the Behaviour of Primary Care Physicians.” Cochrane Database of Systematic Reviews 3(CD002215). doi: 10.1002/14651858.CD002215.
- . 2011. “Capitation, Salary, Fee-for-Service and Mixed Systems of Payment: Effects on the Behaviour of Primary Care Physicians.” The Cochrane Collaboration. <https://doi.org/10.1002/14651858.CD002215>.
- Government of Alberta. 2001. “A Framework for Reform: Report of the Premier’s Advisory Council on Health.” Accessed October 5, 2019. <https://open.alberta.ca/dataset/a2a779b1-9539-4d31-b6cf-399901520575/resource/098ed295-c86b-464b-9900-51c4c73feaa7/download/mazankowski-report-2001.pdf>.
- . 2006. “Health Policy Framework.” Accessed October 15, 2019. <https://open.alberta.ca/dataset/c5c4921a-582a-4ef1-b6c7-39f7498cf302/resource/96868fed-3780-42d4-afd6-3da62a59e341/download/health-policy-framework-2006.pdf>.

- . 2014. “Alberta’s Primary Care Strategy.” Accessed November 3, 2019. <https://open.alberta.ca/dataset/1cac62b5-a383-4959-8187-1b2a6798d0ac/resource/2ff5246a-bdd9-428a-ab04-62e5475c90ed/download/6849603-2014-albertas-primary-health-care-strategy-2014-01.pdf>.
- . 2018. “Primary Care Initiative Policy Manual.” Accessed March 12, 2020. <https://pcnpmo.ca/access/Documents/PCN%20Policy%20Manual.pdf>.
- . 2019. “Report and Recommendations: Blue Ribbon Panel on Alberta’s Finances.” Accessed October 10, 2019. <https://open.alberta.ca/dataset/081ba74d-95c8-43ab-9097-cef17a9fb59c/resource/257f040a-2645-49e7-b40b-462e4b5c059c/download/blue-ribbon-panel-report.pdf>.
- . 2020. “Physician Headcount by Specialty for Fee-For-Service (FFS), Alternative Relationship Plan (ARP) and Blended.” Accessed January 13, 2020. <https://open.alberta.ca/dataset/physician-headcount-by-specialty/resource/fefb3973-baf7-46a9-81a4-775d16ff7dd2>.
- Government of British Columbia. 2014. “Chronic Pain Clinics.” Accessed November 8, 2019. https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/app_policy_framework.pdf.
- . 2018. “Rural Programs: A Guide to the Rural Practice Programs in British Columbia.” Accessed November 3, 2019. <https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/rural-guide.pdf>.
- . 2019a. “Medical Services Commission Payment Schedule.” Accessed October 7, 2019. Pp. 7-1. <https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/medical-services-plan/msc-payment-schedule-march-2019.pdf>.
- . 2019b. “Alternative Payment Programs.” Accessed November 2, 2019. <https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/physician-compensation/alternative-payments-program>.
- Government of Nova Scotia. 2019. “Shaping our Physician Workforce.” Accessed November 8, 2019. https://novascotia.ca/dhw/publications/Physician_Resource_Plan_Shaping_our_physician_Workforce.pdf.
- Government of Ontario. 2014. “Progress Report 2014: Health Care.” Accessed October 23, 2019. <https://www.ontario.ca/page/progress-report-2014-health-care>.
- . 2018. “Arbitration Position of the Ministry of Health and Long-Term Care for Primary Care.” Accessed October 19, 2019. <https://www.stewartmedicine.com/wp-content/uploads/2018/10/20181011-MOH-Arbitration-Position-for-Family-Medicine.pdf>.
- . 2019. “Chronic Pain Clinics.” Accessed November 12, 2019. <https://www.ontario.ca/page/chronic-pain-clinics>.
- Health Quality Council of Alberta (HQCA). 2019. “A Case Study Evaluation: Crowfoot Village Family Practice and Taber Clinic.” Accessed January 10, 2020. https://hqca.ca/wp-content/uploads/2019/12/HQCA-Crowfoot_Taber-Case-Study-Evaluation-2019.pdf.

- Hedden, Lindsay, Morris L. Barer, Kimberlyn McGrail, Michael Law, and Ivy L. Bourgeault. 2017. "In British Columbia, the Supply of Primary Care Physicians Grew, but their Rate of Clinical Activity Declined." *Health Affairs* 36(11): 1904-1911. <https://doi.org/10.1377/hlthaff.2017.0014>.
- Innes, Grant D., Frank X. Scheuermeyer, Julian Marsden, Chad Kim Sing, Dan Kalla, Rob Stenstrom, Michael Law, and Eric Grafstein. 2018. "Impact of Physician Payment Mechanism on Emergency Department Operational Performance." *Journal of the Canadian Association of Emergency Physicians* 20(2): 183-190. doi: <https://doi.org/10.1017/cem.2018.10>.
- Kantarevic, Jasmin, and Boris Kralj. 2011. "Quality and Quantity in Primary Care Mixed Payment Models: Evidence from Family Health Organizations in Ontario." *IZA Discussion Paper* 5762. <http://ftp.iza.org/dp5762.pdf>.
- . 2014. "Risk Selection and Cost Shifting in a Prospective Physician Payment System: Evidence from Ontario." *Health Policy* 115(2-3): 249-257. <https://doi.org/10.1016/j.healthpol.2013.10.002>.
- Lavergne, M. Ruth. 2017. "Financial Incentives for Physicians to Improve Health Care." *Canadian Medical Association Journal* 189: E1505-E1506. doi: 10.1503/cmaj.171126.
- Lavergne, M. Ruth, Sandra Peterson, Rachael McKendry, Saskia Sivananthan, and Kimberlyn McGrail. 2014. "Full-Service Family Practice in British Columbia: Policy Interventions and Trends in Practice, 1991-2010." *Healthcare Policy* 9(4): 32-47. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4749884/pdf/policy-09-032.pdf>.
- Léger, Pierre Thomas. 2011. "Physician Payment Mechanisms: An Overview of Policy Options for Canada." Canadian Health Services Research Foundation. Accessed November 19, 2019. <https://www.cfhi-fcass.ca/sf-docs/default-source/hospital-funding-docs/CHSRF-LegerPhysicianRemunerationENG.pdf?sfvrsn=0>.
- Li, Jinhu, Jeremiah Hurley, Philip DeCicca, Gioia Buckley. 2014. "Physician Response to Pay for Performance: Evidence from a Natural Experiment." *Health Economics* 23: 962-978. doi: 10.1002/hec.297.
- Ludwig, David A. 2011. "Primary Care Networks: Alberta's Primary Care Experiment is a Success - Now What?" *Healthcare Quarterly* 14(4): 7-8.
- McDonald, James T., and Christopher Worswick. 2012. "The Migration Decisions of Physicians in Canada: The Roles of Immigrant Status and Spousal Characteristics." *Social Science & Medicine* 75(9): 1581-1588. doi: 10.1016/j.socscimed.2012.07.009.
- Mechanic, Robert E., Stuart H. Altman, and John E. McDonough. 2012. "The New Era of Payment Reform, Spending Targets, and Cost Containment in Massachusetts: Early Lessons for the Nation." *Health Affairs* 31(10): 2334 -2342.
- Miller, Harold D. 2014. "Win-Win-Win Approaches to Healthcare Cost Control Through Physician-Led Payment Reform." *Clinical Gastroenterology and Hepatology* 12(3): 355-358. <https://doi.org/10.1016/j.cgh.2013.12.002>.

- Mou, Haizhen, and M. Rose Olfert. 2015. "Inter-Provincial Migration Intentions of Family Physicians in Canada: The Roles of Income and Community Characteristics." *Healthcare Policy* 11(2), 58–71. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4729283/>.
- North South Group Inc. 2005. "Audit of the Department of Medicine Alternative Funding Arrangement." Accessed January 3, 2020. https://novascotia.ca/dhw/publications/Alternate_Funding_Audit_2004.pdf.
- Nova Scotia Health Authority. 2018. "Need a Family Practice Registry Data Summary." Accessed November 12, 2019. http://www.nshealth.ca/sites/nshealth.ca/files/nsha_accountability-nfp_registry_data_summary_281mar201829_v2.pdf.
- Peckham, Allie, Julia Ho, and Gregory Marchildon. 2018. "Policy Innovations in Primary Care Across Canada: A Rapid Review Prepared for the Canadian Foundation for Healthcare Improvement." *North American Observatory on Health Systems and Policies*. https://ihpme.utoronto.ca/wp-content/uploads/2019/08/NAO_RR1.pdf.
- Quinn, Amity E., Alun Edwards, Peter Senior, Kerry A. McBrien, Brenda R. Hemmelgarn, Marcello Tonelli, Flora Au, Zhihai Ma, Robert G. Weaver, and Braden J. Manns. 2019. "The Association between Payment Model and Specialist Physicians' Selection of Patients with Diabetes: A Descriptive Study." *Canadian Medical Journal Open* 7(1): E109–116. doi: 10.9778/cmajo.20180171.
- Rich, Antonia, Rowena Viney, Sarah Needleman, Ann Griffin, and Katherine Woolf. 2016. "You Can't Be a Person and a Doctor": The Work-Life Balance of Doctors in Training—A Qualitative Study." *BMJ Open* 6(12): e013897. doi: 10.1136/bmjopen-2016-013897.
- Rosser, Walter W., Jack M. Colwill, Jan Kasperski, and Lynn Wilson. 2010. "Patient-Centered Medical Homes in Ontario." *The New England Journal of Medicine* 362: e7. doi: 10.1056/NEJMp0911519.
- . 2011. "Progress of Ontario's Family Health Team Model: A Patient-Centered Medical Home." *Annals of Family Medicine* 9(2). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3056865/pdf/0090165.pdf>.
- Rudoler, David, Audrey Laporte, Janet Barnsley, Richard H. Glazier, Raisa B. Deber. 2015. "Paying for Primary Care: A Cross-Sectional Analysis of Cost and Morbidity Distributions across Primary Care Payment Models in Ontario Canada." *Social Science & Medicine* 124: 18–28. <https://doi.org/10.1016/j.socscimed.2014.11.001>.
- Rudoler, David, Claire de Oliveira, Joyce Cheng, and Paul Kurdyak. 2017. "Payment Incentives for Community-Based Psychiatric Care in Ontario, Canada." *Canadian Medical Association Journal* 189(49): E1509–E1516. <https://doi.org/10.1503/cmaj.160816>.
- Spenceley, Shannon M., Cheryl Andres, Janet Lapins, Robert Wedel, Tobias Gelber, and L.M. Halma. 2013. "Accountability by Design: Moving Primary Care Reform Ahead in Alberta." *SPP Research Papers* 6(28). <https://journalhosting.ucalgary.ca/index.php/sppp/article/view/42440/30332>.

- Statistics Canada. 2017. "Primary Health Care Providers, 2016." Accessed January 8, 2020. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2017001/article/54863-eng.htm>.
- Sweetman, Arthur, and Gioia Buckley. 2014. "Ontario's Experiment with Primary Care Reform." *SPP Research Papers* 7(11). <https://www.policyschool.ca/wp-content/uploads/2016/03/ontario-health-care-reform.pdf>.
- Thind, Amardeep, Tom Freeman, Cathy Thorpe, Andrea Burt, and Moira Stewart. 2009. "Family Physicians' Satisfaction with Current Practice: What is the Role of their Interactions with Specialists?" *Healthcare Policy* 4(3): e145-e158. doi:10.12927/hcpol.2009.20475.
- Wadhera, Rishi K., Robert W. Yeh, and Karen E. Joynt Maddox. 2018. "The Rise and Fall of Mandatory Cardiac Bundled Payments." *Journal of the American Medical Association* 319(4): 335-336. doi:10.1001/jama.2017.19205.
- Wranik, Dominika W., and Martine Durier-Copp. 2010. "Physician Remuneration Methods for Family Physicians in Canada: Expected Outcomes and Lessons Learned." *Health Care Analysis* 18(1): 35-59. doi: 10.1007/s10728-008-0105-9.
- Yan, Charles, JoAnn Kingston-Riechers, and Chuck Anderson. 2009. "Financial Incentives to Physician Practices: A Literature Review of Evaluations of Physician Remuneration Models." *Institute of Health Economics*. Accessed January 10, 2020. https://www.ihe.ca/download/provider_financing_forum_literature_review.pdf.

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