



Canadian Foundation for
**Healthcare
Improvement**

Exploring Accountable Care in Canada

Integrating Financial and Quality Incentives for Physicians and Hospitals

**Final Report to the Ministry of Health and Long-Term Care and the
Canadian Foundation for Healthcare Improvement**

March 2014

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This document is available at www.cfhi-fcass.ca

This report is a publication of the Canadian Foundation for Healthcare Improvement or CFHI. CFHI is dedicated to accelerating healthcare improvement and transformation for Canadians and is funded through an agreement with the Government of Canada. The views expressed herein are those of the authors and do not necessarily represent the views of CFHI or the Government of Canada.

ISBN: 978-1-927873-07-6

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Key Messages

- Poor quality is common and costly, and represents an important opportunity to improve the financial sustainability of healthcare systems but realizing savings from improved quality is difficult because the costs and benefits of quality are often spread over time and between stakeholders. (Øvretveit, 2009).
- This paper explores the relevance and feasibility of establishing Accountable Care Organizations (ACOs) – where physicians, hospitals and other provider organizations jointly assume accountability for the overall costs and quality of care for a defined population – in Canada, using Ontario as a case study. We conclude that ACO type models are a potentially valuable vehicle for aligning physician and hospital interests in improving quality and reducing cost.
- Using existing administrative data, it is possible to construct 78 networks of relatively self-contained sets of patients, physicians, and hospitals based on existing patient flow patterns in Ontario. There is substantial variation in quality and per-person cost profiles across the networks, suggesting opportunities for improvement at the network level.
- Potential early adopters of ACO-like models in Ontario – individuals currently involved in initiatives aimed at cost-quality improvement – indicated a willingness toward hospitals and physicians jointly assuming accountability for the cost and quality of care of patients in their network, including arrangements to share the financial gains (or losses) with the province on the condition that quality targets are met.
- Financial models constructed using rules similar to those governing the ACO Shared Savings Program in the US suggest that net savings of approximately \$200 million per year is possible for the province of Ontario
- A legal review suggests that a contract-based ACO model could be implemented in Ontario with little to no regulatory change. Regardless of the model used, the choice among for-profit, not-for-profit or charitable corporation status is important with significant implications for board powers, ability to retain and distribute surplus revenues, taxation and other issues.

Executive Summary

Fiscal sustainability continues to be an important issue for the Canadian healthcare system. Past experience tells us that simple spending cuts, while beneficial in the short term, only lead to long-term consequences, such as overcrowding, declines in public confidence and the eventual need for “catch-up” spending.

Quality problems in healthcare are common and can be costly. Reducing healthcare spending through quality improvement therefore represents an alternative approach. However, efforts to reduce healthcare spending through quality improvement have yet to gain firm traction in Canada. Attempts to align cost and quality objectives are plagued by the fact that costs and benefits of quality are spread over time and between stakeholders. Providers therefore face overwhelming incentives to focus on achieving short-term results and on activities within their exclusive control.

Moreover, the rise of chronic diseases and complex (non-episodic) healthcare needs among patients in the face of escalating healthcare spending necessitate a fundamentally different approach to organizing, governing and funding healthcare delivery systems in Canada. Accountable Care Organizations (ACOs) are provider-led organizations whose mission is to manage the full continuum of patient care and be accountable for the overall costs and quality of care for a defined population. In recent years in the United States, ACOs have emerged as a promising alternative to existing payment models, allowing organizations to voluntarily work together to coordinate care for patients and to share in the savings associated with more efficient care delivery.

In this paper, we present the results of our research on the potential of ACO-like vehicles for physicians and hospitals to jointly own the risk and benefits associated with the cost and quality of care for a defined population. We use Ontario as a case study. Our findings are as follows:

- Using existing administrative data, it is possible to construct networks involving natural linkages among patients, physicians, and hospitals based on existing patient flow patterns; in Ontario, our data revealed the existence of 78 such networks, where the patient populations are relatively self-contained, in that individual residents receive most of their care from providers within their respective networks
- Performance indicators show substantial variation in quality across the networks, suggesting opportunities for quality improvement at the network level
- Using existing utilization data and costing methodologies, it is possible to create per-person cost profiles for each network, as well spending benchmarks on a prospective basis
- Potential early adopters of ACO-like models in Ontario – individuals currently involved in initiatives aimed at cost-quality improvement – indicated a willingness toward hospitals and physicians jointly assuming accountability for the cost and quality of care of persons in their network, including arrangements to share the gains (or losses) with the province, when spending falls below (or above) the benchmark, on the condition that quality targets are met

- Financial models constructed using rules similar to those governing the ACO Shared Savings Program in the US suggest that net savings of approximately \$200 million per year are possible for the province of Ontario
- In establishing ACO-like vehicles, two potential models might be considered: ownership/membership model in which a single corporation controls all of the affairs of the network, or a contract model in which autonomous provider organizations within the network unite through a risk-bearing corporate entity; our legal review indicates that the contract model could be implemented in Ontario with little to no regulatory change
- Regardless of which vehicle is used, for-profit, not-for-profit or charitable corporation status could be pursued, with varying implications on board powers, ability to retain and distribute surplus revenues, taxation and other important issues.

We conclude that ACOs are promising vehicles for aligning physician and hospital interests in improving quality and reducing cost. However, successful implementation and realization of the ACO mission requires that attention be paid to supporting capacity building within the ACOs, development of a culture of learning and improvement, as well as rigorous monitoring and evaluation. While the jury is still out on success of ACO implementation efforts in the United States, the results presented here suggest that further exploration of their potential in Canada is warranted, and that distinct characteristics of the Canadian system might require a slightly different approach.

Background and Goals of the Project

The Excellent Care for All Act recently announced changes to the physician fee schedule, and the Avoidable Hospitalizations Expert Panel have focused attention in Ontario on the cost-quality relationship and on policy options to improve quality and control costs. Lionized examples such as the Geisinger Health System, the Cincinnati Children's Hospital, and the Virginia Mason Health System have all improved quality while controlling cost growth, often with dramatic results. These examples along with long-standing case studies such as the Veteran's Health Administration, Kaiser-Permanente, and the Mayo Clinic appeal strongly to policy makers and share a common feature of alignment of incentives between hospitals and doctors. However, there has been no clear best practice on how to create this alignment. Moreover, it is unclear whether this sort of alignment is even possible in highly regulated systems such as the provincial health systems across Canada.

In Ontario, Health Service Organizations (HSOs) created during the 1980s attempted to link hospital and physician incentives by paying physicians on a capitated basis along with a bonus of one-third the dollar value of reduced hospital use (Brosky, 1990). More recently, Alternate Funding Plans (AFPs) have grouped together physician payments from in-hospital work and used innovation funds and other tools to try and align hospital and physician performance. In the US in the 1990s, hospitals and hospital chains bought up physician practices with often disappointing results of poor alignment to quality goals and lower productivity (Budetti, 2002). A range of other business models, such as the Physician Practice Management Companies (PPMCs) tried to link physician and hospital incentives towards greater efficiency through third-party management but ran into similar problems with quality and productivity losses and difficulty with managing large multi-hospital/multi-physician/multi-payer sets of contracts (Robinson, 1996). Although specific case studies – such as the Group Health Centre in Sault Ste Marie – have succeeded in producing good quality care, none of these earlier structural models have created consistent demonstrable improvements in value. In all of these models managing and aligning incentives across sectors and with community needs have been challenging.

These cases suggest that it is possible to implement various combinations of base payment and shared savings structures within provincial health systems, at least at a community or institutional (i.e. hospital) level. Each demonstrates varying impact of the underlying incentives driving provider (hospital, physician, community laboratory and other health service providers) behaviour as well as the ultimate effect of this behaviour on the quality and efficiency of the health system. These experiments also suggest that there are limits to the size of collaborative physician-hospital enterprises (Robinson, 1996), that incentives must be material and clearly linked to decision-making although not necessarily large, that hierarchical relationships that deprive doctors of ownership or engagement reduce productivity (Budetti, 2002; Brown et al, 2012), that successful investments in managerial expertise and information management are critical (Baker, 2009; Øvretveit, 2009), and that incentives should be linked to improvements in value rather than cost reduction alone.

Over the past five years the Accountable Care Organization (ACO) — where physicians, hospitals and other healthcare providers jointly manage the quality and cost of care — has emerged as a promising alternative. A distinguishing feature of ACOs is the financial model through which shared savings incentives are created. In this model incentive payments are predicated on aspects of performance that require physician and hospital management contributions and the attainment of specific quality of care targets. Under the current shared savings program for ACOs, the Centers for Medicare and Medicaid Services (CMS) is offering two different risk-reward models: an ACO can elect to assume a smaller share of upside gains but no risk of loss for 2 years and accepting risk by year 3 or an ACO can participate in both the up- and down-side and qualify for a higher proportion of shared savings from the start. (Berwick, 2011) Implementation began in January 2012. The model has the potential to shift the emphasis from volume and intensity of services to incentives for efficiency and quality (i.e. value). In the United States, the Physician Group Practice Demonstration (2005-2010) paid providers on a fee-for-service basis, plus a performance bonus of up to 80 percent of the Medicare expenditures that are saved in a particular year. (Sebelius, 2009) Recent evaluations of demonstration projects for ACOs in the US have been positive (see Meyer for reference), but that there are challenges when incentive systems become too complicated and where regulatory constraints become “operationally burdensome”(Meyer, 2011) and where governance is poorly developed. (Singer and Shortell, 2011)

The ACO model in the US

ACOs are defined by the Center for Medicare & Medicaid Services (CMS) as:

... a legal entity recognized and authorized under applicable state law and composed of certified Medicare providers or suppliers. These participants work together to manage and coordinate care for a defined population of Medicare fee-for-service beneficiaries and have established a mechanism for shared governance that provides appropriate proportionate control over the ACO's decision-making process. ACOs that meet specified quality performance standards are eligible to receive payments for shared savings if they can reduce spending growth below target amounts.

Principally the ACO model follows a set of core principles. According to Shortell and colleagues (Shortell, 2010) the ACO is based on three design principles; provider-led organizations accountable for the entire continuum of care for a defined population of patients; payment reforms that reward quality improvement and moderated spending through shifting of financial risk onto providers; and performance measurement to support improvement and accountability. In contrast to many other US-based reform initiatives that have sought to manage a portion of the patient journey, ACOs focus on the management of costs and quality across the continuum. Because of the concentration of costs in a relatively small proportion of the population in Canada (Wodchis, 2012), the ability to derive better financial and quality performance from tighter management of this population will be a key issue in considering the feasibility of ACOs in provincial health systems.

The key feature of the ACO model is the shared savings program, which is based on gain-sharing agreements between the payer and providers making up the ACO — where payer and providers share in the cost savings achieved. This allows the payer (in this case CMS) to shift the risk of high cost services to the provider. The draw for the provider is that if savings are achieved, they get to

share the in those savings. As mentioned above, an ACO can elect to assume a smaller share of the savings gains with less risk by not accepting the penalties of overspending, or an ACO can participate in the full up- and down-side risk for a higher proportion of shared savings from the start (Berwick, 2011). To calculate shared savings, benchmark spending is calculated using a combination of historical spending patterns and adjusted future projections. Savings and losses occur when spending is above or below the benchmark. ACOs can only qualify for a share of the savings (or losses) on the condition that quality targets are met and that the savings (loss) are in excess of minimum thresholds (designed to exclude normal statistical variation). In the US, the Medicare Shared Savings Plan has set the base shared savings rate at 50% and the minimum savings rate at 2%; although, these rates vary depending on which risk plan the ACO is participating in and on the number of enrolled beneficiaries. The choice of benchmark, therefore, is a critical question in exploring the financial feasibility of ACOs in provincial health systems.

With respect to eligibility for the ACO program, the Affordable Care Act allows ACOs to include the following types of provider organizations:

- ACO professionals (i.e., physicians and hospitals) in group practices,
- Networks of individual practices of ACO professionals,
- Partnerships or joint venture arrangements between hospitals and ACO professionals, and
- Hospitals employing ACO professionals

However, CMS has been flexible in their application of these eligibility criteria and has allowed critical access hospitals, rural health clinics and federally qualified health clinics to also join the ACO program. In addition, any other types of provider (e.g., home care agencies, long-term care homes) can participate in the ACO program by partnering with an eligible provider (Commonwealth Fund, 2011).

Although the base ACO model has been piloted for a number of years (e.g., the Brookings-Dartmouth ACO Pilot Program was launched in 2009), there are emerging policy discussions about changes to the model. For instance, there are efforts to expand the scope of the ACO model to different patient populations. The Pediatric Demonstration Project is already underway and calls for state Medicaid programs to allow pediatric medical providers to form ACOs and receive shared saving payments (American Academy of Pediatrics, 2011). Meanwhile, others have recently suggested that ACOs focus their attention on populations that would most benefit from higher quality and coordinated care, including those with multiple chronic conditions (Burns, 2012). Some have commented on the lack of attention that new reform efforts in the US have given to behavioural health issues. (Bao, 2012) In addition, new organizational forms are now adopting the ACO model. For instance, the Robert Wood Johnson Medical School, an Academic Health Center, began implementing the ACO model in 2012 (Tallia and Howard, 2012). As Tallia and Howard suggest, the ACO model presents a new opportunity for Academic Health Centers to reinvent themselves and test new models of delivery.

The Pioneer ACO model is another alternative approach, designed specifically for healthcare organizations and providers that are already experienced in coordinating care for patients across care settings. Pioneer ACOs generally assume higher levels of shared savings and risk than those of the basic Medicare Shared Savings Program, and those that have achieved a specified level of savings over the first two years will be eligible to move a substantial portion of their payments to a prospective capitation-based model (as opposed to traditional fee-for-service)(Crosson, 2011).

Critical Issues

There have been some concerns about the sustainability of the ACO model in the US and its potential to transform care (Crosson, 2011). Physicians have expressed concern about the number of physician groups that will have organizational capability and capital to become ACOs (Crosson, 2011); physicians have also expressed concerns that hospitals will dominate the implementation of the ACO model; while others suggest that physicians know little about which interventions are cost effective, and that access to more timely information will be needed to make ACOs successful (Chien, 2013). Thus the governance and improvement capacity of the system, as well as the willingness of providers from across sectors and professions to participate will be a critical question in considering the feasibility of ACOs in provincial health systems.

A related concern, which we will discuss in greater detail below, is the nature of the trade-off between cost and quality. The general assumption associated with the ACO model is that improved quality will result in reduced costs; however, the evidence concerning the relationship between cost and quality is still inconclusive. In quality improvement efforts that focus on addressing inappropriate service provision — by substituting lower cost interventions for high cost interventions, reducing adverse events — and reducing over-servicing by reducing volumes could theoretically achieve significant cost savings. However, addressing under-service — by improving access to under-provided services, increasing the range of services provided, or improving the timing of service provision — may actually increase costs. Thus, it cannot be assumed that all quality improvement has a negative relationship with costs, particularly if provincial health systems have to cope with under-service as much as with other quality problems. This may be one key differentiating factor when comparing quality problems and the applicability of the ACO model in the US and Canada (Stukel, 2012).

Governance has been another key concern. Our review of the literature demonstrates there is little evidence linking specific governance structures to improved outcomes at the patient or system level. This is partially due to the numerous confounding variables and the limitations of study designs for complex system-level interventions. Indeed, Sheaff and colleagues (2003) argue that while it has been assumed “structural, procedural and cultural changes are levers for improving the performance of health service organizations,” there is little evidence to support this. Notwithstanding this lack of evidence, governance remains an important consideration for ACOs, particularly in terms of integrating and engaging multiple provider organizations within disparate sectors of the healthcare system. As Singer and Shortell (Singer, 2011) suggest, in order for ACOs to be successful, governance and management processes need to address the historical differences

that exist between the primary care, specialist and hospital sectors. Indeed, successful organizations (e.g., Kaiser Permanente, Geisinger Health, etc.) seem able to engage these groups by providing them with meaningful roles in the governance and management of healthcare organizations. Thus, the ability to govern, monitor, and improve ACO type organizations – and critically to engage physicians – will be another key consideration in evaluating the feasibility of ACOs in provincial health systems.

In Ontario – as well as in other parts of Canada – the challenge of creating a supportive context for ACOs may be easier compared to the US. Rules around collaborative practice of medicine such as the Stark I and Stark II provisions that hamper referrals within groups of physicians are much more relaxed in Canada (Choudhry, 2004). Likewise, concerns over anti-competitive behaviour that have led US anti-trust authorities to investigate vertically integrated providers are lower in Canada. In addition, the challenge of managing contracts with multiple payers with multiple sets of business rules are replaced in Canada by a series of provincial markets, each with a dominant public payer. However, a key finding from the US literature – that more care is generally worse for patients (Fisher, 2003) – may not hold in Canada where utilization rates are often much lower (Stukel, 2012). For all these reasons, it is important to examine the financial feasibility, business case, and policy barriers to ACOs from the perspective of a provincial health system.

Project Objectives

This project examined the feasibility and desirability of implementing ACO type models in Canada, using Ontario as a case study. It looked at the issue from a variety of perspectives:

- The strength of the relationship between cost and quality and the key structural enablers to support achievement of lower cost and better quality;
- The creation of networks of community and hospital-based physicians and the hospitals where they work or refer patients that can serve to internalize the management of cost and quality;
- The size and scope of specific opportunities for improving quality and reducing cost across the networks;
- The design of gain-sharing models that align incentives among payer and providers for improving quality and reducing cost;
- The regulatory and legal barriers and enablers for aligning physician and hospital incentives in Ontario; and
- The necessary policy enablers to support stronger physician-hospital alignment to reduce cost and improve quality.

In this paper we consider questions 4, 5, and 6 from two potential corporate models for the ACO. An Ownership Model, where a ‘lead’ organization would be the sole owner of each health service provider that is a member of the ACO network; and a Contract Model, where the same ‘lead’ organization would not own any of the health service providers in the ACO network, but would

coordinate various providers, enforce the uptake of common policies and procedures through service contracts, and flow funds to providers for services rendered.

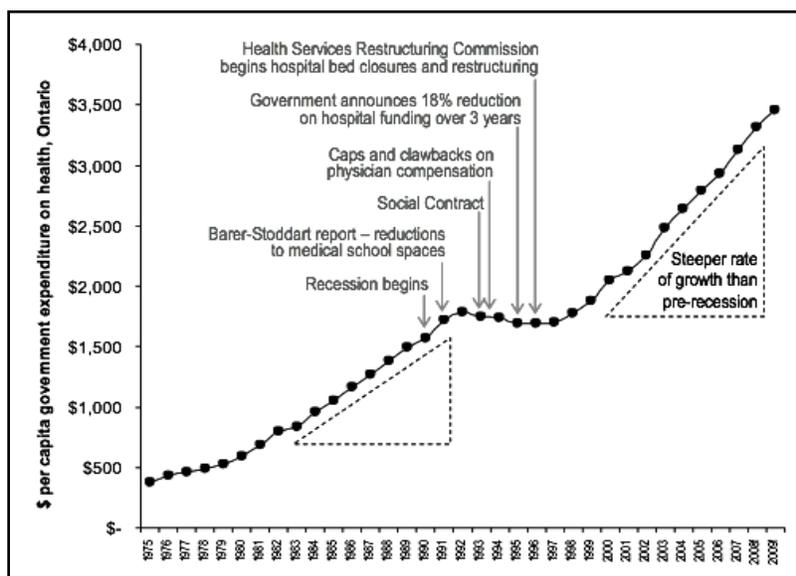
Feasibility of ACOs in Ontario

Trade-off between cost and quality

Fiscal sustainability continues to be an important issue for the Canadian healthcare system. Past experience tells us that simple spending cuts, while beneficial in the short term, only lead to long-term consequences. Figure 1 shows that spending cuts during the last recession were not sustained while a number of papers and commentaries suggest that these supply side cuts likely led to overcrowding and declines in public confidence in the healthcare system.

Another approach to reducing costs is by adopting evidence-based care in order to reduce clinical variation and waste. The link between improved quality and moderated costs has been the driving force behind the ACO model, with a view to reducing remarkably high healthcare spending in the US. Savings from higher quality or better organized care could come from a number of sources, including a reduction in over-treatment, a reduction in coordination failures due to system fragmentation, reduction in failures to adopt or follow evidence-based guidelines, elimination of administrative complexity or waste caused by payers and other organizations (e.g., complex forms and conflicting rules), introduction of pricing that corresponds to that expected in well-functioning markets, and the reduction and elimination of fraud and abuse (Martin et al, 2009).

Figure 1: Growth in per Capita Healthcare Spending in Ontario



Source: Data from Canadian Institute for Health Information

However, there is still some uncertainty about whether there is a strong link between improved quality of care and reduced costs. Several studies in the academic and grey literature suggest that poor quality and lack of coordination of care are associated with increased costs, but there is a paucity of evidence that relates quality improvements to sustained savings, and what evidence does exist shows mixed results. There are some studies that demonstrate compliance with evidence in hospital settings can lead to reductions in cost savings (Casale, 2007; Semel, 2010; Cohen, 2010; Harris, 2011; Waters, 2011; Share, 2011) and there are studies that demonstrate coordinated management, quality improvement and performance measurement can reduce costs in primary care and across integrated health systems (Stock, 2010; Dusheiko, 2011; Fireman, 2004; Schilling, 2010). Although, there is also countervailing evidence that suggests increased quality is associated with higher costs (Joynt, 2011; Schreyogg, 2010). A recent systematic review of evidence of the association between healthcare quality and cost also found mixed results; 34% of studies reported positive or mixed-positive associations between cost and quality, 30% reported negative or mixed-negative associations, while 36% of reviewed studies reported no association (Hussey, 2013).

While the evidence is mixed, there appear to be a number of cultural and policy-related factors that are important to developing effective programs to improve costs and quality. First, integration is critical to cost reduction, as integrated systems appear to be leaders in achieving higher quality and lower costs. Second, trust and physician leadership appears to be critical. For instance, clinician and patient driven quality improvement efforts are more effective than manager / policy-maker driven strategies (Scott, 2009), and trust amongst stakeholders was key to the construction of the ACOs during the US Pilot Program (vanCitters, 2012). Third, isolated interventions aimed at reducing costs and improving quality (e.g., quality improvement efforts, care coordination (Nelson, 2012), enhanced expertise (Bosch, 2009), and substitution of physicians with other healthcare professionals (Laurant, 2010) show mixed results.

Performance measurement against quality indicators is another factor that is often associated with improved performance. However, the literature is limited here as well; although quality appears to improve with measurement studies that show an association between performance measurement and cost savings tend to be analyzed in the context of financial incentive schemes (e.g., Physician Group Practice Demonstration in the US, Quality of Outcomes Framework in the UK) (Curtin, 2006; Trisolini, 2008; Goodney, 2012; Town, 2005; Dusheiko, 2011). Measuring the impact of performance measurement within the context of financial incentive schemes makes it difficult to separate out the effect of measurement. Furthermore, measurement is typically carried out in high-performing systems, which may be a source of selection bias, and there is limited study on the effect of the type or intensity of measurement on outcomes.

Incentive structures are also considered a way of achieving improved quality and moderated costs in healthcare systems. However, once again, the evidence is inconclusive. Systematic reviews that considered studies on financial incentives found mixed results, with some studies showing changes in provider behaviour but little improvement in patient or health system outcomes (VanHerck, 2010; Alshamsan, 2010; Flodgren, 2011; Scott, 2011; Emmert, 2011). Although, this evidence largely focuses on pay-for-performance incentives for processes of care, not for the achievement of

real benefits for patients or healthcare systems. There is an increasingly pervasive view that gain-sharing approaches have more promise in terms of changing provider behaviour, achieving improvements in quality of care and reducing costs because they incorporate a mix of different payment and funding approaches that focus on the achievement of patient and cost benefits (Rosenthal, 2013). Furthermore, economic theory suggests that such mixed approaches are preferred to any individual funding or compensation model (Ellis and McGuire, 1986; Ma, 1994); and, while evidence is still limited, recent programs in the US have demonstrated the promise of gain-sharing approaches (Sebelius, 2009; Ketcham and Furukawa, 2008).

However, it is likely that meaningful improvements in quality and reductions in costs require complex and multi-faceted interventions that include a combination of performance measurement, appropriate incentives, integrated care and quality improvement efforts. In addition, essential system level changes may be necessary to promote better performance. There are three common elements to healthcare systems that have improved on cost and quality over time: 1) a public, specific statement of goals for improvement with a plan for reaching these goals; 2) public reporting of results with a clear link to improvement plans that become part of the strategy; and 3) strong physician and clinical leadership of improvement efforts aligned to improvement goals (Hillestad 2005, Øvretveit, 2009; Brown et al, 2012).

Thus, there does appear to be some relationship between better quality and – at a minimum – moderated cost growth. Success stories from the US and Canada suggest that this sort of improvement is possible and the Triple Aim Initiative led by the Institute for Healthcare Improvement is predicated on the belief that organizations can improve quality and cost. However, success seems to be strongly based on a strong culture of clinical leadership, the ability to use evidence and data to improve care and the ability to manage care better across the continuum to reap the benefits of improvement in one sector across other sectors.

Evidence for the ACO model

ACOs are an example of a complex intervention. There have been efforts to evaluate the model in the US context, but there have been no peer-reviewed controlled evaluations of the ACO model. The CMS Physician Group Practice Demonstration was the largest trial leading up to the implementation of the ACOs; the demonstration showed improvements in healthcare quality and patient outcomes, but small and inconsistent impacts on cost savings. Furthermore, most of the savings occurred in dually eligible beneficiaries, which are a more vulnerable patient population (Colla et al, 2012). Colla and colleagues suggest that this means ACOs may have potential to improve care for high-cost patients.

Although no peer reviewed studies of the ACO shared savings model have been published, there is evidence that gain-sharing — the incentive structure upon which the shared savings program is based — is associated with cost savings. One US study on a gain sharing model for inpatient care at a tertiary care centre found that savings were higher in gain-sharing participants, compared to non-participants, although substantial savings were achieved in both arms of the study (Leitman, 2010).

Another US study demonstrated that gain-sharing for coronary stent programs reduced costs by 7.4%, and that a vast majority of savings came from lower input costs (Ketcham, 2008).

Although the evidence is limited, the ACO model may hold significant potential (Crosson, 2011), both in terms of quality and costs and may merit further demonstration and evaluation. In July 2013, the Centres for Medicare & Medicaid Services published first year results of the Pioneer ACO implementation (Centres for Medicare & Medicaid Services, 2013):

- Cost savings – costs for the more than 669,000 beneficiaries cared for by Pioneer ACOs grew by only 0.3% in 2012, compared to 0.8% for a similar patient population; this generated gross savings of \$87.6 million, with Medicare holding on to \$33 million of the savings
- Financial performance of ACOs – 18 of the 32 Pioneer ACOs achieved spending levels below their benchmark, but 5 of the 18 saved less than the minimum threshold (minimum savings rate) and thus did not qualify for a share of the savings; 14 of the 32 Pioneer ACOs spent more than their benchmark, however in 12 of 14 cases, overspending was less than the minimum threshold required to trigger repayment to CMS
- Quality - All 32 Pioneer ACOs outperformed fee-for-service Medicare for all 15 clinical quality measures for which comparable data were available (seven measures had no comparable data)
- Participation – 7 Pioneer ACOs that did not produce savings have notified CMS that they intend to apply to the “regular” Medicare Shared Savings Program, which has a lower risk-reward profile; 2 Pioneer ACOs indicated to CMS their intent to leave the program

Although the early results are encouraging, they also point to the need for more comprehensive and independent evaluation over time. However, in implementing a gain sharing model, other concerns beyond the evidence need to be considered. In particular, gain sharing raises some important ethical concerns. First, there are issues with respect to the principal-agent relationship between the payer and the physician; issues of trust and provider autonomy. Second, there is the potential to create incentives for under-service as opposed to over-service, particularly where payment is prospectively based. Third, gain-sharing models may produce anti-competitive behaviours and kickbacks. These issues are relatively lightly regulated in Canada compared to the US.

Establishing ACO networks in Ontario

Large multispecialty physician group practices have been shown to achieve high-quality, low-cost care. Such practices reduce complications and avoid costly readmissions to the hospital and emergency department by providing better ambulatory management of patients' care (Lawrence, 2005; Rich, 1995; Wagner, 2001; Bodenheimer, 2002a and 2002b; Knowler 2002; Chodosh 2005). Accordingly, multispecialty physician networks have been suggested as a method to improve directly the management of chronic disease and to facilitate co-ordination of care at a local level for high-needs patients (Stukel and Henry, 2013).

Stukel et al. (2013) identified informal multispecialty physician networks in Ontario by using health administrative data to exploit natural linkages among patients, physicians, and hospitals based on existing patient flow. They linked each Ontario resident to their usual provider of primary care over the period from FY2008 to FY2010. They linked each specialist to the hospital where they performed the most inpatient services. They linked each primary care physician to the hospital where most of their ambulatory patients were admitted for non-maternal medical care. Each resident was then linked to the same hospital as their usual provider of primary care. They computed "loyalty" as the proportion of care to network residents provided by physicians and hospitals within their network. Smaller clusters were aggregated to create networks based on a minimum population size, distance, and loyalty. Networks were not constrained geographically.

They identified 78 multispecialty physician networks in Ontario. Median network size was 134 723 residents, 125 primary care physicians, and 143 specialists. Virtually all residents were linked to a usual provider of primary care, and virtually all residents. Primary care physicians and specialists were linked to a network. Networks were reasonably self-contained, in that individual residents received most of their care from providers within their respective networks.

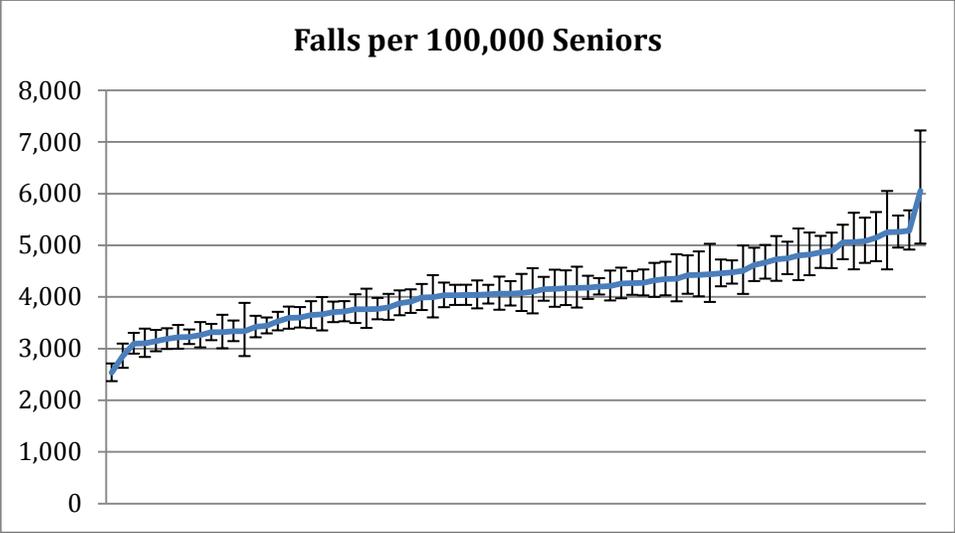
Assessing performance across networks

Analysis of selected indicators demonstrated that it is possible to measure performance at the network level, although small sample size may be a constraint for some indicators in some networks. There was large variation in performance on indicators for all measures examined which is evidence that there is much opportunity for improvement. Each of these indicators measures a process of healthcare that is modifiable; many through interventions aimed at implementing integrated models of care for chronic conditions and their risk factors. Figure 2 illustrates a nearly threefold difference across networks in age-standardized rates of fall related hospitalization. Similar patterns were seen on the other indicators, with some having up to a fivefold difference in network performance.

Performance varied across indicators representing different domains of care. There was large variation in hospital admission rates for all four ambulatory care sensitive conditions examined: asthma, diabetes, chronic obstructive pulmonary disease (COPD) and heart failure (HF). For example heart failure admission rates varied fourfold, from 393-1268 per 100,000 across physician networks and readmission rates after a HF hospitalization varied from 13-30%. Many admissions for ambulatory care sensitive conditions are avoidable through improved chronic disease management in the community as well as efforts aimed at prevention to reduce population risk for these conditions. Similarly, among persons with diabetes, admission rates for complications of diabetes, again often avoidable, varied nearly fourfold across physician networks. There was a fivefold difference in 30-day physician follow-up after a hospitalization for major depression and large variation in subsequent ED visits and hospital admissions. Finally, use of surgical procedures also varied: across networks the proportion of women undergoing a less invasive procedure for hysterectomy varied from one in five to nearly all.

Improved performance on these indicators would increase the efficiency and value of services provided and would potentially be cost-saving. Importantly, improved performance on these indicators would lead to improved patient outcomes, and likely a reduction in avoidable mortality. They could be tied to accountability agreements or financial incentives. Importantly, networks could use these indicators to set priorities, design and target improvement interventions and monitor progress.

Figure 2: Fall-related hospital admissions per 100,000 adults age 65 and older



Designing the incentive structure

An effective incentive structure must do the several things. First, it must provide a realistic opportunity for providers who invest in activities to improve the quality and cost performance of the network to realize a return on their investment themselves. This addresses the issue that costs and benefits of quality are often spread over time and between stakeholders (Øvretveit, 2009). Second, it must yield net benefit to the system as a whole for policy makers to consider the policy in the first place. Third, it should not beggar the one component of the system to benefit another.

To understand the key features of a shared savings model that would meet the needs of the Ontario health system, and would be appealing to future ACO participants, we conducted a qualitative study using semi-structured interviews with a purposively sampled set of stakeholders in the Ontario health system. We specifically targeted those currently engaged in initiatives with a similar goal – to simultaneously reduce cost and improve quality – as they are likely to be early adopters of the ACO approach. A total of 25 individuals were interviewed, with administrative, clinical, health policy, and research perspectives.

In general, the individuals we interviewed supported the concept of ACOs in Ontario, as well as the introduction of a shared savings model with features similar to those of the US model. There was

broad acknowledgement that the current system penalizes organizations that are doing the right things, and that without proper realignment of incentives, providers face an uphill battle when it comes to engaging in system-level improvement efforts. However, several interviewees cautioned against the potential over-reliance on financial incentives, citing that it might not offer sufficient motivation for improvement. With respect to the design of the financial incentive system governing ACOs:

- The majority of the interviewees agreed that it was important that ACOs receive a share of savings if quality targets are met and that these savings must be reinvested into programs;
- Interviewees agreed that although all providers should eventually be involved, hospitals and physicians represent important starting points for a shared savings program in Ontario;
- Interviewees indicated that the calculation of the cost of care for a defined population should be based on all healthcare costs and not just those related to hospitals and physicians (e.g., long-term care, drug costs, home care, etc.);
- Interviewees expressed mixed views on whether participation in an ACO model in Ontario should be voluntary (as in the case in the US) or mandatory; and
- Although almost all of the participants agreed that ACOs should receive a share of the savings and also be financially responsible for a share of the losses incurred, interviewees were unclear as to what was a “fair way” to share the savings and losses between an ACO and the MOHLTC; although 50/50 might be a good starting point, some suggested that the share ratio should be determined through negotiation on a case-by-case basis.

These views pointed toward a gain-sharing mechanism with very similar features to the US model, with a few notable differences. First, there were mixed views about voluntary versus mandatory participation in the ACO model. These views tend to follow the historical pattern of healthcare reform in Ontario; historically, implementation of initiatives of this kind have been voluntary (e.g., primary care reform models, Family Health Teams, etc.) or mandatory (e.g., Local Health Integration Networks). One important consideration is whether Ontario hospitals and physicians are equipped with knowledge, skills and enthusiasm to successfully operate within an ACO model (e.g., managing actuarial risk). There will almost certainly be variation in competencies across these groups. Chien and Rosenthal (2013) suggest that this will be one of the main challenges and that physicians know very little about the cost-effectiveness of their interventions; therefore, they suggest that detailed and timely data will be needed for effective operational and policy decision-making. In addition, policy-makers will have to choose between a voluntary approach that attracts the strongest performers versus an approach that includes all, irrespective of readiness.

There was no consensus around what constitutes a fair ratio for sharing savings and risk between providers and the payer (i.e., MOHLTC). In the US, this ratio was empirically derived through trial and error. Furthermore, the final US rules for the ACO model were determined based on extensive stakeholder consultation. This suggests that the right rate of sharing gains and losses will require extensive provider engagement.

In addition, there was concern about whether Ontario provider organizations (or their affiliated ACOs) will have the financial strength to shoulder cycles of financial losses under a two-sided shared savings model. Therefore, interviewees believed it important to further explore the financial mechanisms behind the ACOs, including cash reserve and payment mechanisms, as well as stop-loss measures. Furthermore, political issues surrounding financial bailout versus allowing ACOs to fail will undoubtedly affect policy-maker and provider attitudes around risk. Apart from these differences, the US ACO model provides a reasonable basis from which to design a similar model for Ontario.

Feasibility and implications of gain-sharing in an ACO environment

Our study demonstrated that it is possible to build a gain-sharing model with features similar to the US model using available administrative data in Ontario. We calculated the annual cost of care for each Ontario resident, from FY2006 to FY2009. Costs associated with the following types of care were included: hospitals, dialysis clinics, cancer clinics, physicians, Ontario Drug Benefit, home care, laboratory services (physician component) and diagnostic services (physician component).

Each Ontario resident (and associated cost) was assigned to one of 78 multi-specialty physician networks using the assignment method described earlier. Per person cost for each network was calculated by dividing the total assigned cost by the number of persons in the network for that particular year. All costs were inflated/deflated to FY 2008 dollars using Statistics Canada's healthcare-specific CPI.

We hypothetically treated FY2009 as the first performance year (i.e., year 1 of an ACO contract). Cost data from the three preceding years, from FY2006 to FY2008, were used to establish cost baselines and growth rates. For each network, a growth rate was applied to FY2008 per person costs to establish the benchmark for FY2009.

Applying rules similar to those of the Shared Savings Program in the US, we analyzed the performance of each network in FY2009 individually and in aggregate. Four of the 78 networks were excluded from our analysis because they either included a hospital serving a specialized patient population or the patient population was too small.

Our simulation indicated that if all 74 networks participated in the two-sided risk program, all met quality standards, and all achieved a 1% reduction in per person cost in FY2009 compared to what they would have spent (i.e. a 1% behaviour change), the province would have generated savings of approximately \$200 million (see Table 1). This is net of the \$73 million in shared savings paid out to the 26 networks that had savings in excess of the minimum savings rate (MSR), which was set at 2% on either side of the spend benchmark, like the Shared Savings Program in the US. The remaining networks either had insignificant savings (less than the MSR) or incurred losses in spite of the 1% behaviour change. Under the two-sided risk model, those with losses in excess of the MSR had to repay MOHLTC. In the FY2009 simulated year, seven networks had to do so. Now, had all 74 networks participated in the one-side risk model, losses for these seven networks would have been forgiven and hence, the net budget impact for the province would have decreased from \$200 million to \$181 million.

Please note that the savings figures provided are all relative to the scenario in which all 74 networks participated in the program but the program produced no change in provider behavior with respect to spending. Under this scenario, shared savings are paid out to any network that by chance, just happened to have actual spending below its benchmark (in excess of MSR). Our simulation shows without any behaviour change MOHLTC would have paid out \$32 million under a one-sided risk model, or received \$14 million in repayment under a two-sided model.

Table 1: Financial Implications of Gain-Sharing in Ontario (\$millions)

Provincial Health Spending (FY2009) Before Shared Savings Payout		No Behaviour						With Behaviour					
		MSR (2%) Met	2-Sided Risk		1-Sided Risk			MSR (2%) Met	2-Sided Risk		1-Sided Risk		
No Behaviour	With 1% Behaviour	No. ACO	Shared Savings Payout	Provincial Budget Impact	No. Losses Forgiven	Shared Savings Payout (50%)	Provincial Budget Impact	No. ACO	Shared Savings Payout (50%)	Provincial Budget Impact	No. Losses Forgiven	Shared Savings Payout (50%)	Provincial Budget Impact
42,388	42,115	21	-14	-14	12	32	32	26	73	-200	7	92	-181

Our study also established that the methods used to set spending benchmarks in the US are not suitable for the Ontario environment. To estimate how accurately MOHLTC would be able to use available data to establish spending benchmarks for the performance years, we analyzed seven different methods of determining annual growth:

- Provincial growth rate (CAGR FY2006-2008)
- Provincial growth amount (average \$pp increase FY2006-2008)
- .5 Provincial growth rate / .5 provincial growth amount
- ACO-specific growth rate (CAGR FY2006-2008)
- .5 Provincial growth rate / .5 ACO-specific growth rate
- Target growth rates for global budgets (budgeted) / provincial growth rates for open-ended programs (CAGR FY2006-2008)
- Target growth rates for global budgets (budgeted) / ACO-specific growth rates for open-ended programs (CAGR FY2006-2008)

Methods 1, 2 and 4 are similar to those used in the initial US study (Fisher, 2009), method 3 is similar to the one currently used in the US Pioneer ACOs; method 5 is a hybrid of methods 1 and 4; and methods 6 and 7 reflect the distinctive block funding used for hospitals and home care (i.e., community care access centers) sectors in Ontario, where budget allocated and balanced budget requirements tend to govern in-year spending.

Methods 1 through 5 (listed above) over-estimated actual spending in FY2009 (between \$33 and \$46 per person), while Methods 6 and 7 under-estimated actual spending in FY2009 (by \$6 and \$7

per person). Our findings suggest that Methods 6 and 7 are most appropriate. The results presented previously were all based on method 6.

The most significant reason for the difference between Methods 1-5 and Methods 6-7 is the way in which hospital costs (~ 50% of all costs) are projected. In the latter, costs associated with hospital base services are kept to 0.27% growth in real terms (2.1% nominal, as announced during the March 2009 Provincial Budget). In contrast, Methods 1-5 relied on historical compound annual growth rates (FY2006-2008) closer to 6%. With the benefit of hindsight, FY2009 marked the beginning of a period of economic and healthcare spending decline. Thus, projections based on historical growths overshot actual spending. Now, the opposite would have also been true if FY2009 marked the beginning of an economic boom.

We also conducted sensitivity analysis to see how different assumptions about the degree of behaviour change, as well as how different settings of the minimum savings rate (MSR) and the shared savings rate (SSR) would affect overall savings and other policy-relevant goals. We found, unsurprisingly, that our simulations were highly sensitive to behaviour change and the MSR; for instance, a high degree of behaviour change in combination with high MSR offered the greatest savings potential for the province. However, as the MSR increased, fewer and fewer ACOs qualified for shared savings (or losses). Our results suggest that a 2% MSR is optimal, allowing between 30% and 40% of ACOs to participate in shared savings (or losses, while still generating the same net savings). The importance of behavior change suggests that quality improvement capacity – the skills necessary to improve care (change behavior) – will be critical as will a more general approach to change management that encourages providers to work together.

Less important in terms of impact on net savings for the province was the SSR. While there is no one “best way” to share the savings and losses between the ACO and payer, our interviews with key stakeholders (discussed above) indicated that a 50/50 model would be a good starting point, but is ultimately too arbitrary; the ratio, they suggested, could be determined through negotiation and/or on a case-by-case basis.

We also conducted break-even analysis to understand how much savings networks would need to generate in order to cover the potential start-up and ongoing costs of operating an ACO. Data from the CMS Physician Group Demonstration in the US indicate that ACOs require start-up investments ranging from \$0.06M to \$0.63M and annual operating costs ranging from \$0.30M to \$2.03M. Our analysis of this data indicated that these costs are relatively fixed (i.e. do not vary with the number of physicians or patients). Even if start-up and operating costs of ACOs in Ontario were at the upper end of the CMS range, 16 of the 74 (22%) hypothetical ACOs would have broken even (or better) with a 1% behaviour change.

Finally, we wanted to know if it is financially viable for an ACO to concentrate its resources on reducing cost among the top 1%, 5% or 10% users of healthcare in the province. Results of our analysis show that under the same high start-up and operating cost scenario as above, ACOs could produce the equivalent amount of savings needed to breakeven through a 5.5%, 2.6% or 2.2% reduction in per person cost among the top 1%, 5% or 10% users of healthcare in the province,

respectively. These results suggest that it is would likely be financially viable for ACOs to concentrate their efforts on the high users of healthcare.

Policy context around ACO development in Ontario

Legislative context

This section discusses the legal considerations to the creation of networks of health service providers across the province. In preparing this review we assumed that the networks will be established through, or operationalized by, legislation/regulation, and could result in patients being required to use only the healthcare providers in one assigned Network.

Our legislative review focused on three questions regarding the creation of ACO networks in Ontario:

- What form of business structures can the networks take?
- Are there limits on self-referral and fee-sharing?
- Are there any competition law/anti-trust issues that could impact the operation of the networks?

This review was conducted for two models that we believed would fulfill the objectives of the ACOs in Ontario: an Ownership/Membership Model and a Contract Model. In the Ownership/Membership Model, a single ACO corporation (for-profit, not-for-profit or charitable; privately held or publicly held) would be the sole owner or sole member of each health service provider in its network. In that capacity, it would elect all of the directors of the health service provider. Through an accountability agreement, it would fund each provider to provide services to the provider's own patients. All providers that are part of this ACO corporation would agree to adopt policies and procedures determined by the ACO corporation. Any surplus funds realized by for-profit or charitable health service providers could be returned to the ACO corporation and redistributed. The ACO corporation or one health service provider selected by the ACO corporation would provide back office services to all members of the network through a service agreement.

The Contract Model would work in a similar fashion, but in that case, the ACO corporation would not automatically have the right to elect directors of the health service providers.

Issues relating to certain corporate/tax entities

As already noted, the ACO corporation could take the form of a for-profit, not-for-profit or charitable entity; a privately held or publicly held entity. Ontario's health service providers currently take all of these forms. There are a number of issues concerning the relationship between different forms of the ACO corporation and different forms of health service providers. These issues concern the charity status of health service providers when receiving funds from the ACO corporation, unanimous members' agreements and unanimous member declarations, and harmonized sales tax. A number of statutory amendments may be needed to deal with these issues, particularly if the Ownership/Membership model is pursued. These amendments would not be necessary under a Contract Model.

Possible statutory amendments

- Charities Accounting Act (Ontario): Under the Ownership/Membership model, it may be necessary to codify the Public Guardian and Trustee (PGT)'s position on director remuneration but make exception for members of the broader public sector. This is because the PGT has historically taken the view that it is an improper use of charitable dollars to pay remuneration to directors unless pursuant to a court order. In order to exempt the ACO Corporation or a health service provider, it may be necessary to statutorily permit it. This of course, would only be an issue for for-profit entities that could join ACO corporations.
- Not-For-Profit Corporations Act (Canada) & Not-For-Profit Corporations Act (Ontario): The Canada Corporations Act, the Corporations Act (Ontario) and the Business Corporations Act (Ontario) do not permit non-share capital corporations incorporated under them to transfer their board's authority to their members. If a health service provider is a not-for-profit entity, the ACO Corporation, in its role as a member, would be unable to obtain the decision making power of the directors of the health service provider. Under the Ownership/Membership model, it may be necessary to permit unanimous member agreements (UMAs) and unanimous member declarations (UMDs) to be adopted by soliciting corporations.

The tables below provide an overview of some important restrictions under different forms of relationships between the ACO corporation and health service providers. Table 2 provides an overview of issues when the ACO corporation is a for-profit corporation, and Table 3 provides an overview of issues when the ACO corporation is a Charitable Organization Corporation. These tables are not exhaustive, and more details are contained in the full legal review provided in the compendium to this report.

Sector-by-sector analysis of barriers to implementation of Networks

Appendix A provides a sector-by-sector analysis of the potential legal barriers to the implementation of networks in Ontario, as well as some system wide legal barriers. Where applicable, the Appendix also lists possible statutory amendments that may be considered. In this section we raise some of the key themes from this analysis.

- Under the Ownership/Membership Model several pieces of legislation may require amendments in order to ensure the successful implementation of the ACO model. Amendments to the Public Hospitals Act (Ontario), the Regulated Health Professions Act (Ontario), and the Long-Term Care Homes Act (Ontario) may be needed to ensure ACO corporations have full control over their management decisions (e.g., electing board members and establishing local by-laws), and to ensure that ACO corporations can take over ownership of health service providers that fall under their control.
- Under both the Ownership/Membership and Contract models, consideration will need to be given to the overlap of responsibilities between the ACO corporation and the Local Health Integration Networks (LHINs) and the Community Care Access Centers (CCACs).

- Under both the Ownership/Membership and Contract models there is the potential that the creation of ACOs will constitute “health services integration” for the purposes of the Public Sector Labour Relations Act (Ontario), which could extend bargaining rights in ways not potentially contemplated.
- Under both models there may be a need to extend the provisions of the Personal health Information Protection Act to the ACO corporations, and to ensure that all health service providers within a network can share health information and are members of a patient’s circle of care.
- Ensure that generally relevant statutes (e.g., Freedom of Information and Protection of Privacy Act, the Broader Public Sector Accountability Act, the Excellent Care for All Act, and the Public Sector Salary Disclosures Act, apply to all members of the ACO (or Network).
- Finally, once ACOs are defined, it may be necessary to conduct an analysis of conflict of interest provisions to ensure ACO corporations and their members are not in violation. A proprietary interest in a health business could in some circumstances give rise to conflict of interest; although, exemptions are often provided through adequate disclosure.

Table 2: With ACO corporation as a For-Profit Corporation

Considerations	Health Service Provider (HSP) Status		
	For-Profit	Not-for-Profit	Charity
Could a USD/UMS be put in place by which the ACO corporation could assume role of HSP board?	Yes	Likely No	Likely No
Could funding be provided by way of capital infusion without potential adverse tax effects?	Yes	Yes	No
Could HSP acquire and retain surplus revenues?	Yes	No	Yes
Could HSP return surplus funds to ACO corporation?	Yes	No	Yes
Could funding be provided by way of services agreement without potential adverse tax effects?	No	No	No
Could funding be provided by ACO corporation by way of grant (accountability agreement)?	Yes	Yes	Likely No
Is entity generally entitled to rebates / credits on HST paid?	Depends	Depends	Yes

Table 3: With ACO corporation as a Charitable Organization Corporation

Considerations	Health Service Provider (HSP) Status		
	For-Profit	Not-for-Profit	Charity
Could a USD/UMS be put in place by which the ACO corporation could assume role of HSP board?	Yes	Likely No	Likely No
Could funding be provided by way of capital infusion without potential adverse tax effects?	No	No	Yes
Could HSP acquire and retain surplus revenues?	Yes	No	Yes
Could HSP return surplus funds to ACO corporation?	Yes	No	Yes
Could funding be provided by way of services agreement without potential adverse tax effects?	Not completely but there would be some relief	Not completely but there would be some relief	Not completely but there would be some relief
Could funding be provided by ACO corporation by way of grant (accountability agreement)?	Yes	Yes	Yes
Is entity generally entitled to rebates / credits on HST paid?	Depends	Depends	Yes

Conclusion of legal review

The Ownership/Membership Model and the Contract Model could be implemented with very little regulatory change. However, these Models would work best with some regulatory changes, which have been listed above and in Appendix A. Before contemplating regulatory changes, it will also be important to identify the key goals for the ACO corporations. If these goals are focused on the better management of complex chronic illness (e.g. high users), then the need to bring in diverse groups of providers such as labs, physicians, hospitals and different lines of funding such as physician services and drugs, will increase the pressure for regulatory changes. If the goals are narrower – for example, reduction in readmission rates – then the pressure for regulatory change will be less along with the complexity of potential changes.

Policy context

In addition to the existing legal context, considering the implementation of an ACO model in Ontario requires a careful analysis of the opportunities and barriers presented by the policy context.

First, the implementation of ACOs is consistent with the current provincial priorities linked to improving the quality of healthcare delivery and increasing health system sustainability. These provincial priorities were clearly articulated in the recent Action Plan for Healthcare and by the Excellent Care for All Strategy, and evidence suggests that the US ACO model has promise in terms of improving the quality and coordination of care delivered (Sebelius 2009, Silow-Carroll and Edwards 2013). In addition, the ACO model aligns with provincial priorities tied to improving the value of healthcare services, which is also presented in Ontario's Action Plan for Healthcare. The evidence concerning the cost savings that can be achieved with the ACO model are mixed; however, our simulations indicate potential for cost savings for the province.

Second, there may be opportunities to leverage existing provincial initiatives to support the implementation of ACOs in Ontario. The recent announcement and ongoing implementation of the Health Links may provide a basis from which to implement ACOs in Ontario. The Health Links are intended to improve collaboration between various sectors of healthcare providers, including primary and acute care, to better integrate care for more complex patient populations. The integration of various sectors will be important for the implementation of the ACOs and the success of a shared savings program. However, Health Links are still in their very early stages of implementation, and it is unclear at this point what they will look like and how they can be leveraged to support ACOs.

In addition, one of the priorities of the Excellent Care for All Strategy has been the implementation of patient-based funding reform for hospitals. These reforms aim to have funds follow the patient through an entire episode of care and to fund hospitals based on performance, as opposed to the existing practice of providing global budgets based on historical spending. The shared savings concept that supports the ACO model follows a very similar logic, but aims to expand the episode of care beyond the hospital setting, and encourage collaboration between key health service providers across the healthcare system. Thus, the introduction of the shared savings concept should not be foreign to health services providers already adjusting to the implementation of patient-based payment. However, the MOHLTC will have to consider how shared savings will overlap with and/or complement the ongoing implementation of patient-based payment and capitated models across the health system.

Policy Enablers

There are a number of policy enablers that need to be in place for ACOs to be successful in the Ontario context. These enablers will support the integration of healthcare providers across the continuum of care, and enable the implementation of risk shifting within ACOs. Some of these are already in place, while others should be pursued.

With respect to integration, there are already permissive self-referral and fair anti-competition laws that give providers the ability to create large groups and refer patients to other providers who are members of those groups and who share a common financial interest. However, more effective governance is needed to ensure clinical leadership across sectors. As already mentioned in our legal review, the LHINs and the ACOs present a potential source of overlap in roles and responsibilities.

MOHLTC will need to consider how the accountability relationships between ACOs and LHINs will function, and how their respective roles will be distinguished.

In addition, the structure of primary care in Ontario may present some barriers for the implementation of the ACO model from a governance standpoint. The majority of primary care practices have very limited financial and performance accountabilities to MOHLTC. Also, with the exception of large multidisciplinary practices (i.e., Family Health Teams and Community Health Centres) there is currently limited capacity to bring together primary care practices to participate in provincial or regional initiatives, such as the implementation of ACOs. Some type of community governance structure for primary care would potentially be helpful to speed ACO implementation.

With respect to enabling risk shifting, the province already has the capability to use administrative data to monitor risks to achieving quality targets, and the ability to shift care out of expensive settings (e.g., shifting care from hospitals into the community). However, there are also a number of barriers that will need to be addressed. First, there are no clear and long-established priorities for quality goals, and providers do not currently have access to interoperable electronic medical records, which will be essential for sharing information across sites to support the achievement of quality targets. There is also a potentially serious lack of management capacity, particularly at the physician practice level, to monitor performance and cost thresholds. There are also issues with respect to professional roles and the sharing of responsibility between different providers and care sites. There are also issues with contradictory financial incentives, particularly with respect to physician payment. Primary care practices are currently remunerated under a variety of payment models (e.g., fee-for-service, capitation, salaried), which may not necessarily align with the objectives of a shared savings program. In the US, some have proposed moving all primary care providers to a capitation-based system (Crosson, 2011); however, others have suggested that current capitation-based payment schemes in Ontario do not adequately account for differences in complexity across patient populations (Glazier, 2009; Sibley, 2012). It will be important that financial incentive models ensure that one portion of the system does not necessarily gain at the expense of another.

Discussion & Recommendations

The current paper suggests that it is possible and potentially even desirable to implement ACO-like models in jurisdictions like Ontario. The policy context in Ontario is similar to that in other provinces in terms of the major drivers of any health reform. Improvements in both cost and quality are a key priority in virtually all provinces as Canada struggles with the effects of a global economic downturn and consistently rising healthcare costs. In comparison to the US, Ontario and other provinces have more permissive self-referral laws and less concern over anti-competitive behaviour. These were not significant issues in the legal and policy review and reduce the need for many of the regulatory changes required to make ACOs possible in the US. Ontario, again like many provinces, is well positioned with its wealth of administrative data and strong history of performance measurement to monitor and report on quality standards.

However, many of the other enablers of strong performance may be missing in Ontario and other provinces. Much of the success reported in the literature on cost and quality comes from systems that are already recognized as high-performing health systems. These systems have relatively strong clinical governance, quality improvement capacity, and integration of clinical services. They generally have good access to financial capital to support improvements and strong technology (e.g. electronic health record) infrastructure. The critical role of governance more generally has been emphasized in reviews of the ACO implementation (Singer and Shortell, 2011). These are issues that require investment and development in Ontario and other provinces and have been called out in repeated reports.

A critical issue to the implementation of ACO-like vehicles is the development of financial models that support gain-sharing. This review suggests that there are a number of critical decisions to be made in any jurisdiction. A first set of issues relate to how different types of providers such as hospitals, community labs, and physicians can share financial risk. The study concludes that in Ontario it would be possible to begin ACO-like vehicles with little or no regulatory change, particularly if they follow a contractual model instead of an ownership model. Given concerns noted above about maturity of governance skills across our healthcare system, the question of how to establish ACO-like vehicles should not hinge only on feasibility or ease of implementation. Ownership models will create shorter and easier lines of decision-making, may provide a stronger focus for developing governance capacity and should have lower transaction costs than contractual models. However, it will be more difficult to implement an ownership model within the current legislative framework. Regardless of the province, the ownership model will also require a fundamental reconceptualization of the role of Local Health Integration Networks (LHINs) and regional or provincial health authorities and agencies such as Alberta Health Services or Cancer Care Ontario. Contractual models may provide a scalable platform for experimentation and evaluation that are politically and administratively feasible. They also do not raise the potentially politically challenging question of how for-profit and not-for-profit providers work more closely together.

A second set of critical issues has to do with the most appropriate method of constructing financial models. Important assumptions such as the right growth rate for modeling health expenditures, the shared savings rate, and the minimum savings rate will affect the success of ACO-like vehicles and their ability to support health system sustainability. Some of these questions – such as the appropriate way to model health expenditures – can be answered through data in each province to make sure that estimates of cost growth reflect reality. Other questions – such as the right shared savings rate – will require the creation of some sort of payer-provider consensus and will require engagement exercises in each jurisdiction to get the right number.

However, all of these decisions about financial modeling hinge on a more critical decision about the focus (foci) for ACOs in terms of quality goals. In the US, a critical step was to decide those quality dimensions on which improved performance would be a critical gate to participation in gain-sharing. Depending on how Ontario or other jurisdictions define *and* prioritize those goals, the extent of integration will be smaller or larger. For example, focusing performance goals on patient

safety in hospital will require integration or collaboration between hospital-based physicians and hospitals but stronger management of complex chronic disease would need to also include community-based doctors, drug programs and community-based labs at a minimum. Moreover, as these goals get broader, it will be hard to avoid moving towards outcome measures and still encourage integration. If the goals for management of complex chronic disease focused on common process measures that occur largely within one sector – such as appropriate testing and follow-up of diabetes patients – it is unlikely that the measures (and hence the savings) will encourage any real cross-sectoral integration. At the same time however, this means that ACO-like vehicles may be evaluated on outcome measures like diabetic complications and these sorts of measures may not change quickly nor will poorly integrated or governed ACO-like vehicles be able to capture their member's commitment to these sorts of goals.

The question of goals has important implications for the evaluation framework for any implementation of ACO-like vehicles. Fisher and colleagues (2012) have already laid out a framework for evaluating the formation, implementation, and performance of ACOs in the US that emphasizes the importance of qualitative and quantitative measurement and a formative approach that can help coach implementation. To this point, we would add that it will be important to connect outcome measures that reflect the longer-term impact of ACOs on populations (such as diabetic complications), to utilization measures like ambulatory care sensitive admissions for diabetes, to process-based measures like appropriate care for diabetes patients using logic models or strategy maps. These will provide guidance to ACOs as they establish their structures and processes and will provide some indication of whether change is happening before outcome measures necessarily change. This sort of model, however, will also require monitoring and reporting of a wide range of quality indicators to prevent synecdoche, ratchet effects, and other problems noted by Bevan and Hood (2006). Moreover, performance reporting seems to be a common element of health systems that have had some success in linking improvements in cost and quality.

Thus the most critical, or at least the first, element of establishing ACO-like vehicles in Canada is likely the articulation of clear goals and creation of a performance evaluation and reporting system around these goals from which all other policy innovations can happen. To make this sort of effort strongest, the usual comments around the importance of timely, granular, and valid reporting apply.

Finally it should also be noted that ACO-like vehicles will likely not fix all the problems within the healthcare system such as equity. They may help reduce horizontal inequities, that is, small area variations in how people with the same needs are treated, but they will not necessarily reduce vertical inequities – whether people with different needs are treated differently and in proportion to those needs – without specific attention to those differences. Likewise, patient experience will not improve unless it is explicitly included in the set of quality indicators that are targets for improvement as was done in the US. Once again, these issues take policy-makers back to the question of goals and performance monitoring.

Appendix A: Sector-by-Sector Legal Barriers

Sector	Barriers / Possible Amendments
Public Hospitals	<p>The Public Hospitals Act (PHA) sets out restrictions related to incorporation of a public hospital. If the ACO corporation would not be seeking to incorporate a public hospital, these provisions would not apply.</p> <p>There is no barrier to a not-for-profit entity being the sole member or shareholder of a public hospital (as is the relationship of the ACO corporation and the public hospital in the Ownership/Membership Model), subject to the capitalization requirements when the ACO corporation is a for-profit entity.</p> <p>By-law amendments would be required to effect that change, since most hospital by-laws contemplate multiple members. Ministry has the power to enact regulations relating to the approval of the by-laws, and to require hospital by-laws to be amended again in accordance with regulations that have not yet been enacted. A future by-law requiring multiple members would be inconsistent with the Ownership/Membership Model; these rights should be eliminated.</p> <p>The PHA permits the Ministry of name individuals to be elected to a hospital board. In order to meet the objectives of the Ownership/Membership Model that the ACO corporation have some certainty with respect to its control rights, it may be desirable to remove this provision.</p> <p>Complete control cannot be assured so long as the PHA continues to permit the Lieutenant Governor to appoint a supervisor to a public hospital where, (i) recommended by the Minister of Health and Long-Term Care, and (ii) it is determined to be in the public interest. It may be concluded that this power on the part of the Ministry is an appropriate limitation on the Ownership/Membership Model, but if not, the section should be eliminated.</p> <p>Possible Statutory Amendments</p> <p>Public Hospitals Act (Ontario): For the Ownership/Membership Model remove provisions giving Minister right to: (i) determine form of by-law to be adopted, (ii) to determine board composition and (iii) appoint a supervisor.</p>
Private Hospitals	No barriers.

Sector	Barriers / Possible Amendments
Independent Health Facilities (IHF)	No barriers. The ACO corporation would be permitted to be the sole member or the sole shareholder of an IHF provided a new IHF license is granted or an existing IHF license is transferred in accordance with the conditions set out in the Independent Health Facilities Act.
Regulated Health Professions / Professional Incorporation	<p>Because all the shares of a professional corporation must be owned by members of the profession, an ACO corporation could not own shares in a professional corporation unless all of the shares in the ACO corporation were also owned by one of the multiple physicians (or their spouses and/or children).</p> <p>A professional corporation would be prohibited from being a shareholder or a member of the ACO corporation unless a reasonable argument could be made that the activities of all the health service providers owned by the ACO corporation are related to or ancillary to the practice of medicine or unless the share ownership could be justified on the basis that it was a temporary investment of surplus funds earned by the Corporation.</p> <p>A professional corporation would not be prohibited from entering into services agreements with the Networks under the Contract Model, so long as the services provided are related to or ancillary to the practice of medicine.</p> <p>If professional corporations are to be shareholders or members of the ACO corporation or owned by the ACO corporation, the legislation governing physician professional corporations would need to be amended.</p> <p>Possible Statutory Amendments</p> <p>Regulated Health Professions Act (Ontario) and related provisions of the Business Corporations Act (Ontario): For the Ownership/Membership Model permit shares to be owned by non-physician other than family members.</p>
Rehabilitation Clinics	No barriers. An ACO corporation could own any of these clinics, and would be free to enter into service agreements under the Contract Model.

Sector	Barriers / Possible Amendments
Pharmacies	<p>Pharmacies operating under a Pre-54 Charter — a corporation that was operating a pharmacy on May 14, 1954 — must be owned by the same corporation that holds the Pre-54 Charter; specifically, the pharmacies cannot be operated by subsidiaries of that corporation.</p> <p>The ACO corporation can only own a pharmacy if: (i) a Pre-54 Charter was obtained (although a majority of the directors of the ACO corporation would have to be Registered Pharmacists), or (ii) the Drug and Pharmacies Regulation Act (Ontario) was amended to exempt the Network from the ownership requirements.</p>
Home Care	<p>The Home Care Community Services Act (HCCSA) recognizes the concept of “Approved Agencies” that coordinate home and community services.</p> <p>The HCCSA places limits on the tax status these agencies in that they must be not-for-profit or operated by a municipality or an organization operated under the authority of a First Nation, or group of First Nations, or an Aboriginal community.</p> <p>In certain circumstances the Minister has a right to replace the directors of the agencies and can control, operate and manage the agency.</p> <p>The Ministry has the right to restrict the amounts charged by these agencies.</p> <p>However, the government has not yet recognized any Approved Agencies, and they have been excluded from this model.</p>

Sector	Barriers / Possible Amendments
<p>Long-Term Care Homes (LTCHs)</p>	<p>The Long Term Care Homes Act, 2007 (LTCHA) sets out requirements related to licensing and ownership, and restrictions for the transfer of shares in an LTCH corporation.</p> <p>Limits on Eligibility for License: LTCHA sets out considerations that apply to Minister’s decision to grant a license to operate an LTCH. While not contemplated under Ownership/Membership Model or Contract Model, the ACO corporation could own an LTCH directly if it made an application, and was approved by the Minister, in accordance with the LTCHA.</p> <p>Limits on Eligibility for License: No interest in a license issued under the LTCHA may be transferred except by the Director appointed by the Act. The LTCHA prohibits any person from gaining a controlling interest in a licensee by any method without obtaining approval of the Director. Any such approval is subject to restrictions imposed by the Minister and to conditions imposed by the Director.</p> <p>Restrictions, non-profit to for-profit: The LTCHA prohibits a non-profit entity from transferring a license to a for-profit expect where the transfer occurs as a result of the exercise of a security interest over the license granted by an obligee to the holder of the license, and only where the license holder made reasonable efforts to avoid the default, and the exercise of the security interest compels the transfer. The same prohibitions apply to the transfer of equity shares in the capital of a not-for-profit license holder.</p> <p>Provisions also relate to a change in the controlling interest of a not-for-profit license holder, which are broad enough to capture a transfer of its controlling membership interests. It is likely the Director would rarely, if ever, approve the transfer of membership interest of a not-for-profit license holder to a for-profit entity.</p> <p>Requirements Relating to Management Contracts: A for-profit ACO corporation could manage a not-for-profit LTCH under an Ownership/Membership Model, rather than be its sole member pursuant to a written management agreement approved by the Director. The agreement would need to specify: (i) any funding under the LTCHA will be paid to the licensee, rather than the manager, and (ii) any change in who has the controlling interest in the manager under the contract shall be deemed to be a material amendment to the contract which requires the Director’s approval.</p> <p>Conclusions: (i) without regulatory change, it is unlikely that a for-profit ACO corporation could become the sole member of a not-for-profit LTCH; (ii) there is nothing in the LTCHA that would prevent a for-profit or not-for-profit ACO corporation from acquiring all of the shared of a for-profit LTCH, so long as the ACO corporation satisfied the Director that it was duly qualified, etc.; and (iii) there is nothing in the LTCHA that would prevent a not-for profit ACO corporation from becoming the sole member of a not-for-profit LTCH, so long as the ACO corporation satisfied the Director that it was duly quality, etc.</p>

Sector	Barriers / Possible Amendments
Mental Health Facilities	No barriers. There is nothing in the Mental Health Act (Ontario) that would prevent a mental health facility from having as its sole shareholder or member a single corporation or entering into a services contract regarding the provision of its services.
Diagnostic Imaging	<p>Magnetic Resonance Imaging (MRI) — No barriers. No impediment to the Contract Model or the Ownership/Membership Model so long as: (i) the health service provider is using the MRI equipment in compliance with Regulation 964 to the PHA; and (ii) the application, or the ordering of the application, of the MRI was down by a regulated health professional who has been given the authority by their profession specific act.</p> <p>CT Scanners / PET Scanners / X-Ray Imaging — No barriers. No impediment to the Control Model or Ownership/Membership Model so long as the health service provider operated the CT Scanner / PET Scanner / X-Ray machine in compliance with HARPA.</p> <p>Ultrasound Imaging — No barriers. No impediment to the Contract Model or the Ownership/Membership Model so long as the application or ordering of the application of the ultrasound occurred in accordance with the RHPA and Controlled Acts Regulation to the RHPA.</p>
Laboratories	No barriers. The legislation relevant to laboratories does not impede the ability of the ACO corporation and a laboratory from entering into either the Contract Model or to the Ownership/Membership Model so long as any transfer in ownership is approved by the Director, the laboratory complies with the provisions set out in The Laboratory and Specimen Collection Centre Licensing Act (Ontario), and its laboratory technologists comply with the provisions set out in the Medical Laboratory Technology Act.
Other Health Law Provisions of Broader Application	

Sector	Barriers / Possible Amendments
Local Health System Integration Act and Service Accountability Agreements	<p>In proceeding with the implementation of either Model, consideration will have to be given to the future role of the Location Health Integration Networks (LHINs). The LHINs' powers, while not entirely incompatible with the proposed powers of the ACO corporations, would certainly result in much duplication of effort within the Networks.</p> <p>If the LHINs continue to exist and if the Networks are in existence, consideration will have to be given to who, if anyone, should enter into and Accountability Agreement with the LHIN. Presumably, it should be just the ACO corporation.</p> <p>Possible Statutory Amendments</p> <p>Local Health System Integration Act (Ontario): For the Ownership/Membership and Contact Models, consider whether the LHINs should continue to exist. If so, consider restriction of their scope of powers to remove some duplication. Determine who should enter into accountability agreements with the ACO corporations.</p>

Sector	Barriers / Possible Amendments
Community Care Access Corporations	<p>Consideration would need to be given to whether it would be appropriate to have the ACO corporations assume the role of the Community Care Access Centres (CCACs) under either Model. If it is determined that they should continue to exist, then the following issues would be relevant:</p> <p>It is important that if CCACs assume a role with the Network that the agreements between the ACO corporations and the CCACs are cast as accountability agreements rather than service agreements.</p> <p>In order to enact the Ownership/Membership Model, it will be necessary to amend the CCAC Act to (a) allow a majority of the directors to be elected by the ACO corporation; and (b) permit a person other than the directors to be the member of the CCACs.</p> <p>Possible Statutory Amendments</p> <p>Community Care Access Corporations Act (Ontario): For the Ownership/Membership and Contact Models consider whether the CCACs should continue to exist. If so, consider how they will interact with the ACO corporations. If they are to become owned by the ACO corporations, then amend the Act to (a) allow a majority of the directors to be elected by the ACO corporation; and (b) permit a person other than the directors to be the member of the CCACs.</p>
Public Sector Labour Relations Transition Act (Ontario) (PSLRTA)	<p>Assuming health service providers are existing entities and that they will continue to provide the same services as a part of the Network, our view is that establishment of the Networks should not constitute health services integration. If incorrect, then the establishment of the Networks could constitute integration for the purposes of PSLRTA and result in the extension of bargaining rights in ways potentially not contemplated. Consideration should be given to clarifying (and limiting) the application of the Act.</p> <p>Possible Statutory Amendments</p> <p>Public Sector Labour Relations Transition Act (Ontario): For the Ownership/Membership and Contact Models revise definition of integration to specifically exclude these arrangements.</p>

Sector	Barriers / Possible Amendments
Personal Health Information	<p>In order for the Networks to operate in the integrated cohesive manner intended and for the ACO corporations to assume the desired degree of accountability, provisions under the Personal Health Information Protection Act (Ontario) should be extended to the ACO corporations. At the same time, consideration should be given to formally defining each HSP within a Network as constituting a member of a patient's circle of care.</p> <p>The PHA provides a record of personal health information compiled in a public hospital for a patient is the property of the hospital and must be kept within the custody of the administrator. Consideration needs to be given to the extent that this requirement would impede the Networks' ability to maintain a common health record.</p> <p>Possible Statutory Amendments</p> <p>For the Ownership/Membership and Contact Models extend access rights of the LHINs to the ACO corporations.</p> <p>For the Ownership/Membership and Contact Models define each member of the Network as part of a patient's circle of care.</p>
Other statutes relevant to health service providers	<p>Other statutes that are generally relevant include the Freedom of Information and Protection of Privacy Act, the Broader Public Sector Accountability Act, the Excellent Care for All Act, and the Public Sector Salary Disclosure Act.</p> <p>Possible Statutory Amendments</p> <p>For the Ownership/Membership model, consideration needs to be given to the desirability of creating consistent application to all Network members.</p>
Other Issues	

Sector	Barriers / Possible Amendments
Limits on self-referral and fee-sharing	<p>A proprietary interest in a health business could in some circumstances give rise to a conflict of interest. The Networks could create a conflict of interest, although regimes often provide a general exception through adequate disclosure.</p> <p>Even the most broadly worded conflict provision can often be avoided if the regulated health professional: (i) provides prior disclosure to the patient of his or her financial interest that gives rise to the conflict of interest, and (ii) otherwise maintains the standards of practice of the profession.</p> <p>The referral of patients to businesses or facilities where the health professional holds a financial interest will also likely be a conflict of interest. Exceptions to this may be permitted in cases where the return on the health professional's investment is based on the equity or interest in the facility, and not on the volume of patient referrals made by the health professional.</p> <p>Conflicts caused by ownership can often be cured through adequate disclosure. In the case of ownership this may include: (i) prior to referral, the health professional fully discloses the interest he/she has in the facility to the patient; and (ii) ensuring the patient understands that they are able to seek services from alternative providers.</p> <p>In the context of the Ownership/Membership Model, such a disclosure would most likely be required where a health professional had an ownership interest in the ACO corporation and where he or she made a referral to any other member of the Network that was wholly owned, or in part, by the Network.</p> <p>In the context of the Contract Model, such a disclosure would be required in all of the circumstances it is currently required and, more broadly, where a health professional had an ownership interest in the ACO corporation and where he or she made a referral to any other member of the Network that was owned wholly, or in part, by the Network.</p> <p>Once the Networks are better defined, an analysis of the conflict of interest regulatory provisions in place for each regulated health profession will need to be analyzed to ensure they would permit participation in the Network.</p>

Sector	Barriers / Possible Amendments
<p>Competition Law / Anti-Trust Issues</p>	<p>The Networks could potentially give rise to issues under the Competition Act (Canada). To the extent that the Networks are being created or authorized by provincial statute or regulation, the common law “regulated conduct defence” (RCD) could apply to displace the application of the criminal provisions of the Competition Act. There is also an argument that the RCD should also displace the application of the civil provisions of the Competition Act, although there is very little case law in this respect and the Competition Bureau’s position is that the RCD does not necessarily apply to oust the application of the civil protections Act.</p> <p>It may be prudent to seek an advisory opinion from the Competition Bureau that the proposed Networks would not raise concerns under the civil provisions of the Competition Act.</p> <p>Possible Statutory Amendments</p> <p>Competition Act (Canada): For the Ownership/Membership and Contract Models allow Networks to fix prices, allocate markets, customers or territories or output of services; and amend sections dealing with refusal to deal, exclusive dealing/market restriction or abuse of dominance.</p>

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