strong primary care system is consistently associated with better and more equitable health outcomes, higher patient satisfaction and lower costs (Starfield et al. 2005). Access to primary care has proven to be challenging in Canada, leaving it behind many developed countries in timely access and after-hours care, and more dependent than most on the use of emergency departments (Schoen et al. 2007). Canadian jurisdictions have struggled with improving access to primary care, and many have made substantial reforms, the nature of which varies across the country (Hutchison et al. 2011). The common elements of reform include organizing physicians into groups with shared responsibilities, inter-professional teams, electronic health records, changes to physician reimbursement, incentive and bonus payments for certain services, after-hours coverage requirements, and telehealth and teletriage services.

Ontario’s initiatives have been substantially different from those of other provinces in the scope, size of investment and structural changes that have been implemented. Ontario’s new primary care models now involve three-quarters of both the population and primary care physicians. The value of new funds invested in primary care models exceeds $1 billion per year. Structural changes have led to the creation of 200 new inter-professional family health teams caring for more than two million people. Close to 40% of comprehensive primary care physicians now receive a blend of payments, with the majority of their income generated through capitation (a fee per person enrolled).

Models of Primary Care
Ontario introduced new payment models including the blended capitation family health network (FHN) in 2001–2002 and the family health organization (FHO) in 2005, and a blended fee-for-service model, the family health group (FHG), in 2002–2003. These models have the same requirements for evening and weekend clinics, and for their physicians to be on call to an after-hours, nurse-led teletriage service. All of these models undertake formal patient enrolment known as rostering. Bonus payments for after-hours care and incentives for cancer screening and chronic disease prevention and management are largely confined to enrolled patients. Physicians participating in any of these models also receive special payments for enrolling unattached patients, especially those recently discharged from hospital, including new mothers and babies, those with positive fecal occult blood results and those considered to be complex/vulnerable. The capitation models (FHN and FHO) have a special additional payment, an access bonus, that comprises roughly 20% of capitation payments. The access bonus is reduced dollar for dollar for primary care use outside the group practice for a defined basket of services up to a maximum of the total bonus payment to the group. Importantly, it is not reduced for emergency department use. Physicians in the FHN and FHO models of blended capitation are eligible to form or join an inter-professional family health team, but physicians in the fee-for-service FHG model and those not in a model are not eligible. The Ontario Ministry of Health and Long-Term Care (MOHLTC) support for family health teams includes payments for the full cost of salaried inter-professional team members (nurses, nurse practitioners, dietitians, pharmacists, social workers and others), an executive director and electronic medical records. According to the Office of the Auditor General of Ontario (2011), payments supporting family health teams reached $200 million in 2009–2010.

Purpose
The goal of this article is to examine measures of access to primary care in relation to the investments made in Ontario’s patient enrolment models, with a view to deriving lessons that may apply to Ontario and other jurisdictions.

Data Sources
The data sources used in this report were accessed through a comprehensive research agreement with the MOHLTC. The databases used included physician claims from the Ontario Health Insurance Plan, alternative payments from the Generalized Alternate Payment Plan and Architected Payments databases, enrolment in primary care models from the Client Agency Program Enrolment tables, physician specialty from the Corporate Physician Database, eligibility for healthcare coverage from the
Registered Persons Database, emergency department visits from the National Ambulatory Care Reporting System, and access to primary care from the Primary Care Access Survey (MOHLTC 2010). Databases were linked using a unique encrypted identifier.

Approval for this research was granted by the Research Ethics Board of Sunnybrook Health Sciences Centre in Toronto, Ontario.

Investments
Mean gross payments from the MOHTLC per full-time equivalent (FTE) primary care physician totalled $300,100 in 2009–2010 compared with $166,200 in 1993–1994, an increase of 5% per year (unadjusted for inflation) when averaged over 16 years (Henry et al. 2012). However, the rate of increase was not steady, rising from 2% per year in the 1990s to nearly 9% per year after 2004–2005. In comparison, payments to all Ontario physicians totalled $334,700 per FTE in 2009–2010 compared with $194,500 in 1993–1994, an increase of 4% per year, unadjusted for inflation (Henry et al. 2012). For primary care physicians, fee-for-service payments remained relatively flat over the entire period, while capitation payments rose rapidly after 2004–2005 and accounted for a large proportion of the increase in payments. The number of FTE primary care physicians declined between 1993–1994 and 1999–2000 but increased by 10% between 1999–2000 and 2005–2006 and by 8% between 2005–2006 and 2009–2010.

Two categories of payments were designed specifically to enhance the retention in care of enrolled patients and to improve access to care: the access bonus and payments for enrolling unattached patients. Figure 1 shows these two annual payments that, respectively, reached $52.1 million and $22.9 million in 2010–2011.

Access to Care
Access to primary care can be considered along many dimensions (Haggerty et al. 2011). For Ontario decision-makers, key measures are the number and proportion of Ontarians who are attached to a primary care provider (MOHLTC 2011). Timely access to care has numerous potential health system benefits (Fournier et al. 2012), but Canada scores poorly in international comparisons of this measure (Schoen et al. 2007). Individuals who cannot access timely primary care or after-hours care often seek care in walk-in clinics or hospital emergency departments.

Figure 2 presents some key measures of access during the period in which substantial investments were made, including access bonuses, payments for enrolling unattached patients and payment increases for primary care physicians and teams. Over the period, changes in access were small in magnitude. Patient attachment to a primary care provider increased from 91 to 95%, the proportion of patients who could obtain same- or next-day appointments with a doctor or nurse decreased from 52 to 47%, the number of emergency department visits remained around 39 per 100 population, and the proportion of individuals with walk-in clinic visits decreased slightly from 25 to 23%.

Lessons Learned
Several lessons were learned from the examination of measures of access to primary care in relation to the investments made in Ontario’s patient enrolment models, and these are discussed below.

It is possible to successfully grow the primary care workforce. Ontario’s primary care workforce has increased substantially following a decline; this increase was likely due to a combination of higher incomes and the funding of inter-professional teams. Increased medical school enrolment and the establishment of a primary care–focused Northern Ontario School of Medicine also likely played a role. Ontario family physicians have high levels of reimbursement as well as work satisfaction.
All the Right Intentions but Few of the Desired Results

(Green et al. 2012), almost certainly due to investments in primary care models. While these trends are evident in other provinces, they are more marked in Ontario.

**Having a doctor does not mean a patient can see that doctor in a timely way.** Rates of attachment to a primary care physician increased, an important accomplishment that may have been related to an increase in the numbers of primary care providers and to incentives for enrolling unattached patients. Annual costs for enrolling unattached patients reached more than $20 million. Despite this increased attachment, the chance of being seen in a timely way did not improve. Ontario’s primary care models require evening and weekend clinics and on-call duties, and penalize practices for out-of-group primary care visits; therefore, these findings are unexpected. While many factors are likely involved, Ontario’s auditor general noted two major faults: not establishing mechanisms for ongoing monitoring and evaluation, and not enforcing practices’ contractual obligations, especially for after-hours care (Office of the Auditor General of Ontario 2011). Ontario’s organizational models have no requirement for timely access to care, and only limited resources have been directed to supporting advanced access—a system that promotes same-day and next-day appointments (Health Quality Ontario 2011).

**The details of how incentives are structured matter.** The access bonus is reduced by outside primary care use but not by emergency department visits. Physicians responding rationally to such a financial incentive would logically direct their patients away from walk-in clinics and toward emergency department visits. The access bonus also strongly discourages healthcare groups from working together to provide late evening and night coverage because all parties would lose financially. An incentive that costs more than $50 million annually should be structured to align better with health system needs.

**Financial incentives may not improve quality of care.** Just as timely access did not change despite new requirements and incentives, improved quality of care cannot be ensured through bonuses and incentive payments. A recent systematic review found insufficient evidence to support or not support the use of financial incentives to improve the quality of care (Scott et al. 2011). In Ontario, there was little relationship between incentive payments and changes in diabetes care (Kiran et al. 2012), nor were there substantial improvements in most aspects of preventive care despite substantial incentives (Hurley et al. 2011). Similar cautionary tales about pay-for-performance can be found elsewhere in the health system (Jha et al. 2012).

**The inverse care law can easily prevail.** It is often the case that those who need care the least (the healthy and well educated) get it the most (Hart 1971). Ontario adjusts capitation for only age and sex, whereas most other jurisdictions further adjust for expected healthcare needs, patient complexity and/or socioeconomic disparities (e.g., the Johns Hopkins Adjusted Clinical Groups http://www.acg.jhsph.org/). That may be why Ontario’s primary care capitation models have attracted healthier and wealthier practices (Glazier et al. 2012). Among patient enrollment models, fee-for-service FHGs have the sickest patients (Glazier et al. 2012) yet do not qualify to join the family health teams that could provide needed resources to their patients. More adequate adjustment for need and/or increased payments for patient complexity would help to remedy this inequitable situation. Community health centres care for disadvantaged populations with superior outcomes (Glazier et al. 2012; Russell et al. 2009) and could play a larger role in Ontario’s health system.

**Resources and accountability should be aligned across sectors to match health system goals.** Ontario policy makers place high priority on avoiding emergency department visits.
overcrowding and costly hospital admissions and readmissions (Health Quality Ontario 2012). Arguably, these aims require the strong engagement of primary care, but they cannot be met entirely within that sector because hospitals and community care providers also play major roles. Aligning resources and accountability across sectors is needed to accomplish health system goals.

Measurement and accountability are required. Unlike some other jurisdictions (National Health Service Information Centre for Health and Social Care 2012), Ontario has no routine measurement of primary care at the practice, group or community levels. It has no organized structures, such as the Divisions of General Practice in Australia (Australian Department of Health and Ageing 2012) or the Divisions of Family Practice in British Columbia (2010), that can help practices come together to improve care. It has also failed to hold practices accountable for their contractual obligations, including after-hours clinics. Without measurement and accountability, it is not possible to tell if improvements have occurred, if groups are meeting their obligations or if investments have yielded the desired results.

Conclusions
Despite Ontario’s major investments in primary care, which have resulted in a re-invigoration of the sector and produced new inter-professional teams, many patients continue to be without timely access to care, and the use of walk-in clinics and emergency departments remains high. How primary care renewal is structured appears to matter a great deal, including the fine details of incentives and payment schemes, and whether resources are directed within primary care alone or across sectors to align with system goals. Ontario’s reforms occurred in the absence of routine measurement of primary care within practices, groups or communities and with limited accountability for how funds were spent. The increase in primary care providers after a period of decline may have prevented a further erosion of access to care and is likely to bring longer-term health system benefits. At this stage, however, re-examination and reform of the provisions of Ontario’s patient enrolment models appear to be required.

Acknowledgements
This study was supported by the Institute for Clinical Evaluative Sciences (ICES), which is funded by an annual grant from the MOHLTC. The opinions, results and conclusions reported in this article are those of the authors and are independent of the funding sources. No endorsement by ICES or the MOHLTC is intended or should be inferred. This work was also supported by the Canadian Institutes of Health Research, grant MOP-86552.

References


Russell, G.M., S. Dahrouge, W. Hogg, R. Geneau, L. Muldoon and M. Tuna. 2009. “Managing Chronic Disease in Ontario Primary Care:


**About the Authors**

Richard H. Glazier, MD, MPH, CCFP, FCFP, ABPM, is a senior scientist at the Institute for Clinical Evaluative Sciences (ICES) in Toronto; a scientist with the Centre for Research on Inner City Health at St. Michael’s Hospital; and a professor in the Department of Family and Community Medicine, University of Toronto and St. Michael’s Hospital.

Alexander Kopp, BSc, is an analyst at ICES.

Susan E. Schultz, MA, MSc, is an epidemiologist at ICES.

Tara Kiran, MD, MSc, is a research scholar with the Department of Family and Community Medicine, University of Toronto and St. Michael’s Hospital; and a family physician at St. Michael’s Hospital.

David A. Henry, MBchB, MRCP, FRCPC (Edin), is president and chief executive officer of ICES; professor in the Faculty of Medicine, University of Toronto; and adjunct professor in the School of Medicine and Public Health, University of Newcastle, Australia.

---

**Better Healthcare... everywhere**

Longwoods.com