Quality in Primary Care

Setting a Foundation for Monitoring and Reporting in Ontario

Ontario
Health Quality Ontario

Health Quality Ontario is the provincial advisor on the quality of health care. We are motivated by this single-minded purpose: **Better health for all Ontarians.**

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On the cover: Madonna, sitting in her west Toronto apartment. See page 10 for her story. We thank Madonna and the other people who share with us their experiences in Ontario's health system.
(Cover photo by Roger Yip)

Who We Are.

We are a scientifically rigorous group with diverse areas of expertise. We strive for complete objectivity, and look at things from a vantage point that allows us to see the forest and the trees. We work in partnership with health care providers and organizations across the system, and engage with patients themselves, to help initiate substantial and sustainable change to the province's complex health system.

What We Do.

We define the meaning of quality as it pertains to health care, and provide strategic advice so all the parts of the system can improve. We also analyze virtually all aspects of Ontario's health care. This includes looking at the overall health of Ontarians, how well different areas of the system are working together, and most importantly, patient experience. We then produce comprehensive, objective reports based on data, facts and the voice of patients, caregivers and those who work each day in the health system. As well, we make recommendations on how to improve care using the best evidence. Finally, we support large scale quality improvements by working with our partners to facilitate ways for health care providers to learn from each other and share innovative approaches.

Why It Matters.

We recognize that, as a system, there is much to be proud of, but also that it often falls short of being the best it can be. Plus, certain vulnerable segments of the population are not receiving acceptable levels of attention. Our intent at Health Quality Ontario is to continuously improve the quality of health care in this province regardless of who you are or where you live. We are driven by the desire to make the system better, and by the inarguable fact that better has no limit.

Health Quality Ontario's Performance Monitoring and Public Reporting

Since 2006, Health Quality Ontario has been creating a better health system by reporting on its performance Our public reporting not only gives Ontarians the information they need to understand about their health system, it can also lead to direct improvements. Our public reporting products include: Measuring Up, our yearly report on the health system's performance, theme reports that delve into focused topics and online reporting of health system indicators.

The Common Quality Agenda

The Common Quality Agenda is the name for a set of measures or indicators selected by Health Quality Ontario in collaboration with health system partners to focus performance reporting. Health Quality Ontario uses the Common Quality Agenda to focus improvement efforts to track long-term progress in meeting health system goals to make the health system more transparent and accountable. The indicators promote integrated, patient-centred care and form the foundation of our yearly report, Measuring Up. As we grow our public reporting on health system performance, the Common Quality Agenda will evolve and serve as a cornerstone for all of our public reporting products.

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Foreword

The internationally renowned Institute of Medicine observed "The only way to know whether the quality of care is improving is to measure performance." Without measuring performance we don't know where we are starting, where to focus quality improvement efforts and how to assess change over time.

Quality in Primary Care: Setting a foundation for monitoring and reporting in Ontario begins that process of measuring the quality of primary care in Ontario. It provides a snapshot of three key areas: access to primary care providers, the provision of specific primary care services, and the sector's coordination of their patients' care with other sectors of the health system.

This report is a culmination of many years of work by the Primary Care Performance Measurement Advisory Committee, a group of dedicated system partners, including patients, with expertise and experience in primary care. The Committee created a set of primary care indicators that Health Quality Ontario has committed to monitoring and reporting over time.

Quality in Primary Care reports on nine of the indicators identified by the Committee and also reports on how equitable the quality of primary care is for all Ontarians, by looking at the data from these nine indicators in different ways. This report builds on the six primary care measures that appear in the Common Quality Agenda (a set of more than 40 indicators that Health Quality Ontario uses to measure the performance of the entire system), providing us with more information about the quality of primary care in Ontario.

This report is the beginning, but only part of, our commitment to measuring performance in primary care. Health Quality Ontario will be providing regular updates on the set of primary care indicators included in this report through online reporting, in order to provide ongoing monitoring and reporting on primary care.

But monitoring and reporting on system performance constitute only one step toward improving the quality of primary care in Ontario. Health Quality Ontario complements our reporting activity with quality improvement efforts. Two examples are providing individual quality reports directly to primary care doctors, and reporting on the annual Quality Improvement Plans that articulate the quality objectives for more than 200 team-based primary care practices.

As the provincial advisor on the quality of health care in Ontario we are motivated by one single-minded purpose: Better health for all Ontarians. Our work in primary care, including this foundational theme report, is designed to contribute meaningfully to that purpose.

Sincerely,

Dr. Joshua Tepper
President and CEO
Health Quality Ontario

Executive Summary

Ontarians rely on primary care for their general health and well-being. Primary care providers (who include family doctors, general practitioners, nurse practitioners, and other health care providers) are often Ontarians' first point of contact with the health system. They offer different types of care—from vaccination and promoting healthy behaviours to assessment and diagnosis, and more—and they play a coordinating role when patients receive care from other health care providers. Their work is fundamental to their patients' health, so ensuring the best quality of care is imperative. Primary care is the foundation of Ontario's health system.

Monitoring and reporting on the quality of primary care in Ontario is an important first step in making sure our primary care system is strong and able to support the needs of all Ontarians.

Using a set of indicators selected with our system partners, *Quality in Primary Care: Setting a foundation for monitoring and reporting in Ontario* provides a snapshot of how well primary care is performing in three key areas: access to primary care providers, provision of specific primary care services, and coordination with other sectors of the health system.

We look at the data in a few different ways to determine whether the quality of primary care is similar for all Ontarians.

Quality in Primary Care shows that across three key areas, where you live matters, as do factors such as your income, the language you speak, and whether you are new to Canada (and Ontario).

Most Ontarians have a primary care provider, but less than half (44.3%) are able to see their provider within 24 hours when they are sick. Internationally, this is the lowest rate among 10 countries of similar social and economic status. In addition, only 28.4% of Ontarians living in some northern regions and 34.6% in rural areas can get an appointment within a day when they are sick. Approximately three-quarters (77.9%) of patients in Ontario receive a call back from their primary care provider or someone else in the office within a day, but if the main language spoken at home is not English or French, this proportion drops to just over two-thirds (67.6%).

While access to primary care can be problematic, there have been some improvements in the primary care services being offered. The percentage of Ontarians who are overdue for colorectal cancer screening has decreased over the past three years (from 46.2% in 2010 to 41.5% in 2013), and the rate of diabetes complications has gone down over eight years (from 6.0 per 100 people with diabetes in 2005/06 to 4.1 per 100 people with diabetes in 2013/14). Despite an overall improvement in these rates, however, there is still variation throughout the province: those living in northern regions are more likely to be overdue for colorectal cancer screening, and Ontarians with diabetes who live in rural areas or have lower incomes are more likely to experience diabetes complications.

The coordination of care between hospitals and primary care is also inconsistent. Overall, less than a third (29.1%) of Ontarians see a primary care doctor within seven days of leaving the hospital, but in some regions this rate is less than a quarter (22.0%).

Quality in Primary Care provides a baseline for measuring the quality of primary care in Ontario. These indicators represent a set that Health Quality Ontario will continue to monitor via annual online reporting to help improve the quality of primary care and the overall health of Ontarians.

Introduction

What is primary care, and what role does it play in overall health and well-being?

Primary care is the foundation of people's health care: it supports people throughout their lifetime, from birth to death, providing comprehensive care that promotes health and well-being and prevents, detects, treats and manages illnesses. High-quality primary care is patient-focused, meaning that the care provided considers the person, not just the illness being treated; it connects people to other parts of the system when needed; and it provides ongoing care for chronic illnesses.[1-4]

Primary care also forms the foundation of Ontario's health system: it is usually patients' first contact with the system and serves as a gateway to other health care providers such as specialist doctors, nurses, social workers and others.[5] Many primary care providers act as the main point of contact as patients move through the system, helping them navigate health care transitions and coordinate multiple appointments and treatments. High-quality primary care is considered key for building a strong health system [5,6]; it is associated with improved overall population health, a more equitable distribution of health in populations and lower health care costs. [2,7]

A primary care provider is often, but not always, a family doctor or nurse practitioner. In Ontario, primary care is delivered in over a dozen different ways. These include a single family physician with a receptionist; nursing stations in remote and isolated communities; group practices of three or more family doctors; and many types of inter-professional team models led by family doctors or nurse practitioners, which may include nurses, dieticians, pharmacists, social workers and others. Different models of primary care may serve specific groups of people, including patients with chronic illnesses, people who are new to Canada (and Ontario) or people with a lower income.[8,9]

What is known about the quality of primary care in Ontario?

Are Ontarians getting the best primary care possible? Despite the importance of primary care, historically there has not been regular, ongoing reporting about its quality and accessibility in Ontario. The collection, measurement and reporting of information about the quality of primary care is a first step in ongoing improvement.

In this report, Health Quality Ontario (HQO) sets the foundation for ongoing work we will be doing to monitor and report on the quality of primary care in Ontario. In particular, this report provides information on three key areas—accessibility, specific primary care services, and coordination with other sectors of the health system—using data from the most recent year available. To determine whether the quality of primary care is equitable for all Ontarians (see sidebar: Setting the context), we report on results province-wide, by health region (see sidebar: Local Health Integration Networks) and for specific groups, including immigrants and rural Ontarians.

For the most part, the indicators we report here cover a range of *primary care providers* (that is doctors, nurse practitioners, and nurses). A few indicators report only on the activities of primary care doctors; in those cases, we use the term *primary care doctor*.

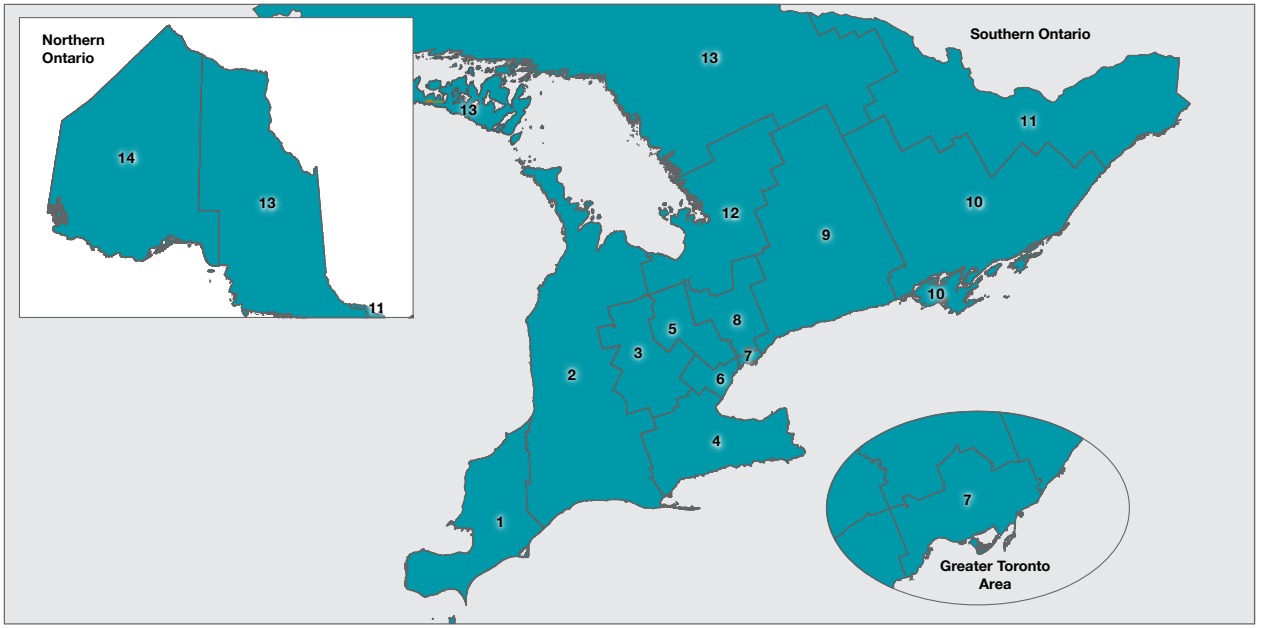
In this report, we refer only to statistically significant differences in quality. For all results, visit HQO's public reporting in primary care webpage at hqontario.ca.

To understand performance in primary care, we use indicators selected in partnership with Ontario's primary care sector, patients and other health system organizations.[10] These do not cover all aspects of primary care and cannot provide a complete picture of primary care performance, but they do provide an important starting point in understanding the quality of primary care in Ontario.

Local Health Integration Networks

Ontario has 14 Local Health Integration Networks (LHINs), based on geographical regions (Figure 1.1). In this report, we use the geographical boundaries of the LHINs to compare performance across regions.

Figure 1.1 Map of Local Health Integration Networks in Ontario



Ontario LHINs

1 Erie St. Clair	5 Central West	9 Central East	13 North East
2 South West	6 Mississauga Halton	10 South East	14 North West
3 Waterloo Wellington	7 Toronto Central	11 Champlain	
4 Hamilton Niagara Haldimand Brant	8 Central	12 North Simcoe Muskoka	

Setting the context

To help set the demographic context for the indicators in this report, here are some statistics from the 2011 Canadian Census:

- About 13 million people live in Ontario,[11] representing roughly 40% of Canada's total population
- Most Ontarians (86%) live in an urban area[12]
- Two LHIN regions cover approximately 91% of Ontario's land mass (North West LHIN region 47% and North East LHIN region 44%) but make up only about 6% of the population (North West LHIN region approximately 2% and North East LHIN region approximately 4%)[13-15]
- Approximately 21% of Ontarians are established immigrants (in Canada for 10 years or longer); about 8% are recent immigrants (in Canada for less than 10 years)[16]
- English is the language Ontarians speak most often at home (81%); just over 2% speak French most often and 16% speak another language[17]

Real-World Experiences

While this is a report about numbers, behind all the data are people who receive health care and people who deliver it. For those perspectives, we include stories from patients and health care providers who experience the challenges in the province's health system and are often working to improve it. These stories are based in primary care but the patients' experiences span the entire health system showing us how primary care is the foundation of health care in Ontario.


Photo by Roger Yip

Madonna: At the centre of her care

Is patient-centred care a reality in Ontario? It is for Madonna in her relationship with her long-time family doctor. Her family doctor treats her as a person, not as a collection of illnesses or symptoms.

Sometimes she feels too unwell to travel from her west Toronto apartment to his office across town. "If I call him and say 'I can't get to you, but I need to see you,' he comes to me. And I can always get him on the phone," she says. "He'll either take it, or he'll call me back in 10 or 20 minutes."

This relationship is the foundation she relies on in a health care journey that has involved 15 surgeries in the past 14 years. She also depends on her pharmacist. "I've got a good team there. They work together." They communicate with each other, and with Madonna, to review her many medications (12 or more a day), to prevent harmful interactions or other problems.

Diagnosed with diabetes in 2006, Madonna also lives with other chronic illnesses including fibromyalgia, chronic obstructive pulmonary disease (otherwise known as COPD), emphysema, osteoarthritis, and sleep apnea. And she lives with fear. In 2011, she lost sight in one eye. That loss, she says, is "terrifying."

She then describes another frightening experience: going into septic shock from an infection after knee-replacement surgery—and being turned away from an emergency department. "I'm a former addict," she says. "I'm clean 15 years. But still, quite often with specialists and emergency doctors, I get treated like I'm there to get pills. It's a stigma."

To deal with her multiple health challenges, Madonna relies on her own strength—"I pretty much push through the pain"— as well as her two daughters, her pharmacist, and her regular visits with the long-time family doctor.

But Madonna's connection with her family doctor hasn't always been this close, it has changed over time—a story of why communication matters, and how it can improve. She believes her health was compromised, years ago, because the family doctor "didn't explain the dangers of diabetes to me. He didn't give me information" about dietary changes she should have made. She has since talked to him about her concerns, and "now we have discussions about everything. I'd go to British Columbia to see him if I had to".

Rana: Taking her health into her own hands

Rana found a family doctor only a few months after arriving in Richmond Hill from Dubai in 2008. When her new doctor urged her to get a mammogram to screen for breast cancer, she didn't go because she thought having her breasts x-rayed would be unpleasant.

"I had heard horror stories," says Rana, who is originally from India and currently lives in Toronto. A year later, when Rana turned 50, the doctor again urged her to get a mammogram. She recalls the doctor saying to her: "No, no, you must go and just have a baseline checkup and then you can forget about it."

So Rana went, but the results indicated she couldn't forget about it.

"The result came back that I needed a biopsy and 10 days later I found out I had malignant breast cancer."

After her family doctor connected her to the appropriate specialists, everything happened very quickly and efficiently -- biopsy, surgery and radiation.

However, when Rana developed anxiety and depression, which is not unusual for cancer patients, she found she had to advocate for herself and work hard to get the care she needed in what she says is a "hit-and-miss" primary care system.

After talking with her family doctor about her anxiety and depression, she was offered medication, but Rana did not like this approach. She suggested to her family doctor that counselling might help her deal with the anxiety and depression and asked the doctor to connect her to a program that provided it. Once suggested, the family doctor connected her to a program, but she had to ask for it.

"I'm thinking that if I did not get that counselling, I would be in a really bad state."

Having to help find these connections is something Rana has done often during her recovery phase, back in the primary care sector. She has had to find various breast cancer support programs and groups on her own, or hear about them almost by chance from others.

While Rana's own resourcefulness and tenacity have helped her successfully navigate the health system, she has seen others in her South Asian immigrant community cope poorly with health issues due to language and cultural barriers to care.

"You have to be A, well-informed, and B, slightly proactive, and both these things are a little difficult generally," she says, noting immigrants often find it intimidating to deal with an unfamiliar medical system or "don't want to trouble their doctor" with what they think are minor problems.

Rana, who remains cancer-free, is looking for an opportunity to help break down the barriers. She wants to speak to South Asian community groups, to share what she has learned dealing with her own health issues and help keep people from falling through the cracks.

"There is so much help and support out there, but we don't know anything about it."

Brian: Creating a circle of care

Brian's resolve to keep his left foot came almost too late, but he met Sandra at a family health team clinic just in time to help him save it.

Brian (not his real name) first encountered Sandra in September 2013 at the Strathroy family health team clinic where she was a triage nurse. When he came into her care that day with a grossly infected left foot, it was the culmination of a problem that had spiralled out of control over two-and-a-half years.

"Brian has diabetes and a long-standing history of anxiety, depression and other mental health challenges," says Sandra, noting he had been leading a fairly solitary life. "I think he just needed somebody to help him initially navigate the whole system."

Brian originally came to the family health team clinic with foot swelling in February 2011. After tests and x-rays ruled out a blood clot but indicated bone malformation, a family doctor at the clinic referred him to an orthopedic surgeon, but it's not clear whether Brian went to the appointment.

The problem received no further medical attention until Brian returned to the family health team clinic in January 2013 with foot pain and a misshapen foot. Over the next few months, he was seen by various clinic doctors, referred to specialists and received home care for pressure sores that developed on his foot.

But he ignored repeated recommendations from doctors to buy supportive shoes, even after being diagnosed in March 2013 with Charcot Foot, a deterioration of the foot structure in people who have significant nerve damage, including people living with diabetes. It can lead to severe deformity and is often accompanied by pressure sores.

"I didn't think I needed the shoes," says Brian, who's 66 years old and has never been one to fuss over his health.

By August 2013 the foot had become infected and the wound specialist he was seeing urged Brian to get a custom-made orthotic walking boot designed to minimize the damage caused by Charcot Foot.

A month later, when Brian arrived back at the family health team clinic and was seen by triage nurse Sandra for the first time, he still didn't have any special footwear. The infection had become so severe that Sandra, together with a family doctor at the clinic, expedited his admission to hospital. He remained there for 10 days, and doctors at the hospital initially recommended amputating his foot.

But Brian told the doctors he wanted to discuss it with Sandra, who was maintaining contact with him while he was in hospital. He told Sandra he didn't want his foot amputated.

When Brian started responding to antibiotics, and Sandra told the hospital doctors he was adamant about keeping his foot, they agreed to a discharge plan she helped put together. When he got out of hospital, she then helped to navigate the care he needed, made sure he got the orthotic boot, and hooked him up with community mental health services.

Brian's foot started to heal and in February 2014 the wound finally closed. Sandra credits Brian's determination and the "circle of care" that developed around him, which included the family health clinic team helping to coordinate his care, as well as outside medical specialists and community health services.

Access to Primary Care in Ontario

Photo by Roger Yip

Using survey data from adults aged 16 years and older, the specific indicators we report on in this chapter are:

- Percentage of adults who have a primary care provider
- Percentage of adults who can always or often reach their primary care provider or someone else in the office when they call, or receive a call back the same day
- Percentage of adults who were able to see their primary care provider on the same day or the next day when they were sick

For detailed information on indicators and data sources, please see the online Technical Appendix.

Access to primary care is very important for people's health. Access can mean having a regular primary care provider, being able to get primary care when it is needed and getting the right kind of primary care.[18,19] Receiving timely care from their primary care provider (whether this is their regular doctor, nurse, or a member of their health team) rather than going to a walk-in clinic, emergency department, or elsewhere, can keep people from getting sicker and can give them a better health care experience. A high-quality primary care system can also reduce the need for more expensive emergency department or hospital visits.[2,20]

There are many ways to measure access. Here, we report on three indicators: whether people in Ontario have a primary care provider they see regularly; whether they receive a same-day response when they call their primary care provider's office; and whether they can get appointments with their regular primary care provider when they need care.

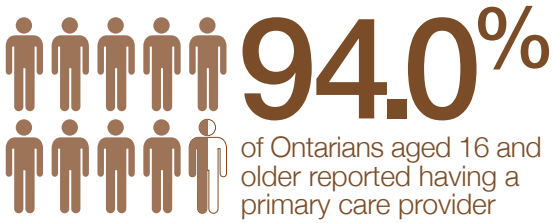
Overall in Ontario

Data from 2014 show that the vast majority (94.0%) of people aged 16 and older have a primary care provider (Figure 2.1).

More than three-quarters (77.9%) report that if they call the office during the business week with a medical question or concern, they always or often receive a same-day response from either the primary care provider or someone else in the office.[21]

Less than half (44.3%) of Ontarians say they are able to see their provider on the same day or the next day when they are sick.[21] This is on par with other provinces in Canada, but when we look at countries with similar social and economic status, Ontarians and Canadians as a whole have among the poorest rates of timely access.[22]

Figure 2.1 Percentage of adults who have a primary care provider, in Ontario, 2014



Data source: 2014 HCES, provided by MOHLTC.

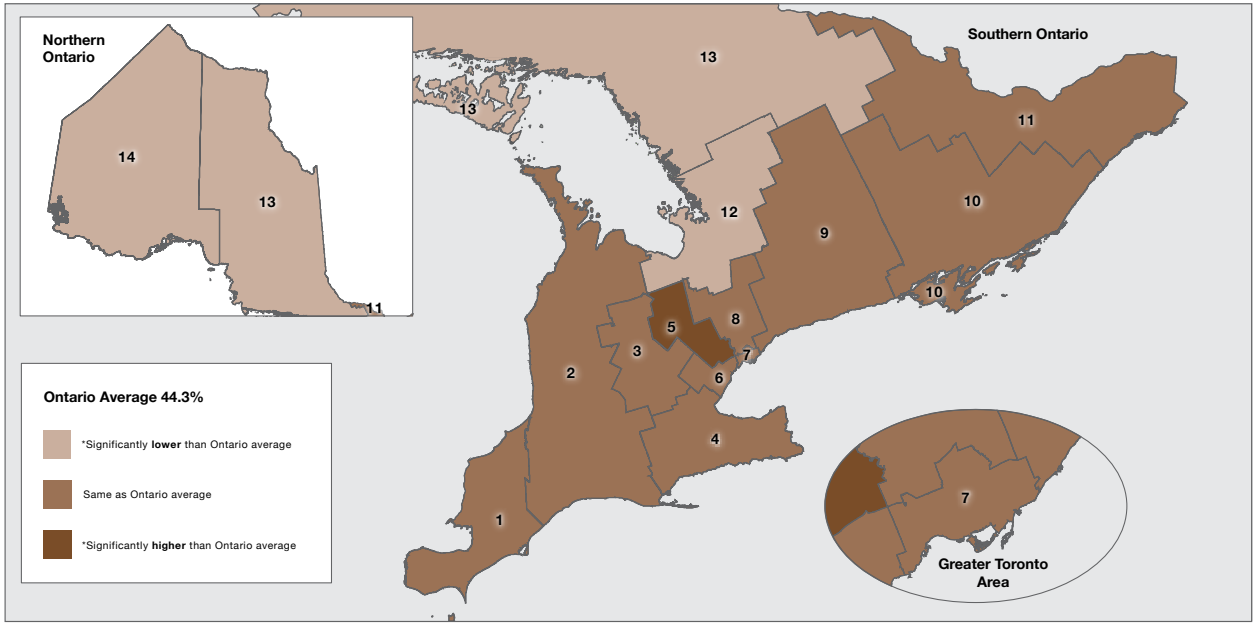
Across regions in Ontario

Access to primary care varies across the province. Compared with the provincial rate (94.0%), a smaller percentage of people living in the North West and North East LHIN regions report having a primary care provider they see regularly (87.3% and 88.3%, respectively).[21] In the South East LHIN region, the percentage who report having a regular primary care provider (97.3%) is higher than the provincial rate.[21]

The rates for same-day response to a phone call are similar across the province, except in two LHIN regions, where the rates are higher (better) than the provincial average of 77.9%: the South East LHIN region (85.3%) and the Hamilton Niagara Haldimand Brant LHIN region (84.3%).[21]

Compared with the provincial rate (44.3%), only 28.4% of people in the North West LHIN region report being able to see a provider the same day or next when they are sick, while 57.0% of people in the Central West LHIN region report being able to do so (Figure 2.2). From another perspective, a lower percentage of people in rural areas (34.6%) report being able to see a provider on the same day or next when they are sick compared with those in urban areas (46.0%).[21]

Figure 2.2 Percentage of adults who were able to see their primary care provider on the same day or the next day when they were sick, in Ontario, by LHIN region, 2014



Ontario LHINs

1 Erie St. Clair **42.5%**	5 Central West **57.0%**	9 Central East **39.0%**	13 North East **31.9%**
2 South West **41.3%**	6 Mississauga Halton **47.6%**	10 South East **39.5%**	14 North West **28.4%**
3 Waterloo Wellington **42.6%**	7 Toronto Central **49.3%**	11 Champlain **44.0%**	
4 Hamilton Niagara Haldimand Brant **48.7%**	8 Central **48.1%**	12 North Simcoe Muskoka **29.4%**	

Data source: 2014 HCES, provided by MOHLTC.
*Denotes a statistically significant difference.

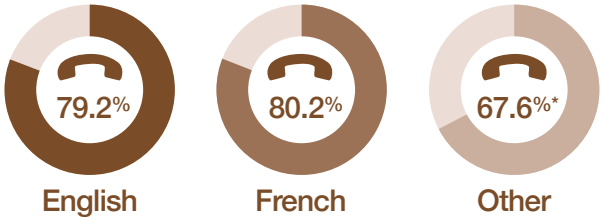
Across groups of people in Ontario

In 2014, 85.5% of recent immigrants (those in Canada for less than 10 years) have a primary care provider they see regularly, compared with 95.3% of established immigrants (those in Canada for 10 years or more) and 94.4% of Ontarians born in Canada.[21]

Established immigrants who have a primary care provider may be less likely than Canadian-born patients to get a same-day response when they call the office (74.0% versus 79.6%).[21]

The rates of same-day response to a patient phone call are significantly lower (67.6%) for those who primarily speak a language at home other than English or French than for those who primarily speak English (79.2%). For Ontarians who primarily speak French, the rates of same-day response are 80.2%. (Figure 2.3).

Figure 2.3 Percentage of adults who can always or often reach their primary care provider or someone else in the office when they call, or receive a call back the same day, in Ontario, by language spoken most often at home, 2014



Data source: 2014 HCES, provided by MOHLTC.
*Denotes a statistically significant difference compared to English.

In summary

In Ontario, the vast majority of people have a primary care provider, but this does not necessarily mean they have timely access to primary care. Many may be unable to see their provider on the same day or the next when they are sick, or to speak with someone on the phone on the same day they call their provider's office.

Also, not everyone has the same degree of access. Access depends, in part, on where people live, and on other factors such as immigration status or the language spoken most often at home. Given that access to primary care is of benefit to both the individual and the health system, it remains an area of focus for health care improvement.

Illness Prevention, Detection and Patient-Centred Approach in Ontario's Primary Care Services

Photo by Roger Yip

Using survey data from adults aged 16 years and older, as well as administrative data, the specific indicators we report on in this chapter are:

- Percentage of adults who report that their primary care provider always or often involves them in decisions about their care and treatment
- Percentage of adults who, in the last year, reviewed their prescription medications with their primary care provider
- Percentage of people aged 50 to 74 overdue for colorectal cancer screening
- Rate of serious complications in the last year among people with diabetes

For detailed information on indicators and data sources, please see the online Technical Appendix.

High-quality primary care should focus on each patient's specific needs. That is, it should be patient-centred. Patient-centred care depends on communication and respect for patients' values and preferences. It invites people to be involved as partners in their care and treatment decisions—a key step in engaging patients in their care overall.[10,23-25]

Engaged and involved patients may have better recall of medical information, as well as more knowledge and confidence to manage a condition or adhere to a treatment plan.[25,26] They may be more satisfied with their care [27] and more active in illness prevention, screening and health promotion activities.

Promoting good health by preventing illnesses and detecting them early are important aspects of primary care.[28]

In this chapter, we report on one measure of a patient-centred approach to care: people's involvement in decisions about their care and treatment. We also look at indicators for three preventative primary care services: regular prescription reviews (especially important for patients on multiple medications), colorectal cancer screening and diabetes care.

All three of the preventative services we look at have the potential to improve health outcomes by ensuring that patients receive the most appropriate prescription medications for their conditions and preventing adverse drug reactions; promoting early detection and treatment (for colorectal cancer); or preventing serious complications (diabetes care). These three represent just a small number of the core services that primary care providers offer, but they are also performed for conditions that affect the health of a large number of Ontarians.[29-33]

Overall in Ontario

Data from 2014 show that more than four out of five (86.2%) Ontarians aged 16 and older who have a primary care provider say the provider always or often involves them (to the degree they wish) in decisions about their care and treatment.[21]

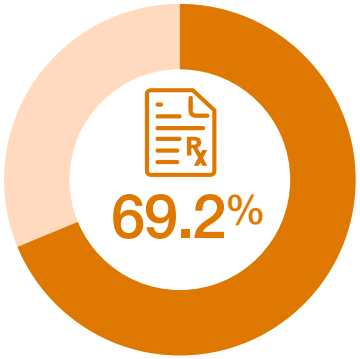
Among Ontarians aged 16 and older who are taking at least one prescription medication, just over two-thirds (69.2%) say they have had a review of their medications with their primary care provider in the past year (Figure 3.1). Note, however, that other medication discussions and reviews may be occurring,

because this indicator does not capture discussions people may have had with their pharmacists, or that family members may have had with the primary care provider on their behalf.

As part of preventative care, primary care providers can play a central role by speaking to their patients about colorectal cancer screening, especially patients aged 50 to 74 or those who have colorectal cancer in their family.[34] However, not all eligible patients get screened. In 2013, 41.5% of Ontarians aged 50 to 74 were overdue for colorectal cancer screening. Although this rate remains high, it is a significant improvement from three years before (2010), when 46.2% were overdue.[35]

Another notable improvement is the rate of serious diabetes complications (such as hospitalization for coronary heart disease, kidney failure requiring dialysis, or amputations): it has dropped from 6.0 per 100 people with diabetes in 2005/06 to 4.1 per 100 people with diabetes in 2013/14 (Figure 3.2). Note that this measure applies only to people who have been clinically diagnosed with diabetes for at least one year.

Figure 3.1 Percentage of adults who, in the last year, reviewed their prescription medications with their primary care provider, in Ontario, 2014



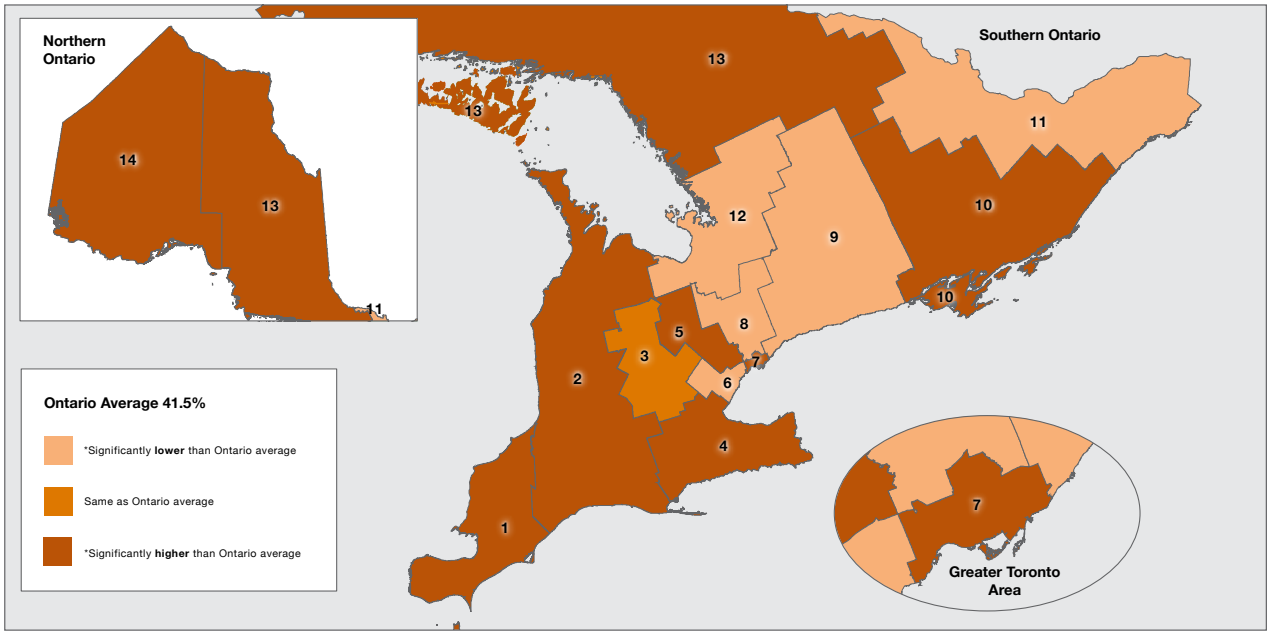
Medication Reviews

Data source: 2014 HCES, provided by MOHLTC.

Figure 3.2 Rate of serious complications in the last year among people with diabetes, in Ontario, 2013/14

Data sources: DAD, RPDB, OHIP, ODD, provided by ICES.

Figure 3.3 Percentage of people aged 50 - 74 overdue for colorectal cancer screening, in Ontario, by LHIN region, 2013



Ontario LHINs

1 Erie St. Clair **42.3%**
2 South West **44.2%**
3 Waterloo Wellington **41.7%**
4 Hamilton Niagara Haldimand Brant **43.7%**
5 Central West **44.5%**
6 Mississauga Halton **41.2%**
7 Toronto Central **43.5%**
8 Central **37.8%**
9 Central East **39.6%**
10 South East **43.9%**
11 Champlain **40.5%**
12 North Simcoe Muskoka **37.5%**
13 North East **41.8%**
14 North West **46.4%**

Data sources: OHIP, LRT, CIRT, OCR, RPDB, PCCF+6A, provided by CCO.
*Denotes a statistically significant difference.

Across regions in Ontario

Data from 2014 show that the rate of patient involvement in decisions about care and treatment is similar across the province (average of 86.2%), except in the South East LHIN region. There, 90.9% of people who have a primary care provider say their provider always or often involves them in decisions about their care.[21]

The percentage of patients overdue for colorectal cancer screening in 2013 varies across LHINs, ranging from 37.5% in the North Simcoe Muskoka LHIN region to 46.4% in the North West LHIN region (Figure 3.3). The percentage of people aged 50 to 74 overdue for colorectal cancer screening is higher in rural–very remote areas (45.0%) and rural-remote areas (43.1%) than in urban areas (41.4%).[35]

Across groups of people in Ontario

Almost 90 percent (88.3%) of Ontarians born in Canada say their provider always or often involves them in decisions about their care and treatment, compared with 78.4% of recent immigrants (in Canada for less than 10 years) and 82.1% of established immigrants (in Canada for 10 years or more) (Figure 3.4). Also, a smaller percentage (64.6%) of established immigrants than of Canadian-born Ontarians (71.1%) say they have had a medication review with their provider within the past year.[21]

The language most often spoken at home may have an impact on a patient's involvement in decisions about care and treatment. Specifically, Ontarians who primarily speak a language other than English or French at home have lower rates (80.1%) of involvement in decisions than those who primarily speak English (87.3%). More than four-fifths (82.7%) of Ontarians who speak French are involved in decisions about their care (Figure 3.5).

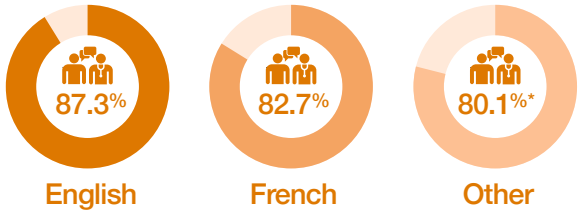
In urban areas, data from 2013 show that the percentage of people aged 50 to 74 overdue for colorectal cancer screening decreases as neighbourhood income increases—ranging from 49.7% in the lowest-income urban neighbourhoods to 34.9% in the highest-income urban neighbourhoods.[35]

Rates of serious diabetes complications are higher (4.6%) in the lowest-income neighbourhoods than in the highest-income neighbourhoods (3.8%) (Figure 3.6).

Figure 3.4 Percentage of adults who report that their primary care provider always or often involves them in decisions about their care and treatment, in Ontario, by immigration status, 2014

Data source: 2014 HCES, provided by MOHLTC.

Figure 3.5 Percentage of adults who report that their primary care provider always or often involves them in decisions about their care and treatment, in Ontario, by language most often spoken at home, 2014



Data source: 2014 HCES, provided by MOHLTC.
*Denotes a statistically significant difference compared to English.

Figure 3.6 Rate of serious complications among people with diabetes, in Ontario, by neighbourhood income, 2013/14

Data sources: DAD, RPDB, OHIP, ODD, provided by ICES.

In summary

Patient-centred and preventative primary care is more available to some Ontarians than others. Results for all four measures in this chapter point to this inequity; location, immigration status and language are the most common influencing factors.

Patients who are actively involved in one-to-one interactions with their primary care provider are likely to be more engaged in their own care, overall. Ultimately, the benefit of patient engagement goes beyond the individual, helping to foster a more patient-centred approach to health care and potentially a healthier population.[23] Most Ontarians report being involved in care decisions and having had a medication review in the past year, but rates are lower among immigrants who have been in Canada for less than 10 years. Also, patients' primary language may affect how involved they are in decisions about their care. It is encouraging that the overall rate of serious diabetes complications and the percentage of people overdue for colorectal cancer screening are both decreasing. However, the rates for both of these indicators are worse for Ontarians in lowest-income neighbourhoods than for those in highest-income neighbourhoods. Further improvement is needed, but overall reductions in these rates are positive steps for health promotion and illness prevention in primary care.

Coordination Across the Health System

Using administrative data, the specific indicators we report on in this chapter are:

- Hospital readmission rates within 30 days of leaving hospital for some conditions
- Rate of follow-up with a primary care doctor within seven days of leaving hospital for some conditions
- 'Some conditions' include: pneumonia, heart failure, chronic obstructive pulmonary disease, gastrointestinal conditions, stroke, diabetes, and cardiac conditions (excluding heart attack)

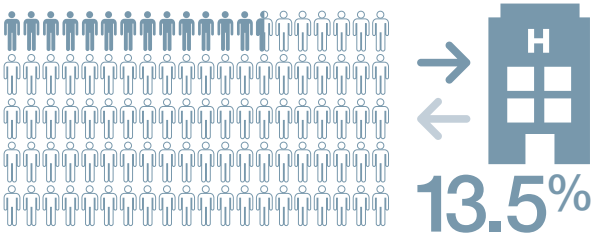
For detailed information on indicators and data sources, please see the online Technical Appendix.

Some patients require services from multiple parts of the health system. Ideally, one service connects to another service or provider seamlessly; patients have confidence that they are cared for and supported regardless of the setting; they are informed about what is happening with their care; and they understand the next step in their care journey. For example, patients leaving hospital need timely follow-up. Gaps in communication or coordination can keep them from getting the care they need when they are most vulnerable.[36] It is important that primary care providers receive information about hospital stays so they can support patients' recovery. Seamless care is often a result of collaborative and coordinated efforts by patients, family members and care providers.

In this chapter, we report on two measures that help gauge how well primary care is coordinated with hospital care and other areas of the health system: rates of hospital readmission within 30 days, and rates of follow-up visits with a primary care doctor within seven days.

Readmission (that is, being admitted to hospital again) within 30 days of leaving the hospital may point to problems in the quality of care the patient received while in the hospital, or to missed opportunities in care coordination with primary care or other parts of the system after the hospital stay. Follow-up care after leaving hospital is an important piece of care coordination and may help reduce readmissions for some conditions. [37-39] A follow-up visit with a primary care doctor lets the patient raise questions or issues and lets the doctor see how well things are progressing.

Figure 4.1 Hospital readmission rates within 30 days of leaving hospital for some conditions, in Ontario, 2013/14



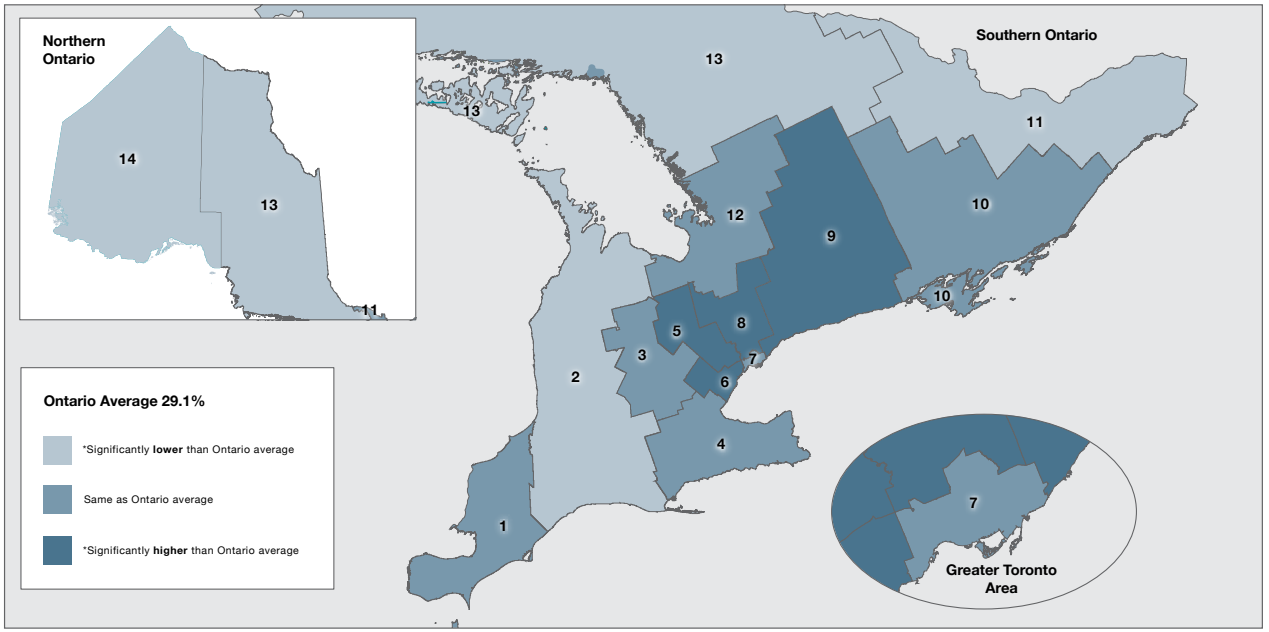
Data sources: DAD, OHIP, RPDB, provided by ICES.

Overall in Ontario

The rate for 30-day readmission to hospital increased from 12.0% in 2009/10 to 13.5% in 2013/14 (Figure 4.1). It is important to note that many experts believe most readmissions are unavoidable.[40] However, variation in the readmission rate may signal differences in the quality of care received in hospital or in the coordination of follow-up care (such as primary care) after patients leave hospital.

Data from 2013/14 show that less than a third (29.1%) of people who are hospitalized for selected conditions have a follow-up visit with a primary care doctor within seven days of leaving hospital.[41] It is important to note that this indicator involves patients with certain conditions only, and excludes any follow-up visits they may have had with other care providers, either in primary care (e.g., a nurse) or another sector of the system (e.g., a specialist).

Figure 4.2 Rate of follow-up with a primary care doctor within seven days of leaving hospital for some conditions, in Ontario, by LHIN region, 2013/14



Ontario LHINs

1 Erie St. Clair 30.4%	5 Central West 37.5%	9 Central East 31.3%	13 North East 22.0%
2 South West 23.2%	6 Mississauga Halton 33.7%	10 South East 27.1%	14 North West 22.1%
3 Waterloo Wellington 30.0%	7 Toronto Central 28.9%	11 Champlain 24.6%	
4 Hamilton Niagara Haldimand Brant 28.6%	8 Central 33.6%	12 North Simcoe Muskoka 26.2%	

Data sources: OHIP, DAD, IPDB, RPDB, provided by ICES.
*Denotes a statistically significant difference.

Across regions in Ontario

For 30-day hospital readmissions in 2013/14, almost all rates in the LHIN regions are comparable to the provincial average of 13.5%, except for the North East LHIN region. Its rate of 16.2% is significantly higher (worse) than the provincial average.[42]

For seven-day follow-up with a primary care doctor after leaving hospital, people in northern LHIN regions have lower (worse) rates than the provincial average of 29.1% in 2013/14. Specifically, the North East LHIN region has the lowest rate (22.0%), while the Central West LHIN region has the highest rate (37.5%) (Figure 4.2).

Also, people in rural areas have lower (worse) seven-day follow-up rates (24.9%) than those in urban areas (29.7%) (Figure 4.3).

Across groups of people in Ontario

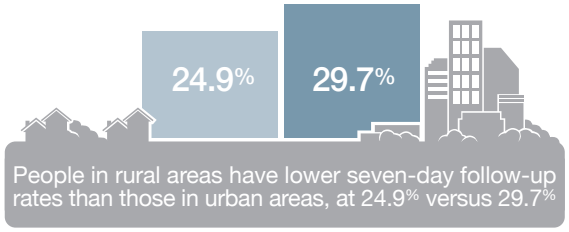
People in the lowest-income neighbourhoods have higher (worse) 30-day hospital readmission rates than those in the highest-income neighbourhoods (15.0% versus 11.6%) (Figure 4.4). This link to socio-economic status is in keeping with results for other indicators in this report.

In summary

The transition from hospital to home is a time when patients are especially vulnerable. Early follow-up care with a primary care doctor or nurse practitioner is important for monitoring, coordination, and ensuring that patients understand what happened in hospital and what should happen next.

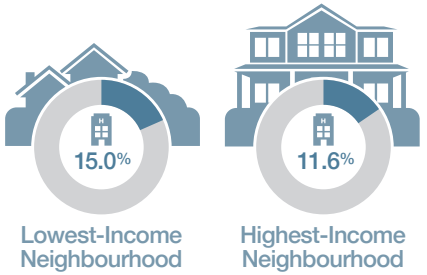
Overall in Ontario, the coordination of care after leaving hospital needs improvement, and the care provided is not equal for all. For example, patients in rural and northern communities are less likely to see a primary care doctor within seven days of hospital discharge, and Ontarians with low incomes are more likely to be readmitted to hospital. Results for both indicators are similar to results from other studies, and emphasize the need for more equitable care and better coordination across sectors of the health system, including primary care.[43,44]

Figure 4.3 Rate of follow-up with a primary care doctor within seven days of leaving hospital for some conditions, in Ontario, by rural or urban setting, 2013/14



Data sources: OHIP, DAD, IPDB, RPDB, provided by ICES.

Figure 4.4 Hospital readmission rates within 30 days of leaving hospital for some conditions, in Ontario, by neighbourhood income, 2013/14



Data sources: DAD, OHIP, RPDB, provided by ICES.

The Road Ahead

Not all Ontarians have timely access to primary care, receive optimal care, or benefit from well-coordinated care when they are leaving hospital. Most report that they have a primary care provider, but over half are unable to get a same-day or next-day appointment when they are sick. Of the measures included in this report, there was improvement in colorectal cancer screening and early detection across the province, but the results for all measures showed variation across different groups of people and locations. This means that some populations in Ontario are not receiving the best quality of primary care. Also, work is still needed to better connect primary care with other care that patients receive, especially when they leave hospital.

What this means for patients in Ontario

This foundational report provides a snapshot of the current state of primary care in Ontario, based on selected indicators that have been identified as key in monitoring primary care performance. It shows where improvements can be made in access, illness prevention, chronic disease management and care coordination.

Work underway to improve primary care in Ontario

Primary care providers, as well as the Ministry of Health and Long-term Care, HQO, and primary care organizations and associations, are embarking on a variety of activities to improve primary care in Ontario.

Team-based primary care practices complete annual goals for quality improvement and describe their improvement activities through Quality Improvement Plans. They complete these plans as part of their accountabilities with the Ministry of Health and Long-Term Care. (This is similar to the hospital, long-term care and home care sectors.) HQO provides tools and resources to support the development and implementation of Quality Improvement Plans, and it identifies annual priorities for improvement in each sector, including primary care.

One way to support quality improvement is by letting providers know how their results on quality indicators compare with those of others. HQO can provide primary care doctors with a Primary Care Practice Report. All doctors who sign up for it receive annually confidential data about how their practice compares

with regional and provincial performance on 19 quality indicators. The practice report also includes tips for improvement.

To improve the quality of care, it is also important to understand patients' perspectives. HQO has developed a primary care patient experience survey in collaboration with partners in the primary care sector. It serves as an evidence-based resource to help primary care providers understand their patients' experiences and develop targeted quality improvement initiatives.

For a full list of HQO quality improvement initiatives in primary care, please visit www.hqontario.ca.

Other organizations are playing important roles in improving primary care, including the Association of Family Health Teams of Ontario, the Association of Ontario Health Centres, the Nurse Practitioners Association of Ontario, the Ontario College of Family Physicians, the Ontario Medical Association, and the Registered Nurses' Association of Ontario.

Many activities to improve primary care are underway across the province—too many to capture here—but a more coordinated strategy is needed to increase the spread and adoption of quality improvement initiatives. An example of a large-scale initiative that includes a coordinated strategy is the introduction of Health Links. Health Links are designed to support patients with multiple chronic illnesses by connecting health care and social service providers across sectors. Primary care providers have often taken a leadership role in Health Link teams, linking primary care with home care and/or other services in the community to better and more quickly coordinate care for high-needs patients. Health Links tend to focus on select populations, including those highlighted in this report (that is, people with lower incomes, new immigrants) and others (such as aboriginal and First Nations people) to address their specific health care needs and overcome inequities in care.

Next steps

This report helps set the foundation for continuous monitoring of primary care quality in Ontario. It provides important information about the quality of primary care for all Ontarians by reporting on a key set of performance measures, and by presenting the data not only at the provincial and regional levels but also by different population characteristics. HQO is also launching online reporting of the indicators included in this report; the data will be updated annually. We will review the indicators periodically to see if they are still relevant to the monitoring of primary care performance, and new indicators may be added as they are developed.

We continue to work towards a more coordinated strategy in primary care, connecting performance measurement with quality improvement in Ontario, because a high-quality primary care system means better health for all.

Methods Notes

Below is a brief description of the methods used in this report. For more detail, please see the Technical Appendix on our website (www.hqontario.ca).

Indicator selection

HQO collaborates with organizations across the province that represent patients, primary care clinicians, data holders, researchers, managers and policymakers. This collaboration has resulted in the development of a Primary Care Performance Measurement (PCPM) framework to measure and report on performance.[10] Through a prioritization process, a subset of measures (12 core indicators) at the system level (community, regional, provincial) were selected to give insight into the quality of the primary care system in Ontario. This report looks at nine of these 12 indicators, based on HQO's data access at the time of writing and alignment with HQO's online reporting of primary care indicators.

Data sources

The indicator results presented in this report were supplied by a variety of data providers, including the Ontario Ministry of Health and Long-Term Care (MOHLTC), the Institute for Clinical Evaluative Sciences (ICES) and Cancer Care Ontario (CCO).

Both survey and administrative data were used for the analysis. The former includes data from the 2014 Health Care Experience Survey (HCES), implemented by the MOHLTC, which is a telephone-based survey of adults aged 16 and over.

Administrative data sources used:

- Colonoscopy Interim Reporting Tool (CIRT)
- Discharge Abstract Database (DAD)
- ICES Physician Database (IPDB)
- Laboratory Reporting Tool (LRT)
- Ontario Cancer Registry (OCR)
- Ontario Diabetes Database (ODD)
- Claims History Database—Ontario Health Insurance Plan (OHIP)
- Postal Code Conversion File version 6A (PCCF+6A)
- Registered Persons Database (RPDB)

For a full list of data sources as they relate to each indicator, please refer to the Technical Appendix.

Analysis

To enable appropriate and fair comparisons of primary care performance, some of the indicators were age- and sex-adjusted to the 1991 Canadian census population. This is the population standard specified by Statistics Canada.[45] The 2011 Canadian census population was used to calculate age-standardized rates for the percentage of people aged 50 to 74 overdue for colorectal cancer screening.[46] For the diabetes complications indicator, the standardized rate was adjusted by age, sex and duration of diabetes using the population of prevalent cases of diabetes in Ontario on April 1, 2013.

Survey data were weighted to reflect the design characteristics of the survey and the population of Ontario. For further details on which indicators were adjusted, which were weighted, and the methodology used, please see the individual indicator templates in the online Technical Appendix.

Income analyses provided by Cancer Care Ontario for the percentage of people aged 50 to 74 overdue for colorectal cancer screening are based on residents living in urban areas only.[46] In contrast, income analyses for other indicators include residents of both rural and urban Ontario. Rural and urban analyses provided by Cancer Care Ontario for the percentage of people aged 50 to 74 overdue for colorectal cancer screening are based on four categories (rural–very remote, rural-remote, rural and urban). In contrast, rural and urban analyses for other indicators are based on two categories only (urban and rural).[46]

Significance testing

Confidence intervals around each result were calculated at the 95% confidence level. Confidence intervals were used to compare results by time point, region, rural or urban area, neighbourhood income, language primarily spoken at home and immigration status. The report states an increase/decrease or higher/lower result only when the 95% confidence intervals of the results do not overlap (i.e., when the differences in the results are statistically significant).

Limitations

There are certain limitations of the analysis that should be considered when interpreting the results. Some of the limitations are specific to the data source, the indicator and the methodology used to calculate it. For details on indicator-specific limitations, please see the individual indicator templates in the online Technical Appendix.

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Health Quality Ontario Management

Joshua Tepper
President and Chief Executive Officer

Jennifer Schipper
Chief, Communications and Patient Engagement

Jeffrey Turnbull
Chief, Clinical Quality

John Yip
Vice-President, Corporate Services

Anna Greenberg
Vice-President, Health System Performance

Irfan Dhalla
Vice-President, Evidence Development and Standards

Lee Fairclough
Vice-President, Quality Improvement

Biographies are posted at hqontario.ca/about-us/executive-leadership-team

Report development

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Parts of this material are based on data and information compiled and provided by CIHI. However, the analyses, conclusions, opinions and statements expressed herein are those of the author, and not necessarily those of CIHI.

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References

1. World Health Organization. Declaration of Alma-Ata: International Conference on Primary Health Care. Alma-Ata, USSR. 1978:6-12.

2. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Millbank Quarterly. 2005;83 (3):457-502.

3. Lamarche PS, Beaulieu M-D, Pineault R, Contandriopoulos A-P, Denis J-L, Haggerty J. Choices for change: the path for restructuring primary health care services in Canada. Report submitted to the Canadian Health Services Research Foundation; 2003.

4. Hogg W, Dahrouge S, Russell G, Tuna M, Geneau R, Muldoon L, et al. Health promotion activity in primary care: performance of models and associated factors. Open Medicine. 2009;3(3):e165.

5. Shi L. The impact of primary care: a focused review. Scientifica. 2012:1-22.

6. Starfield B. Primary care and equity in health: the importance to effectiveness and equity of responsiveness to peoples' needs. Humanity & Society. 2009;33(1-2):56-73.

7. Macinko J, Starfield B, Shi L. The contribution of primary care systems to health outcomes within the Organization for Economic Cooperation and Development (OECD) Countries, 1970-1998. Health Services Research. 2003;38(3):831-65.

8. Glazier RH, Zagorski B, Rayner J. Comparison of Primary Care Models in Ontario by Demographics, Case Mix and Emergency Department Use, 2008/09 to 2009/10. ICES Investigative Report. Toronto: Institute for Clinical Evaluative Sciences, 2012.

9. Health Force Ontario. Family Practice Models 2013. Available from: http://www.healthforceontario.ca/en/Home/Physicians/Training_%7C_Practising_in_Ontario/Physician_Roles/Family_Practice_Models.

10. Health Quality Ontario. A primary care performance measurement framework for Ontario - report of the Steering Committee for the Ontario Primary Care Performance Measurement Initiative: phase one. 2014.

11. Ontario Ministry of Finanace. Census Highlights: Factsheet 1. Population counts: Canada, Ontario and regions 2011. Available from: http://www.fin.gov.on.ca/en/economy/demographics/census/cenhi11-1.html.

12. Statistics Canada. 2011 Census of the population. Available from: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo62g-eng.htm

13. Ontario Local Health Integration Network. North West LHIN About our LHIN 2014. Available from: http://nwlhin.on.ca/AboutOurLHIN.aspx.

14. Statistics Canada. Table 109-5345 - Estimates of population (2011 Census and administrative data), by age group and sex for July 1st, Canada, provinces, territories, health regions (2014 boundaries) and peer groups, annual (number), CANSIM (database) 2014. Available from: http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1095335.

15. Ontario Local Health Integration Network. North East LHIN About our LHIN 2014 2014. Available from: http://www.nelhin.on.ca/aboutus.aspx.

16. Statistics Canada. National Household Survey, Statistics Canada Catalogue no 99-010-X2011027. 2011.

17. Ontario Ministry of Finance. Census Highlights: Factsheet 6. Mother tongue and language 2011. Available from: http://www.fin.gov.on.ca/en/economy/demographics/census/cenhi11-6.html.

18. Wong ST, Watson DE, Young E, Regan S. What do people think is important about primary healthcare? Healthcare Policy. 2008;3(3):89.

19. Muggah E, Hogg W, Dahrouge S, Russell G, Kristjansson E, Muldoon L, et al. Patient-reported access to primary care in Ontario Effect of organizational characteristics. Canadian Family Physician. 2014;60(1):e24-e31.

20. Canadian Association of Emergency Physicians and National Emergency Nurses Affiliation. Canadian Association of Emergency Physicians and National Emergency Nurses Affiliation (CAEPNE-NA) Joint Position Statement on Emergency Department Overcrowding. Canadian Journal of Emergency Medicine. 2001;3(2):82–4.

21. Ontario Ministry of Health and Long-Term Care. Health Care Experience Survey. 2014.

22. Health Quality Ontario. Measuring Up: A yearly report on how Ontario's health system is performing. 2014.

23. Health Council of Canada. How engaged are Canadians in their primary care? Results from the 2010 Commonwealth Fund International Health Policy Survey. 2011:1-36.

24. Mulder C, Glazier R, Southey G. What if we could measure how comprehensive and patient-centered primary care is? Poster presented at the North American Primary Care Research Group 2015.

25. Coulter A, Parsons S, Askham J. Where are the patients in decision-making about their own care? Health Systems and Policy Analysis. 2008:1-26.

26. Parsons S, Winterbottom A, Cross P, Redding D. The quality of patient engagement and involvement in primary care. The Kings Fund. 2010:1-100

27. Rickert J. Patient-centered care: what it means and how to get here 2012. Available from: http://healthaffairs.org/blog/2012/01/24/patient-centered-care-what-it-means-and-how-to-get-there/.

28. Ontario Medical Association. Priorities for building an integrated primary care system in Ontario. Toronto, ON: Ontario Medical Association; 2013. 1-22 p.

29. Cancer Care Ontario. Cancer Statistics. Deaths for cancers by sex, Ontario 2014 [updated June 3, 2014; cited 2015 May 7]. Available from: https://www.cancercare.on.ca/cms/One.aspx?-portalId=1377&pageId=8630#two-tab.

30. Public Health Agency of Canada. Diabetes in Canada: Facts and Figures from a Public Health Perspective. Ottawa,ON2011.

31. The Institute for Safe Medication Practices and Health Quality Ontario. Ontario Primary Care Medication Reconciliation Guide. 2015:1-66.

32. Cancer Care Ontario. Cancer System Overview 2015 [updated Mon, May 25, 2015]. Available from: https://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pageId=8615.

33. Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Canadian Journal of Diabetes. 2013;37(Suppl 1):S1-S212.

34. Rabeneck L, Tinmouth JM, Paszat LF, Baxter NN, Marrett LD, Ruco A, et al. Ontario's ColonCancerCheck: Results from Canada's first province-wide colorectal cancer screening program. Cancer Epidemiology Biomarkers & Prevention. 2014;23(3):508-15.

35. Cancer Care Ontario. Ontario Health Insurance Plan, Laboratory Reporting Tool, Colonoscopy Interim Reporting Tool, Ontario Cancer Registry, Registered Persons Database. Postal Code Conversion File version 6A. 2010-2013.

36. Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Archives of internal medicine. 2006;166(17):1822-8.

37. McAlister FA, Youngson E, Bakal JA, Kaul P, Ezekowitz J, van Walraven C. Impact of physician continuity on death or urgent readmission after discharge among patients with heart failure. Canadian Medical Association Journal. 2013;185(14):E681-E9.

38. Hernandez AF, Greiner MA, Fonarow GC, Hammill BG, Heidenreich PA, Yancy CW, et al. Relationship between early physician follow-up and 30-day readmission among Medicare beneficiaries hospitalized for heart failure. Journal of the American Medical Association. 2010;303(17):1716-22.

39. Hess CN, Shah BR, Peng SA, Thomas L, Roe MT, Peterson ED. Association of early physician follow-up and 30-day readmission after non-ST-segment-elevation myocardial infarction among older patients. Circulation. 2013;128(11):1206-13.

40. van Walraven C, Jennings A, Taljaard M, Dhalla I, English S, Mulpuru S, et al. Incidence of potentially avoidable urgent readmissions and their relation to all-cause urgent readmissions. Canadian Medical Association Journal. 2011:1-6.

41. Institute for Clinical Evaluative Sciences. Discharge Abstract Database, Registered Persons Database, Ontario Health Insurance Plan, 2013/14.

42. Institute for Clinical Evaluative Sciences. Discharge Abstract Database, Registered Persons Database, Ontario Health Insurance Plan, 2013/14.

43. Canadian Institute for Health Information. Physician follow-up after hospital discharge: progress in meeting best practices. 2015:1-24.

44. Canadian Institute for Health Information. All-Cause Readmission to Acute Care and Return to the Emergency Department. 2012:1-64.

45. Statistics Canada. Deaths 1991-1999: Definitions (Archived Content). Available from: http://www.statcan.gc.ca/pub/84f0211x/1999/4067936-eng.htm.

46. Cancer Quality Council of Ontario. Technical Information: Colorectal Cancer Screening Percentage Overdue for Screening: Technical Specifications. Available from: http://www.csqi.on.ca/cms/One.aspx?portalId=327483&pageId=335155.

Health Quality Ontario
130 Bloor Street West
10th Floor
Toronto, ON M5S 1N5

Telephone: 416-323-6868
Toll-free: 1-866-623-6868
Email: info@hqontario.ca
www.hqontario.ca