# Building on Strong Foundations:

## Inaugural Report on Quality in Colonoscopy, Mammography and Pathology

2015

Quality Management Partnership

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO

Ontario
Cancer Care Ontario

**Building on Strong Foundations:**
Inaugural Report on Quality in Colonoscopy, Mammography and Pathology

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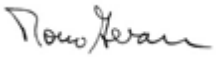
# Message from the Partnership Executive

**Over the past two years, the main focus of the Quality Management Partnership (the Partnership) has been on designing the building blocks of quality management programs (QMPs) for colonoscopy, mammography and pathology services across Ontario. The attached document, *Building on Strong Foundations: Inaugural Report on Quality in Colonoscopy, Mammography and Pathology*, represents our first significant milestone toward implementing quality reporting in these three health service areas.**

Reporting on specific indicators at the provider, facility, regional and provincial levels will enable a clearer view of quality across the system, providing direction for implementation efforts and allowing the effectiveness of improvement efforts to be monitored over time. Reporting also promotes transparency and accountability and contributes to building systems that put patients and caregivers first, aligning with the priorities outlined in the Ministry of Health and Long-Term Care's (MOHLTC's) *Patients First Action Plan*.

This initial report provides a provincial baseline for quality processes and performance to guide the roll-out of the QMPs and to facilitate quality improvement. As our work progresses, we will build on this baseline by developing a strategy to close the gaps that remain to fully enable quality reporting at the provider, facility and system levels as envisioned in the Partnership's phase 2 report, *Provincial Quality Management Programs for Colonoscopy, Mammography and Pathology*.

Our mandate from the MOHLTC is to continue to engage and involve our partners and stakeholders in this multi-faceted and multi-year initiative. Achieving all our goals and continuing to move forward will require sustained collaboration. We look forward to continuing to work together to improve the quality of care provided across Ontario.



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# Introduction

## Background

On March 28, 2013, the Ministry of Health and Long-Term Care (MOHLTC) announced the Quality Management Partnership (the Partnership), which brings together Cancer Care Ontario and the College of Physicians and Surgeons of Ontario (CPSO). Since then, the Partnership has been working closely with stakeholders to develop quality management programs (QMPs) for three health service areas: colonoscopy, mammography and pathology.

The Partnership established three goals for the QMPs:

- enhance the quality of care and improve patient safety;
- increase the consistency in the quality of care provided across facilities; and
- improve public confidence by increasing accountability and transparency.

To design the QMPs, the Partnership recruited three provincial clinical leads and established three expert advisory panels that included physicians and other health professionals who practice in the health service area, administrators and patients/service users.[1] Consultation with stakeholders from across the health system provided valuable feedback and helped refine the panels' recommendations. The panels' recommendations are detailed in the Partnership's report, *Provincial Quality Management Programs for Colonoscopy, Mammography and Pathology in Ontario*.[2]

## About this report

The Partnership is releasing this inaugural report on the quality of colonoscopy, mammography and pathology services in Ontario based on available data and information. This report provides summary information on:

- the health professionals and facilities that provide the three health services in Ontario;
- key provincial quality initiatives that currently exist in each health service area; and
- provincial performance, as measured by indicators recommended by the expert advisory panels, where data are available.

This description shows that strong foundations for quality management programs already exist in Ontario and reveals gaps that need to be filled in order to ensure consistent high quality across the province.

1 Many people who have medical procedures—colonoscopy and mammography, in particular—are not sick and are doing so for routine screening purposes only, leading some to argue that "service users" is a more appropriate label than "patients." To address this issue, this report uses the terminology patients/service users to refer to people who use these health services.

2 Available at **http://www.qmpontario.ca**.

# About Provincial Quality Management Programs

The quality management programs (QMPs) will be provincial and mandatory for all providers and facilities for the health service areas. They will be supportive, enhance transparency and encourage quality improvement, while providing mechanisms and escalation processes to appropriately manage quality concerns. In particular, the QMPs will promote safe, high-quality care to benefit patients/service users, providers and the healthcare system by:

- establishing provincial standards that will be consistently applied across all care settings where the health services are provided;
- reporting on quality at the provider, facility, regional and provincial levels and providing clear lines of accountability for quality of care and patient safety; and
- addressing current inconsistencies and gaps in quality assurance programs and processes.

Patients/service user participation is integral to the Quality Management Partnership's (the Partnership's) success. Patients/service users have been, and will continue to be, involved in the Partnership's governance structures, including a newly formed Citizen's Advisory Committee. Their views will be actively sought so that they can provide meaningful input into the QMPs and ensure that measurement and reporting strategies, as well as communication activities, are shaped with their interests and views in mind. Patient/service users are integral to defining patient experience measures, a key priority for the Partnership during implementation. Overall, the Partnership aims to be patient-centred and must demonstrate to patients/service users that it is improving the quality of their care in ways that matter to them.

The Partnership will support and foster a culture of continuous quality improvement by putting in place a network of clinical leads for each health service area at the provincial, regional and facility levels. The leads will be responsible for monitoring quality and engaging providers and facilities to sustain continuous quality improvement and manage quality concerns as they arise. All leads will be practicing physicians with expertise in the relevant health service area.

Each QMP will be guided by a provincial committee that is chaired by the QMP provincial lead and includes the QMP regional leads, other relevant clinical leads and healthcare providers, patients/service users and other subject matter experts, as required. Efforts will be made to ensure that the committee includes representation from all facility types.

The following core processes will be foundational to the QMPs and were considered by each of the expert advisory panels as they made detailed recommendations specific to their health service areas.

## Defining standards, best practice guidelines and indicators

Defining quality involves establishing the standards, best practice guidelines and indicators to provide a foundation for quality reporting, assurance and improvement. The expert advisory panels reviewed the published literature and practices in other jurisdictions to inform their recommendations for standards, guidelines and indicators that are evidence-based, relevant and feasible for Ontario. To build on existing programs and reduce duplication, the panels focused their efforts on assessing existing standards and guidelines that are either recommended or implemented in Ontario and/or in other provincial, national or international programs or organizations.

## Facilitating the uptake and adoption of provincial standards and best practice guidelines

The QMPs will work with existing programs and organizations to integrate the recommended provincial standards into inspection, assessment and accreditation programs. In many cases this will

involve expanding or modifying existing programs. Where there is no current program, the QMPs will collaborate with existing organizations to create an appropriate mechanism for integrating the standard.

## Generating and distributing quality reports

Measuring and reporting quality indicators at the provider, facility, regional and provincial levels is critical to understanding the current state of quality, making informed decisions around quality improvement investments and monitoring the effectiveness of quality improvement efforts over time. Quality reporting also promotes transparency and accountability for the broader health system to help support and drive quality improvements.

The provincial committees will be responsible for reviewing and monitoring aggregate quality reports. Responsibility for reviewing individual provider- and facility-level data will be limited to QMP leads because they have the relevant clinical knowledge and expertise to appropriately interpret these data.

See Table 1 for further information on who will receive information at each level. Note that provider-level indicators are currently out of scope for pathology, and pathology quality reporting will be limited to facility indicators.

Quality reports will be issued to providers, facilities and the QMP leads, and will be used as an input into a quality management process that monitors quality at all levels by:

- supporting continuous quality improvement discussions with providers and facilities;
- identifying providers and facilities where there may be a quality issue; and
- providing clear lines of accountability for identifying the cause of the issue, recommending and confirming that quality improvement activities are in place to address any needs, and monitoring completion.

**Table 1: Distribution and review of quality reports**

| | Providers | QMP Facility Leads | QMP Regional Leads | QMP Provincial Leads |
|---|---|---|---|---|
| **Provider Indicators** | Their own identified provider data (e.g., cancer detection rate) | Identified provider data for providers in their facility | Identified provider data for providers in their region | Identified provider data for all providers |
| | Peer comparator data (e.g., cancer detection rate for all providers in Ontario) | Peer comparator data | Peer comparator data | Peer comparator data |
| **Facility Indicators** | Identified facility data for their facility (e.g., wait times for facility A) | Identified facility data for their facility | Identified facility data for facilities within their region | Identified facility data for all facilities |
| | Facility comparator data (e.g., wait times for all facilities in Ontario) | Facility comparator data | Facility comparator data | Facility comparator data |

The Partnership is actively working with patients/service users to develop patient experience measures that are meaningful to patients/service users and the general public, and will incorporate these into future reports. The Partnership also plans to move toward public reporting in an effort to improve the transparency regarding healthcare system performance. The Partnership will work closely with stakeholders to ensure that public reports are meaningful to the public and that the approach takes into account the sensitive nature of some of this information.

## Supporting continued quality improvement

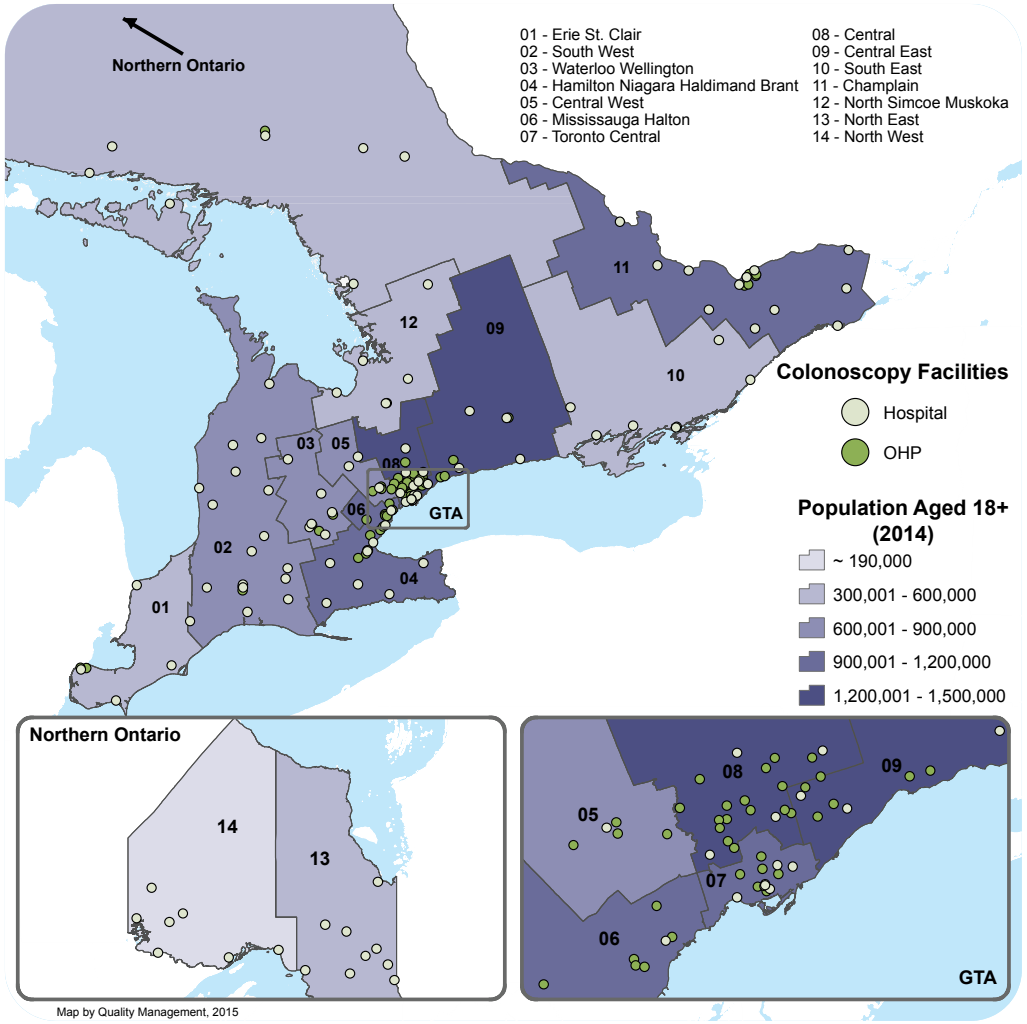
The QMPs will foster a culture of quality improvement by assisting providers, facilities and regional leaders to develop the skills, knowledge and resources they need to deliver high-quality care. These resources will include educational supports for providers and process improvement recommendations for facilities and regions, and may include provincial, system-level initiatives. QMP leads at the appropriate level will support and facilitate quality improvement, and will have training to support them in their roles. All providers and facilities will be encouraged to access quality improvement resources and supports.

# Colonoscopy

## Background

In Ontario, the majority of colonoscopies are performed by gastroenterologists and general surgeons in hospitals and out-of-hospital premises (OHPs). Figure 1 maps the population of adults age 18 and over, and the location of hospitals and OHPs where colonoscopy was provided, by Local Health Integration Network (LHIN), for the province of Ontario in 2014.[3]

**Figure 1: Population age 18 and over, and colonoscopy facilities in Ontario in 2014, by LHIN**




3 Methodology notes for all data, figures and tables in this report are available at **http://www.qmpontario.ca**.

**Table 2: Distribution, by LHIN, of endoscopists, colonoscopy facilities and proportions per population age 18 and over, Ontario, 2014**

| LHIN | Number of Endoscopists | Number of Hospitals | Number of OHPs | Population Age 18 and Over | Hospital Colonoscopies for Population Age 18 and Over | Hospital Colonoscopies per 1,000 Population Age 18 and Over | Endoscopists per 100,000 Population Age 18 and Over |
|---|---|---|---|---|---|---|---|
| Erie St. Clair | 38 | 4 | 2 | 510,045 | 19,798 | 38.8 | 7.5 |
| South West | 76 | 17 | 2 | 775,063 | 29,312 | 37.8 | 9.8 |
| Waterloo Wellington | 40 | 6 | 3 | 608,052 | 16,964 | 27.9 | 6.6 |
| Hamilton Niagara Haldimand Brant | 100 | 8 | 4 | 1,154,872 | 36,816 | 31.9 | 8.7 |
| Central West | 39 | 2 | 4 | 698,485 | 13,682 | 19.6 | 5.6 |
| Mississauga Halton | 61 | 2 | 8 | 950,839 | 19,965 | 21.0 | 6.4 |
| Toronto Central | 106 | 7 | 7 | 1,027,873 | 24,290 | 23.6 | 10.3 |
| Central | 100 | 6 | 17 | 1,476,272 | 33,486 | 22.7 | 6.8 |
| Central East | 92 | 7 | 8 | 1,288,933 | 36,057 | 28.0 | 7.1 |
| South East | 28 | 6 | 0 | 409,164 | 14,757 | 36.1 | 6.8 |
| Champlain | 87 | 12 | 6 | 1,053,808 | 30,953 | 29.4 | 8.3 |
| North Simcoe Muskoka | 37 | 5 | 1 | 381,985 | 14,250 | 37.3 | 9.7 |
| North East | 50 | 17 | 1 | 463,697 | 18,609 | 40.1 | 10.8 |
| North West | 23 | 7 | 0 | 187,912 | 7,567 | 40.3 | 12.2 |
| **Ontario** | **877** | **106** | **63** | **10,987,000** | **316,506** | **28.8** | **8.0** |

Notes: LHIN = Local Health Integration Network, OHP = out-of-hospital premises

Table 2 shows the distribution by LHIN of endoscopists, hospitals and OHPs providing colonoscopy; and the proportions of hospital colonoscopies and endoscopists per 100,000 population age 18 and over. Of the approximately 460,000 colonoscopy procedures provided in 2014, 143,000 (31.1%) were delivered in OHPs, but data limitations do not allow for the calculation of OHP colonoscopy volumes by LHIN at this time. Although preliminary, these data show regional variation in the proportion of colonoscopies and endoscopists for the population. Further analysis is needed to better understand the reasons for, and impact of, this variation.

## Current quality initiatives

The colonoscopy quality management program (QMP) will build on strong foundations that already exist in Ontario. This section provides information on key initiatives and programs that are currently focused on improving colonoscopy quality in Ontario:

- ColonCancerCheck, providing high-quality colorectal cancer screening;
- Gastrointestinal Endoscopy Quality-Based Procedure, funding high-quality endoscopy services; and
- Out-of-Hospital Premises Inspection Program, ensuring facilities and physicians adhere to standards.

## ColonCancerCheck

ColonCancerCheck (CCC) is Ontario's organized, population-based colorectal cancer screening program. The CCC program goals are to:

- reduce colorectal mortality through an organized screening program; and
- improve the capacity of primary care providers to participate in comprehensive colorectal cancer screening.

Through the Program in Evidence-Based Care (PEBC), CCC has developed evidence-based guidelines and standards for colorectal cancer screening[4] and colonoscopy[5] that provide guidance regarding the quality and use of screening tests, including fecal testing and colonoscopy. The CCC program's guideline includes colonoscopy indicators that align with the colonoscopy QMP provider- and facility-level quality indicators. In addition, CCC is developing updated recommendations on colonoscopy surveillance intervals.

The program is planning to switch from the guaiac-based fecal occult blood test (FOBT) to the fecal immunochemical test (FIT) for screening people without a family history of colorectal cancer. FIT is a more sensitive test than FOBT, so associated follow-up colonoscopy procedures tend to be more complex. As a result, additional facility and provider quality standards and indicators will be developed and monitored when FIT is implemented.

## Gastrointestinal Endoscopy Quality-Based Procedure

Quality-Based Procedure (QBP) is a health system funding reform initiative that reimburses providers for the types and numbers of patients they care for using evidence-informed reimbursement rates that are linked to high-quality care. Moving towards evidence-informed pricing models will provide incentives to facilities to adopt best practice standards, improve clinical processes and develop innovative care delivery models.

The Gastrointestinal (GI) Endoscopy QBP has four key deliverables that, together, improve quality and patient care across Ontario:

- develop clinical best practice in order to enhance quality;
- compensate the delivery of high quality services by developing a funding model aligned to clinical best practice;
- plan capacity and manage the activity and types of procedures occurring across the province; and
- manage performance by implementing a framework to measure quality at the facility level and the system impact of the QBP.

To ensure alignment between initiatives, the GI Endoscopy QBP performance management framework uses quality indicators that are aligned with those recommended by the Colonoscopy QMP Expert Advisory Panel. All hospitals in Ontario providing GI endoscopy services are required to adhere to the GI Endoscopy QBP quality and reporting requirements, and thus are included in the performance management framework, regardless of their source of funding.

## Out-of-Hospital Premises Inspection Program

The College of Physicians and Surgeons of Ontario's (CPSO's) Out-of-Hospital Premises Inspection Program (OHPIP) supports continuous quality improvement by developing and maintaining standards for the provision of medical care/procedures in Ontario OHPs. OHPs and the physicians who work in them are inspected and assessed for safety and quality of care; reassessments occur within five years, or earlier if the CPSO thinks it advisable (e.g., a premises move, a concern reported to the CPSO). Decisions and outcomes of OHP assessments are determined by the Premises Inspection Committee and posted on the CPSO website. CPSO responsibilities include but, are not limited to:

- conducting inspection-assessments of the premises and medical procedures to ensure that services for patients/service users are provided according to the standard of the profession;
- determining the outcome of inspection-assessments; and
- maintaining a current public record of Inspection Outcomes (on the CPSO website).[6]

OHPs must meet all requirements of an OHP inspection-assessment to receive a pass, and any deficiencies must be addressed in order to receive a pass.

OHP inspections include physician observation of a procedure. In addition, physicians performing colonoscopy procedures may be randomly selected for a peer assessment by the CPSO. Information about the peer assessment program is provided in the pathology section, below.

4 Tinmouth J, Vella E, Baxter N, Dubé C, Gould M, Hey A, et al. Colorectal cancer screening in average risk patients evidence summary. Toronto: Cancer Care Ontario; Forthcoming, 2015. Program in Evidence-Based Care Evidence Summary No.: 15-14.

5 Tinmouth J, Kennedy E, Baron D, Burke M, Feinberg S, Gould M, et al. Guideline for colonoscopy quality assurance in Ontario. Toronto: Cancer Care Ontario; 2013. Program in Evidence-Based Care Evidence-based Series No: 15-5. V2.

6 See **http://www.cpso.on.ca/Public-Register/Out-of-Hospital-Premises-Listing**.

It should be noted that at the time of compiling this report, inspection processes for OHPs and independent health facilities (IHFs) were under review by the Ministry of Health and Long-Term Care (MOHLTC).

## Aligning key quality initiatives

The Colonoscopy QMP Expert Advisory Panel explicitly recognized that in order for the colonoscopy QMP to be successful, it must be in alignment with and build on existing quality initiatives. This alignment is being achieved by adopting best practices from these initiatives and ensuring that they are applied to all providers and facilities. For example:

- QMP standards are aligned with standards for CCC, QBP and OHPIP, where appropriate, and will be applied consistently across the province to all endoscopists and facilities;
- QMP endoscopist and facility indicators are aligned with those of CCC and QBP, and the requirements of OHPIP, where feasible and applicable, and will be used to monitor quality consistently across Ontario; and
- the roles of existing Regional Cancer Screening/GI Endo Leads (RCSGIELs) are being expanded to include QMP-specific responsibilities in order to reduce overlap and further support alignment between QMP, CCC and QBP at the regional level.

## Colonoscopy reporting

Based on a review of the literature and programs in other jurisdictions, the Colonoscopy QMP Expert Advisory Panel recommended indicators, targets and auditable outcomes based on the strength of the evidence, as well as their relevance and feasibility for the colonoscopy QMP. Through this review, the *Guideline for Colonoscopy Quality Assurance in Ontario* was identified as a key source.[7] This guideline includes indicators (where there was sufficient evidence to support a target) and auditable outcomes (where there was insufficient evidence to support a target) for all colonoscopy procedures performed in Ontario. Other sources were also considered as a basis for quality indicators, including the CCC program's wait time indicators, which apply to procedures performed for screening indications. Targets have not been established for all indicators; after a process of data acquisition, stabilization and review, targets may be established for these indicators, if appropriate, or they may remain auditable outcomes.

Aggregate provincial results for the endoscopist indicators are presented in Table 3 and for the colonoscopy facility indicators in Table 4. These results were compiled using existing data, where they are available, and are included to describe the current state of colonoscopy quality in Ontario. These data show regional variation. Further analysis is needed to better understand the reasons for, and impact of, this variation.

In future, colonoscopy reporting will be expanded to include all indicators, and reports will be issued at all levels: provincial, regional, facility and endoscopist. Patient experience measures will be defined with input from patient/service users, and incorporated into reports where appropriate. In time, public reporting will also be implemented. The Partnership will work closely with stakeholders to ensure that the public reports are meaningful and that the approach takes into account the sensitive nature of this information.

QMP reports will be used to support colonoscopy quality improvement in Ontario, as described in the section about quality management programs, above.

7 Tinmouth J, Kennedy E, Baron D, Burke M, Feinberg S, Gould M, et al. Guideline for colonoscopy quality assurance in Ontario. Toronto: Cancer Care Ontario; 2013. Program in Evidence-Based Care Evidence-based Series No: 15-5. V2.

## Table 3: Endoscopist performance, aggregated at the provincial and LHIN level

| Indicator | Provincial Performance | Lowest and Highest LHIN Performance | Notes |
|---|---|---|---|
| **Total Colonoscopy Volume per Endoscopist**<br>Total annual colonoscopy volume per endoscopist<br>**Target**<br>≥200 colonoscopies per year | Median = 406<br>IQR = 188–693 | - | Year of the data: 2014 |
| **Inadequate Bowel Preparation**<br>Percentage of outpatient colonoscopies with poor bowel preparation<br>**Auditable Outcome** | 3.5% | 2.8%–6.9% | Year of the data: 2014<br>Data limitations: Hospitals that submit colonoscopy data to CIRT only (n=71) |
| **Outpatient Polypectomy**<br>Percentage of outpatient colonoscopies in which ≥1 polyp(s) were removed<br>**Auditable Outcome** | 39.8% | 34.1%–49.6% | Year of the data: 2014 |
| **Outpatient Cecal Intubation**<br>Percentage of outpatient colonoscopies where cecum or terminal ileum was reached<br>**Target**<br>95% in patients with adequate bowel preparation and no obstructing lesions | 97.8% | 96.8%–98.6% | Year of the data: 2014 |
| **Post-Polypectomy Bleeding**<br>Percentage of outpatient colonoscopies with polypectomy where patient was admitted to hospital with lower gastrointestinal bleeding within 14 days of procedure<br>**Target**<br><1 per 100 colonoscopies with polypectomy resulting in clinically significant bleeding requiring hospital admission | 0.3% | 0.1%–0.5% | Year of the data: 2014 |
| **Outpatient Perforation**<br>Number of outpatient colonoscopies where patient was admitted to hospital with perforation within 7 days of procedure, per 1,000 colonoscopies<br>**Target**<br><1 per 1,000 colonoscopies | 0.3 | 0.1–0.8 | Year of the data: 2014 |
| **CRC Detection**<br>Percentage of outpatient colonoscopies where CRC was detected within 6 months of procedure<br>**Auditable Outcome** | 1.3% | 1.0%–1.7% | Year of the data: 2013 |
| **Post-Colonoscopy CRC**<br>Percentage of outpatient colonoscopies negative for CRC where CRC was diagnosed within 6–36 months of procedure<br>**Auditable Outcome** | 0.2% | 0.1%–0.3% | Year of the data: 2011 |
| **Adenoma Detection**<br>Percentage of colonoscopies in which ≥1 adenoma was identified and removed<br>**Target/Auditable Outcome**<br>TBD | - | - | Data not collected |

Notes: CIRT = Colonoscopy Interim Reporting Tool, CRC = colorectal cancer, IQR = Interquartile range (25th percentile to 75th percentile), LHIN = Local Health Integration Network

## Table 4: Facility performance, aggregated at the provincial and LHIN level

| Indicator | Provincial Performance | Lowest and Highest LHIN Performance | Notes |
|---|---|---|---|
| **Outpatient Cecal Intubation**<br>Percentage of outpatient colonoscopies where the cecum or terminal ileum was reached<br>**Target/Auditable Outcome**<br>TBD | - | - | The provincial result for provider outpatient cecal intubation is reported above. The facility outpatient cecal intubation is not reported at this time because the methodology currently used is inconsistent with the provider indicator methodology. The Partnership is working towards aligned methodologies for facility and provider indicators for future reports. |
| **Colonoscopies Performed by Endoscopists Meeting Volume Standard**<br>Percentage of colonoscopies performed at each facility by endoscopists who have performed 200 or more colonoscopies in total in the reporting year<br>**Target/Auditable Outcome**<br>TBD | - | - | The provincial result for provider total colonoscopy volume is reported above. Colonoscopies performed by endoscopists meeting volume standard is not reported at the facility level at this time because the methodology currently used is inconsistent with the provider indicator methodology. The Partnership is working towards aligned methodologies for facility and provider indicators for future reports. |
| **Colonoscopy Within 8 Weeks of Positive FOBT**<br>Percentage of individuals with an abnormal FOBT result who underwent colonoscopy within the 8 week benchmark after the abnormal screen date<br>**Target/Auditable Outcome**<br>TBD | 46.3% | 39.7%–54.4% | Year of the data: 2013 |
| **Colonoscopy Within 26 Weeks for Family History**<br>Percentage of colonoscopies within the 26-week benchmark for individuals with family history of CRC<br>**Target/Auditable Outcome**<br>TBD | 89.2% | 77.0%–96.2% | Year of the data: 2014<br>Data limitation: Hospitals that submit colonoscopy data to CIRT only (n=71) |
| **Positive FOBT Follow-Up**<br>Percentage of individuals who had an abnormal FOBT result and underwent colonoscopy within 6 months of the abnormal FOBT date<br>**Target/Auditable Outcome**<br>TBD | 77.5% | 65.3%–82.0% | Year of the data: 2013 |
| **Tier 1 and Tier 2 Adverse Events**<br>Numbers of Tier 1 and Tier 2 adverse events.<br>Tier 1 events:<br>• death within the premises;<br>• death within 10 days of a procedure performed at the premises;<br>• any procedure performed on wrong patient, site or side; and/or<br>• transfer of a patient from the premises directly to a hospital for care.<br>Tier 2 events:<br>• number and type of infections occurring in the premises;<br>• unscheduled return to the procedure room for an unexpected event;<br>• unplanned stay at the premises for medical reasons that is longer than 12 hours post-procedure; and/or<br>• unscheduled treatment of a patient in a hospital premises. | - | - | Data not available |
| **Patient Experience**<br>Measures to be developed | | | |

Notes: LHIN = Local Health Integration Network, CIRT = Colonoscopy Interim Reporting Tool, FOBT = fecal occult blood test, the Partnership = Quality Management Partnership

## Colonoscopy QMP next steps

Implementation of the colonoscopy QMP will be a multi-year undertaking. Once complete, all recommendations will be implemented, reporting on quality will be established at all levels and quality assurance processes will be consistent for all providers and facilities.

The Quality Management Partnership's work in 2015/16 includes:

- prioritizing the Colonoscopy QMP Expert Advisory Panel's recommendations and moving forward first with those that have strong stakeholder support, good alignment with existing initiatives and adequate resources for execution;
- building towards full reporting at the endoscopist, facility, regional and provincial levels, guided by a comprehensive information management and information technology strategy that addresses current data gaps and limitations;
- supporting a study, led by researchers at Sunnybrook Research Institute, that will issue endoscopist audit and feedback reports to 50 per cent of endoscopists in 2015/16 and 100 per cent of endoscopists in 2016/17, and evaluate the impact of the reports on endoscopist performance;
- recruiting colonoscopy leads at the provincial, regional and facility levels to support and facilitate quality improvement and establishing a provincial quality committee to provide overall guidance and leadership for the colonoscopy QMP; and
- engaging patients/service users as members of both the provincial quality committee and a newly formed Citizen's Advisory Committee in order to ensure that all aspects of the QMP, including the measurement and reporting strategy, are informed by their interests and views.

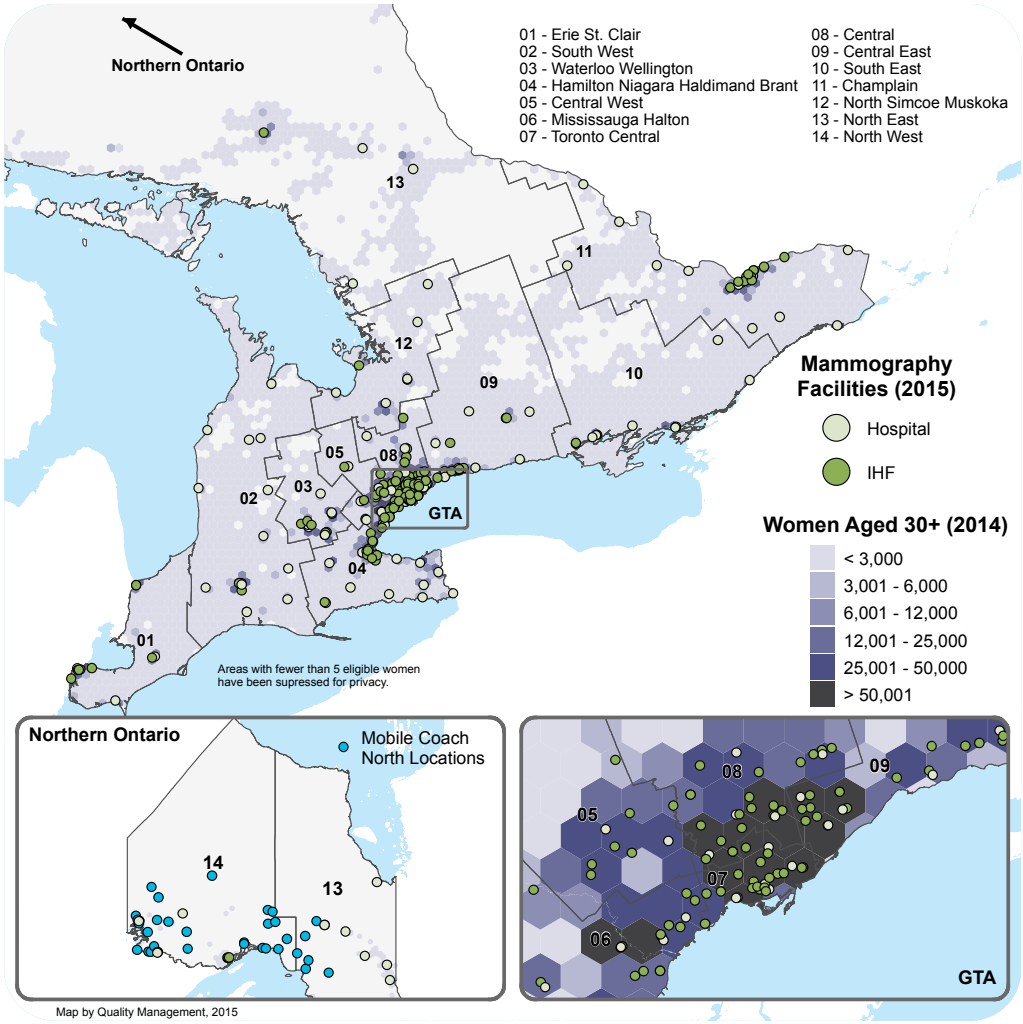
Continued strong alignment with key quality initiatives in colonoscopy, such as CCC, QBP and OHPIP, will be a critical success factor for the colonoscopy QMP. Ongoing communication and engagement with stakeholders will also be essential to ensure that the colonoscopy QMP reaches its goal of achieving consistent high-quality colonoscopy across the Ontario healthcare system.

# Mammography

## Background

In Ontario, mammograms are performed by medical radiation technologists (MRTs) and interpreted by radiologists in hospitals and independent health facilities (IHFs). Figure 2 shows the distribution of women age 30 and over, and the presence of mammography facilities across the province.[8]

**Figure 2: Women age 30 and over and mammography facilities in Ontario, 2015**




8 Methodology notes for all data, figures and tables in this report are available at **http://www.qmpontario.ca**.

**Table 5: Distribution, by LHIN, of radiologists reading mammography, mammography facilities and proportions per women age 30 and over, Ontario, 2015**

| LHIN | Number of Radiologists | Number of Hospitals | Number of IHFs | Number of Mobile Coaches | Women Age 30 and Over | Total Mammograms (Hospital + IHF) for Women Age 30 and Over | Mammograms per 1,000 Women Age 30 and Over | Radiologists per 100,000 Women Age 30 and Over |
|---|---|---|---|---|---|---|---|---|
| Erie St. Clair | 27 | 5 | 6 | 0 | 224,211 | 60,409 | 269 | 12.0 |
| South West | 36 | 12 | 4 | 0 | 327,664 | 90,199 | 275 | 11.0 |
| Waterloo Wellington | 29 | 5 | 8 | 0 | 246,137 | 53,613 | 218 | 11.8 |
| Hamilton Niagara Haldimand Brant | 64 | 16 | 12 | 1 | 495,912 | 119,714 | 241 | 12.9 |
| Central West | 33 | 3 | 7 | 0 | 289,261 | 61,250 | 212 | 11.4 |
| Mississauga Halton | 53 | 6 | 17 | 0 | 405,706 | 92,882 | 229 | 13.1 |
| Toronto Central | 62 | 7 | 17 | 0 | 439,882 | 93,290 | 212 | 14.1 |
| Central | 85 | 7 | 23 | 0 | 649,857 | 163,604 | 252 | 13.1 |
| Central East | 66 | 11 | 20 | 0 | 550,762 | 147,862 | 268 | 12.0 |
| South East | 16 | 8 | 2 | 0 | 179,022 | 47,797 | 267 | 8.9 |
| Champlain | 53 | 13 | 10 | 0 | 452,595 | 111,967 | 247 | 11.7 |
| North Simcoe Muskoka | 20 | 5 | 2 | 0 | 161,424 | 41,094 | 255 | 12.4 |
| North East | 17 | 11 | 2 | 0 | 204,181 | 48,102 | 236 | 8.3 |
| North West | 8 | 4 | 1 | 1 | 82,580 | 19,095 | 231 | 9.7 |
| **Ontario** | **569** | **113** | **131** | **2** | **4,709,194** | **1,150,878** | **244** | **12.1** |

Notes: IHF = independent health facility, LHIN = Local Health Integration Network

Table 5 shows the distribution by Local Health Integration Network (LHIN) of radiologists reading mammography, hospitals and IHFs providing mammography, and the proportions of mammograms and radiologists per 100,000 women age 30 and over. Although preliminary, these data show regional variation in the proportion of mammograms and radiologists reading mammograms for the population. Further analysis is needed to better understand the reasons for, and impact of, this variation.

## Current quality initiatives

The mammography quality management program (QMP) will build on strong foundations that already exist in Ontario. This section provides information on key initiatives and programs that are focused on improving mammography quality in Ontario:

- the Ontario Breast Screening Program, providing high-quality breast cancer screening;
- the Independent Health Facilities Program, ensuring facilities and physicians adhere to standards; and
- a diagnostic imaging peer review program, being proposed to provide learning opportunities for all radiologists.

## Ontario Breast Screening Program

The Ontario Breast Screening Program (OBSP) is an organized provincial screening program that provides eligible women with the benefits of organized screening (e.g., invitations to participate in screening, reminders when it is time for the next screen). The OBSP has numerous quality assurance processes to ensure that women in the program receive high-quality services. For example, the OBSP requires regular inspections of mammography units and reporting work stations by a qualified medical physicist with training in mammographic systems. The physicist also confirms that required quality control has been carried out. The OBSP requires that all facilities maintain accreditation under the Canadian Association of Radiologists-Mammography Accreditation Program (CAR-MAP). CAR-MAP verifies that radiologists and MRTs have the training, education and experience to perform mammography and that images produced by the equipment are clinically satisfactory for interpretation.

In addition, the OBSP conducts regular image reviews for MRTs who work in participating facilities to assess their positioning technique and image quality, and to identify where they are performing well and where they may need to improve. The OBSP provides radiologists with individual radiologist outcome reports that contain information on key indicators, such as their abnormal calls, cancer detection and one-year recalls compared to provincial peer averages and to nationally recognized targets, where available.

The OBSP's quality assurance processes are applicable to participating facilities, MRTs and radiologists. In early 2015, 190 (78 per cent) facilities participated in the OBSP and 56 (22 per cent) did not participate. Of the 567 radiologists who read mammography in early 2015, 473 (83 per cent) read at OBSP facilities. The remaining 94 (17 per cent) read outside the OBSP.

To ensure that all mammography facilities in Ontario attain the same quality standards as OBSP facilities, the Mammography QMP Expert Advisory Panel recommended that all facilities participate in the OBSP. This will mean that all mammography units are assessed in the same way, all MRTs have regular image reviews and all radiologists receive outcome reports. Eligibility for the OBSP will continue to be based on evidence and clinical practice guidelines that identify the populations that receive the most benefit and least harm from screening.

## Independent Health Facilities Program

Independent health facilities (IHFs) are licensed by the Ministry of Health and Long-Term Care (MOHLTC) and are subject to MOHLTC oversight if they provide insured services and bill for a facility fee. A range of services are performed in IHFs, including mammography. The College of Physicians and Surgeons of Ontario (CPSO) assesses IHFs on behalf of the MOHLTC. It is the mandate of the MOHLTC to ask the CPSO to assess every IHF in Ontario on an ongoing basis at least once during each facility's three to five year licensing period. In addition, the director of the IHF program at the MOHLTC may ask the CPSO to perform an assessment at any time if considered necessary or advisable. IHF assessments are based on adherence to guidelines, called clinical practice parameters and facility standards, which have been developed for the services offered in a facility.[9]

As of July 2015, all IHFs in Ontario that were licensed to provide mammography services had been assessed and received an outcome of "meets standards."[10] From April 2013 to March 2014, 219 radiologists working in an IHF had an image review as part of the facility assessment. Looking forward, CPSO is developing a peer assessment program for radiologists that will further contribute to continuous quality improvement for this specialty. Information about the peer assessment program is provided in the pathology section, below.

It should be noted that at the time of compiling this report, inspection processes for out-of-hospital premises and IHFs were under review by MOHLTC.

9 Accessed July 2015, **http://www.cpso.on.ca/Policies-Publications/CPGs-Other-Guidelines**.
10 Accessed July 2015, **http://www.health.gov.on.ca/en/public/programs/ihf/docs/ihf_assessment_report.pdf.**

### Diagnostic imaging peer review program

MOHLTC tasked Health Quality Ontario (HQO) with developing recommendations for a diagnostic imaging peer review program.[11] HQO has submitted their report and it is now being considered by the MOHLTC. The report's recommendations acknowledge that peer review is one of several tools that support the development of a culture of continuous quality improvement. Peer review alone will not assure quality; it must be implemented within the framework of a broader quality management program.

The Mammography QMP Expert Advisory Panel recognized the value of peer review as a tool for assuring quality and patient safety, and recommended that a peer review system for mammography be developed and embedded within HQO's broader diagnostic imaging initiative.

### Other safety and quality processes

In Ontario, facilities that have X-ray equipment (including mammography units) must meet the requirements of the *Healing Arts Radiation Protection (HARP) Act* and the accompanying *Regulation 543 (X-Ray Safety Code)*. All mammography facilities in Canada are expected to comply with Health Canada's *Radiation Protection and Quality Standards in Mammography: Safety Code 36*.

The Mammography QMP Expert Advisory Panel recommended additional standards to enhance mammography quality across the province, such as CAR-MAP accreditation, the use of digital mammography using direct radiography (DR) technology and participation in a digital imaging and report repository. In 2014, all OBSP facilities and IHFs were CAR-MAP accredited. A survey conducted that year, completed by a majority of facilities, confirmed that seven hospitals were not CAR-MAP accredited; the status for two other hospitals was not confirmed. Survey results showed that DR was the most common form of mammography technology: 220 facilities used DR technology and 21 facilities used film screen. Participation in an imaging repository was reported to be high: 143 facilities indicated that they participated and 63 that they did not; 23 did not know if their facility participated.

## Aligning key quality initiatives

The Mammography QMP Expert Advisory Panel explicitly recognized that, in order for the mammography QMP to be successful, it must be in alignment with and build on existing quality initiatives. This alignment will be achieved by adopting best practices from these initiatives and ensuring that they are applied to all providers and facilities. For example:

- QMP standards are aligned with standards for the OBSP and IHF program, where appropriate, and will be applied consistently across the province to all mammography providers (radiologists and MRTs) and all facilities;
- QMP radiologist and facility screening indicators are aligned with OBSP and/or national indicators and will be used to monitor quality consistently across Ontario; and
- The roles of existing Regional Breast Imaging Leads (RBILs) are being expanded to include QMP-specific responsibilities in order to reduce overlap and further support alignment between QMP and OBSP at the regional level

11 Accessed August 2015, **http://www.hqontario.ca/portals/0/Documents/about/di-expert-panel-report-en.pdf.**

## Mammography reporting

The Mammography QMP Expert Advisory Panel reviewed the literature and programs in other jurisdictions and identified existing quality indicators for mammography. The panel then recommended specific indicators and targets based on this evidence, as well as their relevance and feasibility for the mammography QMP. For radiologist and facility screening indicators, the panel recommended that established indicators and targets be used. Current targets apply to eligible women screened in an organized program; in future, once data are acquired and stabilized, targets may be established for screening all women (i.e., screening inside and outside the OBSP). There are currently no established national indicators or targets for radiologist diagnostic mammography indicators. The proposed diagnostic indicators must undergo a process of data acquisition, stabilization and review before they can be reported.

Aggregate provincial results for the radiologist screening indicators are presented in Table 6. Table 7 lists the proposed radiologist diagnostic indicators without results because the data are currently not available. Table 8 presents aggregate provincial results for facility indicators. Results, where reported, were compiled using existing data, and are included to describe the current state of mammography quality in Ontario. These data show regional variation. Further analysis is needed to better understand the reasons for, and impact of, this variation.

In future, mammography reporting will be expanded to include all indicators reported at all levels: provincial, regional, facility and radiologist. Patient experience measures will be defined with input from patient/service users, and incorporated into reports where appropriate. In time, public reporting will also be implemented. The Partnership will work closely with stakeholders to ensure that the public reports are meaningful and that the approach takes into account the sensitive nature of this information.

QMP reports will be used to support mammography quality improvement in Ontario, as described in the section about quality management programs, above.

## Table 6: Radiologist screening performance, aggregated at the provincial and LHIN level

| Indicator | Provincial Performance | Lowest and Highest LHIN Performance | Notes |
|---|---|---|---|
| **Abnormal Calls**<br>Percentage of women with an abnormal screening mammogram referred for further testing<br>**Target**<br>N/A | 8.7% | 6.0%–10.3% | Year of the data: 2013<br>Data limitations: OBSP facilities only |
| **Positive Predictive Value**<br>Percentage of women with an abnormal screening mammogram who were diagnosed with invasive breast cancer or DCIS after diagnostic work-up<br>**Target**<br>N/A | 5.9% | 4.7%–8.5% | Year of the data: 2013<br>Data limitations: OBSP facilities only |
| **Invasive Cancer Detection Rate**<br>Number of women with a screen-detected invasive breast cancer per 1,000 screens<br>**Target**<br>N/A | 4.0 | 3.2–5.4 | Year of the data: 2012<br>Data limitations: OBSP facilities only |
| **DCIS Detection Rate**<br>Number of women with a screen-detected DCIS breast cancer per 1,000 screens<br>**Target**<br>N/A | 0.9 | 0.5–1.2 | Year of the data: 2010–2012<br>Data limitations: OBSP facilities only |
| **Tumour Size**<br>Percentage of screen-detected invasive breast cancers ≤1 cm<br>**Target**<br>>25% | 28.8% | 19.4%–36.0% | Year of the data: 2010–2012<br>Data limitations: OBSP facilities only |
| **Nodal Involvement**<br>Percentage of screen-detected invasive breast cancers in which the cancer has not invaded the axillary lymph notes<br>**Target**<br>>70% | 75.7% | 70.8%–81.5% | Year of the data: 2010–2012<br>Data limitations: OBSP facilities only |
| **Post-Screen Invasive Cancer Rate**<br>Number of post-screen invasive breast cancers found after a normal mammography screening episode within 12 months per 10,000 normal screens<br>**Target**<br><6 per 10,000 normal screens/year | 6.5 | 4.6–9.0 | Year of the data: 2009-2011<br>Data limitations: OBSP facilities only |

Notes: DCIS = ductal carcinoma in situ, LHIN = Local Health Integration Network, N/A = not available, OBSP = Ontario Breast Screening Program

## Table 7: Radiologist diagnostic performance

| Indicator | Provincial Rate | Notes |
|---|---|---|
| **Malignant Biopsies**<br>a) Malignant core biopsies<br>• Percentage of malignant core biopsies, out of all core biopsies for asymptomatic women<br>• Percentage of malignant core biopsies, out of all core biopsies for symptomatic women<br>b) Malignant surgical biopsies<br>• Percentage of malignant surgical biopsies, out of all surgical biopsies for asymptomatic women<br>• Percentage of malignant surgical biopsies, out of all surgical biopsies for symptomatic women<br>**Target**<br>TBD | - | Data not collected |
| **Positive Predictive Value**<br>Percentage of recommended biopsies found to have breast cancer (DCIS or invasive) after diagnostic work-up, out of all recommended biopsies<br>**Target**<br>TBD | - | Data not collected |
| **Use of BI-RADS 3**<br>Percentage of BI-RADS 3 called on diagnostic work-up, out of all diagnostic cases<br>**Target**<br>TBD | - | Data not collected |
| **BI-RADS 3 Malignancies**<br>Percentage of BI-RADS 3 calls found to have cancer (DCIS or invasive) at next follow-up, out of all BI-RADS 3 calls<br>**Target**<br>TBD | - | Data not collected |
| **BI-RADS 5 Malignancies**<br>Percentage of BI-RADS 5 calls found to be cancer (DCIS or invasive), out of all BI-RADS 5 calls<br>**Target**<br>TBD | - | Data not collected |

Notes: BI-RADS = Breast Imaging Reporting and Data System, DCIS = ductal carcinoma in situ, TBD = to be determined

## Table 8: Facility performance, aggregated at the provincial and LHIN level

| Indicator | Provincial Performance | Lowest and Highest LHIN Performance | Notes |
|---|---|---|---|
| **Breast Cancer Screening Abnormal Follow-up (Wait Time to First Assessment)**<br>Percentage of women with an abnormal screening mammogram who had their initial assessment procedure within 3 weeks of the abnormal screen date<br>**Target**<br>≥90% within 3 weeks | 80.4% | 53.1%–89.2% | Year of the data: 2013<br>Data limitations: OBSP facilities only |
| **Breast Cancer Screening Diagnostic Interval (Wait Time to Diagnosis Without Tissue Biopsy)**<br>Percentage of women with an abnormal screening mammogram who were diagnosed without tissue biopsy within 5 weeks of the abnormal screen date<br>**Target**<br>≥90% within 5 weeks | 90.9% | 84.5%–94.1% | Year of the data: 2013<br>Data limitations: OBSP facilities only |
| **Breast Cancer Screening Diagnostic Interval (Wait Time to Diagnosis With Tissue Biopsy)**<br>Percentage of women with an abnormal screening mammogram who were diagnosed with tissue biopsy within 7 weeks of the abnormal screen date<br>**Target**<br>≥90% within 7 weeks | 73.3% | 56.9%–80.2% | Year of the data: 2013<br>Data limitations: OBSP facilities only |
| **Patient Experience**<br>Measures to be developed | | | |

Notes: LHIN = Local Health Integration Network, OBSP = Ontario Breast Screening Program

## Mammography QMP next steps

Implementation of the mammography QMP will be a multi-year undertaking. Once complete, all recommendations will be implemented, reporting on quality will be established at all levels and quality assurance processes will be consistent for all providers and facilities.

The Quality Management Partnership's work in 2015/16 includes:

- prioritizing the Mammography QMP Expert Advisory Panel's recommendations and moving forward first with those that have strong stakeholder support, good alignment with existing initiatives and adequate resources for execution;
- building towards full reporting at the radiologist, facility, regional and provincial levels for all mammography in Ontario, guided by a comprehensive information management and information technology strategy that addresses current data gaps and limitations;
- recruiting mammography leads at the provincial, regional and facility levels to support and facilitate quality improvement and establishing a provincial quality committee to provide overall guidance and leadership for the mammography QMP; and
- engaging patients/service users as members of both the provincial quality committee and a newly formed Citizen's Advisory Committee in order to ensure that all aspects of the QMP, including the measurement and reporting strategy, are informed by their interests and views.

Continued strong alignment with key quality initiatives in mammography, including the OBSP, IHF assessment and diagnostic imaging peer review, will be a critical success factor for the mammography QMP. Ongoing communication and engagement with stakeholders will also be essential to ensure that the mammography QMP reaches its goal of achieving consistent high-quality mammography across the Ontario healthcare system.

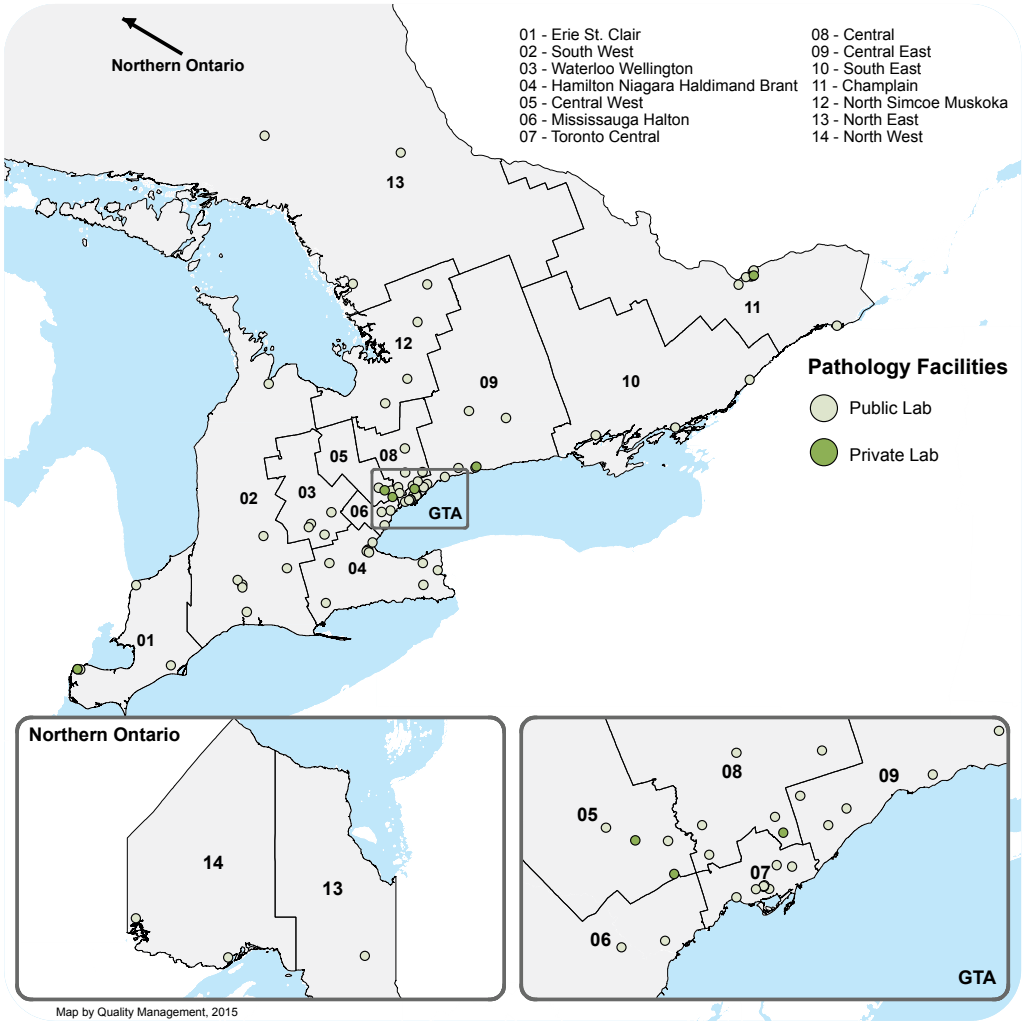
# Pathology

## Background

The scope of the pathology quality management program (QMP) is histopathology or surgical pathology, which involves the study of tissue samples for diagnostic purposes. In Ontario, histopathology is practiced by anatomical and general pathologists in public facilities and private laboratories. As of June 2015, 80 laboratories provided histopathology services in Ontario, of which 22 (27.5 per cent) were academic facilities, 52 (65.0 per cent) were community facilities, and six (7.5 per cent) were private laboratories.[12]

Figure 3 shows the location of public laboratories and private laboratories that provided histopathology services in Ontario in 2015. Note that private laboratories can receive specimens from across the province, so their services are not restricted to the Local Health Integration Network (LHIN) in which they are located.

**Figure 3: Laboratories that provide histopathology services in Ontario, 2015**




12 Methodology notes for all data, figures and tables in this report are available at **http://www.qmpontario.ca**.

**Table 9: Distribution, by LHIN, of anatomical and general pathologists, Ontario, 2015**

| LHIN | Number of Anatomical Pathologists | Number of General Pathologists |
|---|---|---|
| Erie St. Clair | 13 | 1 |
| South West | 34 | 6 |
| Waterloo Wellington | 17 | 5 |
| Hamilton Niagara Haldimand Brant | 37 | 11 |
| Central West | 10 | 9 |
| Mississauga Halton | 21 | 6 |
| Toronto Central | 108 | 9 |
| Central | 32 | 8 |
| Central East | 24 | 4 |
| South East | 16 | 4 |
| Champlain | 48 | 7 |
| North Simcoe Muskoka | 5 | 6 |
| North East | 8 | 9 |
| North West | 5 | 2 |
| **Ontario** | **378** | **87** |

Notes: LHIN = Local Health Integration Network

Table 9 shows the distribution by LHIN of general and anatomical pathologists in Ontario. Although preliminary, these data show variation in the numbers of anatomical and general pathologists by region. Further analysis is needed to better understand the reasons for, and impact of, this variation.

## Current quality initiatives

The pathology QMP will build on strong foundations that already exist in Ontario. This section provides information on key programs and initiatives that are focused on improving pathology quality in Ontario:

- Cancer Care Ontario's Pathology and Laboratory Medicine Program, strengthening cancer pathology services;
- Path2Quality, defining quality for laboratory physicians;
- the College of Physicians and Surgeons of Ontario's Peer Assessment Program, supporting quality improvement for physicians; and
- Institute for Quality Management in Healthcare, ensuring facilities adhere to standards.

### Pathology and Laboratory Medicine Program

Cancer Care Ontario's Pathology and Laboratory Medicine Program (PLMP) works with regional providers, stakeholder groups and clinical experts to strengthen the quality of cancer pathology services across Ontario. The PLMP leads a wide range of quality initiatives focused on improving the collection and use of cancer data, and on developing and implementing guidelines and tools to support clinicians in adopting evidence-based best practices.

The PLMP's synoptic pathology reporting tools and collaborative staging program standardize the collection of cancer pathology report data to improve communication of critical patient health information between service providers, and to enable use of pathology data for establishing and monitoring cancer-related quality indicators. Indicators, such as turn-around time, are monitored and reported by PLMP publicly and to regions for all disease sites. Practice guidelines and performance standards for pathology and laboratory medicine are developed and implemented by PLMP through extensive clinician and stakeholder consultation and evidence-based analysis. PLMP also oversees funding and monitors quality assurance for molecular oncology tests for breast, lung, skin, colorectal and gastric cancers.

## Path2Quality

Path2Quality (P2Q) is a collaboration of the Ontario Medical Association Section on Laboratory Medicine and the Ontario Association of Pathologists. Since 2009, P2Q has been working to attain high levels of patient care and safety through the promotion and/or development of initiatives that enhance the systems, environments and resources that support the work of Ontario's laboratory physicians.

Path2Quality's quality processes in laboratory medicine include:

- *Standards2Quality: Guidelines for Quality Management in Surgical Pathology Practices* (S2Q)—Developed in 2011, the S2Q guidelines provide guidance to individuals, groups and institutions on the processes necessary for ensuring high quality in surgical pathology. Version 2, which includes appendices for cytology and hematopathology, was released in the spring of 2013 and was endorsed by the Pathology QMP Expert Advisory Panel; and
- *Work2Quality: Guidelines for Workload Measurement in Pathology Professional Practices* (W2Q)—Developed in 2012, this companion document is a workload measurement system for laboratory medicine professional practice.

Current works-in-progress include:

- *Networks2Quality: Guidelines for Shaping and Resourcing Ontario's Laboratory Medicine System*, which aims to develop a robust, patient-centric, comprehensive and flexible laboratory medicine service delivery system that can meet the current and future demands of Ontario's ever-changing healthcare system; and
- *Leadership2Quality*, which focuses on building leadership skills and capacity.

P2Q disseminates its knowledge through the founding organizations' communication channels and its annual Ontario Laboratory Directors' Summit. The summit, open to laboratory directors from the public and private sectors, helps inform best practice.

## Peer Assessment Program

The College of Physicians and Surgeons of Ontario (CPSO) operates a peer assessment program to fulfil its requirements under the *Regulated Health Professions Act*. The aim of peer assessments is to promote continuous quality improvement within the profession. This program is not unique to pathologists. Assessments are performed annually on a random selection of physicians from a variety of disciplines. In addition, physicians undergo targeted assessments when they turn 70 years of age, and every five years they remain in practice thereafter. Physicians are assessed by peers who have a similar scope of practice, and assessments include a records review and an in-person interview. Assessors complete a report that the CPSO uses to determine if any further follow-up is required. In 2014, CPSO conducted 1,776 peer assessments.

## Institute for Quality Management in Healthcare

The Institute for Quality Management in Healthcare (IQMH) is Canada's largest provider of medical laboratory proficiency testing and accreditation. Participation is mandated for Ontario's laboratories by the Ministry of Health and Long-Term Care (MOHLTC) under the *Laboratory and Specimen Collection Centre Licensing Act*.

The IQMH Centre for Proficiency Testing regularly sends pathology laboratories unstained glass slides containing clinical material for various histochemical and immunohistochemistry stains, including predictive and prognostic markers (e.g., estrogen receptor and progesterone receptor). Performance is evaluated by inter-laboratory comparison and expert panel assessment. IQMH produces consensus practice recommendations based on data collected through patterns-of-practice surveys. Recommendations focus on the validity and reliability of the technical component of these tests.

The IQMH Centre for Accreditation (formerly Ontario Laboratory Accreditation) evaluates laboratory processes to ensure quality and competence through conformance to ISO 15189, an international standard for medical laboratory quality and competence. IQMH accreditation requirements are comprehensive and encompass laboratory management, as well as the spectrum of specimen processing and examination. On-site assessment is conducted at least once every four years to identify non-conformances to requirements, which must be corrected within a specified timeframe to achieve accreditation. Specific requirements for accreditation are accompanied by guidance information to assist laboratory management in ensuring appropriate processes are in place to achieve the requirement.

The four-year accreditation certificate is dependent on demonstrated ongoing competence through surveillance activities.

All laboratories providing histopathology services in Ontario currently hold accreditation certificates.

## Aligning key quality initiatives

The Pathology QMP Expert Advisory Panel explicitly recognized that in order for the pathology QMP to be successful, it must be in alignment with and build on existing quality initiatives where it makes sense to do so. This alignment is being achieved by:

- adopting P2Q's S2Q as initial standards for the pathology QMP; and
- working with PLMP and IQMH to ensure that the pathology QMP's work is complementary to theirs and does not duplicate their efforts.

## Pathology reporting

Based on a review of the literature and programs in other jurisdictions, the Pathology QMP Expert Advisory Panel identified no standardized, evidence-based nationally and internationally accepted indicators for measuring histopathology performance at the provider level. For this reason, provider-level reporting is out of scope for the pathology QMP at this time. For facility-level indicators, there are no standardized national targets; after a process of data acquisition, stabilization and review, targets may be established for these indicators, if appropriate. Patient experience measures will be defined with input from patient/service users, and incorporated into reports where appropriate. In time, public reporting will also be implemented. The Partnership will work closely with stakeholders to ensure that the public reports are meaningful and that the approach takes into account the sensitive nature of this information.

A pathology QMP provincial baseline survey of laboratories providing histopathology services in Ontario was conducted between March and June 2015. The primary purpose of the survey was to provide a baseline view of the uptake of S2Q and the pathology quality indicators recommended by the Pathology QMP Expert Advisory Panel. As of July, 2015, the response rate for the survey was 94.8 per cent (75 out of 80 laboratories that provide histopathology services).

Preliminary quantitative results from the survey are given in Tables 10 through 24, and thematic analysis of qualitative comments follows. The survey results in the tables are preliminary, self-reported and not validated. A more fulsome analysis will be presented in a future report. These results show regional variation. Further analysis is needed to better understand the reasons for, and impact of, this variation.

Note that private laboratories are excluded from the lowest to highest LHIN rates in the tables because private laboratories can receive specimens from across the province, so their services are not restricted to the LHIN in which they are located.

# Preliminary Baseline Survey Results

## Table 10: Laboratories meeting recommendations for foundational elements of a quality assurance program

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories in Ontario must have a pathology professional quality management committee. | 72.0% | 33.3%–100.0% |
| All laboratories in Ontario must have a pathology professional quality management plan. | 78.7% | 50.0%–100.0% |
| All laboratories must have a guideline for classification of report defects, discrepancies, discordances and errors. | 81.1% | 0.0%–100.0% |
| All laboratories must have a policy for investigation and resolution of report defects, discrepancies, discordances and errors. | 80.0% | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 11: Laboratories meeting recommendations for policies and data collection on intra-departmental consultations

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the procedure for consultation with intra-departmental colleagues, including the documentation of those consults. | 82.7% | 43.0%–100.0% |
| All laboratories must have a policy that outlines which cases require mandatory intra-departmental consultation and which are discretionary for the professional group. | 60.0% | 20.0%–100.0% |
| All laboratories must collect data on intra-departmental consultations for each pathologist. | 69.33% | 40.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 12: Methods used to collect and store data on intra-departmental consultations

| How are the data on intra-departmental consultations collected and stored at your facility? Choose all that apply. | Paper | Excel | Patient Report: Discrete Data | Patient Report: Free Text/Scanned | LIS: Discrete Data | LIS: Free Text/ Scanned | N/A | Other |
|---|---|---|---|---|---|---|---|---|
| Provincial rate | 23.5% | 17.7% | 3.4% | 8.4% | 30.3% | 6.7% | 5.9% | 4.2% |

Notes: LIS = laboratory information system, N/A = not applicable

## Table 13: Laboratories meeting recommendations for guidelines, policy and data collection on external consultations

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a guideline outlining the responsibilities of a pathologist requesting an external consultation to ensure that data and important clinical information are sent to the external consultant to allow for proper interpretation of the case in a timely manner. | 58.7% | 37.5%–100.0% |
| All laboratories must have a policy that outlines the procedure for requesting external consultation, including the review and documentation of the resulting consultation opinion. The policy must provide guidance as to the types of cases that are appropriate for external consult. | 64.0% | 28.6%–100.0% |
| All laboratories must collect data on external consultations for the professional group. | 68.0% | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 14: Methods used to collect and store data on external consultations

| How are the data on external consultations collected and stored at your facility? Choose all that apply. | Paper | Excel | Patient Report: Discrete Data | Patient Report: Free Text/Scanned | LIS: Discrete Data | LIS: Free Text/ Scanned | N/A | Other |
|---|---|---|---|---|---|---|---|---|
| Provincial rate | 32.5% | 15.8% | 0.8% | 12.5% | 25.8% | 8.3% | 2.5% | 1.7% |

Notes: LIS = laboratory information system, N/A = not applicable

## Table 15: Laboratories meeting recommendations for policy and data collection on intra-operative consultations

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the processes for, and the documentation of, the comparison of intra-operative consultation results with final diagnoses. | 76.0% | 37.5%–100.0% |
| All laboratories must collect data on the accuracy of intra-operative consults and deferral rates for the professional group. | 54.3% | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 16: Methods used to collect and store data on intra-operative consultations

| How are the data on intra-operative consultations collected and stored at your facility? | Paper | Excel | Patient Report: Discrete Data | Patient Report: Free Text/Scanned | LIS: Discrete Data | LIS: Free Text/ Scanned | N/A | Other |
|---|---|---|---|---|---|---|---|---|
| Provincial rate (intra-operative accuracy) | 30.4% | 18.8% | 2.9% | 4.4% | 34.8% | 2.9% | 5.8% | 0.0% |
| Provincial rated (intra-operative deferral) | 24.6% | 13.9% | 1.5% | 3.1% | 18.5% | 3.1% | 35.4% | 0.0% |

Notes: LIS = laboratory information system, N/A = not applicable

## Table 17: Laboratories meeting the recommendation for a policy on correlating current with previous/concurrent surgical pathology cases

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the procedure for correlation of current surgical pathology cases with pertinent previous/concurrent laboratory reports and, if required, related slides and other material. | 3.2% for external and internal reports<br><br>26.7% for internal reports only | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 18: Laboratories meeting recommendations for policy and data collection of cases requiring external review

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the processes for handling requests for review of cases by an external pathologist, including the documentation and review of those results. | 82.7% | 50.0%–100.0% |
| All laboratories must collect data on report defects and discordances for the professional group. | 76.0% | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 19: Methods used to collect and store data on cases requiring external review

| How are the data on external reviews collected and stored at your facility? Choose all that apply. | Paper | Excel | Patient Report: Discrete Data | Patient Report: Free Text/Scanned | LIS: Discrete Data | LIS: Free Text/ Scanned | N/A | Other |
|---|---|---|---|---|---|---|---|---|
| Provincial rate | 37.1% | 16.4% | 0.9% | 9.5% | 21.6% | 8.6% | 4.3% | 1.7% |

Notes: LIS = laboratory information system, N/A = not applicable

## Table 20: Laboratories meeting recommendations for policies and data collection on corrected reports

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the criteria for revising or correcting reports, including those in which diagnoses are revised or corrected. | 65.3% | 25.0%–100.0% |
| All laboratories must have a policy that outlines when to directly inform the responsible clinician of the revision or correction (e.g., by verbal communication) and how to document that communication. | 66.7% | 0.0%–100.0% |
| All laboratories must have a policy that outlines the procedure for notification of the laboratory director (or chair of the pathology professional quality management committee), and initiation of critical incident and similar reporting, where appropriate. | 65.3% | 0.0%–100.0% |
| All laboratories must have a policy that outlines when revised or corrected reports have to be documented for risk management, root cause analysis and quality improvement purposes via that organization's processes. | 53.3% | 0.0%–100.0% |
| All laboratories must collect data on corrected reports stratified by reason for the professional group. | 41.3% | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 21: Methods used to collect and store data on corrected reports

| How are the data on corrected reports collected and stored at your facility? Choose all that apply. | Paper | Excel | Patient Report: Discrete Data | Patient Report: Free Text/Scanned | LIS: Discrete Data | LIS: Free Text/ Scanned | N/A | Other |
|---|---|---|---|---|---|---|---|---|
| Provincial rate | 17.8% | 12.9% | 3.0% | 7.9% | 38.6% | 6.9% | 10.9% | 2.0% |

Notes: LIS = laboratory information system, N/A = not applicable

## Table 22: Laboratories meeting recommendations for policy, procedures and documentation of critical diagnoses

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the types of diagnoses/findings that are considered critical in the practices of physicians served by a surgical pathology group. | 81.3% | 0.0%–100.0% |
| All laboratories must have a defined procedure for timely communication of critical diagnoses/findings to the physician most responsible for the care of the patient involved. | 85.3% | 0.0%–100.0% |
| All laboratories must document the communication of critical diagnoses. | 84.0% | 0.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 23: Laboratories meeting recommendations for policy and data collection on turnaround times

| Recommendation | Provincial Implementation | LHIN Implementation (Lowest and Highest) |
|---|---|---|
| All laboratories must have a policy that outlines the processes for monitoring of turnaround times on a regular basis. | 93.3% | 50.0%–100.0% |
| All laboratories must collect data on turnaround times for the professional group. | 86.7% | 50.0%–100.0% |

Notes: LHIN = Local Health Integration Network

## Table 24: Methods used to collect and store data on turnaround times

| How are the data on surgical pathology turnaround times collected and stored at your facility? Choose all that apply. | Paper | Excel | Patient Report: Discrete Data | Patient Report: Free Text/Scanned | LIS: Discrete Data | LIS: Free Text/ Scanned | N/A | Other |
|---|---|---|---|---|---|---|---|---|
| Provincial rate | 10.5% | 24.2% | 1.1% | 3.2% | 52.6% | 1.1% | 4.2% | 3.2% |

Notes: LIS = laboratory information system, N/A = not applicable

### Survey qualitative themes

The following themes have been identified from qualitative comments submitted via the survey.

**Resources:** Many responses indicated that implementation, measurement and monitoring of the quality indicators and practices described in the survey may not be possible in the current environment. Existing resourcing limitations identified in responses include human resources (e.g., pathologists, pathologists' assistants and administrative and informatics support staff), laboratory information systems, data collection and analysis tools and support.

**Indicator target and relevance:** Multiple respondents identified concerns over the utility of some of the indicators for specific facility types. For example, academic facilities and facilities with very small numbers of pathologists may fall outside of a meaningful range for particular indicators. Respondents also highlighted the paucity of literature to support setting an acceptable target for some indicators.

**Variable perception of need/value of some quality management practices:** There was a lack of agreement among respondents regarding the need for policies that outline procedures for handling a particular situation at a facility. Some said that there was value in establishing a guideline or indicator, while others said that this same guideline or indicator was meaningless or wasteful. Some respondents questioned the utility of the guideline or indicator in the context of a specific facility or practice type.

**Wide range of data collection methods used:** There was a broad spectrum of ways that data were collected and stored, both between facilities and within the same facility.

**Quality management improvements are ongoing:** Quality management practices have been adopted to varying degrees. For more than half of the quality management practices, more than 10% of facilities report that the development/implementation of these procedures or policies is in progress.

## Pathology QMP next steps

Implementation of the pathology QMP will be a multi-year undertaking. The Quality Management Partnership (the Partnership) recognizes that there are unique challenges with implementing the pathology QMP. For example, unlike colonoscopy and mammography, pathology is an entire medical discipline rather than a health service area. In addition, implementation must proceed at a pace that matches capacity.

The Pathology QMP Expert Advisory Panel's key recommendation was to support standardized uptake of S2Q in Ontario laboratories. The Partnership's work in 2015/16 includes:

- prioritizing S2Q standards and guidelines and moving forward first with those that have strong stakeholder support, good alignment with existing initiatives and adequate resources for execution;
- developing supports for facilities to implement prioritized standards (e.g. sharing templates and best practices)
- focusing initially on a subset of S2Q facility indicators, and building gradually toward comprehensive reporting at the facility, regional and provincial levels, with provider-level reporting out of scope for now;
- recruiting pathology leads at the provincial, regional and facility levels to support and facilitate quality improvement and establishing a provincial quality committee to provide overall guidance and leadership for the pathology QMP; and
- engaging patients/service users as members of both the provincial quality committee and a newly formed Citizen's Advisory Committee in order to ensure that all aspects of the QMP, including the measurement and reporting strategy, are informed by their interests and views.

Continued strong alignment with key quality initiatives in pathology, including PLMP, P2Q, IQMH, and CPSO will be a critical success factor for the pathology QMP. Ongoing communication and engagement with stakeholders will also be essential to ensure that the pathology QMP reaches its goal of achieving consistent high-quality histopathology across the Ontario healthcare system.

# Summary

This inaugural report provides a preliminary overview of quality for colonoscopy, mammography and pathology in Ontario. The report demonstrates that strong foundations are in place for the three quality management programs (QMPs). In each health service area, there are a number of well-established programs and processes that help promote best practice and assure quality. The Partnership will work with stakeholders to ensure that the QMPs add value and avoid duplication of efforts by building on existing programs and processes wherever possible.

At the same time, the report shows that more work is needed to achieve consistent high quality in the three health care services across the province. There are variations in the coverage of the quality programs and processes described in the report. Regional differences exist in performance, as measured by reported indicators, and in implementation of standards and best practices. Data gaps preclude comprehensive quality reporting in some areas. The Partnership will look for opportunities to reduce variations and fill gaps in order to realize its vision of consistent high-quality care for Ontario. Strong collaboration with stakeholders across the healthcare system is crucial to ensuring that these efforts are successful.

Together, the Partnership and health system stakeholders are working to ensure that all health professionals and facilities providing each of the three health services meet the same quality standards, receive the same quality reports and have access to appropriate support for developing the skills, knowledge and resources needed to deliver high-quality care.

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