



Ontario College  
of Pharmacists

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# QUALITY ROUNDTABLE: PHARMACY INDICATORS 2018

August 2018



# STAKEHOLDER ROUNDTABLE: QUALITY INDICATORS FOR PHARMACY

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## ACKNOWLEDGEMENT

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## EXECUTIVE SUMMARY

*The Ontario College of Pharmacists (the College) serves as the regulating body for the pharmacy profession with a mandate to serve and protect the public. Health Quality Ontario (HQO), as Ontario's advisor on quality, uses indicators to track the quality of Ontario's health system including establishing a process and criteria for the selection of indicators for measuring health system performance and outcomes. To better assess the impact of pharmacy practice on health outcomes, the College and HQO are collaborating to establish a set of quality indicators for pharmacy care in Ontario.*

Although other jurisdictions have started to explore measurement in pharmacy, there is a global gap in availability of indicators to measure outcomes. With the goal in mind to bridge this gap, HQO and the College brought together a group of key stakeholders to achieve consensus on a set of overarching goals and measurement areas to move forward with developing these quality outcome indicators for pharmacy. The roundtable included patients, providers (including pharmacists), health information and measurement experts, representatives from the Ministry of Health and Long Term Care and Local Health Integration Networks, insurance providers, the Ontario Hospital Association, HQO and the College. For a full list of participants, please see Appendix A. The discussions were facilitated by Dr. Adalsteinn Brown, the Dean of the Dalla Lana School of Public Health and the Dalla Lana Chair of Public Health Policy at the University of Toronto. HQO's [Quality Matters Framework](#) and the Quadruple Aim were used as a roadmap for quality to help facilitate the roundtable discussion<sup>1</sup>.

The objectives of the roundtable were to achieve a consensus on overarching goals for quality indicators, identify areas to measure, and to review indicator selection criteria and principles for indicator implementation. The following summarizes the key discussion points:

### **Objective 1 - Overarching goals for quality**

**indicators:** The following goals were confirmed:

1. ensuring data is used to measure and report on quality of pharmacy care;
2. selecting indicators that are pharmacy centric;
3. aligning measures to existing pharmacy frameworks; and
4. ensuring measurement fosters a culture of quality improvement in the profession of pharmacy.

**Objective 2 - Measurement areas:** The indicator measurement areas identified include:

- patient reported experiences and outcomes;
- provider experience and engagement;
- appropriateness of medications dispensed;
- medication related incidents and hospital visits; and
- transitions of care

**Objective 3 - Indicator selection criteria:** The indicator selection criteria discussed were consistent with those outlined by HQO, and centred on the principles of importance/relevance to pharmacy, actionability, measurability, feasibility, evidence-based, interpretability and data quality.

### **Objective 4 - Principles for indicator**

**implementation:** The participants also discussed principles to consider when moving forward with a quality-based approach to reporting of indicators. The implementation principles discussed include ensuring a focus is placed on high quality data access and infrastructure support, developing capacity for quality improvement in pharmacy practice, and ensuring reporting is done with a clear audience in mind. With regard to the intended use of, and audience for, the indicators, it was stressed that the initial focus should be on quality improvement, with future considerations for public reporting at different levels such as to pharmacies and pharmacy professionals.

## BACKGROUND

### About the College

The College is the regulatory body for the profession of pharmacy in Ontario with a mandate to serve and protect the public<sup>2</sup>. The College aims to raise the bar of quality and competence for pharmacy and create awareness among patients as to how this mandate is fulfilled. A main step in this direction is shifting focus to a more quality and outcomes based approach. As the regulator of pharmacy in Ontario, the College has a duty to understand the impact of pharmacy practice on patient outcomes to ensure that the pharmacy system is performing optimally to contribute to improving them<sup>3</sup>.

### About HQO

HQO is the advisor for Ontario on the quality of health care in the province. HQO uses indicators to track the quality of Ontario's health system. Measuring and publicly reporting on how the Ontario health system is performing is a key component of HQO's mandate. HQO continually works to improve the relevance, timeliness and accessibility of the performance information that is monitored and publicly reported.

### Pharmacy professionals' role in the health system

Pharmacy professionals regulated by the College include pharmacists and pharmacy technicians. Pharmacists undergo over four years of university training on clinical and technical aspects of medication management and effects and must be qualified in all aspects of medications including drug therapy, understanding drug interactions and side effects, and dispensing medications as well as patient counselling and care. Pharmacy technicians are trained and must be qualified in handling medications, including product preparation, dispensing medications and supporting pharmacists<sup>4</sup>.

Pharmacy professionals practice in a variety of settings including community pharmacies, hospital pharmacies, Family Health Teams and Community Health Centres.

### Current state of quality measurement in Pharmacy

Historically, the quality of pharmacists' care has been evaluated via compliance with pharmacy regulations<sup>5</sup>, reporting systems for pharmacy errors<sup>6</sup> and pharmacy audits<sup>7</sup>. However, a number of countries have developed indicators that aim to measure the quality of pharmacists' care, including outcome measures<sup>8</sup>. These quality indicators are limited however, with a recent abstract documenting that the majority were process measures with <1.0% measuring true outcomes<sup>9</sup>. Psychometric review of studies to develop quality indicators for measuring pharmaceutical care provision to out-patients identified a significant gap in well-developed, validated indicators measuring pharmacists' quality of care<sup>10</sup>.

Although other jurisdictions have started to explore measurement in pharmacy, there is a global gap in the availability of indicators to measure outcomes. Bringing together key stakeholders to achieve consensus on a set of guiding principles was determined to be an important first step in moving forward with developing these quality outcome indicators for pharmacy.

### The College's existing measurement approach

The College conducts practice assessments<sup>11</sup> to evaluate individual pharmacy professionals' performance, as well as community pharmacy assessments<sup>12</sup> and hospital pharmacy assessments<sup>13</sup> to measure adherence to operational standards and processes. These assessments use structure and process measures to monitor performance of pharmacy, but there is currently no system to

measure the impact of good quality pharmacy care on patient outcomes. Data will soon be available from the College's new Medication Safety Program<sup>14</sup>, a standardized program requiring mandatory anonymous reporting to a third party of all medication safety incidents in community pharmacy; and other jurisdictions have established indicators based on drug plan data, mostly focusing on surrogate measures of health outcomes including medication adherence and use of inappropriate or high risk medications. These measures do not reflect the impact of pharmacy care on overall patient outcomes. With different mechanisms to monitor structure and process indicators, there is an opportunity to round out the measurement of pharmacy quality to include outcome indicators. These outcome measures will allow the College, HQO, the public and the government to take on a wider system approach to measuring the performance of pharmacy and its impact on population health outcomes.

There are a number of important quality challenges in the health system that are impacted by a multitude of health care providers in a variety of settings. Safe transitions of care, the opioid crisis, medication-related adverse events, and antimicrobial resistance are just a few examples where a number of healthcare providers, including pharmacists, play a role in patient care and have an opportunity to contribute to the solutions to these quality challenges. However at this time there is no way to measure pharmacy's impact on these issues. As the regulator of pharmacy in Ontario, a specific objective of the College is to "develop, establish and maintain programs and standards of practice to assure the quality of the practice of the profession." As such, the College aims to measure the impact of pharmacy practice on patient outcomes<sup>3</sup>.

# OBJECTIVES

## STAKEHOLDER ROUNDTABLE OBJECTIVES

The objectives of the stakeholder roundtable were as follows:

**Objective 1:** Achieve consensus on the **overarching goals** for quality indicators for pharmacy

**Objective 2:** Identify **measurement areas** to support moving forward with system-level measures for pharmacy

**Objective 3:** **Review** and **confirm indicator selection criteria** to guide selection of quality indicators for pharmacy

**Objective 4:** Inform a set of **principles to guide indicator implementation** (monitoring, reporting and quality improvement)

The following summary is a synthesis of what was discussed and provides the College and HQO with direction on how to move forward with establishing a set of indicators for pharmacy.

### OBJECTIVE 1: Overarching goals for quality indicators for pharmacy

Although HQO and the College had an agreed upon set of goals for setting out to do this work, it was important to ensure that the roundtable participants shared a common understanding of the purpose and goals of establishing indicators for pharmacy. Participants achieved a consensus on the following overarching goals:

- Use of data to measure and report on the quality of pharmacy care, in a way that is important to patients and their care experience.
- Measure the impact of pharmacy care on health outcomes that are agreed upon system priorities. Ensure that indicators identified for reporting on pharmacy care can be used to measure regional and provider level performance.
- Support the alignment of the measurement of pharmacy to existing frameworks both provincially (using HQO's six

quality domains (safe, effective, patient-centred, timely, efficient and equitable, as outlined in Quality Matters) and the Quadruple Aim (improving health outcomes, improving patient experience, reducing costs, and helping healthcare professionals thrive)), and nationally through knowledge and best practice sharing.

- Support the continued culture of quality in pharmacy, through a focus on learning and development, establishing support for pharmacy professionals in their quality improvement goals.

### OBJECTIVE 2: Measurement areas

The roundtable participants referenced HQO's Quality Matters Framework and the Quadruple Aim when identifying quality issues and gaps in pharmacy practice. The group agreed that all of these domains should be considered when identifying indicators, and suggested that the following areas are important to measure:

- **Patient / Caregiver Experience and Outcomes - ensuring the patient voice is well represented:** Insight on quality of care from the lens of the patient / caregiver was highlighted as extremely important in order to ensure patient-centred care and increased transparency. Both Patient Reported Experience Measures (PREMS, i.e. satisfaction with care provided) and Patient Reported Outcome Measures (PROMS, i.e. to measure outcomes such as medication therapy efficacy) were identified as important areas to measure and report on.
- **Provider experience and engagement - reflecting provider satisfaction and wellbeing to optimize health system performance:** The original Triple Aim is a framework for optimizing health system performance (developed by the Institute for Healthcare Improvement) and was expanded to include a fourth aim, enhanced provider experience, to reflect the importance of provider satisfaction and wellbeing in optimizing health system performance<sup>15</sup>. The roundtable participants also recognized the importance of measuring provider experience. The group highlighted pharmacy professional

experience as an important area to measure, to encourage provider engagement, collaboration and trust in the function of the health system.

- **Appropriateness of dispensed medications:** Given the pharmacists' role in assessment of prescriptions, not only for accuracy but also for appropriateness, measures related to the appropriateness of dispensed medications were identified as an important consideration. There are a number of quality challenges in areas such as polypharmacy in seniors, antimicrobial resistance, and the opioid crisis. It was agreed that defining measures for these areas of focus would help identify clear expectations of pharmacists in their role of assessing prescriptions for appropriateness and support these quality challenges.
- **Medication-related incidents and hospital visits – minimizing medication incidents resulting in preventable drug events:** Given the responsibility of pharmacy professionals in medication management and the prevention of medication-related incidents, roundtable participants noted the importance of measuring this. Both hospital visits (emergency department and admissions) and medication incidents taking place in pharmacy were identified as possible areas to consider for measurement. The College's [Medication Safety Program](#) (a standardized continuous quality assurance program that will enable practitioners to identify learnings to help prevent medication incidents and enhance patient safety) was identified as a possible enabler for this.
- **Transitions of care – establishing a shared accountability of all health care professionals involved in transitions of care:** Transitions of care and determining the accountability of each healthcare player was identified as a common challenge in the health system. Gathering data to identify the gaps was thought to be a key step towards the improvement of these transitions and prevention of adverse events associated with them. Some enablers that were described as ways to measure this include medication reconciliation, measuring readmission rates, and primary care visits after discharge.

### OBJECTIVE 3:

#### Review of indicator selection criteria

The roundtable reviewed the existing principles HQO uses when it selects indicators to evaluate their importance and relevance to pharmacy. The principles, as outlined below, were all determined to be important and relevant to pharmacy practice, with a few additional considerations:

- **Important/relevant to pharmacy:** The indicator should reflect a quality issue that is important and relevant to patients, healthcare professionals, system leaders, and policy makers. When considering relevance, the participants discussed the importance of pharmacy-centric measures, to ensure an accurate reflection of pharmacy care specifically. Given the various facets of pharmacy practice, the participants stressed the importance of an indicator being applicable across all pharmacy sectors (i.e. hospital, community) and locations (i.e. urban, rural). An additional consideration that was raised related to this principle was the need for durability, ensuring that what is actionable at the present time will also be actionable in the future, given the evolving role and model of pharmacy.
- **Measurable:** There should be data sources that can be used to measure the indicator. Although the group felt this was an important principle to consider, there was a great deal of discussion on the fact that lack of current capability to measure should not be a restriction during the indicator selection and development process. Indicator importance may need to be prioritized over measurability and if an indicator is considered important, a case should be made to establish methods to build better data sources to measure the indicator. Some examples that were raised include Patient Reported Outcome Measures, provider experience and medication related emergency department visits.
- **Actionable:** The indicator will likely alter behaviour of healthcare providers, inform and influence public policy or funding, and/or increase general understanding by the public in order to improve quality of care and population health. The roundtable participants discussed the importance of selecting indicators that pharmacy professionals (whether solely or in collaboration) are able to impact and influence.
- **Evidence-based:** There should be good evidence to support the process, or evidence of the importance of the outcome of measuring and reporting on the indicator. One of the greatest challenges with currently available pharmacy indicators is establishing a clear link to quality outcomes. The roundtable participants stressed the need for indicators with real world applicability and impact on outcomes, not just academic evidence.
- **Feasible:** The indicator should be calculable and capable of being measured; data is timely. This principle brought forth much discussion about the feasibility of an outcome indicator that solely reflects pharmacy efforts. Although the group felt it important to ensure indicators are pharmacy centric, it was identified that it

will be challenging in some cases to isolate the impact of the pharmacy professionals' efforts from that of the interprofessional team.

- **Interpretable:** The indicator should be clear and be easily interpreted by a range of audiences; the results of the indicator are comparable and easy to understand, including what constitutes improved performance, such as clear directionality (i.e. a lower number is better). The group discussed the importance of collaboration with healthcare stakeholders, ensuring all parties interpret the data in the way in which it was intended.
- **Data quality:** The indicator should include data quality specifications such as technical definition, calculation methodology, validity and reliability of measurement, and timeliness of data. The participants discussed balancing the value of data and the data burden, highlighting the importance of succinct data measures.

These principles will be used by HQO and the College to guide the expert panel's indicator selection process.

## OBJECTIVE 4:

### Principles to guide indicator implementation

Health system quality indicators can be used for a variety of purposes including quality improvement, performance measurement, monitoring, evaluation, quality assurance, and public reporting. As indicator use in the system becomes more established, there may be opportunities to use these indicators for quality assurance and accountability. It was agreed that the initial focus for the pharmacy indicators should be on quality improvement and building foundations for a culture of quality within the profession.

Once indicators are established, advice is required to determine how to move forward with a quality-based approach to reporting of indicators. To support this, the roundtable participants discussed the current landscape including enablers for implementation, what works well and what requires improvement in the areas of data, reporting, and capacity for quality improvement.



## DATA

In order to ensure successful indicator implementation, it is important to have access to reliable data. The roundtable participants identified the Narcotics Monitoring System (NMS) database as a successful initiative currently embedded in pharmacy practice; however, they felt there are still many data gaps that need to be addressed. The data gaps were identified as follows:

- **Lack of centralized data repository:** Data are currently available in silos and hence pharmacy professionals have fragmented access to a patient's medical history. In order for pharmacy professionals to have a greater impact on health outcomes, the full picture of a patient's medical status and history is required, including data from hospital visits, other pharmacies, and speciality clinics. Roundtable participants also highlighted gaps in access to public versus private insurance claims data that provide a barrier to being able to appropriately measure certain quality outcomes. It was recommended that collaboration with agencies, institutions, and other organizations is required to ensure that data sets are aligned and to leverage existing data where possible and minimize/eliminate any undue reporting burden on pharmacies.
- **Unintegrated technological frameworks:** The participants discussed the importance of collaborating to leverage existing technology and share infrastructure. Innovative technological initiatives such as apps for health promotion, and portals to share information should also be explored.
- **Lack of Patient Reported Outcome Measures (PROMs) data:** Patient/caregiver perspectives were identified as a vital component of measurement to ensure a patient centred care approach to quality improvement. The use of technology to measure PROMs and identify other ways to collect patient data (through devices such as wearables for vitals measurements) was also discussed.



## REPORTING

- **Establishing clarity of audience:** The group discussed the importance of establishing clarity around which data will be available at which level. Once indicators are identified, decisions will need to be made on how the analysis will be presented. Options included region-level (i.e. province, region, and sub-region) reporting, reporting at the pharmacy (or pharmacy professional) level, and reporting directly to patients and the public. The group also discussed how the results will be made available. For indicators that are reported publicly, the group highlighted the need to begin at the system level, and to ensure that it is presented for quality improvement purposes. Anonymous pharmacy-specific reports were also discussed, for the purposes of continuous coaching of pharmacy professionals.
  - **Ensuring data and indicators are fit for use:** To enable use, local needs for data and analysis and quality improvement capacity-building should be assessed and provided as appropriate to support effective use of data and indicator results.
  - **Modelling indicator reports after existing reports for improvement:** The participants confirmed the need to leverage existing capacity of organizations such as HQO when developing reports. The HQO MyPractice reports were identified as a successful initiative in driving quality improvement within health care. Using these reports as a guide to develop pharmacy centric reports is an opportunity to share best practices in quality improvement.
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## CAPACITY FOR QUALITY IMPROVEMENT

- **Infrastructure and operational workflow for pharmacy professionals to engage in quality pharmacy care:** The participants discussed the current workflow model in community pharmacy which is primarily reactive and transaction based. This model could be seen as a barrier and should be considered during implementation.
  - **Support for pharmacy professionals to embrace quality improvement:** The group felt that in order for the measurement data to be impactful, data for providers should be accompanied with context and supplemented with education, training, and tools to support the effective implementation and use of data and indicators among pharmacy professionals.
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### Key Takeaways for principles for implementation

The following principles have been distilled, based on the discussions outlined above:

- Indicators should be contextualized with a clear audience and the focus of the indicators should initially be on public reporting and quality improvement
- There are key gaps in data availability and to support implementation, emphasis should be placed on collaboration to establish infrastructure that can provide reliable and high quality data
- Capacity for quality improvement in the pharmacy sector is required to ensure meaningful use of the indicators and support for a culture of quality in pharmacy.

## NEXT STEPS

Using the measurement areas identified and HQO's indicator selection criteria informed by the roundtable as a guide, the College will work with HQO to establish a set of quality indicators for pharmacy. The indicator selection process will be driven by an expert panel composed of a subset of roundtable participants and other stakeholders. The expert panel will review existing indicators to build on lessons learned from the roundtable and identify opportunities for new indicators through a series of surveys and deliberation meetings. Once a consensus has been reached by the panel on the indicator set, the College will proceed with a formal consultation to gain feedback from the public and pharmacy professionals on the indicators selected and other implementation considerations.

Once the indicators have been established, principles identified from the roundtable will be used to guide indicator implementation. The goal is to use these indicators for quality improvement, and eventually to report publicly on these indicators, beginning with aggregate (provincial and regional level) results. Future considerations will include expanding these indicators nationally, and reporting to pharmacies and pharmacy professionals, based on the principles outlined above.

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## APPENDIX A

| First Name | Last Name   | Affiliation   |
|------------|-------------|---|
| Anita      | Arzoomanian | Professional Development and Remediation Lead, Ontario College of Pharmacists   |
| Michael    | Beckett     | Measurement Specialist, Health System Performance, Health Quality Ontario   |
| Jennifer   | Bridge      | Director, Health Analytics Branch, Ministry of Health and Long Term Care ( <i>regrets</i> )   |
| Alicia     | Brown       | Patient Advisor   |
| Andrea     | Calvert     | Pharmacist, Professional Practice, Toronto Central Local Health Integration Network   |
| Mike       | Cavanagh    | Board Chair, Ontario Pharmacists Association  |
| Judy       | Chong       | Manager, Hospital Practice, Ontario College of Pharmacists  |
| Thomas     | Custers     | Health Workforce Planning and Regulatory Affairs, Ministry of Health and Long Term Care   |
| Imtiaz     | Daniel      | Director, Financial Analytics and System Performance, Ontario Hospital Association  |
| Lisa       | Dolovich    | Professor, University of Toronto Leslie Dan Faculty of Pharmacy and McMaster Department of Family Medicine ( <i>regrets</i> )   |
| Olavo      | Fernandes   | Director of Pharmacy - Clinical, University Health Network  |
| Karl       | Frank       | Vice Chair, Neighbourhood Pharmacy Association of Canada  |
| Kate       | Fyfe        | Vice-President, Performance and Accountability, North East Local Health Integration Network   |
| Jason      | Garay       | Vice-President, Analytics and Informatics, Cancer Care Ontario ( <i>regrets</i> )   |
| Tara       | Gomes       | Scientist, Institute for Clinical Evaluative Sciences and Li Ka Shing Knowledge Institute St. Michaels; Epidemiologist and Principle Investigator, Ontario Drug Policy Research Network |
| Anna       | Greenberg   | Vice-President, Health System Performance, Health Quality Ontario   |
| Sara       | Guilcher    | Assistant Professor, University of Toronto; Affiliate Scientist, Li Ka Shing Knowledge Institute St. Michael's; Adjunct Scientist, Institute for Clinical Evaluative Sciences           |
| Sandra     | Hanna       | Vice-President, Pharmacy Affairs, Neighbourhood Pharmacy Association of Canada  |
| Bill       | Holling     | Patient Advisor   |
| Susan      | James       | Director, Quality, Ontario College of Pharmacists   |
| Douglas    | Lum         | Managing Director, Reinsurance Management Associates ( <i>regrets</i> )   |
| Nancy      | Lum-Wilson  | Registrar and CEO, Ontario College of Pharmacists   |
| Alan       | Malek       | President and Chief Pharmacy Officer, Ontario Pharmacists Association   |
| Lisa       | McCarthy    | Professor, Women's College Hospital and the Leslie Dan Faculty of Pharmacy  |
| Ivana      | McVety      | Measurement Specialist, Health System Performance, Health Quality Ontario   |
| Saul       | Melamed     | Manager, Client Affairs - Ontario, Canadian Institute for Health Information  |
| Harvey     | Naglie      | Patient Advisor   |
| Massimo    | Nini        | Vice-President and Group Actuary, Accident and Health, Reinsurance Management Associates  |
| Margo      | Orchard     | Manager, Strategic Policy, Planning and Analytics, Ontario College of Pharmacists   |
| Jillian    | Paul        | Director, Local Health Integration Network Renewal, Institute for Clinical Evaluation Science ( <i>regrets</i> )  |
| Tina       | Perlman     | Manager, Community Pharmacy, Ontario College of Pharmacists   |
| Ned        | Pojkic      | Vice-President, Strategic Market Solutions, Greenshield Canada  |
| Leila      | Ryan        | Patient Advisor   |
| Paul       | Sajan       | Manager, Prescription Drug Abuse, Canadian Institute for Health Information   |
| Anisa      | Shivji      | Policy Advisor, Ontario College of Pharmacists  |
| Tommy      | Tam         | Senior Methodologist, Health System Performance, Health Quality Ontario   |
| Jenny      | Tang        | Patient Advisor   |
| Karin      | Taylor      | Program Specialist, Quality, Ontario College of Pharmacists   |
| Joshua     | Tepper      | CEO, Health Quality Ontario   |
| Joan       | Wier        | Director, Health and Dental Policy, Canadian Life and Health Insurance Association  |
| Nancy      | Winslade    | President and CEO, Winslade Consultants   |
| Walter     | Wodchis     | Professor, Institute of Health Policy, Management and Evaluation, University of Toronto and Adjunct Scientist, Institute for Clinical Evaluative Sciences                               |
| Angie      | Wong        | Director, Ontario Public Drug Programs, Ministry of Health and Long Term Care   |