

RECOMMENDATIONS REPORT: NOVEMBER 2019

A Sustainable Indicator Reduction and Management Strategy for the Ontario Hospital Sector

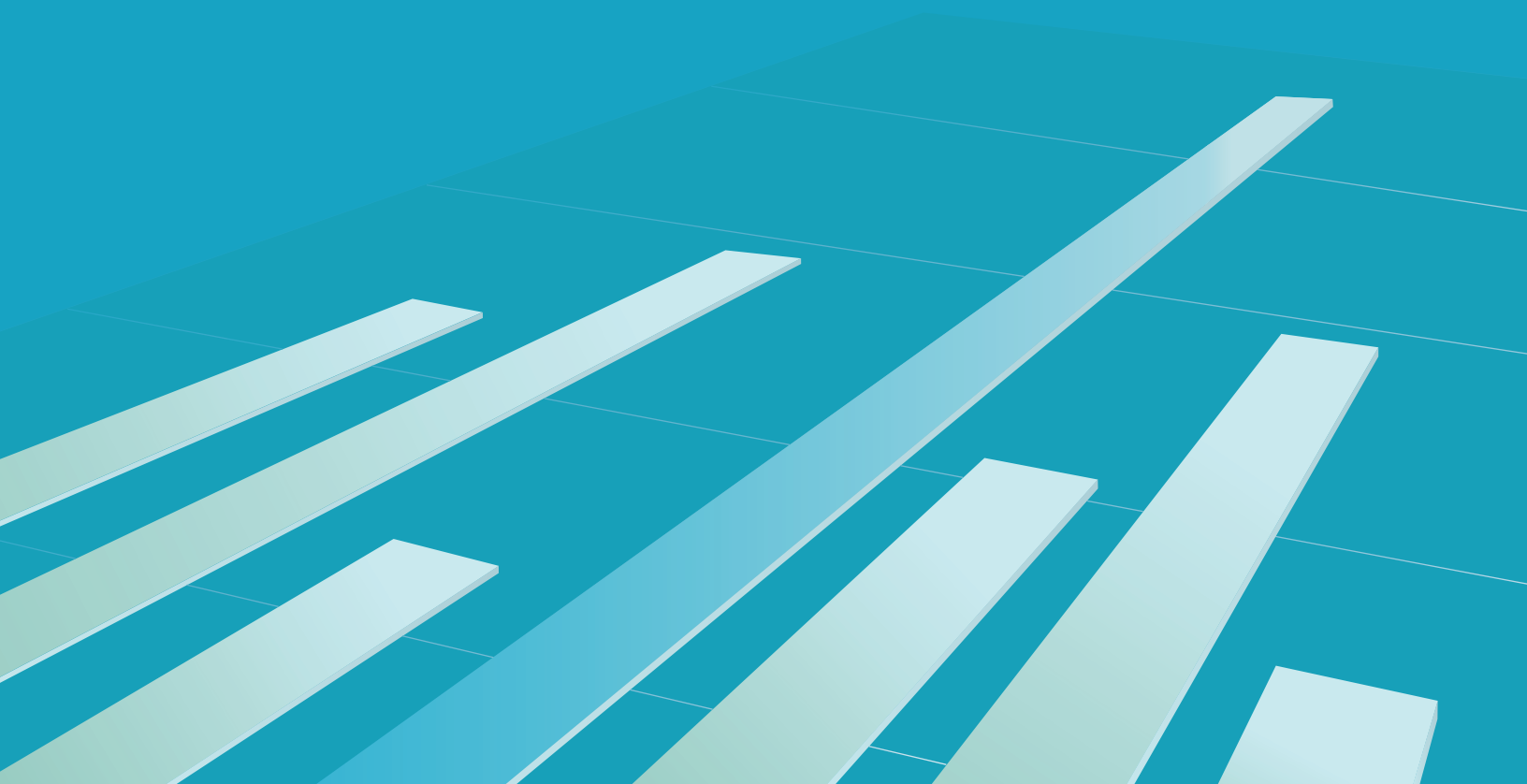


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Introduction

Every health care system needs to measure how it is doing so it can improve, and inform citizens whether the system is moving in the right direction and providing high value for their money. What we measure helps us identify and focus our efforts on the most burning issues and concerns. It is critical not to overwhelm health care professionals with the burden of measuring. As Dr. Donald Berwick, President Emeritus and Senior Fellow, Institute for Healthcare Improvement has noted about the problem of excessive and mandatory measurement: “Intemperate measurement is as unwise and irresponsible as is intemperate health care ... The aim should be to measure only what matters.”¹

The Ontario Hospital Association (OHA) and Health Quality Ontario (HQQ) (soon to be a part of Ontario Health) began working together in November 2017 on an initiative to stop excessive measurement and prioritize what matters. The objective of this collaboration is to ensure that efforts to measure and report performance indicators in hospitals support better patient outcomes and mitigate the burden of collecting and reporting. The timing of this initiative aligns with broader system changes taking place to end hallway healthcare, reduce red tape and address the fiscal and capacity pressures on Ontario hospitals.

Although the initiative initially focused on hospital indicators, the recommendations in this report can be applied more broadly to performance measurement for the entire health system. Across all sectors, there is renewed discussion about indicator alignment and rationalized measurement and reporting that reduces the burden. The creation of the consolidated Ontario Health agency presents an opportunity to reduce indicator chaos and duplication across previously separate organizations. This work also aligns with Ontario’s health system strategy and system-wide initiatives to improve quality of care, including the emergence of Ontario Health Teams, Quality Improvement (QI) plans, Bundled Care and Quality-Based Procedures (QBPs) clinical adoption.

Depending on the size and type of institution, senior leaders in Ontario hospitals have identified between 500 and 1,000 indicators that cross their desks. These indicators come from different organizations and vary in format, time cycle, and sometimes use different definitions. These indicators are in addition to what a hospital may choose to collect on its own to manage and improve care and operations. Some indicators are duplicative or not aligned with one another. Additionally, hospitals are asked to individually calculate and submit indicators even though they might be more efficiently monitored centrally or via a network. The proliferation of hospital performance indicators has not led to consistent improvement and in fact may be drawing important resources away from patient care and outcomes.

In response to these concerns, the OHA and HQO collaborated to articulate a thoughtful method for a streamlined, sustainable approach to performance measurement for the hospital sector that is better aligned to provincial priorities. This report discusses the research and consultation used to develop the proposed strategy and describes a series of recommendations to assist Ontario’s health system leaders with the implementation and maintenance of a sustainable hospital performance measurement strategy with applicability for the entire health system.

¹ Berwick DM. Era 3 for Medicine and Health Care. JAMA. 2016;315(13):1329–1330

Roundtable Recommendations

The following recommendations were endorsed by the Roundtable Advisory (See Appendix A: Roundtable and Task Group Participants). The advisory was comprised of hospital administrators, Ministry of Health and Long-Term Care representatives, and OHA and HQO leaders brought together to advise on reducing and managing Ontario's hospital indicators:

Recommendation 1: Ontario Health becomes the secretariat for implementing the Hospital Sector Indicator Reduction and Management Strategy and will manage the overall performance measurement system for the strategy, including establishment of the Indicator Strategic Committee (ISC) and Technical Indicator Screening Committee (TISC).

A sustainable indicator management system requires dedicated resources and staffing for coordination and project management duties to ensure committees and performance measurement guidelines are established and adopted. This secretariat function is important as the Ministry of Health and the new Ontario Health formalize their working relationships on performance measurement/management strategy and establishes alignment to strategic priorities. As discussed, the secretariat duties may evolve beyond the hospital sector as the health system transforms.

Associated tasks:

- Ontario Health takes on the secretariat roles and responsibilities for the Hospital Sector Indicator Reduction and Management Strategy.
- Appropriate resources are made available to establish and maintain a performance measurement system for the strategy.
- Complete within 6 months.

Recommendation 2: Implement an ongoing process to ensure indicator alignment to system priorities, and actively support retirement of low-value indicators and refinement and/or maintenance of high-value indicators aligned to strategic priorities based on guiding principles (see page 8).

To ensure the scientific rigour, value, alignment and volume of indicators, a two-committee system should be implemented.

Associated tasks:

- Recruit and establish the Indicator Strategic Committee (ISC) co-chaired by the Ministry of Health and Ontario Health to provide strategic alignment, value and input to the processes of selecting indicators for hospital (and potentially, broader system delivery) monitoring and reporting in Ontario.
- Recruit and establish the Technical Indicator Screening Committee (TISC) to provide expert scientific input and policy perspectives on new indicators proposed for hospital sector monitoring and reporting.
- Ensure that the indicators categorized as (i) Public Accountability, (ii) System Monitoring, (iii) Local Monitoring, and (iv) Retirement are reflective of the current health system-level priorities and emerging issues (see Figure 1a below).
- Consult with system leaders and experts to ensure the indicators in the Indicator Framework clearly reflect system-level priorities.
- Complete within 1 year.

Recommendation 3: Implement a centralized or networked monitoring system to track indicators and generate alerts based on thresholds and benchmarks.

Based on the purpose and principles, continue design and resource planning for a centralized or networked monitoring system that will track all system monitoring indicators and generate automated alerts when an institution’s indicator results cross an established threshold or benchmark. This system would ease the burden on administrators by reducing the number of indicators that they themselves need to monitor. Key elements of the monitoring system include the use of automation, and clear roles and accountability associated with alert mechanisms to relevant stakeholders when a performance issue is detected.

Associated tasks:

- Explore the requirements of a central or networked monitoring system: human capital, financial investment, and sector buy-in.
- Create an inventory of current data repositories (excluding research databases), the types of data they hold, timing of the data and data flow/pathways.
- Ensure thresholds and benchmarks for indicators used in the monitoring system are established, including an equity lens.
- Explore automation options to enable efficient and accurate monitoring, and ensure data access is available to appropriate stakeholders.
- Begin immediately, with a phased implementation. Complete within 2 years.

Recommendation 4: Develop a process to embed partnering with patients, families, caregivers, and the public into ongoing indicator selection and management.

Indicators must be meaningful to patients, families, caregivers, and the public. Hospitals are not siloed institutions – they are a part of the community and need to reflect the standards and values of individuals in that community. What we measure must reflect what matters to the people we serve.

Associated tasks:

- Embed partnering with patients, families, caregivers and the public into this work by developing and implementing a common patient partnering strategy.
- Integrate this work with the patient and family partnering function being developed within Ontario Health, and with other efforts underway across the health system to avoid duplication.
- As a first step in a patient partnering strategy, include patients, families, caregivers, and members of the public on the ISC.
- Immediate and ongoing.

Approach to Developing Strategy and Recommendations

The OHA and HQO developed a workplan for this initiative that was presented to the Boards of Directors and/or Senior Leadership of both organizations for endorsement. A two-phased approach was used to develop the strategy and recommendations for the hospital sector, which was complementary to the system-wide indicator management work already in progress.

Methodology

Phase 1 of the Initiative was a qualitative study that involved interviews with 17 senior leaders from 15 Ontario hospitals. Interviewees included CEOs, Chiefs of Staff, Chief Medical Officers and Vice Presidents representing a range of small, community, and academic hospitals across Ontario. The objective of the interviews was to understand each hospital's experience related to indicator chaos, learn of any mitigating strategies used, and principles that might guide a solution to indicator chaos.

Phase 2 involved a series of four Roundtable discussions with hospital CEOs and other senior leaders who participated in the interviews, representatives from the Ontario Ministry of Health and Long-Term Care (MOHLTC), and senior representatives of the OHA and HQO (see Appendix A: Roundtable and Task Group Participants). Dr. Adalsteinn Brown, Institute for Health Policy, Management and Evaluation, University of Toronto, chaired the Roundtable with secretariat support from OHA and HQO. The objective of the Roundtable discussion was to gain feedback and guidance on the development of the strategy, and the following four deliverables for a comprehensive solution:

- A framework to map existing indicators to system priorities
- Identification of a reduced and meaningful set of indicators (“cleaning house”)
- A standardized, ongoing process to refine and retire indicators, as appropriate
- An ongoing process for system monitoring

Findings

Phase 1 – Interviews

All interviewees reinforced the importance of measuring performance to support improvement in the quality of care and patient outcomes. All applauded the progress in data access and use over past 10 years. However, all interviewees agreed that the number of indicators, confusion over their purpose and value, and the absence of a structure responsible for regulating the introduction and retirement of indicators has created fragmentation and unnecessary burden for the hospital sector.

Senior leadership in Ontario hospitals reported managing between 500 and 1,000 measures on a regular and ongoing basis. This includes indicators that require action (e.g., Hospital Service Accountability Agreements (HSAA)), indicators that may require action (e.g., patient safety, wait times), voluntary indicators (e.g., for local QI initiatives), funding related indicators (e.g., those related to Quality Based Procedures (QBPs), that are department- or unit-specific), and unique versus indicators reported in multiple locations (e.g., workplace violence vs. hospital readmission).

The interviews validated four themes related to indicator chaos:

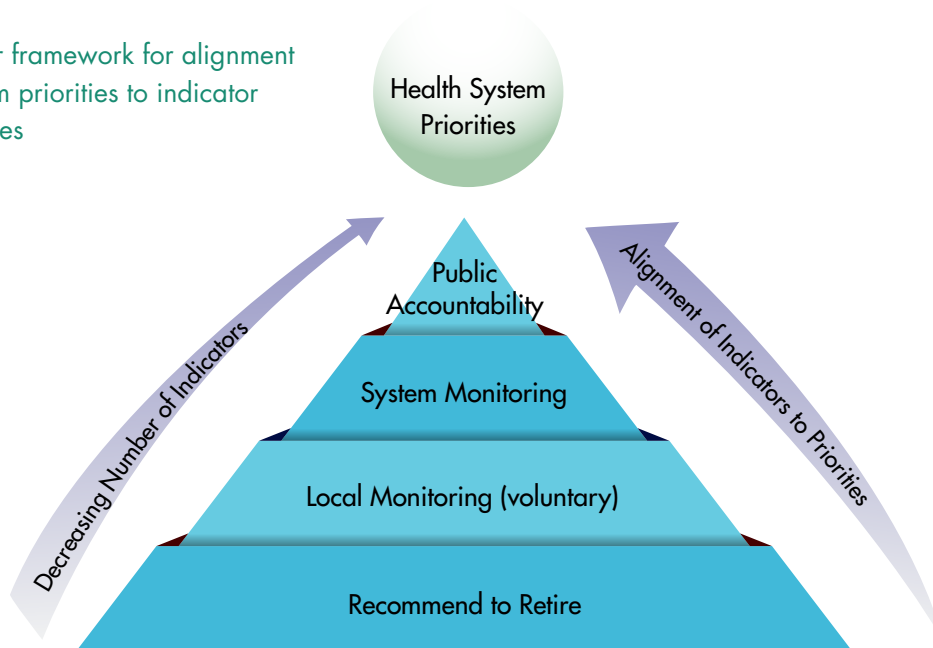
1. **Too many indicators have led to difficulty in focusing quality improvement efforts:** Administrative and clinical leaders are overwhelmed by the available performance data and are unsure how to move forward with confidence. Some indicators appear to be measuring the same concept, and some data and reporting requirements by stakeholders result in hospitals having to send the same information to multiple organizations.
2. **Orphaned indicators:** There are many orphaned indicators meaning they do not have an associated quality improvement process nor align well to other indicators.

3. **Insufficient infrastructure:** The current data-capture system is burdensome on administrators and clinicians, and is expensive to develop and maintain.
4. **Poor alignment of cascading indicators:** Indicators are often misaligned between micro and macro goals, and may not align with Ontario’s health system priorities, data strategy, the hospital’s own strategy, or current best practices.

Interviewees identified principles to guide a solution to indicator chaos in Ontario hospitals, including:

- A coordinated system-level strategy for performance measurement that is prescriptive on a short set of indicators aligned to clearly articulated system priorities (e.g., integration)
- Allowance for hospitals to select hospital-level quality improvement indicators
- Increased automation for data collection and validation
- Reflective of the diversity of Ontario hospitals (i.e., community vs. academic centres, diverse catchment areas and rural vs. urban)
- Stakeholder engagement at all levels, including front-line clinicians, patients and family members
- Quality improvement tools and resources aligned with priority measurement topics and indicators so hospitals will have evidence-based change ideas to improve their performance

Figure 1a: Indicator framework for alignment of system priorities to indicator categories



Phase 2 – Roundtable Deliverables

A Framework to Align Indicators to Provincial Priorities

To make sense of the current inventory of existing indicators in the Ontario hospital system, indicators were mapped to a framework based on their purpose and value to the system. The framework included the following four categories:

- **Public Accountability** – A small set of indicators reflecting the highest-priority issues facing the health system. These indicators are candidates for public reporting.
- **System Monitoring** – A larger set of measures that should be tracked and used to identify emerging quality issues. These indicators would not typically be publicly reported.
- **Local-Level Monitoring** – Voluntary indicators selected by a health care organization collected and monitored using their own data management system.
- **Retire (Yes/No)** – Low- to no-value indicators (e.g., indicators measuring the same concept as other high-value indicators, indicators with poor data quality, unknown directionality, or that lack a strong evidence-base).

A Reduced and Meaningful Set of Indicators

An exercise to reduce the number of hospital measures indicators into a manageable and meaningful set was then initiated. Senior measurement specialists from seven Ontario hospitals reviewed and categorized a subset of 299 priority indicators into the Hospital Indicator Framework. Indicators selected for “retire” were those deemed to be duplicative, or that did not meet the following criteria:

Guiding Principles

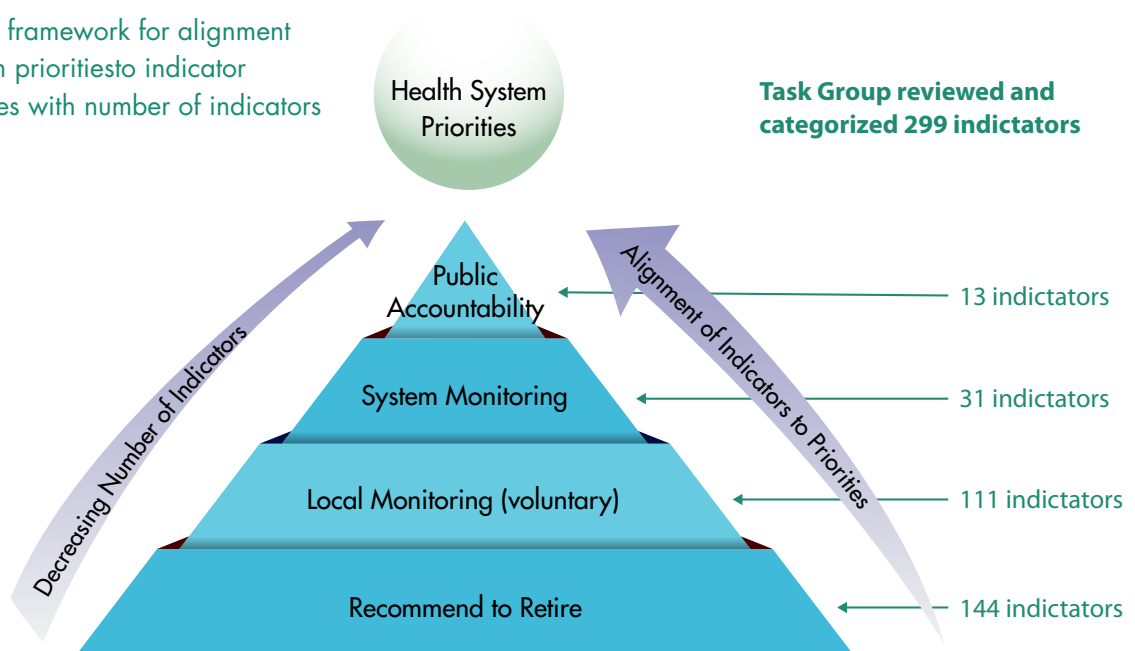
- Relevant and meaningful: the indicator reflects an issue that is important to patient care and outcomes
- Actionable: performance on the indicator can be influenced by the behaviour and actions of frontline professionals
- Evidence-based: there is robust evidence to support the indicator
- Interpretable: the indicator results are comparable and comprehensive including what constitutes improved performance (clear directionality)
- Based on quality data: data are valid, reliable, and timely

Based on individual review and group deliberation, existing measures were mapped as follows:

- 13 indicators for public accountability
- 31 indicators for system monitoring
- 111 indicators for local monitoring
- 144 indicators for retirement

Not surprisingly, the most challenging category was selecting indicators to retire. Easiest were those already deprioritized by others. Consistent with an effort to focus the sector, several indicators from the 2018/19 Quality Improvement Plan were removed in 2019/20, so these were retired from the Indicator Framework. Multiple indicators that measured the same or similar concept (e.g., readmissions) and indicators with poor data quality were also more easily recommended for retirement. Difficulties arose when an indicator was perceived as lower-value but complete removal might leave the hospital unaware of an emerging issue (e.g., select patient volumes indicators, select alternate level of care indicators), so some of these indicators were categorized as system or local monitoring.

Figure 1b: Indicator framework for alignment of system priorities to indicator categories with number of indicators



Count indicators were also a challenge. For example, a wait times indicator for a given procedure may consist of multiple sub-metrics that contribute to the overall count and sense of burden, such as 90th percentile, percentage within target, mean wait, and median wait. However, different versions of wait times indicators are appropriate for different audiences and purposes for measurement (e.g., quality improvement, public reporting, accountability). Maintaining these different versions may be appropriate.

After consultation with patients and providers, the measurement topics and number of hospital indicators suggested for the public accountability category in the Indicator Framework include:

- Alternate level of care (1 indicator)
- Wait times (emergency department length of stay, wait time for inpatient bed) (2 indicators)
- Hospital readmissions (1 indicator)
- Patient safety (infections) (1 indicator)
- Finance (2 indicators)
- Patient experience (3 indicators)
- Workplace violence/provider experience (1 indicator)
- Hallway healthcare (1 indicator)
- Repeat emergency visits for mental health (1 indicator)

(See Appendix B: Inventory of Ontario Indicators, for indicator details)

A Standardized, Sustainable Process to Introduce, Refine and Retire Indicators

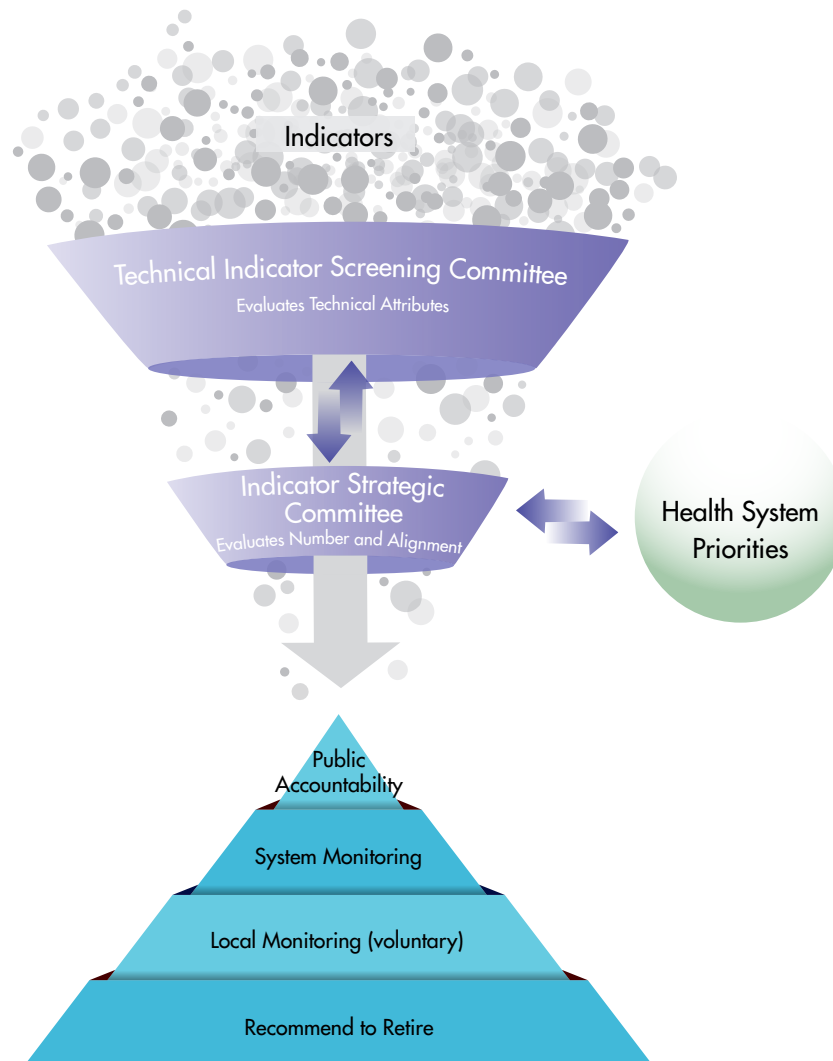
A process to support long-term sustainability of the reduced set of indicators with allowance for changing priorities, new indicator development, and indicator retirement over time was a priority for the Roundtable. Figure 2 illustrates the proposed process to achieve this, including a health system Indicator Strategic Committee (ISC) and a hospital-specific Technical Indicator Screening Committee (TISC):

- 1. Indicator Strategic Committee (ISC):** Evaluates the alignment of the indicators to the stated provincial priorities. The ISC will vet and provide feedback on the indicators proposed by the TISC and ensure alignment to provincial priorities, value, and volume of indicators. The committee is proposed to be chaired by the Ministry of Health and Ontario Health. Committee membership includes senior representatives from the Ministry, Ontario Health, sector clinicians, patients, and caregivers. Ontario Health is the secretariat.
- 2. Technical Indicator Screening Committee (TISC):** Evaluates the technical attributes of the proposed indicators according to validated criteria and recommends indicators to the Indicator Strategic Committee. This committee will review indicators' technical specifications, thresholds, benchmarks and risk-adjustment methodologies from all indicator developers. The committee chair is Ontario Health. Committee membership includes Ministry, Ontario Health, OHA, sector clinicians, provincial and pan-Canadian indicator developers, data specialists, academics/researchers. Ontario Health is the secretariat.

Based on the process, the two committees will review proposed new indicators for classification as public accountability or system monitoring indicators before use.

The process establishes standardized, transparent processes for managing the quality and quantity of indicators in the system.

Figure 2: System for ensuring indicator alignment



A Sustainable System Monitoring Process for Indicators Not in the Public Domain

In Ontario, there are a multitude of rich administrative data sources used to create performance indicators. Through the indicator mapping process, the task group highlighted that the broad range of procedures and services and the overall complexity of the hospital environment have contributed to the large number of hospital indicators. Administrators of the system were concerned that an indicator not mapped to the **public accountability** domain could result in their overlooking an important issue unfolding in the hospital system.

To address this, the Roundtable committee recommended a province-wide, trustworthy, central or networked monitoring system to track the set of **system monitoring** indicators in the proposed Indicator Framework. Key elements of the centralized monitoring system include the use of automation, and clear roles and accountability relationships associated with alert mechanisms that would be provided to relevant stakeholders when performance issues are detected. Such systems have been successfully implemented in the U.K. and other jurisdictions, and have proven effective in reducing incidences of mortality and hospital measurement burden.

A monitoring system should:

- Include a central or network maintained repository for data
- Have clear roles and accountability for communicating and addressing performance issues
- Not be public-facing
- Leverage existing infrastructure, wherever possible

Over time, functionality of the system should include:

- Artificial intelligence and associated infrastructure for analysis
- An automated alert system that triggers when an indicator goes outside a determined acceptable threshold limit

The proposed monitoring system will reduce the burden on administrators/hospitals by decreasing the number of indicators they need to monitor. Platforms such as Cancer Care Ontario's (CCO) iPort could be leveraged to meet the requirements of a centralized monitoring system. However, much like an airport control tower, the monitoring system will need to escalate performance issues using established guidelines with clear protocols for communication to relevant stakeholders when performance issues arise. Many Ontario data repositories exist in Ontario, but their role is often undefined as it relates to analysis and alerting stakeholders to emerging issues. Trust and confidence will be vital to reduce duplication of indicator calculation and reporting in the system.

Additional Consultations – International, Canadian and Provincial Experts

Consultations with three groups and various academic literature were used to inform and validate the Roundtable deliverables. Three predominant themes arose from consultations with provincial and national indicator developers and/or reporters; local, national and international experts on performance measurement; and patients. (See Appendix C: Consultations, for list of experts consulted and Appendix D: Reference Materials, for the relevant literature that was consulted.)

Theme 1: The issues and approach to a solution identified by the initiative resonated with all groups

- Most provincial organizations, national and international jurisdictions were aware of the indicator burden issue, and were considering, actively developing, or had implemented strategies to reduce the number of indicators within their purview, or develop more meaningful performance management systems.
- Some experts in different jurisdictions described major overhauls of their system, catalyzed by a significant event exposing a performance gap (e.g. Mid Staffordshire NHS Hospital Trust, U.K.), and other reporting organizations described introducing changes based on end-users' concerns about indicators or reports (e.g., CCO, CorHealth).
- Consultations identified a system-wide solution as the most efficient way to address the indicator reduction and alignment issue.

Theme 2: The challenges and implications of the current Ontario performance measurement system are complex

- No comprehensive indicator management approach for the hospital system exists in Ontario.
- No inventory of indicators and their associated purpose exist. This project has sought to create such an inventory for the hospital system (see Appendix B: Inventory of Ontario Indicators). (However, additional indicators are still being identified), and indicator definitions are not always consistent.
- There are multiple provincial and national partners collecting and/or holding Ontario data. Data flow between provider organizations, data repositories, analyzers, and reporters is complicated and indicator-dependent.
- Ontario is lacking an inventory of reports generated from the various sources of data, and where and how these reports are distributed.

- Hospitals are impacted to varying degrees by the impact of indicator chaos and lack of a provincial performance monitoring system (e.g., capacity for performance measurement varies in large urban versus small community hospitals).

Theme 3: Implementing some recommendations may be challenging

- Multilevel buy-in will be required for successful implementation of the recommendations.
- Learning from the experience of other jurisdictions, there may be resistance from some stakeholders to elements of the proposed strategy.
- There is limited literature on how to build a centralized or networked monitoring system that addresses the identified principles. Leveraging existing Ontario and pan-Canadian infrastructure will be essential.
- Good performance measurement needs to be meaningful, but what is meaningful may differ across audiences. Funders, administrators, care providers, decision support, and patients may have different motivations and interests in defining what indicators are meaningful or offer value. Understanding and managing these differences will need to be considered in the implementation of the recommendations using change management strategies.

Final Thoughts

These recommendations were born out of frustration over the burden of hospital indicator measurement and reporting, and the inefficiencies of “indicator chaos.” Although the discussion focused on the hospital system, the recommendations, proposed structure and approach can be translated to the broader Ontario health system. The Indicator Strategic Committee (ISC) will focus on the entire health system in the longer term while the Technical Indicator Screening Committee (TISC) could remain sector specific. As the health system transformation underway in Ontario matures, having one ISC will minimize the duplication of performance measurement efforts.

Across both phases of the project, Roundtable members and consultations described conditions key to the successful implementation of the suggested recommendations in the report. Trust, transparency, equity, and consistency in governance are important principles for successful implementation of an indicator reduction and management system for Ontario. These principles should be followed at all stages of implementation.

Conclusion

The OHA and HQO, soon to be Ontario Health followed a process to engage patients, senior hospital administrators, health system policymakers, and local, national and international experts to propose recommendations for a sustainable performance measurement system for Ontario. The recommendations are not meant to be carried out in isolation. They will be most effectively implemented in partnership with a broad array of system stakeholders

including patients and caregivers. Once implemented, these recommendations will reduce the burden of over-measurement, and refocus important resources back to patient care and improved outcomes. This model may also be expanded to the broader health system to enhance system integration and reduce the indicator chaos impacting other sectors.

Appendices

APPENDIX A: Roundtable and Task Group Participants

Roundtable Advisory Group Meetings:

Roundtable Meeting #1	October 31, 2018
Roundtable Meeting #2	February 25, 2019
Roundtable Meeting #3	July 25, 2019

Members of the Roundtable Advisory Group:

Roundtable Member	Role
Ross Baker	Professor, Institute of Health Policy, Management and Evaluation at the University of Toronto
Adalsteinn Brown	Dean, Dalla Lana School of Public Health
Pat Campbell	Former President and CEO, Orillia Soldier's Memorial Hospital
Elizabeth Carlton	VP, Policy and Public Affairs, OHA
Charlie Chan	Former Interim President and CEO, University Health Network
Allison Costello	Director, Policy and Innovation, Ministry of Health and Long-Term Care Director, Health Quality Ontario Liaison and Program Development, Ministry of Health and Long-Term Care
Lee Fairclough	VP, Quality Improvement, Health Quality Ontario
Melissa Farrell	Assistant Deputy Minister, Hospitals and Emergency Services, Ministry of Health and Long-Term Care
Alan Forster	Vice President, Innovation and Quality, Ottawa Hospital
Anna Greenberg	Interim CEO, Health Quality Ontario
Nicole Haley	CEO, Espanola Regional Hospital and Health Centre
Michael Hillmer	Executive Director, Information Management, Data and Analytics, Ministry of Health and Long-Term Care
Jackie Houston	Manager, Policy Development & Implementation, Health System Quality and Funding Division, Ministry of Health and Long-Term Care
Steven Jackson	Chief of staff, Mackenzie Health
Gillian Kernaghan	President and Chief Executive Officer, St. Joseph's Health Care London
Melanie Kohn	Director, Hospitals Branch, Ministry of Health and Long-Term Care
Bert Lauwers	Former President and CEO, Ross Memorial Hospital
Shaun McGuire	Chief of Staff, Bruyère
Neil McMullin	Manager, Ministry of Health and Long-Term Care
Richard McLean	Vice-President, Medical Affairs, Hamilton Health Sciences
Dante Morra	Chief of Medical Staff, Trillium Health Partners

Roundtable Member	Role
Wade Petranik	CEO, Dryden Regional Health Centre
Fredrika Scarth	Director, Premier's Council Secretariat, Ministry of Health and Long-Term Care
Karen Sequeira	Senior Lead, Policy, OHA
Douglas Sinclair	Chief Medical Officer and Executive Vice President, St. Michael's Hospital
Andy Smith	President and CEO of Sunnybrook Health Sciences Centre
Altat Stationwala	President and CEO of Mackenzie Health
Mary Wilson Trider	President & CEO at Almonte General Hospital & Carleton Place District Memorial Hospital
Ru Taggar	Executive VP, Chief Nursing and Health Professions Executive at Sunnybrook Health Sciences Centre
Eleni Tsoutsias	Manager, Project Implementation, Ministry of Health and Long-Term Care
Carole Wiebe	VP, Medical Affairs, Bruyère

HQO / OHA Secretariat	Role
Edward Chau (OHA)	Funding and Performance, Consultant, OHA
Shirley Chen (HQO)	Sr. Methodologist, Health System Performance, HQO
Jethro Cheng (HQO)	Research Analyst, Health System Performance, HQO
Imtiaz Daniel (OHA)	Director, System Performance and Financial Analytics, OHA
Gail Dobell (HQO)	Interim VP, Health System Performance, HQO
Stephanie Hylmar (HQO)	Lead, Health System Performance, HQO
Michal Kapral (HQO)	Team Lead, Health System Performance, HQO
Wendy Medved (HQO)	Manager, Health System Performance, HQO
Kristen Pitzul (OHA)	Advisor, Funding and Performance, OHA

Task Group Meetings:

Task Group Meeting #1	November 26, 2018
Task Group Meeting #2	December 12, 2018

Members of the Task Group:

OHA Invited Guests	HQO / OHA Secretariat
Riyaz Abdulrasul (Mackenzie)	Edward Chau (OHA)
Michael Caesar (UHN)	Jethro Cheng (HQO)
Darren Gerson (Sunnybrook)	Shirley Chen (HQO)
Katherine Henning (UHN)	Imtiaz Daniel (OHA)
Brent Maranzan (NWhA)	Gail Dobell (HQO)
Michael Nader (UHN)	Enza Ferro (OHA)
Danielle Jane Paton (SMH)	Stephanie Hylmar (HQO)
Deepak Sharma (NYGH)	Michal Kapral (HQO)
Sherra Solway (SMH)	Wendy Medved (HQO)
Gary Spencer (Trillium)	Gary Mitchell (OHA)

* Members from Sunnybrook were consulted separately for data flow

APPENDIX B: Inventory of 299 Priority Ontario Indicators

Public Accountability

Indicator Source	Indicator Name
HSAA	ALC (indicator TBD)
HSAA, Quality Improvement Plans (QIP, 2017/18)	ED Length of stay (%within target)
Quality Improvement Plans (QIPs, 2019/20)	Time to inpatient bed
HSAA/Canadian Institute for Health Information	Readmissions (30 day) (this might be more of a system indicator)
HSAA	Hospital acquired infection (CDI)
HSAA	Financial (current ratio)
HSAA	Financial (Total margin)
Linking Quality to Funding (LQ2F)	Patient experience (e.g. receive enough information when you left hospital)
Linking Quality to Funding (LQ2F)	Patient experience (e.g. having a clear understanding about all their prescribed medication before they left the hospital)
Linking Quality to Funding (LQ2F)	Patient experience (e.g. there was good communication about their care between doctors, nurses and other hospital staff)
Quality Improvement Plans (QIPs, 2019/20)	Provider experience (workplace violence)
Quality Improvement Plans (QIPs)	Hallway healthcare bed use (Indicator TBD)
CIHI	Repeat emergency visits for mental health

System Monitoring

Indicator Source	Indicator Name
CIHI	All patients readmitted to hospital (Overall 30-day all-cause readmission rate)
HSAA	Rate of Hospital Acquired Cases of Methicillin Resistant Staphylococcus Aureus
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for Cancer Surgery
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for Cardiac By-Pass Surgery
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for Cataract Surgery
HSAA	Percentage of ALC Days
HSAA	Hospital Standardized Mortality Ratio
Quality Improvement Plans (QIPs) 2019	Number of patients receiving care in unconventional spaces
Quality Improvement Plans (QIPs) 2020	Early identification: Documented assessment of needs for palliative care patients

Indicator Source	Indicator Name
ER provincial summary report - access to care (CCO)	ambulance offload time 90th percentile (in minutes), by lhin
ER provincial summary report - access to care (CCO)	ambulance offload time rank, by lhin
ER provincial summary report - access to care (CCO)	average ER length of stay, previous fiscal year in hours by LHIN (both time to PIA and time from PIA to disposition)
ER provincial summary report - access to care (CCO)	average ER length of stay by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre), previous fiscal year
ER provincial summary report - access to care (CCO)	change in volume and ER length of stay, by hospital (only outliers identified on graph)
ER provincial summary report - access to care (CCO)	daily average number of patients in ER waiting for inpatient bed at 8AM, by month, past 10 years
ER provincial summary report - access to care (CCO)	daily average number of patients waiting for inpatient bed at 8AM, ED length of stay (admitted), time to inpatient bed , by LHIN
ER provincial summary report - access to care (CCO)	Admission rate by LHIN: one month snapshot for current year and previous year, as well as April 2008: % change current year vs. previous year, and current year vs. April 08
ER provincial summary report - access to care (CCO)	admission rate by hospital group, current year by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre)
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC, monthly for previous 2 fiscals
CCO Regional Performance Scorecard Indicators	Percentage of Ontario breast screening program clients diagnosed within 7 weeks of an abnormal screen for cases with a tissue biopsy
CCO Regional Performance Scorecard Indicators	CT biopsy wait time
CCO Regional Performance Scorecard Indicators	Referral to a lunch diagnostic assessment program to diagnosis or rule out: percentage of patients diagnosed or ruled out within 28 days
CCO Regional Performance Scorecard Indicators	Percentage of new ambulatory cancer cases that were screened for tobacco use in the past 6 months (regional cancer centres only)
CCO Regional Performance Scorecard Indicators	Percentage of tobacco users that accepted a referral for tobacco use cessation counselling
CCO Regional Performance Scorecard Indicators	Referral to consult: percentage of patients seen within target for all priority categories (all reporting facilities)
CCO Regional Performance Scorecard Indicators	Decision to treat to treatment - P2: percentage of patients treated within target for "Priority 2" cases (all reporting facilities)
CCO Regional Performance Scorecard Indicators	Pathology post-surgical turn-around time for all disease sites: percentage of reports received within 14 days (all reporting facilities)
CCO Regional Performance Scorecard Indicators	Percentage of palliative courses peer reviewed (all radiation facilities)

Indicator Source	Indicator Name
CCO Regional Performance Scorecard Indicators	Referral to consult: percentage of patients receiving systemic treatment seen within 14 days (RSTP level 1, 2, and 3 facilities)
CCO Regional Performance Scorecard Indicators	Consult to treatment: percentage of patients receiving systemic treatment treated within 28 days (RSTP level 1, 2, and 3 facilities; excluding palliative)
CCO Regional Performance Scorecard Indicators	Percentage of cancer patients in the regional cancer centre who were screened at least once per month for symptom severity using ESAS/EPIC

Local Monitoring

Indicator Source	Indicator Name
CIHI Indicator Library	30-day all-cause readmission rate after isolated coronary artery bypass graft (CABG)
CIHI Indicator Library	30-day all-cause readmission rate after percutaneous coronary intervention (PCI)
CIHI Indicator Library	30-day in-hospital mortality after coronary artery bypass graft (CABG) and aortic valve replacement (AVR)
CIHI Indicator Library	30-day in-hospital mortality after isolated aortic valve replacement (AVR)
CIHI Indicator Library	30-day in-hospital mortality after isolated coronary artery bypass graft (CABG)
CIHI Indicator Library	30-day in-hospital mortality after percutaneous coronary intervention (PCI)
CIHI Indicator Library	Cost of a standard hospital stay
CIHI Indicator Library	Emergency department wait time for physician initial assessment (90% spent less, in hours)
CIHI Indicator Library	Hip fracture surgery within 48 hours
CIHI Indicator Library	Hospital harm
CIHI Indicator Library	in-hospital hip fracture in elderly (65+) patients
CIHI Indicator Library	in-hospital sepsis
CIHI Indicator Library	low-risk caesarean sections
CIHI Indicator Library	medical patients readmitted to hospital
CIHI Indicator Library	nursing-sensitive adverse events for medical patients
CIHI Indicator Library	nursing-sensitive adverse events for surgical patients
CIHI Indicator Library	obstetric patients readmitted to hospital
CIHI Indicator Library	obstetric trauma (with instrument)
CIHI Indicator Library	obstetric trauma (vaginal delivery without instrument)
CIHI Indicator Library	patients 19 and younger readmitted to hospital
CIHI Indicator Library	surgical patients readmitted to hospital
CIHI Indicator Library	time in emergency department until disposition decision (hours, percentile)
CIHI Indicator Library	total time spent in emergency department (hours, percentile)
CIHI Indicator Library	wait time for hip fracture surgery, age 65+ (proportion with surgery within 48 hours)
HSAA	90th Percentile ED Length of Stay for Non-Admitted Low Acuity Patients [CTAS IV-V]
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for Hip Replacements
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for Knee Replacements
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for MRI

Indicator Source	Indicator Name
HSAA	Percent of Priority 2, 3 and 4 Cases Completed within Access Targets for CT scans
HSAA	90th Percentile Time to Disposition Decision (Admitted Patients)
HSAA	Percent of Stroke/TIA Patients Admitted to a Stroke Unit During Their Inpatient Stay
HSAA	Rate of Ventilator-Associated Pneumonia
HSAA	Rate of Central Line Infection
HSAA	Adjusted Working Funds / Total Revenue %
HSAA	Repeat Unscheduled Emergency Visits within 30 days for Mental Health Conditions
HSAA	Repeat Unscheduled Emergency Visits within 30 days for Substance Abuse Conditions
Critical Care Services Ontario Performance Indicator	Incident Rate - Unplanned Extubation (‰)
Critical Care Services Ontario Performance Indicator	Hand Hygiene Compliance (before patient contact) (%)
Critical Care Services Ontario Performance Indicator	% of Beds Not Available
Critical Care Services Ontario Performance Indicator	Night-Time Discharge Rate (%)
Critical Care Services Ontario Performance Indicator	ICU Average LOS (days)
Critical Care Services Ontario Performance Indicator	Avoidable Days Rate (%)
Critical Care Services Ontario Performance Indicator	# of Chronic Ventilated Patients (> 21 Days)
Critical Care Services Ontario Performance Indicator	Admission to Bed (within 90 minutes)(%)
Quality Improvement Plans (QIPs) 2017, 2018	Patient experience: did you receive enough information when you left the hospital?
Quality Improvement Plans (QIPs) 2017, 2018	Patient experience: would you recommend inpatient care?
Quality Improvement Plans (QIPs) 2017, 2018	Patient experience: would you recommend emergency department?
Quality Improvement Plans (QIPs) 2017, 2019/20	Medication reconciliation at discharge
Quality Improvement Plans (QIPs) 2017, 2019/20	Percent discharge summaries sent from hospital to community care provider within 48 hours of discharge
Quality Improvement Plans (QIPs) 2017	Percentage of complaints acknowledged to the individual who made a complain within 3 to 5 business days
Quality Improvement Plans (QIPs) 2017, 2019/20	Readmission within 30 days for mental health and addiction
Common Quality Agenda 2017 (some are publicly reported)	first contact in the ED for Mental Health & Addictions
Common Quality Agenda 2017 (some are publicly reported)	% patients readmitted to hospital for mental illness and addiction within 30 days of discharge after hospitalization for mental illness or addiction

Indicator Source	Indicator Name
Common Quality Agenda 2017 (some are publicly reported)	% patients in mental health designated beds who were physically or mechanically restrained
Common Quality Agenda 2017 (some are publicly reported)	% patients who underwent a cardiac surgery or procedure within the provincial access target
Common Quality Agenda 2017 (some are publicly reported)	% of low-risk deliveries by delivery type
Common Quality Agenda 2017 (some are publicly reported)	% deliveries by delivery type
Common Quality Agenda 2017 (some are publicly reported)	visits to ED for conditions people thought could have been treated by their primary care provider
Common Quality Agenda 2017 (some are publicly reported)	hospital readmission rate within 30 days of leaving hospital for medical or surgical treatment
Common Quality Agenda 2017 (some are publicly reported)	hospitalization rate for conditions that can be managed outside hospital
Common Quality Agenda 2017 (some are publicly reported)	% of patients who had an unscheduled ED visit that potentially could have been treated in an alternative primary care setting
Common Quality Agenda 2017 (some are publicly reported)	% of home care patients who had unplanned ED visits within 30 days for referrals from hospital to CCAC after acute hospital discharge
Common Quality Agenda 2017 (some are publicly reported)	% of people, among those who died, who had at least one unplanned ED visit in their last 30 days of life
Common Quality Agenda 2017 (some are publicly reported)	% of people who died in hospital, in Ontario
Publicly-Reported Patient Safety	Surgical safety checklist completion
Publicly-Reported Patient Safety	Antibiotic-Resistant Bloodstream Infections in hospital patients
Better Outcomes Registry Network (BORN)'s KPI	Proportion of newborn screening samples that were unsatisfactory for testing, by submitting hospital and comparator groups
Better Outcomes Registry Network (BORN)'s KPI	rate of episiotomy in women who had a spontaneous vaginal birth
Better Outcomes Registry Network (BORN)'s KPI	rate of formula supplementation from birth to discharge in term infants whose mothers intended to exclusively breastfeed
Better Outcomes Registry Network (BORN)'s KPI	proportion of women with a caesarean section performed from greater than or equal to 37 weeks to less than 39 weeks gestation among low-risk women having a repeat caesarean section at term
Better Outcomes Registry Network (BORN)'s KPI	proportion of women who delivered at term and had Group B streptococcus (GBS) screening at 35-37 weeks' gestation
Better Outcomes Registry Network (BORN)'s KPI	proportion of women who were induced with an indication of post-dates and were less than 41 weeks' gestation at delivery
CorHealth: Stroke Scorecard	proportion of stroke/TIA patients who arrived at the ED by ambulance
CorHealth: Stroke Scorecard	Annual age and sex adjusted inpatient admission rate for stroke/TIA (per 1,000 population)
CorHealth: Stroke Scorecard	risk-adjusted stroke/TIA mortality rate at 30 days (per 100 patients)
CorHealth: Stroke Scorecard	proportion of ischemic stroke/TIA inpatients aged 65 and older with atrial fibrillation who filled a prescription for anticoagulant therapy within 90 days of discharge from acute care

Indicator Source	Indicator Name
CorHealth: Stroke Scorecard	proportion of ischemic stroke inpatients who received carotid imaging
CorHealth: Stroke Scorecard	median door to needle time among patients who received acute thrombolytic therapy (tPA) (minutes)
CorHealth: Stroke Scorecard	proportion of ischemic stroke patients who received acute thrombolytic therapy (tPA)
CorHealth: Stroke Scorecard	proportion of stroke/TIA patients treated on a stroke unit at any time during their inpatient stay
CorHealth: Stroke Scorecard	proportion of ischemic stroke/TIA patients discharged from the ED and referred to secondary prevention services
CorHealth: Stroke Scorecard	proportion of acute stroke (Excluding TIA) patients discharged from acute care and admitted to inpatient rehabilitation
CorHealth: Stroke Scorecard	proportion of acute stroke (excluding TIA) patients with mild disability (alphaFIM > 80) discharged home
CorHealth: Stroke Scorecard	median number of days between stroke (excluding TIA) onset and admission to stroke inpatient rehabilitation
CorHealth: Stroke Scorecard	median number of minutes per day of direct therapy received by inpatient stroke rehabilitation patients
CorHealth: Stroke Scorecard	proportion of inpatient stroke rehabilitation patients achieving RPG active length of stay target
CorHealth: Stroke Scorecard	median FIM efficiency for moderate stroke in inpatient rehabilitation
CorHealth: Stroke Scorecard	mean number of CCAC visits provided to stroke patients on discharge from inpatient acute care or inpatient rehabilitation 2014/15-2015/16
CorHealth: Stroke Scorecard	proportion of patients admitted to inpatient rehabilitation with severe stroke (RPG 1100 or 1110)
CorHealth: Stroke Scorecard	proportion of stroke/TIA patients discharged from acute care to LTC/CCC (excluding patients originating from LTC/CCC)
CorHealth: Stroke Scorecard	age and sex adjusted readmission rate at 30 days for patients with stroke/TIA for all diagnoses (per 100 patients)
CorHealth Annual Cardiac Report	cardiac catheterization: elective wait times
CorHealth Annual Cardiac Report	cardiac catheterization: urgent wait times
CorHealth Annual Cardiac Report	percutaneous coronary intervention: elective wait times
CorHealth Annual Cardiac Report	percutaneous coronary intervention: urgent wait times
CorHealth Annual Cardiac Report	implantable cardioverter defibrillator (ICD) and cardiac resynchronization therapy (CRT): elective wait list
CorHealth Annual Cardiac Report	implantable cardioverter defibrillator (ICD) and cardiac resynchronization therapy (CRT): urgent wait list
CorHealth Annual Cardiac Report	door to balloon times: ambulance transfers to PCI centre
CorHealth Annual Cardiac Report	door to balloon times: walk-ins to PCI centre
CorHealth Annual Cardiac Report	door to balloon times: transfers from non-pci centres
CorHealth Annual Cardiac Report	percentage of primary pcis presenting directly to a pci centre achieving 90 minute benchmark
CorHealth Annual Cardiac Report	percentage of primary pcis transferred from a non-pci centre achieving 120 minute benchmark
ER provincial summary report - access to care (CCO)	provincial ambulance offload time trend for past 10 years, monthly

Indicator Source	Indicator Name
ER provincial summary report - access to care (CCO)	ambulance volumes by LHIN, previous fiscal year
National System for Incident Reporting, CIHI	All Critical Incidents related to Medication/IV fluids
National System for Incident Reporting, CIHI	Non-critical medication/ IV fluid incidents
Provincial Council for Maternal and Child Health Scorecard	Caesarean Section Rates
Provincial Council for Maternal and Child Health Scorecard	Preterm Birth (<37 Weeks) Rates
Provincial Council for Maternal and Child Health Scorecard	NICU Admission Rates
Provincial Council for Maternal and Child Health Scorecard	Paediatric Inpatient Admission Rates
Provincial Council for Maternal and Child Health Scorecard	Paediatric ED Visit Rates

Recommend to Retire

Indicator Source	Indicator Name
CIHI Indicator Library	Hospital Deaths following major surgery
CIHI Indicator Library	percutaneous coronary intervention (PCI) volume by province and centre
HSAA	Total Margin (Hospital Sector Only)
Critical Care Services Ontario Performance Indicator	% of Nurses with Critical Care Training
Critical Care Services Ontario Performance Indicator	48 Hour Readmission Rate (%)
Quality Improvement Plans (QIPs) 2017	Risk-adjusted 30 day all cause readmission rate for patients with CHF
Quality Improvement Plans (QIPs) 2017	Risk-adjusted 30 day all cause readmission rate for patients with COPD
Quality Improvement Plans (QIPs) 2017	Risk-adjusted 30 day all cause readmission rate for patients with stroke
Quality Improvement Plans (QIPs) 2017	Home support for discharged palliative patients
Quality Improvement Plans (QIPs) 2017	Percentage of patients identified as meeting health link criteria who are offered access to health links approach
Quality Improvement Plans (QIPs) 2017	Pressure ulcers for complex continuing care patients
Quality Improvement Plans (QIPs) 2017	90th percentile emergency department length of stay for complex patients
Quality Improvement Plans (QIPs) 2017	Physical restraints in mental health

Indicator Source	Indicator Name
Quality Improvement Plans (QIPs) 2017	ICU antimicrobial utilization -antimicrobial-free days (AFD)
Common Quality Agenda 2017 (some are publicly reported)	average time patients spent in the ED
Common Quality Agenda 2017 (some are publicly reported)	% of inpatient days that beds were occupied by patients who could have been receiving care elsewhere
CorHealth: Stroke Scorecard	proportion of ALC days to total length of stay in acute care
CorHealth Annual Cardiac Report	diagnostic cardiac catheterization volumes by hospital
CorHealth Annual Cardiac Report	percutaneous coronary intervention volumes by hospital
CorHealth Annual Cardiac Report	cardiac surgery volumes by hospital
CorHealth Annual Cardiac Report	transcatheter aortic valve implantation volumes by hospital
CorHealth Annual Cardiac Report	electrophysiology studies (EPS) and ablations volumes by hospital
CorHealth Annual Cardiac Report	cardiac devices implant procedures volumes by hospital
CorHealth Annual Cardiac Report	primary PCI, pharmacoinvasive PCI, and rescue PCI volumes
ER provincial summary report - access to care (CCO)	provincial 90th percentile ER length of stay
ER provincial summary report - access to care (CCO)	provincial 90th percentile ER length of stay trend by patient type (admitted; non admitted, high acuity, non-admitted, low acuity)
ER provincial summary report - access to care (CCO)	provincial 90th percentile time to inpatient bed
ER provincial summary report - access to care (CCO)	provincial 90th percentile time to physician initial assessment (PIA)
ER provincial summary report - access to care (CCO)	provincial ER volume
ER provincial summary report - access to care (CCO)	provincial % change in ER volume (for complex conditions; admitted patients; non-admitted, high acuity; non-admitted, low acuity; visit by ambulance)
ER provincial summary report - access to care (CCO)	90th percentile ER Length of stay (hours), one month snapshot, by LHIN
ER provincial summary report - access to care (CCO)	% change in ER length of stay (hours), past two fiscal years, by LHIN
ER provincial summary report - access to care (CCO)	90th percentile ER length of stay, fiscal year, by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre)
ER provincial summary report - access to care (CCO)	ER volume vs. % change in ER volume (current fiscal year and previous fiscal year), by hospital (only outliers identified)
ER provincial summary report - access to care (CCO)	most improved hospital sites by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre) for ER length of stay (hours) for current fiscal year

Indicator Source	Indicator Name
ER provincial summary report - access to care (CCO)	most improve hospital sites by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre) for ER length of stay (hours) for previous fiscal year
ER provincial summary report - access to care (CCO)	most improve hospital sites by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre) for ER length of stay (hours) % change from previous two fiscal years
ER provincial summary report - access to care (CCO)	most improve hospital sites by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre) for time to PIA (hours) current fiscal year
ER provincial summary report - access to care (CCO)	most improve hospital sites by hospital group (teaching hospital, very high volume community hospital; high volume community hospital; medium volume community hospital; low volume community hospital; very low volume community hospital; paediatric hospital; urgent care centre) for time to IP bed (hrs) currently fiscal year
ER provincial summary report - access to care (CCO)	correlation between % CTAS I and II patients and 90th percentile ER length of stay (by hospital, only outliers identified)
ER provincial summary report - access to care (CCO)	number of patients designated ALC in acute care by LHIN (one month snapshot of current year)
ER provincial summary report - access to care (CCO)	ALC rate by LHIN (one month snapshot of current year)
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC by inpatient service (acute care, complex continuing care, rehab, mental health), by month for past 2 years
ALC provincial summary report - access to care (CCO)	provincial trend in ALC rate by inpatient service (acute care, ccc, rehab, mental health), monthly past year
ALC provincial summary report - access to care (CCO)	LHIN alc rate, one month snap shot for current year and previous year, by lhin: total ALC days, control to provincial ALC rate, total inpatient days, ALC rate
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC in acute care by top three discharge destinations (long term care, home with ccac, supervised or assisted living), past 2 years
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC in post-acute care by top three discharge destinations (long term care, supervised or assisted living, home with ccac), past 2 years
ALC provincial summary report - access to care (CCO)	% cumulative ALC days of open patients designated ALC by discharge destination -one month snapshot in current year, by province and lhin
ALC provincial summary report - access to care (CCO)	ALC rate by acute and post-acute care (one month snapshot current year), by LHIN
ALC provincial summary report - access to care (CCO)	ALC rate by province, lhin, and inpatient service (all post-acute, ccc, mental health, rehab, all, and acute)
ALC provincial summary report - access to care (CCO)	% of acute care patients designated ALC by discharge destination (ltc, rehab, ccc, home w ccac, home with community services, home w/o support, SAL, conv. Care, MH, palliative, unknown), province

Indicator Source	Indicator Name
ALC provincial summary report - access to care (CCO)	% of post acute care patients designated ALC by discharge destination (lrc, rehab, ccc, home w ccac, home w comm services, home w/out support, SAL, conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	volume of open patients designated ALC in acute care by top four discharge destinations , past fiscal year (long term care, home w ccac, supervised or assisted living, ccc)
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in acute care by top four discharge destinations (all acute open cases, supervised or assisted living, lrc, ccc, home w ccac) , by month, past 2 years
ALC provincial summary report - access to care (CCO)	for one month snapshot from previous year, % of acute care patients designated ALC, by discharge destination that was defined as most appropriate discharge destination (% to LTC, rehab, ccc, home w ccac, home w comm services, SAL, conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	for one month snapshot from previous year, % of acute care patients designated ALC, by discharge destination that was defined as NOT the most appropriate discharge destination (% to LTC, rehab, ccc, home w ccac, home w comm services, SAL, conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	for one month snapshot from previous year, % of post-acute care patients designated ALC, by discharge destination that was defined as most appropriate discharge destination (% to LTC, rehab, ccc, home w ccac, home w comm services, SAL, conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	for one month snapshot from previous year, % of post-acute care patients designated ALC, by discharge destination that was defined as NOT the most appropriate discharge destination (% to LTC, rehab, ccc, home w ccac, home w comm services, SAL, conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	proportion of open patients designated ALC in acute care by discharge destination, previous two years, by discharge destination = most appropriate discharge destination vs. discharge destination does not equal most appropriate discharge destination
ALC provincial summary report - access to care (CCO)	proportion of open patients designated ALC in post-acute care by discharge destination, previous two years, by discharge destination = most appropriate discharge destination vs. discharge destination does not equal most appropriate discharge destination
ALC provincial summary report - access to care (CCO)	wait time for open patients designated ALC in acute care by discharge destination equals most appropriate discharge destination vs. discharge destination does not equal most appropriate discharge destination, one month snapshot in past year (median, % 90th percentile), by LHIN
ALC provincial summary report - access to care (CCO)	wait time for open patients designated ALC in post-acute care by discharge destination equals most appropriate discharge destination vs. discharge destination does not equal most appropriate discharge destination, one month snapshot in past year (median, % 90th percentile), by LHIN
ALC provincial summary report - access to care (CCO)	percent of acute care patients designated ALC with specialized needs and supports (SNS) as a barrier by discharge destination (LTC, rehab, CCC, home w CCAC, home w/ comm services, home w/o support, SAL, Conv. Care, MH, palliative, unknown)

Indicator Source	Indicator Name
ALC provincial summary report - access to care (CCO)	percent of post-acute care patients designated ALC with specialized needs and supports (SNS) as a barrier by discharge destination (LTC, rehab, CCC, home w CCAC, home w/ comm services, home w/o support, SAL, Conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	proportion of open patients designated ALC in acute care by SNS and top four discharge destinations, one month snapshot in past year
ALC provincial summary report - access to care (CCO)	proportion of open patients designated ALC in post-acute care by SNS and top four discharge destinations, one month snapshot in past year
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in acute care by specialized needs and supports (no SNS required, SNS as a need only, SNS as a barrier), past 2 years
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in post-acute care by specialized needs and supports (no SNS required, SNS as a need only, SNS as a barrier), past 2 years
ALC provincial summary report - access to care (CCO)	percentage of acute care patients designated ALC with SNS as a barrier, by type of SNS (no barrier, bariatric, behavioural, development, dialysis, equip/structure, feeding, infection, mechanical ventilation, meds/labs, mental health, neuro, respiratory, social, wound), snapshot of one month
ALC provincial summary report - access to care (CCO)	percentage of post-acute care patients designated ALC with SNS as a barrier, by type of SNS (no barrier, bariatric, behavioural, development, dialysis, equip/structure, feeding, infection, mechanical ventilation, meds/labs, mental health, neuro, respiratory, social, wound), snapshot of one month
ALC provincial summary report - access to care (CCO)	volume of open patients designated ALC in acute care by top four barriers to discharge (social, behavioural, neurological, infection control/isolation), one month snapshot in past year
ALC provincial summary report - access to care (CCO)	volume of open patients designated ALC in post-acute care by top four barriers to discharge (social, behavioural, neurological, infection control/isolation), one month snapshot in past year
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in acute care by top four barriers to discharge , previous two years
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in post-acute care by top four barriers to discharge , previous two years
ALC provincial summary report - access to care (CCO)	percentage of acute care patients designed ALC by age group (0 to 64, 65 to 74, 75 to 84, 85+), one month snapshot previous year
ALC provincial summary report - access to care (CCO)	percentage of post-acute care patients designed ALC by age group (0 to 64, 65 to 74, 75 to 84, 85+), one month snapshot previous year
ALC provincial summary report - access to care (CCO)	trend of volume of open patients designated ALC in acute care by age group (-064, 65-74, 75-84, 85+), previous 2 years
ALC provincial summary report - access to care (CCO)	trend of volume of open patients designated ALC in post-acute care by age group (-064, 65-74, 75-84, 85+), previous 2 years
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in acute care by age group (0-64, 65-74, 75-84, 85+), previous 2 years
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC in post-acute care by age group (0-64, 65-74, 75-84, 85+), previous 2 years

Indicator Source	Indicator Name
ALC provincial summary report - access to care (CCO)	percentage of long wait acute care patients designated ALC by discharge destination (LTC, rehab, ccc, home w ccac, home w comm services, home w/out support, SAL, conv. Care, MH, palliative, unknown)
ALC provincial summary report - access to care (CCO)	proportion of long waiters out of all open patients designated ALC in acute care - trend in past two years
ALC provincial summary report - access to care (CCO)	proportion of long waiters out of all open patients designated ALC in post-acute care - trend in past two years
ALC provincial summary report - access to care (CCO)	Age and SNS breakdown for long waiters in acute care -one month snapshot in past year, number of cases and % of acute open ALC cases
ALC provincial summary report - access to care (CCO)	Age and SNS breakdown for long waiters in post-acute care -one month snapshot in past year, number of cases and % of acute open ALC cases
ALC provincial summary report - access to care (CCO)	percentage of discharge acute care patients designated ALC by discharge destination (LTC, rehab, ccc, home w ccac, home w comm services, home w/out support, SAL, conv. Care, MH, palliative), one month snapshot, previous year
ALC provincial summary report - access to care (CCO)	percentage of discharge post-acute care patients designated ALC by discharge destination (LTC, rehab, ccc, home w ccac, home w comm services, home w/out support, SAL, conv. Care, MH, palliative), one month snapshot, previous year
ALC provincial summary report - access to care (CCO)	volume of patients designated ALC discharged from acute care by top four discharge destinations, one month snapshot previous year
ALC provincial summary report - access to care (CCO)	volume of patients designated ALC discharged from post-acute care by top four discharge destinations, one month snapshot previous year
ALC provincial summary report - access to care (CCO)	90th percentile wait time for patients designated ALC discharged from acute care by top four discharge destinations , previous 2 years
ALC provincial summary report - access to care (CCO)	90th percentile wait time for patients designated ALC discharged from post-acute care by top four discharge destinations , previous 2 years
ALC provincial summary report - access to care (CCO)	percentage of discharge acute care patients designated ALC by discharge destination (lrc, rehab, ccc, home w ccac, home w comm. Services, home w/o support, SAL, conv. Care, MH, palliative)
ALC provincial summary report - access to care (CCO)	percentage of discharge post-acute care patients designated ALC by discharge destination (lrc, rehab, ccc, home w ccac, home w comm. Services, home w/o support, SAL, conv. Care, MH, palliative)
ALC provincial summary report - access to care (CCO)	volume of patients designated ALC discharged from acute care by top four discharge destinations, year to date
ALC provincial summary report - access to care (CCO)	volume of patients designated ALC discharged from post-acute care by top four discharge destinations, year to date
ALC provincial summary report - access to care (CCO)	wait time for patients designated ALC discharged from acute care by discharge destination, year to date
ALC provincial summary report - access to care (CCO)	wait time for patients designated ALC discharged from post-acute care by discharge destination, year to date
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC 65+ years old, past two years
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC 65+ years old, past two years, by top four discharge destinations
ALC provincial summary report - access to care (CCO)	90th percentile wait time for open patients designated ALC 65+ years old by top four discharge destinations, past two years

Indicator Source	Indicator Name
ALC provincial summary report - access to care (CCO)	provincial trend in open patients designated ALC 65+ years old by inpatient service (acute care, ccc, rehab, mental health), past 2 years
ALC provincial summary report - access to care (CCO)	open patients designated ALC 65+ years old by all discharge destinations, one month snap shot of each of the previous two years
ALC provincial summary report - access to care (CCO)	province/LHIN snapshot: volume and 90th percentile wait time for open patients designated ALC 65+ years old, one month snap shot of each of the previous two years
HSAA Volume Management	Ambulatory care: visits
HSAA Volume Management	complex continuing care: weighted patient days
HSAA Volume Management	day surgery: weighted cases
HSAA Volume Management	elderly capital assistance program (ELDCAP): patient days
HSAA Volume Management	emergency department: weighted cases
HSAA Volume Management	emergency department and urgent care: visits
HSAA Volume Management	inpatient mental health: patient days
HSAA Volume Management	inpatient rehabilitation days: patient days
HSAA Volume Management	total inpatient acute: weighted cases
HSAA Volume Management	Hip replacement BUNDLE (unilateral): volume
HSAA Volume Management	Knee replacement BUNDLE (unilateral): volume
HSAA Volume Management	Rehabilitation inpatient primary unilateral hip replacement: volume
HSAA Volume Management	acute inpatient primary unilateral knee replacement : volume
HSAA Volume Management	acute inpatient hip fracture: volume
HSAA Volume Management	knee arthroscopy: volume
HSAA Volume Management	elective hips - outpatient rehab for primary hip replacement: volume
HSAA Volume Management	elective knees - outpatient rehab for primary knee replacement: volume
HSAA Volume Management	acute inpatient primary bilateral joint replacement (hip/knee): volume
HSAA Volume Management	rehab inpatient primary bilateral hip/knee replacement: volume
HSAA Volume Management	rehab outpatient primary bilateral hip/knee replacement: volume
HSAA Volume Management	acute inpatient congestive heart failure: volume
HSAA Volume Management	acute inpatient stroke hemorrhage: volume
HSAA Volume Management	acute inpatient stroke ischemic or unspecified: volume
HSAA Volume Management	acute inpatient stroke transient ischemic attack (TIA): volume
HSAA Volume Management	stroke endovascular treatment (EVT): volume
HSAA Volume Management	acute inpatient non-cardiac vascular aortic aneurysm excluding advanced pathway: volume
HSAA Volume Management	acute inpatient non-cardiac vascular lower extremity occlusive disease: volume
HSAA Volume Management	unilateral cataract day surgery: volume
HSAA Volume Management	retinal disease: volume
HSAA Volume Management	acute inpatient tonsillectomy: volume
HSAA Volume Management	acute inpatient chronic obstructive pulmonary disease: volume
HSAA Volume Management	acute inpatient pneumonia: volume
HSAA Volume Management	non-routine and bilateral cataract day surgery: volume
HSAA Volume Management	corneal transplant (day surgery): volume

Indicator Source	Indicator Name
HSAA Volume Management	non-emergent spine (non-instrumented - day surgery): volume
HSAA Volume Management	non-emergent spine (non-instrumented- inpatient surgery): volume
HSAA Volume Management	non-emergent spine (instrumented- inpatient surgery): volume
HSAA Volume Management	shoulder (arthroplasties): volume
HSAA Volume Management	shoulder (reverse arthroplasties): volume
HSAA Volume Management	shoulder (repairs): volume
HSAA Volume Management	shoulder (other): volume

APPENDIX C: Consultations

Consultations and meetings to discuss system monitoring, performance management and data flow.

Date	Organization	Participant and Role	HQO / OHA Participants
INDICATOR DEVELOPERS			
February 6, 2019	CorHealth	Graham Woodward , Senior VP Laurie Bourne , Senior Director, Health System Policy, Design and Improvement	Imtiaz Daniel, Gail Dobell
March 20, 2019	CCO, Data Assets	Shari Dworkin , Director, Data Assets Kiren Handa , Director, Analytics and BI	Stephanie Hylmar, Wendy Medved
March 26, 2019	CCO, Analytics and Informatics	Jason Garay , Former VP, Analytics and Informatics	Gail Dobell
April 12, 2019	Sunnybrook Health Sciences	Melanie Lam , Manager, Business Intelligence Wendy Li , Manager, Decision Support	Shirley Chen, Jethro Cheng, Gail Dobell
April 30, 2019	CCO, Ontario Renal Network (ORN)	Daphne Sniekers , Group Manager, Ontario Renal Network	Gail Dobell
May 2, 2019	BORN	Lise Bisnaire , Executive Director Sandy Dunn , Knowledge Translation Specialist	Gail Dobell, Stephanie Hylmar, Wendy Medved,
May 17, 2019	CCO, Regional Programs	Christina Tassone , Performance Analyst, Regional Victoria Hagens , Manager, Regional Programs Jennifer Stiff , Manager, Cancer Quality System Sharmila Kandasamy , Team Lead, Regional Programs Samatha Hughes , Regional Programs Coordinator	Shirley Chen, Jethro Cheng, Michal Kapral, Stephanie Hylmar, Wendy Medved

Date	Organization	Participant and Role	HQO / OHA Participants
June 7, 2019	CCO, Surgical Oncology Program	Dr. Frances Wright , Affiliate Scientist, Sunnybrook Leigh McKnight , Program Manager, Surgical Oncology	Shirley Chen, Jethro Cheng, Stephanie Hylmar
June 13, 2019	MOHLTC	Michael Hillmer , Executive Director, Information Management, Data, and Analytics	Gail Dobell, Wendy Medved
June 26, 2019	CCO, Data Assets, Analytics and Regional Programs	Ravi Akula , Group Manager, BI Asim Bhatti , Director, Product Management Shari Dworkin , Director, Data Assets Daniel Funge , Team Lead, BI Victoria Hagens , Group Manager Regional Programs and Performance Management Kiren Handa , Director, Analytics and BI Garth Matheson , VP, Planning and Regional Programs Sid Suwande , Chief Technology Officer	Shirley Chen, Jethro Cheng, Imtiaz Daniel, Gail Dobell, Michal Kapral, Stephanie Hylmar
June 11, 2019	CIHI	Saul Melamed , Manager, Client Affairs Kathleen Morris , VP, Research and Analytics Francine Anne Roy , Acting VP, Eastern Canada	Gail Dobell
CANADIAN AND INTERNATIONAL ENTITIES			
March 27, 2019	Nuffield Trust UK	Chris Sherlaw-Johnson , Sr. Research Analyst	Shirley Chen, Jethro Cheng, Imtiaz Daniel, Michal Kapral, Stephanie Hylmar, Wendy Medved
April 2, 2019	Cambridge University UK	Dr. David Spiegelhalter , Winton Professor, Faculty of Mathematics, University of Cambridge	Shirley Chen, Jethro Cheng, Imtiaz Daniel, Michal Kapral, Stephanie Hylmar, Wendy Medved
April 25, 2019	LSE UK	RG Bevan , Emeritus Professor of Policy Analysis Department of Management	Imtiaz Daniel, Gail Dobell

Date	Organization	Participant and Role	HQO / OHA Participants
July 6, 2019	Alberta Health Services	Stafford Dean , Senior Program Officer, Analytics, Alberta Health Services Andrew Fong , Clinical Analytics, Alberta Health Services Deborah Katz , Clinical Analytics, Alberta Health Services Aaron Sheldon , Analytics Architecture, Alberta Health Services, and University of Calgary	Shirley Chen, Jethro Cheng, Imtiaz Daniel, Gail Dobell, Michal Kapral
April 3, 2019	University of North Carolina at Chapel Hill	George Pink , Distinguished Professor, Department of Health Policy and Management, Senior Research Fellow at the Cecil G. Sheps Center for Health Services Research, Gillings School of Global Public Health	Imtiaz Daniel and Gail Dobell
PATIENTS			
May 27, 2019	HQO's Patient, Family and Public Advisory Council	Five members of the HQO Patient, Family and Public Advisory Council	Imtiaz Daniel, Wendy Medved, Stephanie Hylmar, Michal Kapral, Jethro Cheng, Shirley Chen

APPENDIX D: Reference Materials

This is a selection of references consulted to inform indicator management, system surveillance and data flow.

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