Health Quality Ontario

The provincial advisor on the quality of health care in Ontario

November 2016

Patient Safety Indicator Review: Summary Report

Ontario
Health Quality Ontario

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Introduction

In 2016, Health Quality Ontario initiated an indicator review of the patient safety performance indicators for the acute care sector. The original patient safety indicators were selected by the Ministry of Health and Long-Term Care under the mandate of a regulation under the Public Hospitals Act in 2008. Reporting on these indicators began in 2008 on the Ministry's web pages and transitioned to Health Quality Ontario's online reporting web pages in 2012. This indicator review assessed whether the currently reported indicators continue to meet the criteria of strong public reporting indicators. It also assessed which new indicators, identified through an environmental scan, would enhance our public reporting by making our online indicators more relevant to a public audience and actionable by the hospital sector. This review moves forward Health Quality Ontario's mandate to continually improve our public reporting and adhere to the principle of transparency in the selection of indicators for public reporting.

This review was limited to patient safety in the acute care sector. A larger indicator review for the hospital sector (for mental health, rehabilitation services, paediatrics, and outpatients) may be considered in the future. The review was designed to engage a comprehensive group of stakeholders, through a modified Delphi process with an expert panel, patient engagement and sector engagement. This report provides detail around the process that was used to get to the final recommended set of 11 indicators. While this indicator review was focussed on Health Quality Ontario's online reporting, the results of this review may inform other public reporting products (e.g. yearly report) and other Health Quality Ontario reporting (e.g., QIPs).

Background

Ten patient safety indicators were reported by the Ministry of Health and Long Term Care starting in 2008. Public reporting of these nine indicators moved over to Health Quality Ontario's webpages in December 2012. Table 1 describes the patient safety indicators reported online, highlights those included also in the hospital Quality Improvement Plans (QIPs) and those reported in our yearly report *Measuring Up* for 2014 and 2015, prior to the indicator review.

Table 1: Health Quality Ontario's publicly reported patient safety performance indicators 2012-2016

Indicator	Reporting level	Health Quality Ontario reporting product
Methicillin Resistant Staphylococcus aureus (MSRA) Bacteremia	Provincial, Hospital-Level	Online
Vancomycin Resistant Enterococcus (VRE) Bacteremia	Provincial, Hospital-Level	Online
Central Line-Associated Primary Bloodstream Infection (CLI)	Provincial, Hospital-Level	Online, QIP
Ventilator-Associated Pneumonia (VAP)	Provincial, Hospital-Level	Online, QIP
Surgical Site Infection (SSI) Prevention	Provincial, Hospital-Level	Online
Hand Hygiene Compliance (HHC) (before and after patient contact)	Provincial, Hospital-Level	Online
Surgical Safety Checklist Compliance (SSCC)	Provincial, Hospital-Level	Online, QIP
Hospital Standardized Mortality Ratio (HSMR)	Provincial, Hospital-Level	Online
Clostridium difficile Infection (CDI)	Provincial, Hospital-Level	Online, QIP, Measuring Up,

The indicator review aimed to address concerns with the current set of indicators, which were heavily weighted towards hospital-acquired infections, had some challenges with data interpretability and were

not always actionable. Further, the review could identify potential new indicators not considered in 2008 when reporting began and leverage improvements in data collection and access..

The indicator review re-evaluated the existing public reporting indicators and indicators identified through a broad environmental scan, a Never Events review[1] and NSQIP (National Surgery Quality Improvement Plans) initiatives. These indicators were assessed using Health Quality Ontario's indicator selection criteria for the purpose of public reporting. A full list of our selection criteria can be found online and in Appendix A.

Indicator Review Principles

This review is limited to care for in-patients in the hospital sector. Participants were asked to consider the following principles in their deliberations:

Guiding Principles of Health Quality Ontario's Patient Safety public reporting:

1. Indicators and reporting that make the system measurably safer

2. Indicators and reporting that provide an accurate representation of the experiences of patients and the public and are actionable by the sector. Reporting should benefit the public, health care providers and other system users

3. Indicators and reporting that consider the risks and benefits related to public reporting of performance indicators

4. Data that are reliable and valid and provide an accurate reflection of patient safety within the acute care setting.

5. Indicators that are important to report but have current data limitations should be considered for further development and/or data advocacy.

Methodology

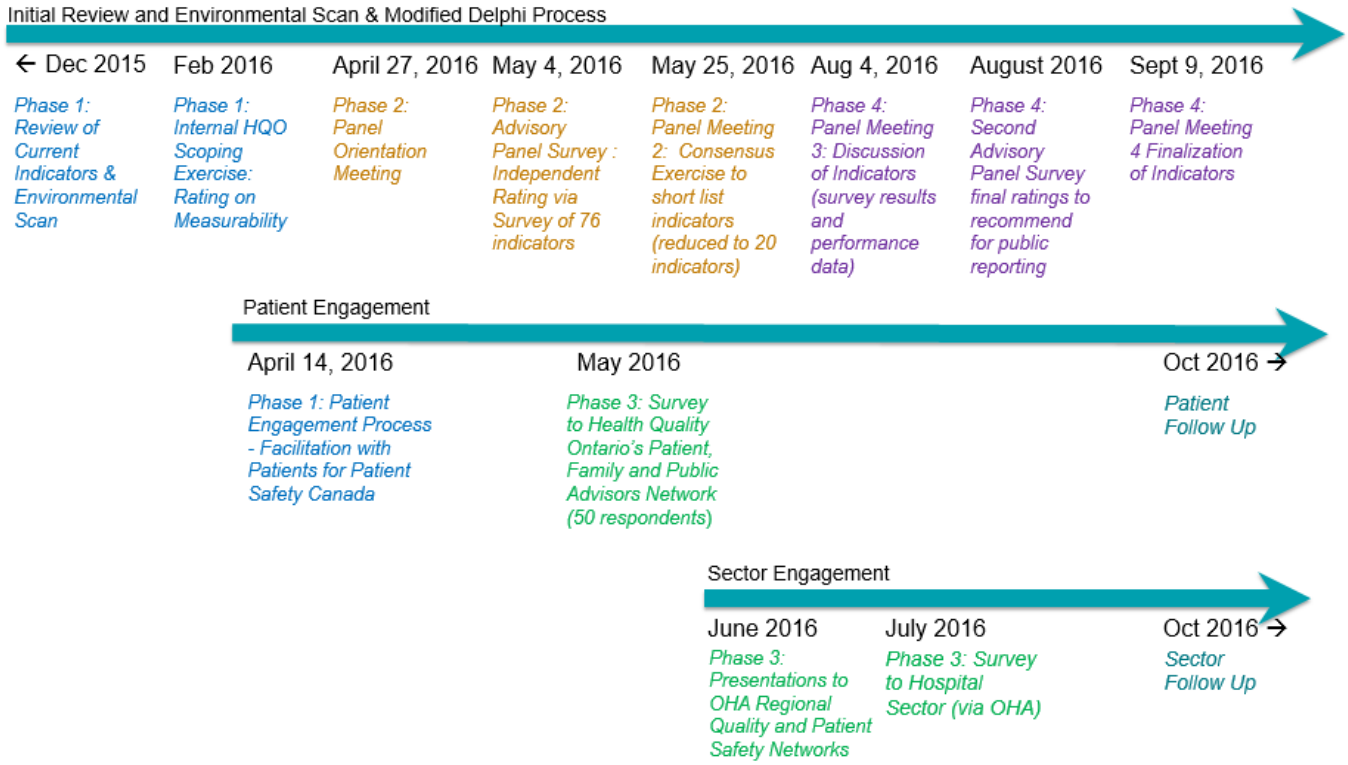
Health Quality Ontario began the patient safety indicator review in May 2016, convening an expert panel composed of representatives from the sector that included policymakers, provider representatives, infection prevention and patient safety professionals, data holders and researchers (see Appendix B: Membership of Expert Panel).

Indicators were reviewed using pre-defined selection criteria to determine their strength for public reporting (see Appendix A: Indicator Selection Criteria). An expert panel engaged in a modified Delphi process to recommend a set of indicators that comprehensively measure acute care performance in the area of patient safety.

[1] Canadian Patient Safety Institute, 2015. "Never Events for Hospital Care in Canada" Accessed at: http://www.patientsafetyinstitute.ca/en/toolsResources/NeverEvents/Documents/Never%20Events%20for%20Hospital%20Care%20in%20Canada.pdf

The indicator selection process was conducted with three major consultations: a modified Delphi process with an expert panel, patient engagement, and sector engagement. The patient and sector engagement were conducted in parallel to the modified Delphi process to ensure that the results of the engagement could inform the expert panel's recommendations. There will be a final round of public and sector engagement to share the results of the review.

Figure 1: Patient Safety Indicator Review Process



Phase 1: Initial Review and Environmental Scan

Health Quality Ontario staff conducted an environmental scan that included clinical literature, reporting in other jurisdictions (provinces and other countries) and organizations (CIHI, HSAA) and other indicator review results (Table 2: Public sources for environmental scan). Indicators were initially reviewed by Health Quality Ontario for potential to be measured in Ontario, importance/relevance to the public and the sector and alignment with Health Quality Ontario's public reporting mandate. An initial 180 indicators were gathered at this stage of the review, and 76 were advanced for review by the expert panel.

As part of this scoping phase, Health Quality Ontario (HQO) led a 2-hour long focus group session with 4 of the Ontario-based members of Patients for Patient Safety Canada (PPSC) to get feedback on patient safety that were the most important and relevant for patients. Members were asked to share what they think key concepts of patient safety are and reflect on what makes them feel safe or unsafe in a hospital setting. The group was also asked to comment on the importance and relevance of the patient safety indicators currently reported publicly on HQO's website (see Appendix C: Patient Engagement Discussion Guide). The group's feedback was shared with the expert panel.

Table 2: Public Sources for environmental scan

Jurisdiction	*Source*
International	Agency of Healthcare Research and Quality (AHRQ) Australian Commission on Safety and Quality in Health Care Centers for Medicare & Medicaid Service (CMS) Institute for Safe Medication Practices (ISMP) Institute for Clinical Systems Improvement (ICSI) The Joint Commission (US) National Surgical Quality Improvement Program (NSQIP) National Quality Forum (NQF) Organization for Economic Cooperation and Development (OECD) Quality and Outcome Framework (NHS, UK)
Canada	Accreditation Canada British Columbia Patient Safety and Quality Council (BCPSQC) Canadian Institute for Health Information (CIHI) Canadian Patient Safety Institute (CPSI) Health Quality Council of Alberta (HQCA) Nova Scotia Quality and Patient Safety Advisory Committee
Ontario	Critical Care Services Ontario (CCSO) Public Health Ontario (PHO) Health Quality Ontario (HQO)

Phase 2: Modified Delphi Panel – survey and consensus meetings

An expert panel of relevant stakeholders was struck with clinical representatives from infection control and quality care (including representatives from small and rural hospitals), data providers, Ministry of Health and Long Term Care, sector associations, and researchers. The panel participated in a modified Delphi process to confirm a set of indicators to recommend for public reporting. This methodology balances independent rating of the indicators (independent surveys) with open discussion (consensus meetings) to achieve majority agreement on the expert panel's final recommendations. The panel was provided with information on the indicators to inform their ratings and discussion, including the results of public and sector engagement and performance data on indicators where available.

Expert panel members were asked to complete an online survey to independently rate the list of 76 measurable indicators according to three criteria: important/relevant, actionable, and interpretable. The survey ratings were presented at the first consensus meeting for comment and discussion. The panel used the results of the ratings survey and the consensus meeting to identify a short list of 20 indicators that should be advanced for further consideration.

Phase 3: Patient and Sector Engagement

The patient and sector engagement phase was included in this process to determine which indicators are the most useful and important to patients, public and system stakeholders, and how those indicators should be interpreted. The results of both sector and patient engagement were shared with the panel and informed their decisions.

Patient Engagement Survey

Health Quality Ontario invited members from PPSC and Health Quality Ontario's Patient, Family and Public Advisors Network to participate in a survey to rank their top indicators from the expert panel's short list. The survey was designed by HQO staff and reviewed by the Ontario-based members of PPSC. The respondents were also asked to select three key measurement areas that they felt were important to measure, provide reasoning for their choices and offer feedback on what areas of measurement were missing (survey

questions can be found in Appendix F). The quantitative and qualitative feedback provided by the 56 survey respondents was shared with the expert panel to ensure the patient perspective was included throughout the panel deliberations.

Sector Engagement

Health Quality Ontario presented results of the panel deliberations, informed by results of the patient engagement process, at six regional meetings of the Ontario Hospital Association's Quality and Safety regional roundtables. These presentations were followed up by a survey of hospital patient safety personnel, facilitated by the Ontario Hospital Association. Sixty respondents provided ratings and comments on the comprehensiveness and actionability of the refined list of indicators generated by the expert panel.

Table 3: Surveys Conducted during indicator review

Survey	Date	Respondents	Purpose
Initial Panel Survey	May 4, 2016	Expert Panel (17 respondents)	Rating of the long list of 76 indicators (76) for importance, actionability and interpretable. Results were shared with the panel in development of a short list of 20 indicators
Patients Survey	May 9, 2016	Patient and Family Network (50 respondents)	20 indicators were taken to Health Quality Ontario's Patient and Family Network to provide a preference ranking and qualitative feedback. Results were shared with the expert panel
Sector Survey	July 2016	Quality and Patient Safety representatives from hospitals (60 respondents)	Hospital sector representatives were asked to rate the 20 indicator short list on comprehensiveness, actionability and feasibility. Results were shared with the expert panel.
Second Panel Survey	August 2016	Expert Panel (16 respondents)	The expert panel were provided the results of the patient and sector surveys and performance data. Results were brought to the final meeting to support discussion.

Phase 4: Indicator Finalization and Wrap-Up

The expert panel had three consensus meetings to review the results of their independent ratings, patient and sector engagement, as well as indicator performance data. In this phase, participants were asked to use definitions developed by the Agency for Health Quality and Research (AHRQ) in their review of the performance data (Table 4). A second panel survey was developed to assess agreement to include or discard an indicator. Participants agreed to a 50 per cent threshold to assess agreement. The aim was to reduce the number of indicators according to their strength in identifying true quality problems.

Review of performance data on indicators via survey

In the second consensus meeting, the panel was provided with performance data on the indicators where available. In this meeting, the panel was asked to assess the indicators for data quality and feasibility (see Appendix A, Indicator Selection Criteria). To operationalize data quality, the panel applied the AHRQ definitions in a second panel survey for good construct validity, precision and whether there was evidence that the indicator was prone to bias in their review of the performance data (Table 4).

Table 4: AHRQ Criteria for Evaluating Quality Indicators

Construct validity	Does the indicator perform well in identifying true (or actual) quality of care problems?
Minimum bias	Is there either little effect on the indicator of variations in patient disease severity and comorbidities, or is it possible to apply risk adjustment and statistical methods to remove most or all bias?
Precision	Is there a substantial amount of provider or community level variation that is not attributable to random variation?

Final meeting of indicator review

In the second panel survey, participants were asked to review the shortlist of indicators using the AHRQ data quality criteria. They were asked to recommend each indicator for:

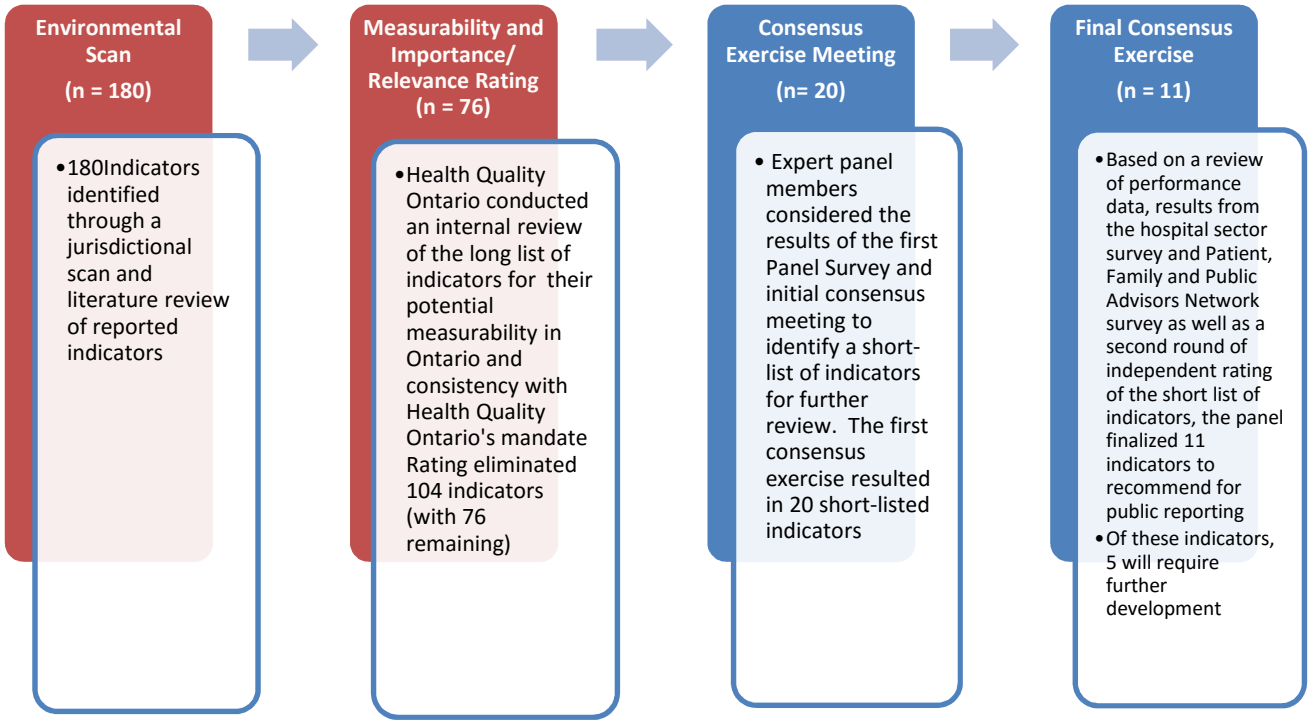
- For public reporting in its current state,
- Modifications/development for reporting at a later date,
- Discard the indicator for public reporting in either the original or a modified state

Results were presented at a final panel meeting. The meeting focused discussion on indicators where there was less than 50% panel agreement. In this meeting, participants reached consensus on 11 indicators to be recommended for public reporting. The following section outlines these results.

Results

The indicator review process began with 180 indicators identified through an environmental scan, and was narrowed down to a final recommended set of 11 patient safety indicators. Figure 2 summarizes the indicator selection process and the number of indicators eliminated at each stage. A full set of results can be found in Appendix D.

Figure 2: Indicator shortlisting



Of the nine indicators that Health Quality Ontario currently reports, four were retired entirely from future public reporting (Surgical Site Infection (SSI) prevention for hip and knee, Ventilator Associated Pneumonia (VAP), Central Line Infection (CLI) and Hospital-Standardized Mortality Ratio (HSMR)), and 5 indicators were kept with the recommendation that these undergo some modifications to their definitions (Table 5). The final set of indicators to be selected for public reporting will be based on an evaluation of indicator data quality, measurement feasibility, and final indicator definitions.

The following table describes the final list of indicators recommended by the panel:

Table 5: Reporting and Modification Status of Recommended Indicators

Indicators Recommended for Inclusion	Panel Recommendation	Rationale for Inclusion
Hospital onset bacteremia (Methicillin-sensitive Staphylococcus aureus (MSSA), Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant Enterococcus (VRE)	Reporting of individual infection rates to be replaced by a combined indicator of hospital acquired blood stream infections. Original indicators for MRSA and VRE will be reported immediately, MSSA will require development	Infections included here are all the most common bloodstream infections that can occur in hospital. They are similarly actionable, and may be associated with breaches in patient safety protocols
Critical medication incidents	Indicator to capture all critical medication incidents. Requires development of a data source and indicator definition	Medication errors are the number one cause of patient safety events in hospitals. "Medication Never Events" was considered too narrow in its definition. The panel expanded the indicator to include all incidents due to medication administration
Hand hygiene compliance	The new indicator will continue to measure hand hygiene compliance but will allow hospitals to use either	Significant evidence to show the link between hand hygiene and spread of infection. Current measures are

Indicators Recommended for Inclusion	Panel Recommendation	Rationale for Inclusion
	audit or electronic monitoring to collect data on hand hygiene compliance. The metrics arising from electronic monitoring will have to be reconciled with those currently reported using audit. Until then, the current indicator will continue to be reported	flawed because they are based on self-reported audit methods. Panel recommended that hospitals be able to use electronic monitoring as a source of data collection if available.
Medication reconciliation	Requires Development of a data source and indicator definition	Process indicator to supports the medication incidents indicator. Also aligned with QIPs and Accreditation Canada
Hospital acquired Clostridium difficile	Panel recommended current indicator be retained; recommendation to report quarterly instead of monthly	C. Difficile is a common preventable infection contracted in hospital. This indicator reflects an important / relevant health concern for patients and providers
Compliance with all three phases of the surgical safety checklist	Original indicator refined to require reporting organizations to confirm completion of each of the three phases of the checklist separately. Requires development; original indicator will be reported in the interim	Important process indicator that ensures compliance with surgical best practice. It results in low outcomes of surgical site infection. Finally, modifications to this indicator may improve the construct validity of the indicator and more closely reflect true performance.
Falls occurring post admission that result in injury	Indicator defined (CIHI)	Falls are very common in aging populations and in those under strong medications. Hospitals should have falls prevention actions in place. This is also a nursing sensitive indicator.
Surgical site infection	Indicator will need some development in terms of surgeries to include, period and type of infection. Indicator definition will require development; data source exists	Continues to be room for improvement on the rate of SSIs. Indicator shows how well infection control practices are doing.
New pressure ulcers acquired post admission	Indicator defined (CIHI)	Common in aging populations and in those under strong medications. This is also a nursing sensitive indicator.
Percentage of hospital staff vaccinated against influenza	Indicator defined (PHO)	Both a process and an outcome measure. Very actionable from the hospital's perspective.
Obstetrical trauma with instrument	Indicator defined (CIHI)	The panel felt that obstetrical care represents high volumes of patients in hospital and that patient risks in this group should be included. This indicator has been developed by CIHI and is currently reported

Indicators selected by the panel as recommended for reporting were aligned with the recommendations from the sector and patient survey. Appendix E shows that all five indicators rated as 'important' by patients were included in the final set of indicators recommended by the panel. Appendix D also highlights alignment with priorities from the sector. The sector survey asked providers to rate indicators on actionability, feasibility, and interpretability. Appendix E shows the final scores for each indicator from the patient and sector surveys (please see Appendix G for the sector survey questions).

Notes on the final recommended indicators

- From the original set of publicly reported patient safety indicators, only one indicator (rate of hospital acquired *Clostridium difficile* infection) was retained as is for future reporting. Four of the indicators that were originally reported, hand hygiene compliance, surgical safety checklist compliance, rate of hospital acquired *vancomycin-resistant enterococcus* (VRE) and rate of hospital acquired *methicillin-resistant Staphylococcus aureus* (MRSA) were retained with modifications (see summary above) which will require some development time. However, the original versions of these indicators will continue to be reported by Health Quality Ontario until their modified versions have been developed.

- Four indicators from the original set, central line associated bloodstream infections, ventilator acquired pneumonia, surgical site infection prevention for elective hip and knee surgery and hospital standardized mortality ratio were retired from public reporting. These indicators will be retired within the fiscal year.

- Four of the indicators that were recommended by the panel are currently measured and/or reported and will require very minor review before they can be publicly reported by Health Quality Ontario. Post-admission pressure ulcers, post-admission falls resulting in injury, obstetrical trauma with instrument and staff influenza vaccination rate will be reported in the 17/18 fiscal year, barring issues of definition or data quality.

- Three indicators will require substantial development including identification of a provincial data source for two. A reliable provincial data source will need to be identified for critical medication incidents and medication reconciliation. In addition, both indicators will require additional development work to define the indicators. While there is an existing data source for the indicator on surgical site infection (CIHI-DAD), this indicator will require development to define the population inclusions and event inclusions.

- Two indicators (surgical never events and antimicrobial stewardship program rates) have been recommended for alternative reporting formats. Participants agreed that online public reporting may not be the best venue for these indicators.

Public Reporting Phases

The following table shows the plan to include these indicators for public reporting. Health Quality Ontario will be launching new public reporting webpages for patient safety in January 2017 and the new set of patient safety indicators will be reported using a phased approach.

Table 6: Public Reporting timelines for recommended indicators

INDICATOR	RECOMMENDATION
Indicators retained and refined (Phase 1 Reporting)	
C. Difficile Rate	Report CDI immediately; consider quarterly vs monthly reporting
Hand Hygiene Compliance	Continue to report existing indicator until new indicator is developed; move forward with discussions on development

Compliance with all three phases of the Surgical Safety Checklist	Continue to report existing indicator until new indicator is developed'; move forward with development of new data collection immediately
Hospital Onset Bacteremia Rate (Methicillin-sensitive Staphylococcus aureus (MSSA), Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant Enterococcus (VRE)	Report combined MRSA and VRE immediately; move forward with discussions on definition of MSSA collection and combining rates
Indicators to be retired from public reporting (Phase 1 Reporting)	
Surgical site infection prevention for elective hip and knee surgery	
Central line infection (CLI)	
Ventilator-associated pneumonia (VAP)	
Hospital Standardized Mortality Ratio	
New indicators require some review/discussion (Phase 2)	
New Pressure Ulcers acquired post admission	Indicator is available but HQO will request information on indicator validity and reliability; data would need to be requested from CIHI
Injury Rate related to falls occurring post admission	Indicator is available but HQO will request information on indicator validity and reliability; data would need to be requested from CIHI
Obstetrical trauma with instrument	Indicator is available but HQO will request information on indicator validity and reliability; data would need to be requested from CIHI
Staff influenza vaccination rate	Would need some discussion with PHO, indicator is currently reported to PHU and potentially could be publicly reported
New indicators requiring substantial development (further development beyond 17/18 FY)	
Critical medication incidents	No reliable and complete data source; will need to work with CIHI and NSIR and ISMP to develop
Surgical site infection rate	Indicator will need some development in terms of surgeries to include, period and type of infection
Medication reconciliation	Data source will need to be developed

Conclusion

Health Quality Ontario is committed to providing patients, the public and health care providers with easily accessible, high-quality performance data that are as close to real-time as possible, and to reporting performance results tailored to a public audience.

The patient safety indicator review resulted in a list of 11 indicators that will provide a more comprehensive picture of patient safety performance in the acute care sector. The recommended indicators were selected to improve the relevance and usefulness of our patient safety indicators to the public and health care professionals.

Further indicator development is required to ensure the indicators recommended through this process are reportable in Health Quality Ontario's public reporting.

Appendix A: Indicator Selection Criteria

Criteria	Comments
Important/relevant	The indicator reflects an issue that is important to the general population and to relevant stakeholders, and is consistent with Health Quality Ontario's mandate
Measureable	There are data sources that could potentially be used to measure the indicator
Actionable	Performance on the indicator is likely to inform and influence policy or funding, alter behaviour of health care providers, or increase general understanding in the community in order to improve quality of care and population health
Interpretable	The indicator (as defined) is clear and interpretable to a range of audiences, and the results of the indicator are comparable and easy to understand, including what constitutes improved performance (clear directionality)
Evidence-based	There is good/strong evidence to support the process or evidence of the importance of the outcome
Feasible	Indicator is calculable; data are timely
Data Quality (including validity, reliability and timeliness)	Health Quality Ontario will explore the indicator in detail, including the technical definition, calculation methodology, validity and reliability of measurement, and timeliness of data If possible, baseline data analysis is conducted to understand: - Limitations and caveats of the indicator - Current performance, including variation over time, by region and at the provider level

Appendix B: Membership of Delphi Panel

Title/Organization	Name and Title
Chair	Dr. Alan Forster, Chief of Quality, The Ottawa Hospital
Health Quality Ontario (Health System Performance)	Shirley Chen, Senior Methodologist, Acute care sector
	Susan Brien, Director, Public Reports
Health Quality Ontario (Quality Improvement)	Sudha Kutty, Director Quality Improvement
Other Health Quality Ontario	Michelle Rossi, Director, Policy and Strategy
Provider Organizations	
Ontario Hospital Association	Karen Sequeira, Lead, Quality, Risk and Patient Safety
Public Health Ontario	Jennifer Robertson (Manager, IPAC Knowledge Synthesis and Evaluation)
Canadian Patient Safety Insitute	Sandy Kossey, Senior Director
Policy makers	
MOHLTC	Simon Rabinovitch, Hospitals Branch
	Caroline Marshall, Strategy and Policy Advisor
PIDAC	Dr. Matthew P. Muller, Chair
Data providers	
HAB (MOHLTC)	John Hill, Manager, Health Analytics Branch
CCO	Dr. Monika Krzyzanowska
CCIS	Donna Thompson, Executive Director, Criticall
CIHI	Chantal Couris, Manager, Indicator Research and Development
Provider representatives	
Physician Rep	Dr. Amir Ginzburg, Chief of Quality, Trillium Health Partners
Physician Rep	Dr. Michael Baker, Phyisician in chief (UHN)
Physician Rep	Dr. Allison McGeer, Infectious Disease Consultant, (Mt. Sinai Hospital)
Sector Rep	Jennifer Lawrance, Sioux Lookout Meno Ya Win Health Centre
Sector Rep	Sonja Glass, CNO, Grey Bruce Health Services
Nursing Rep	Chris Zettler, Manager, Professional Practice Portfolio, Trillium Health Partners
Nursing Rep	Richard Wray, Director, Quality, Safety, Infection Control at SickKids
Research / Nursing Rep	Lianne Jeffs, Volunteer Association Chair in Nursing Research and Scientist Keenan Research Centre of the Li Ka Shing Knowledge Institute, St. Michael's University
Research / Physician Rep	Dr. William Ghali, Scientific Director, O'Brien Institute for Public Health University of Calgary

Appendix C: Patient Engagement Discussion Guide

What is Patient Safety?

What does Patient Safety mean to you as a patient, family member, caregiver, and member of the public?

Patient Safety Concepts

From your perspective, what are the key concepts that constitute Patient Safety?

Experiences with Patient Safety

Based on past experiences, what are some of the situations or events that have made you feel safe in a hospital?

What are situations or events that have made you feel unsafe in a hospital?

Current Reporting on Hospital Patient Safety at Health Quality Ontario

- Infections from being in the hospital
- Hand washing
- Surgical safety checklists
- Deaths in hospital

Does knowing about the above occurrences help you determine how safe a hospital is?

Are any of these more important than others?

Are we missing something important?

Proposed Themes in Patient Safety

- Infections picked up from being in hospital
- Safe use of medication
- Safety related to surgeries
- Deaths that happen in hospital
- Preventable health issues that can arise in hospital
- Culture of patient safety in hospitals

Do these resonate with you?

Do these themes capture what it means to be safe in a hospital?

Appendix D: Final Set of Recommended Indicators and Measureability

Indicator Name	Status from Indicator review (New = not currently reported by Health Quality Ontario)	Indicator development	Measurable	Data Source	Currently Reported	Reporting frequency
Indicators Recommended for Public Reporting						
New Pressure Ulcers acquired post admission	New indicator	Indicator Defined	Yes	CIHI (DAD)	CIHI	Annual
Injury Rate related to falls occurring post admission	New indicator	Indicator Defined	Yes	CIHI (DAD)	--	Annual
C. Difficile Rate	Currently reported by Health Quality Ontario	Indicator Defined	Yes	MOH (SRI)	Health Quality Ontario	Currently monthly; recommend quarterly
Obstetrical trauma with instrument	New indicator	Indicator Defined	Yes	CIHI (DAD)	CIHI	Annual
Percentage of hospital staff vaccinated against influenza	New indicator	Indicator Defined; will need to review to understand definition and limitations	Yes	PHO survey	PHO; to PHUs not publicly reported	Annual
Critical medication incidents	New indicator	Will require further definition; currently data collection is voluntary	developmental	NSIR* / CIHI (DAD)	--	
Compliance with all three phases of the Surgical Safety Checklist	Modified version of currently reported indicator was recommended	Will require refinement of existing data source and definition of indicator	developmental	No current data source	--	Currently semi-annual
Hospital Onset Bacteremia Rate (MSSA, MRSA, VRE)	Modified version of currently reported indicator was recommended	Will require refinement of existing data source and definition of indicator	developmental	CIHI (DAD)	Health Quality Ontario (Partial)	Currently quarterly; could stay quarterly

Indicator Name	Status from Indicator review (New = not currently reported by Health Quality Ontario)	Indicator development	Measurable	Data Source	Currently Reported	Reporting frequency
Medication Reconciliation	New indicator	Will require development of a data source and definition of indicator; Will require decision about "at admission" or "at discharge"	Not currently	No current data source	--	
Surgical Site Infection	New indicator	This indicator is in development at CIHI	developmental	CIHI (DAD)	--	Annual
Hand Hygiene Compliance	Modified version of currently reported indicator was recommended	Will require development of electronic counting data source and definition of a combined indicator	Not currently	SRI (MOH) (current indicator)	Health Quality Ontario	Currently semi-annual
Indicators Recommended for Other Reporting Mechanisms						
Antimicrobial Stewardship Program	Panel recommended that Patient Safety public reporting may not be the best venue for this indicator; but could be in customized reports	Will require development	Not currently	No current data source	PHO (in development)	
Surgical Never Events	Panel recommended an alternative reporting mechanism for this indicator	Will require development	Not currently	CIHI (DAD)	CPSI	

Appendix E: Patient and Sector Survey Results for Recommended Indicators

Indicator Name	Patient Survey Ranking (out of 20 candidate measures)	Sector Ranking (out of a score of 5)		
		Important	Actionable	Feasible
Hospital Onset Bacteremia Rate (MSSA, MRSA, VRE)	1	5	4	4
Critical medication incidents	2	5	4.5	4
Hand Hygiene Compliance	3	5	4	4
Medication Reconciliation	4	5	4	3.5
C. Difficile Rate	5 (tied)	5	5	5
Compliance with all three phases of the Surgical Safety Checklist	5 (tied)	5	5	5
Injury Rate related to falls occurring post admission	7	5	4	4
Surgical Site Infection	10	5	4	3
New Pressure Ulcers acquired post admission	11	5	4	3
Percentage of hospital staff vaccinated against influenza	11	5	4	4
Obstetrical trauma with instrument	14	4.5	4	4

Appendix F: Patient Survey Questions

Question 1: If you or a loved one was admitted in a hospital, what types of situations or circumstances would make you feel unsafe during your stay?

Question 2: If you were trying to determine how safe a particular hospital is, what information about that hospital would you be looking for?

Question 3: Important measurement areas
Select three key area that is important for the measurement of patient safety in the hospital.

Why is this measurement area important to you?
(Short List of Indicators provided for this question)

Question 4: Are there any areas of focus or indicators that shouldn't be measured?

Question 5: Are there any other key areas of patient safety in the hospital that are important to measure that we have missed?

Question 6: Would you like to share any other thoughts?

Appendix G: Sector Survey Questions

1. **Do these areas of focus represent comprehensive measurement of patient safety in acute care?** Considerations: Does this set reflect all areas of patient safety in hospitals? What is missing?
   a) Yes, this is a comprehensive set of hospital-based patient safety quality indicators
   b) Partially, this is a fairly comprehensive set of quality indicators but there are still some important gaps in measurement
   c) No, this is an incomplete set of quality indicators and there are clear gaps in measurement

If you think this list of indicators has gaps that do not reflect a comprehensive measurement, please provide us with further comments or examples of the gaps you would suggest need to be addressed. Are there indicators or additional sources that we should consider?

2. **In the following questions, we will ask you to rank the indicators in the shortlist on a 5 point scale on three criteria.**

Indicator (Green = data source is currently available, red = new data collection required)	**Criteria**	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Would you recommend this indicator for public reporting?**
Medication incidents: death or serious harm as a result of one of five pharmaceutical events or alternatively defined *(outcome)*	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Med Reconciliation at admission or at discharge *(process)*	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Surgical Safety Checklist Compliance* (process)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Surgical Site Infection (SSI): all surgeries, specified surgeries or surgical group (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
SSI Prophylaxis for hip and knee surgery* or for another surgery or surgical group (process)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Surgical never events: Surgery on the wrong body part and unintended foreign object left in patient (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Important	*1*	*2*	*3*	*4*	*5*	*Yes/No*

Pulmonary embolism or deep vein thrombosis (post-surgery or post admission for medical patients) (outcome)	*Actionable*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
VTE prophylaxis for surgical patients or prevention for medical patents (process)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Pressure Ulcers (post admission) (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Injury Rate related to falls occurring post admission (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Hospital Standardized Mortality Ratio*(outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Hospital Onset Bacteremia Rate: overall or by condition including MRSA, VRE, CLI and others (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Catheter-Associated UTIs (CAUTIs) (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
C. Difficile Rate* (outcome)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Hand Hygiene Compliance Rate* (process)	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Obstetrical trauma with instrument	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Percentage of hospital staff vaccinated against influenza	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Rate of patients 65 and older receiving at least one delirium screen within 48 hours of admission to hospital	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*
Rate of high risk patients with advanced care directives	*Important*	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Actionable	*1*	*2*	*3*	*4*	*5*	*Yes/No*
	Feasible	*1*	*2*	*3*	*4*	*5*	*Yes/No*

Indicator Specific Feedback

During the panel's first consensus meeting, some indicators required further information before a decision could be made. Feedback on the indicator specific questions below will be shared with the panel to assist them in making their final recommendations and specifications of some of these indicators.

3. **There are two "Never Event" indicators short-listed by the panel (surgical never events and medication incidents). It is unlikely that these indicators would be reportable at the hospital level given small numbers, but would you agree that it is important to report these indicators at the provincial or regional level?**

    a) Yes, never events indicators is an important area that should be reported at both the provincial and/or regional level

    b) No, these indicators should not be considered for public reporting

If reporting were limited to provincial and regional performance, what do you think are some of the concerns with public reporting of the two never events indicators?

4. **Health Quality Ontario is looking for feedback on a medication reconciliation indicator. Do you have a preference for reporting on medication reconciliation at admission, discharge, or both?**

    a) Medication reconciliation at admission

    b) Medication reconciliation at discharge

    c) Both time points should be considered for public reporting

5. **Which indicator do you think is the best reflection of hospital-acquired infections? The panel considered that MRSA, VRE and CLI could be combined into a measure of bacteremia, though all-cause bacteremia is differently actionable depending on the infection. The panel felt both options should be presented for further consideration.**

    a) All-cause bacteremia

    b) MRSA, VRE & CLI aggregate bacteremia indicator

    c) No bacteremia indicator should be considered for public reporting

Please provide any other comments on the short-list of indicators or public reporting for patient safety in the space provided below.