

Quality-Based Procedures Indicators

An Implementation Guidance Document

Ministry of Health and Long-Term Care

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Acknowledgements

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List of Abbreviations

| | |
|--------|---|
| AC | Accreditation Canada |
| CCN | Cardiac Care Network |
| CCO | Cancer Care Ontario |
| CHRP | Canadian Hospital Reporting Project |
| CQA | Common Quality Agenda |
| DAD | Discharge Abstract Database |
| ECFAA | Excellent Care for All Act (2010) |
| HQO | Health Quality Ontario |
| H-SAA | Hospital Service Accountability Agreement |
| ICES | Institute for Clinical Evaluative Sciences |
| IDEAS | Improving and Driving Excellence Across Sectors |
| LHIN | Local Health Integration Network |
| MOHLTC | Ministry of Health and Long-Term Care |
| NACRS | National Ambulatory Care Reporting System |
| NRS | National Rehabilitation Reporting System |
| OSN | Ontario Stroke Network |
| QBP | Quality-Based Procedure |
| QIP | Quality Improvement Plan |
| WTIS | Wait Time Information System |

Executive Summary

- Quality-Based Procedure (QBP) indicators are a critical component of QBP implementation. The measures will provide a starting point for monitoring and evaluating the impact of the introduction of the QBPs and provide benchmark information for clinicians (physicians, nurses and allied health professionals) and administrators that will enable mutual learning and promote on-going quality improvement at local, regional and system levels. QBP indicators will also provide performance-based information back to Expert Panels to evaluate the impact of their work in real time.
- At the present time, indicators will be reported only if they can be calculated using existing administrative data sources. Therefore the QBP indicators will not require additional data collection by hospitals.
- Indicator results will be shared via QBP-specific baseline reports that will be posted electronically on an internal ministry website. Facility level data will be communicated directly and securely to hospitals and LHINs via e-mail.
- QBP-specific baseline reports are supplementary to the respective clinical handbooks. Each baseline report will summarize results for the quality indicators at the LHIN and provincial-levels, provide contextual information regarding performance, and include technical details outlining how indicators were calculated.
- QBP indicator development and refinement is an iterative and cyclical process that will take place in collaboration with key ministry stakeholders.
- There are currently no targets set for the indicators nor are the indicators currently tied to funding. However, the end goal of QBP implementation is for reimbursement to be tied to quality, at which point a defined process for selecting appropriate indicators and setting targets for that purpose will be designed by the ministry in collaboration with the Advisory Groups and other relevant stakeholders.
- Not all indicators will have the same level of relevance to or require action by all of the stakeholders impacted by QBP implementation. The QBP integrated scorecard was developed to be used as a menu from which clinicians, hospital administrators and LHINs can choose measures that are relevant based on their clinical focus, strategic priorities or impact in terms of health outcomes or costs/volumes. In addition to the measures suggested by the Clinical Expert Advisory Groups, the

ministry will also include results for a select group of system-level outcome indicators in the baseline report.

1. Introduction

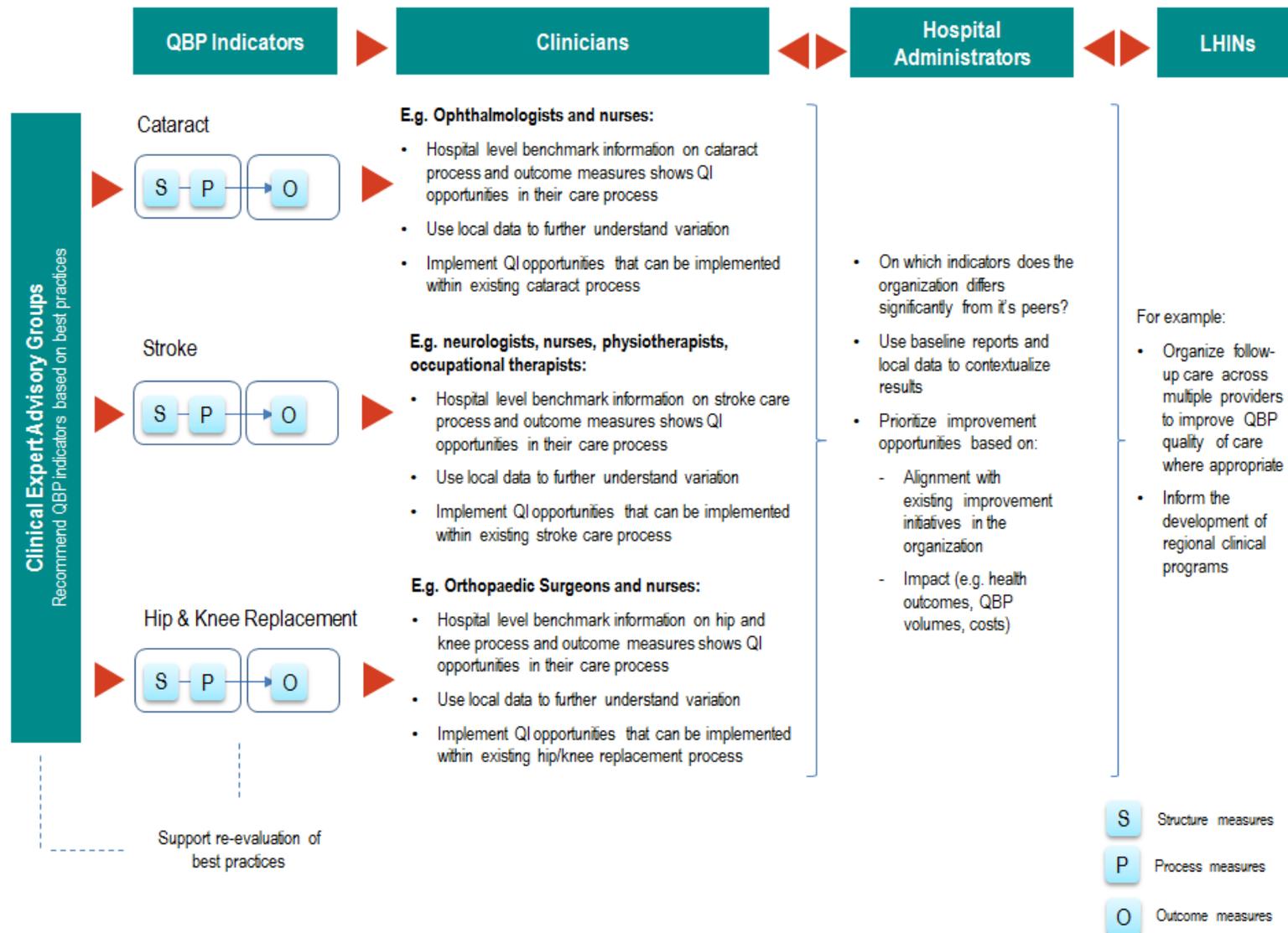
SUMMARY:

- One of the key goals of the QBP indicators is to help clinicians, administrators and LHINs monitor the implementation of the QBP best practices and identify opportunities for improving quality of care by providing benchmark information on a key set of expert-recommended quality indicators.
- Indicators are currently being calculated by the ministry in collaboration with its partners. Results will be summarized at the Local Health Integration Network (LHIN) and provincial levels into QBP-specific baseline reports and facility level results will be shared directly with hospitals.
- Currently, QBP indicators are not tied to funding and no performance targets have been set. However, at some point in time targets might be established and QBP funding may be tied to outcomes and/or quality of care provided. If this is deemed a viable option, a separate process for setting targets and selecting appropriate indicators will be established in collaboration with the Clinical Expert Advisory Groups and other relevant stakeholders.

1.1 Purpose of this guidance document

The purpose of this document is to provide information regarding the Quality-Based Procedure (QBP) indicator work that the ministry is undertaking in collaboration with its partners to evaluate the impact of QBP implementation. A discussion of its relation to other reporting initiatives will be presented as well as an overview of the process and principles underlying indicator selection. This document will inform hospitals, clinicians (physicians, nurses and allied health professionals) and LHINs regarding how the QBP indicators will support their QBP quality assurance and help them identify opportunities for quality improvement. Figure 1 provides an overview of how the various stakeholders can use the QBP indicator information.

Figure 1: The QBP indicators will enable discussion within and between hospitals and LHINs on what the variation might mean and how quality of QBP care can be improved as well as support re-evaluation of recommended best practices



1.2 Background

1.2.1 Health System Funding Reform – Quality-Based Procedures

The Ministry of Health and Long-Term Care is implementing Health System Funding Reform (HSFR) across hospitals in Ontario. This change in the way funding is provided is part of the province's strategy to put people at the centre of the system, and to ensure that Ontarians receive the highest possible health care quality and value.

As of April 1, 2012, the ministry began the implementation of Health System Funding Reform. Over a four-year period, HSFR will shift much of Ontario's health care system funding for hospitals and Community Care Access Centres (CCACs) away from global funding allocation towards a more transparent, evidence-based model where funding is tied more directly to the quality care provided to Ontarians.

Health System Funding Reform has two key components: Health Based Allocation Model (HBAM) funding, used to allocate a fixed amount of funding for each health service provider based on the demographic profiles of their patients along with clinical and financial data and; Quality-Based Procedure (QBP) funding, which will be allocated for specific procedures based on a "price x volume + quality" approach.

Four QBPs were selected for roll-out starting 2012/13 and comprise approximately 6% of total hospital funding: Primary Unilateral Hip Replacement; Primary Unilateral Knee Replacement; Cataract; and Chronic Kidney Disease. These QBPs were identified using an evidence- and quality-based selection framework that identifies opportunity for process improvements, clinical re-design, improved patient outcomes, enhanced patient experience and potential cost savings. As implementation evolves, more QBPs will be introduced and will account for approximately 30% of total hospital funding at the culmination of HSFR.

1.2.2 Objectives of the Quality-Based Procedure Integrated Scorecard

The purpose of the QBP integrated scorecard approach is to have measures in place that will:

- Support monitoring and evaluation of the implementation impact (intended and unintended) of the QBPs;

- Provide information for clinicians and administrators that will enable mutual learning and promote on-going quality improvement at local, regional and system levels;
- Provide performance-based information back to Expert Panels to evaluate the impact of their work and update as required in real time.

As with every policy change, it is important for the ministry to understand the impact of the introduction of QBPs. That is, will this change in the way funding is allocated lead to the intended response from hospitals, clinicians and LHINs and in turn result in the achievement of better health outcomes such as improved quality and value? Will there be any unintended impact of implementation? If so, what are these unexpected responses? Therefore one of the objectives of the integrated scorecard approach is to support the evaluation of QBP implementation.

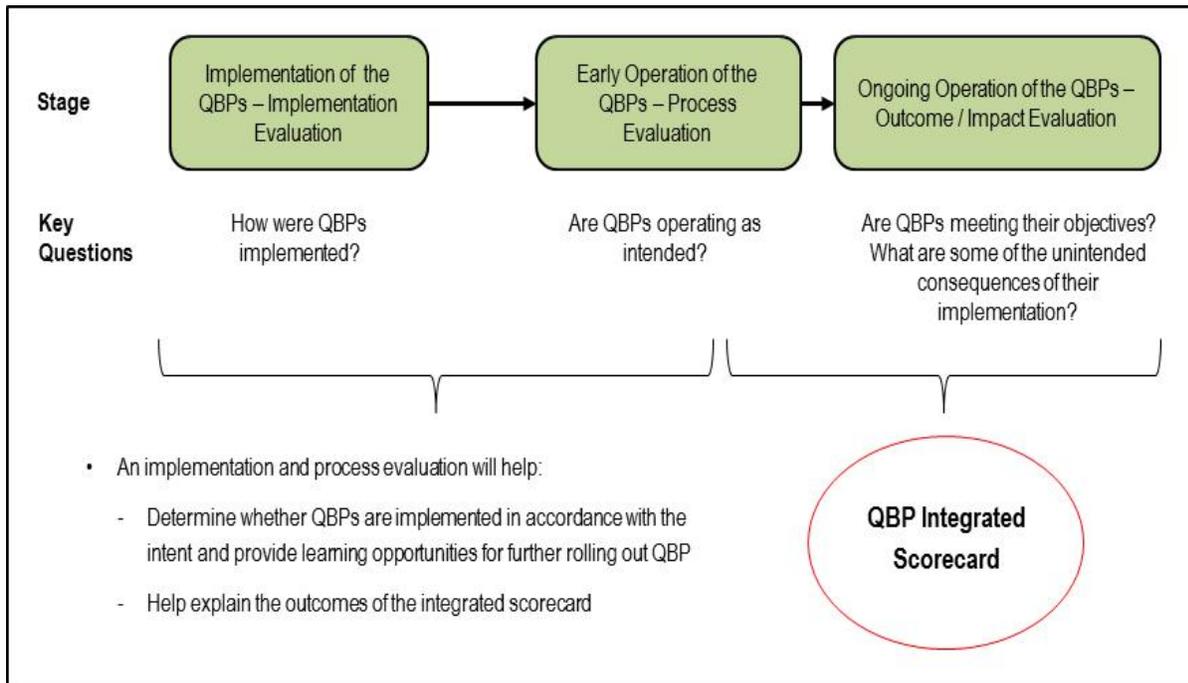
There are various ways in which new initiatives can be evaluated in order to assess whether they are working as planned to achieve intended results. Performance monitoring is one evaluation type and involves routine and periodic tracking and reporting of indicators corresponding to relevant outputs, measures of productivity, efficiency and outcomes of care, and patient centeredness. The QBP integrated scorecard approach is a performance monitoring evaluation strategy and the focus of this guidance document.

Although the QBP integrated scorecard also includes some indicators that will provide information regarding how QBPs are implemented, it is not sufficient on its own to explain the observed results on the indicators. Recognizing this information gap, the ministry also intends to conduct other evaluation types such as *implementation evaluation* and a more detailed *process evaluation* of QBPs at some point in the future (see *figure 2*) and collaborate with health services researchers who are undertaking steps to evaluate various components of QBP implementation. No decisions have yet been made regarding timelines or implementation methods surrounding these types of evaluation.

A second objective of the QBP integrated scorecard is to support QBP quality improvement. Since the intent of QBPs is to align funding with the quality of care that is delivered, hospitals and clinicians will, among other tools, also need information on whether care is provided according to the relevant QBP best practice/s. These stakeholders will also require knowledge of the outcomes of QBP care in order to guide their improvement decisions.

Finally, the best practices underlying each QBP will be re-evaluated and if needed adjusted on a regular basis by the respective Clinical Expert Advisory Panels. In doing this, the Clinical Expert Advisory Panels will need information that allows them to evaluate their recommendations and adjust if needed.

Figure 2: Types of QBP evaluation (adopted from Hollander et al., 2010)ⁱ



The integrated scorecard approach will result in a broad set of indicators that are relevant at different levels of the healthcare system. This is a reflection of the complexity of the changes that QBP introduction will initiate which include a number of different care processes (e.g. cataract, GI endoscopy), stakeholders (clinicians, patients, hospital administrators, LHINs and ministry) and levels of care (clinical process vs. continuum of care across different providers). See sections 5.1 and 5.2 of this document for further discussion.

Finally, it is important to stress that at this point in time there are no reporting requirements for hospitals to submit any additional data for calculating indicator results. The QBP integrated scorecard uses existing data sources such as the Discharge Abstract Database (DAD), National Ambulatory Care Reporting System (NACRS), Wait Time Information System (WTIS), National Rehabilitation Reporting System (NRS) and other sources as applicable. The ministry, together with some of its partners that include Cancer Care Ontario (CCO), the Institute for Clinical Evaluative Sciences (ICES) and

the Ontario Stroke Network (OSN), has been calculating the indicators and will share the facility-level results with the respective facilities and LHINs. It should be noted, however, that as the QBP Integrated Scorecard Approach matures, different stakeholders may assume responsibility for various aspects of the reporting process as appropriate.

1.2.3 Targets for QBP indicators and tying QBP indicators with funding

The ministry acknowledges that establishing targets and linking funding to outcomes of care must be designed and implemented carefully and cautiously. Targets play an important role in highlighting key policy goals and helping to motivate organizations and providers to achieve these goals. However, experiences from other jurisdictionsⁱⁱ, suggest that caution should be exercised when target-setting, particularly with regard for selecting appropriate data on which to base expectations, in order to ensure that goals are within the reach of care providers.

Taking these experiences into consideration as well as recognition that a number of the QBP indicators have not yet been established as mature performance indicators, the ministry has decided not to set targets at this point in time. The only exceptions to this rule are a small number of targets set by QBP Clinical Expert Advisory Groups as part of their recommended best practices (for example, the Primary Hip/Knee Replacement Expert panel established a 4.4 day benchmark for average acute LOS). If it is determined that target-setting will later become a ministry objective, a specified process will be designed by the ministry in collaboration with the Clinical Expert Advisory Groups and other relevant stakeholders. Historical performance on the various QBP indicators will be one of many sources that will inform respective targets.

Similarly, a cautious approach will be undertaken in decisions regarding tying outcomes of care to funding. At this time the QBP quality indicators are not associated in any way with the funding that individual organizations receive. However the end goal of QBP implementation is for reimbursement to be tied to quality. Similar to target-setting, if it is decided that this course of action represents a reasonable option for moving forward, a separate process for selecting indicators will be designed by the ministry in collaboration with the Clinical Expert Advisory Groups and other relevant stakeholders.

2. QBP Integrated Scorecard Approach

SUMMARY:

- The ministry, together with subject-matter experts and other key stakeholders, developed an integrated scorecard based on QBP policy goals in alignment with the quality domains outlined in ECFAA, 2010.
- Based on their respective recommended best practices and the integrated scorecard, the Clinical Expert Advisory Panels recommended quality indicators for each QBP both for which provincial data is currently available and those which should be developed based on data that will be collected in the future.
- In addition to the expert-recommended indicators, baseline reports will also include measures that the ministry considers relevant to monitor and evaluate the impact of QBP implementation and/or measures aligned with other ministry priorities e.g. Health Links.
- The development of QBP measures is a cyclical and iterative process. Quality indicators may be revised or replaced based on the feedback from experts, clinicians, hospitals administrators and LHINs. The end-goal of the process is to identify sets of indicators that are not just “nice to have” but of key importance to monitor intended and unintended consequences of implementation and for frontline providers to improve the quality of QBP care.

2.1 The Role of Indicators in Measuring Quality of Care

Although indicators have been defined in a myriad of ways, the ministry’s definition being employed for this particular initiative is “a measurable aspect of provided care that provides an indication of the quality of that care”. In general, a good indicator has the following characteristics:

1. Has a strong relation to organizational concepts of quality (i.e. face validity)
2. Demonstrates changes in response to changes in quality (i.e. sensitivity)
3. Is measured in a reliable way (i.e. consistency)

It is also important to note that QBP evaluation is based on indicators that conform with Donabedian's modelⁱ and assess processes, structures or outcomes as defined below:

- Structures refer to the physical and organizational properties of the settings in which care is provided (e.g. hospital buildings, staff and equipment)
- Processes refer to the treatment or service being provided to the patient (e.g. specific therapies)
- Outcomes refer to the results of treatment received (e.g. results of a specific therapy)

2.2 Development of Quality-Based Procedures indicators

To monitor and evaluate the impact of the QBPs and to support ongoing quality improvement by providing benchmark information to hospitals, the ministry, in consultation with experts in the field of health care evaluation and performance management, developed an **integrated scorecard approach** which is summarized in *figure 3* below.

The development of the integrated scorecard approach was based on the following guiding principles:

- **Relevance** – the scorecard should only measure the response of the system to introducing QBPs
- **Importance** – to facilitate improvement, the indicators should be meaningful for the various stakeholders (clinicians, administrators, LHINs, ministry and patients)
- **Alignment** – where appropriate, the scorecard should align with other indicator-related initiatives
- **Evidence** – the indicators in the integrated scorecard should be scientifically sound and capture constructs that have been established in relevant communities e.g. clinicians, administrators and/or policy-decision makers

Figure 3: Schematic summary of the integrated scorecard approach



Recognizing the purpose of the integrated scorecard, the domains of inquiry were derived from the QBP policy goals which are:

- Aligning incentives to facilitate adoption of best clinical evidence-informed practices
- Appropriately reducing variation in practice and costs across the province while improving outcomes
- Ensuring we are advancing the principle of providing the right care, in the right place, at the right time

The aforementioned goals were translated into six domains of quality. These domains, along with a corresponding list of evaluation questions (*see table 1*) informed the selection of QBP-specific indicators. They will also be used to monitor the impact of QBP implementation at the system-level. It is important to note that the six domains are aligned with dimensions of quality as defined in the Excellent Care for All Act (ECFAA), 2010. QBP-specific indicators were selected based on their importance for quality assurance and improvement purposes. In addition to facilitating the selection of indicators, the evaluation questions will also help guide future thinking on evaluating the implementation of QBPs and the delivery of QBP care (i.e. process and implementation evaluation). Subsequently, the ministry together with internal and external experts translated the key evaluation questions into a list of key provincial indicators that are summarized in Table 1 below.

It should be noted that the patient experience domain is still under development. There are currently initiatives underway across the province to measure and/or re-assess current patient/client experience measurement tools across the system. As such, the ministry will wait to learn from and build upon the outcome of those initiatives.

Table 1: Domains of inquiry, key evaluation questions and key provincial indicators for measuring impact QBPs

| Domains of Inquiry (objectives of QBP) | What do we want to know | Key Evaluation Questions | Key provincial indicators |
|---|--|---|---|
| <p>Improve effectiveness and reduce variation in clinical outcomes</p> | <p>What are the outcomes of care received by patients? Do results vary across providers? Can any variance be explained by population characteristics? Is care provided without causing harm?</p> | <ul style="list-style-type: none"> • Did the health service provider achieve predefined therapeutic goals and is there variation across providers? • Did the patients' subjective perceptions of their own physical and emotional state improve and is there variation across providers? • Did the prevalence of adverse events¹ decrease with the introduction of QBP and is there variation across providers? | <ol style="list-style-type: none"> 1. Proportion of QBP patients with improved outcomes 2. Proportion of QBP patients with reduced variation in outcome 3. Proportion of QBP patients who avoided adverse events and infections |
| <p>Improve appropriateness by reducing practice variations and variations in volumes</p> | <p>Is patient care being provided according to scientific knowledge and in a way that avoids overuse, underuse or misuse?</p> | <ul style="list-style-type: none"> • Is there variation in QBP utilization among providers? • Is there a shift in "admission" categories (inpatient surgeries, outpatient surgeries or first day surgeries)? • Is there a shift to less invasive procedures? • Did patients receive all the recommended care / is the care provided consistent with the best available evidence? • Did patients receive adequate information for each alternative treatment and were they involved in the decision about their treatment (shared-decision making)? | <ol style="list-style-type: none"> 4. Proportion of patients who received care aligned with standard QBP pathway 5. Proportion of QBP patients that saw a substitution from inpatient to outpatient/day surgery (where appropriate) 6. Proportion of QBP patients who received less invasive procedures (where appropriate) 7. Proportion of QBP patients that saw an increase in discharge dispositions into the community (where appropriate) 8. Proportion of QBP patients with reduced lengths of stay |

¹ An adverse event is when a patient experiences an unintended, undesirable change in health caused by healthcare services (*Health Quality Ontario, 2011*)

| Domains of Inquiry (objectives of QBP) | What do we want to know | Key Evaluation Questions | Key provincial indicators |
|--|--|---|--|
| Improve integration across the continuum of care | Are all parts of the health system organized, connected and working with one another to provide high quality care? | <ul style="list-style-type: none"> • Are patients and families engaged in the discharge process? • Do patients receive timely follow-up care? • Does effective communication occurs between the receiving and sending care providers along the continuum of care? | <p>9. Reduction in 30-day readmissions rate (if relevant)</p> <p>10. Improved access to appropriate primary and community care (e.g. psychosocial support) following discharge if deemed appropriate</p> |
| Improve efficiency by reducing unwarranted variation in resource utilization ^o | Does the system make best use of available resources to yield maximum benefit ensuring that the system is sustainable for the long term? | <ul style="list-style-type: none"> • Did the weighted cost for QBP decline? • Are activities included within the funding for the QBP moved out into the community and/or to what degree are costs being shifted to the patients • Has the cost forecasting for the QBP improved? | <p>11. Actual costs vs. QBP price</p> |
| Improve or maintain access to appropriate health services | Are those in need of care able to access services when needed? | <ul style="list-style-type: none"> • Does the patient receive timely care along the full clinical pathway outlined for the respective QBP? • Does the introduction of the QBP, impede patient access for health services that are not a QBP? • Is there equitable access regardless of who people are and where they live? • Has the number of hospitals performing this QBP decreased? | <p>12. Increase in wait times for QBPs / for specific populations for QBP</p> <p>13. Increase in wait times for other procedures compared to QBP change in QBP wait times.</p> <p>14. Increase in distance patients have to travel to receive the appropriate care related to the QBP</p> <p>15. Proportion of providers with a significant change in resource intensity weights (RIW)</p> |

^o Unwarranted variation refers to differences that cannot be explained by illness, medical need, or evidence-based medicine

| Domains of Inquiry (objectives of QBP) | What do we want to know | Key Evaluation Questions | Key provincial indicators |
|--|--|--|---|
| <p>Improve patient centeredness of health Services</p> <p>- Under development -</p> | <p>Is the patient / user at the center of the care delivery and is there respect for and involvement of patients' values, preferences and expressed needs in the care they receive</p> | <ul style="list-style-type: none"> • Are patients able to be active participants in their care plans and execution? • Do patients/family feel properly informed and enabled to make informed decisions about their treatment? • Do patients/family know what to do and whom to contact for questions post-discharge? • Do patients feel respected? | <p>16. Increased rate of patients being involved in treatment decision (TBD)</p> <p>17. Coordination of care (TBD)</p> <p>18. Involvement of family (TBD)</p> |

2.3 Recommendation of Indicators by QBP Clinical Expert Advisory Groups

The Clinical Expert Advisory Groups were convened to guide the development and implementation of evidence-based informed best practices of each QBP. They were also asked to recommend indicators to support the ministry in monitoring and evaluating the impact of the introduction of QBPs and provide hospitals, clinicians and LHINs with information to monitor, benchmark and steer the quality of care associated with each QBP.

The Clinical Expert Advisory Groups were requested to select QBP-specific indicators, recognizing that not all key provincial indicators are relevant for each QBP (such as hospital readmissions for the cataract QBP) and the interpretation of each key provincial indicator can differ according to the specific context of a QBP (for example, the case-level outcome of a hip fracture QBP patient differs from a stroke QBP patient). It is important to note that based on these considerations, it is difficult to select only a small number of indicators that would provide meaningful information to the ministry regarding the impact of QBP implementation as well as to clinicians and administrators regarding the quality of their QBP care.

National and international experiences show that in order to be meaningful for clinicians and administrators and to improve quality on the front lines, it is important to tie indicators to clinical guidelines. It is also imperative that measurement is clinically relevant to front line providers as well as indicative of system level performance.^{iii iv v} As a result, it was decided that the Clinical Expert Advisory Groups that developed the best practices for each respective QBP were best positioned to recommend associated indicators.

Specifically, the ministry sought input and advice from the Clinical Expert Advisory Groups regarding:

1. **Identifying indicators that are meaningful and measurable** (i.e. provincial data is currently available to measure indicators; there are no unreasonable obstacles or constraints on accessing the information; and the information can be used without restrictions); and
2. **Suggestions for indicators that are important but cannot currently be measured** due to the absence of data or constraints on accessing required information.

Measures in the latter category are intended to guide future discussions with ministry partners and stakeholders on how identified data gaps can be addressed.

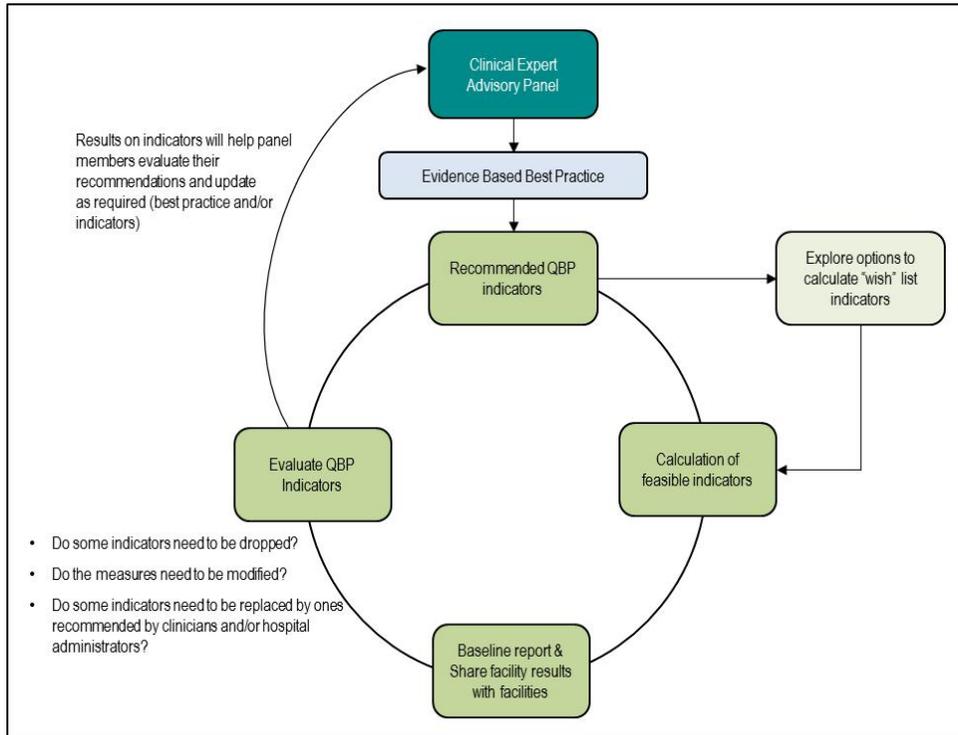
2.3.1 Next steps in indicator development

The development of QBP measures is a cyclical and iterative process (see *figure 4*). The QBP indicators were recommended by the respective Clinical Expert Advisory Groups using the key evaluation questions discussed previously coupled with subject-matter expertise and clinical experience. In selecting the indicators they used a set of guiding criteria to ensure that indicators were ‘important’, ‘grounded in evidence’, ‘feasible’ and ‘aligned’, meaning that where appropriate, measures should be selected from existing measure sets that are calculated using the same or similar technical specifications.

Provincial, LHIN and facility-level results will be shared via QBP-specific baseline reports. Once released, the ministry, in collaboration with relevant subject-matter experts, clinicians, hospital administrators, LHINs and patients, will evaluate which indicators were deemed most crucial for monitoring and supporting quality improvement at the provider level.

In addition, as hospitals and clinicians implement the QBPs and gain more experience, alternative key indicators may be identified that are appropriate for calculating and reporting in a standardized manner across the province for benchmarking purposes. This iterative process will allow the revision and/or replacement of recommended indicators by measures that are more strongly endorsed by hospitals and/or clinicians as meaningful for action. The process will also lead to the identification of a core set of indicators that is relevant to the various stakeholders involved while simultaneously minimizing the burden of additional data collection on providers.

Figure 4: Iterative process for developing QBP indicators that are not only “interesting” for monitoring purposes but “relevant” to frontline providers to evaluate the impact of QBPs and improve the quality of QBP care



3. Sharing QBP Indicator Results

SUMMARY:

- A baseline indicator report will be prepared for each QBP and posted on the ministry website. These reports will feature LHIN and provincial-level results along with contextual information and technical details outlining how indicators were calculated.
- Facility-level results will be shared with hospitals and LHINs to support benchmarking and ongoing quality improvement.
- The timing and frequency of reporting moving forward is yet to be established.
- The ministry will work with its partners to develop various avenues for sharing the information in the baseline reports (e.g. webcasts, conferences etc.). Learning opportunities outlining the interpretation and implications of indicator results and how the information can be used to drive quality improvement will also be provided.
- In future, it is envisioned that QBP indicator results will be publicly reported in order to increase transparency regarding the quality of care provided to Ontarians.

3.1 Baseline reports

For each QBP, it is envisioned that the recommended and feasible indicators will be regularly calculated and reported on starting with what are being termed 'baseline reports'. Baseline reports contain results for the most recent year/s of available data for each QBP specific indicator. As such they will provide a starting point for future ongoing measurement and evaluation initiatives.

The baseline reports will supplement the Clinical Handbooks. The reports will provide results aggregated to the LHIN and provincial-levels. More specifically, the baseline reports will provide information to administrators, hospital boards, clinicians, the Ontario public, LHINs and the ministry on:

- Trends and current performance
- Contextualization; and
- Methodological considerations

The baseline reports will be accompanied by facility-level information that will be shared with hospitals and LHINS to enable sharing of best practices and target setting at the provider level.

The reports will feature indicators recommended by the Clinical Expert Advisory Groups for which provincial data was available. They will also include indicators that were not selected by the experts but deemed important for the ministry as they relate to other ministry priorities and/or are viewed by the ministry as concurrently important for evaluating the intended and unintended impact of QBP implementation. The baseline reports will clearly delineate between indicators that were recommended by the respective Clinical Expert Advisory Groups and which were identified by the ministry.

3.2 Frequency of reporting and format of sharing indicator results with hospitals

At this point in time, no decision has been made regarding the frequency of indicator calculation and reporting. This process will involve various discussions with hospitals, data custodians, analytic teams and other stakeholders and will depend on a number of considerations including the burden of data collection, capacity within the system to calculate, analyze and report, clarification and agreement on which indicators need to be calculated centrally and the informational value of calculating the indicators frequently i.e. the time-lag between implementation of a given quality improvement initiative and seeing a resulting change in performance on the respective indicator/s.

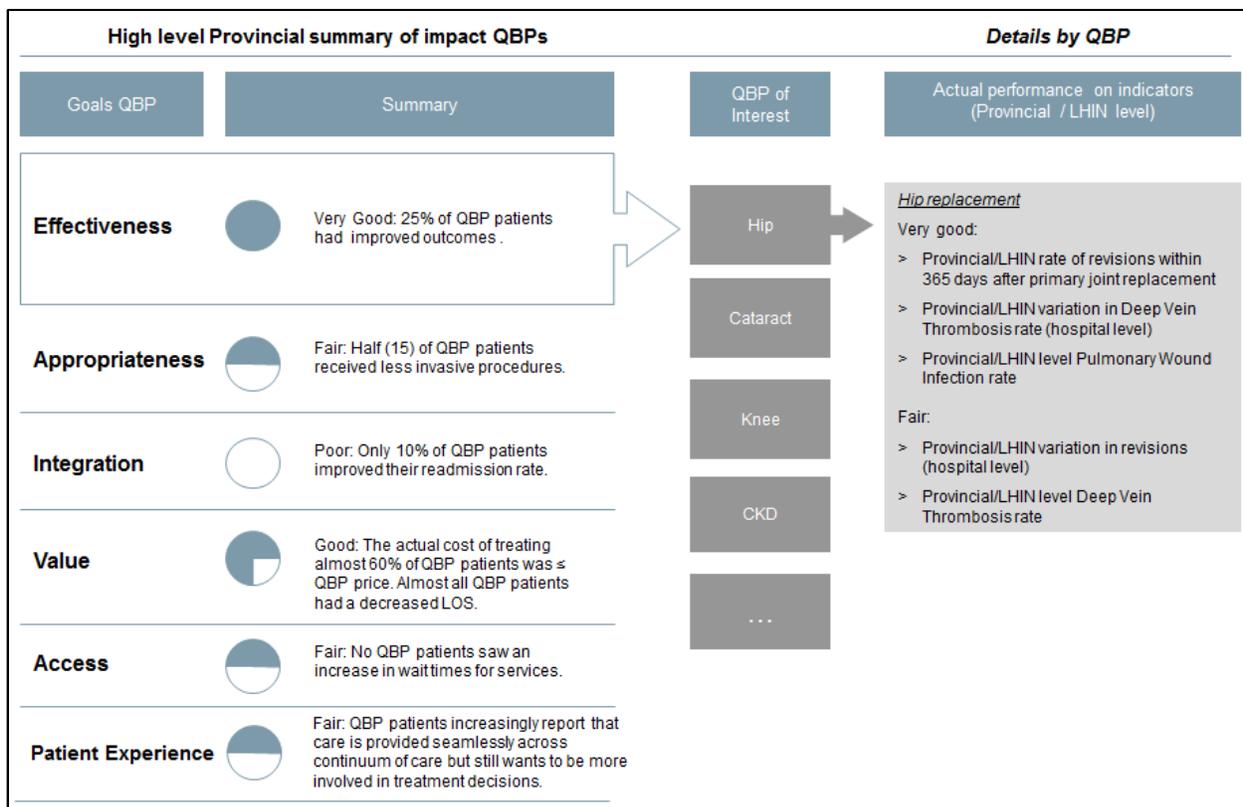
In rolling out the indicators, the ministry, in collaboration with partners such as the Ontario Hospital Association (OHA) and others will organize QBP indicator specific webcasts in advance of the release of each respective baseline report. Timing of the release of the reports will be dependent on a number of factors including the dates when experts recommend the indicators and the associated turnaround time for calculating, analysing and validating findings. The ministry will regularly and continually inform hospitals when a QBP baseline report becomes available and provide the date of the respective associated webcasts.

3.3 Public reporting

For the purpose of accountability and to stimulate QBP quality improvement initiatives, the ministry envisions that QBP quality information will eventually be made public. However, initially only the baseline reports will be posted on the ministry’s website as appendices to the Clinical Handbooks for each respective QBP.

Over time, the ministry will explore the possibility of providing information regarding the quality of care associated with each QBP in a more user-friendly format that can be accessed by the public. An example of how public reporting for QBP quality indicators might be modeled is similar to Cancer Care Ontario’s (CCO’s) Cancer System Quality Index^v (see *figure 5* below). No decisions have been made with regard to the level of results that will be made public (for example the provincial, LHIN, and or facility-levels). The public reporting system will be developed in collaboration with Clinical Expert Advisory Group hospitals, clinicians, LHINs and patient representatives and ministry key partners such as HQO.

Figure 5: Example of possible future provincial level (public) dashboard for QBP indicator results



4. Use of QBP Indicators

SUMMARY:

- The QBP quality indicators will have different levels of relevance for the various stakeholders impacted by QBP implementation.
- For clinicians and administrators, it is important to identify which QBP indicators are most relevant for their decision-making. It is important to note that system-level indicators may provide contextual information that may assist in interpreting relative performance.
- The QBP indicators are meant to start conversations within and between organizations regarding the meaning and implications of results and how the quality of care provided to patients can be improved.

4.1 What should hospitals do with the indicator results that are received?

QBP-specific indicators were recommended by the Clinical Expert Advisory Groups to monitor the implementation of the recommended best practices and the resulting outcomes of care. As such, the measures provide hospitals and clinicians with a standardized set of measures to assess the quality of their respective QBP care over time and in relation to their peers. However, it is important to recognize that some of the recommended important quality indicators cannot be calculated at the current time due to the absence of province-wide data. This has the following implications for the use of QBP indicators:

- Understanding the local context is important for understanding and utilizing the QBP indicators – Asking questions such as “How is my organization performing on this indicator?”, “How have results trended over time?”, “How are we performing on the other indicators for this QBP?”, “How do I compare to my peers?”, “What can explain the variance?” etc. are crucial in order to understand the implications of given results.
- Hospitals have access to important information not available to the ministry. In some cases organizations have the ability to calculate the expert-recommended indicators for which no provincial data is available but for which information is collected using internal systems. In addition, hospitals can review results of the

indicators provided in the baseline reports in conjunction with supplementary demographic, clinical and financial information to assess the quality of care provided for each QBP.

- Hospitals can develop their own additional indicators as required. Individual organizations are at liberty to utilize indicators that they have developed and proven to be helpful for the hospital to guide decision-making and quality improvement.

It is important to regard the QBP indicators as a “menu” list that can assist decision-makers in identifying areas for quality improvement. Not all indicators will have the same level of relevance or require action from all stakeholders impacted by QBP implementation. Some steps that a hospital might take when they receive the data might be:

1) Confirming relevance

- a. Is the QBP indicator relevant to the organization i.e. is the organization providing care to this particular QBP population?

2) Assessing comparative performance

- a. How has the organization performed on the indicators?
- b. Are there any indicators where the organization’s performance was significantly different from its peers e.g. hospital ‘A’ seems to do fine on the indicator “in-hospital-all cause mortality” among elective repair of lower extremity occlusive disease QBP but not on the “risk-adjusted all cause all-cause mortality rate” indicator for the stroke QBP (see figure 6)

3) Contextualization

- a. What are the factors underlying the organization’s performance? (e.g. is this something the organization can act upon?)

4) Prioritization

Are any of the QBPs and/or individual indicators more important than others? For example:

- a. Are there QBPs and/or individual indicators with identified opportunities and high potential for improved care delivery? For example:
 - Do they represent a large percentage of the organization’s costs and/or volumes?

- Do they represent severe impact on the health status of patients e.g. C.Difficile?
- Are they reflective of high costs if performance is poor (e.g. costs incurred through missing X-rays, rework, delays, lost materials, increased hospital acquired infections)?
- Are they a strategic priority for a hospital and/or LHIN?

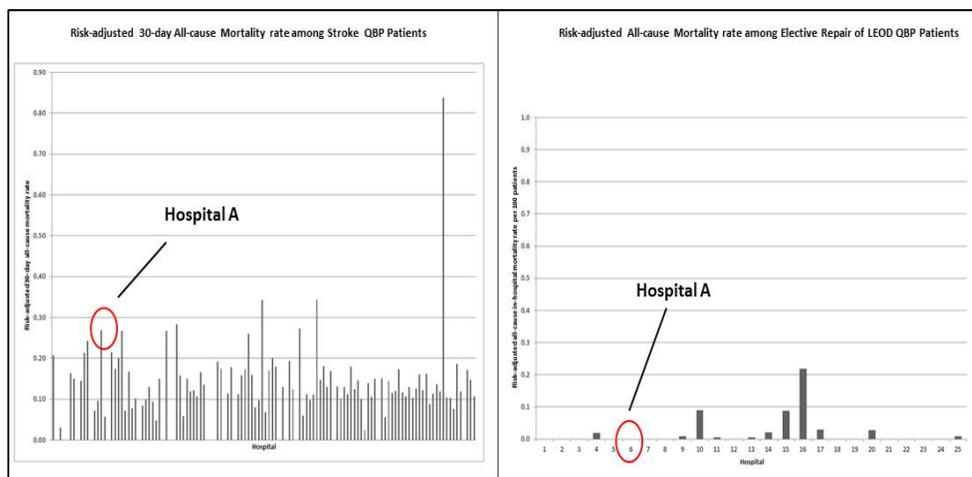
5) Driving improvement

- How can organizational performance be improved?

4.2 What should LHINs do with the indicator results that are received?

It is important that QBP indicators are not seen as important only from a performance management perspective. Rather, understanding performance on many of the indicators requires contextualization of the local health system characteristics. For example, in stroke care, ALC rates may be high due to low access to rehabilitation services in a given community. Similarly, mortality rates may be high due to low access to acute inpatient stroke units and regional tPA rates may be low due to limited geographic access to centres that provide the therapy. QBP indicators provide an opportunity to further encourage collaboration amongst health service providers and LHINs to interpret the results given the health system context and to work together to drive change at both provider and local health system level to improve care for patients.

Figure 6: Example of indicators a hospital performs differently that might help identifying priorities



5. Relation between QBP Indicators and other Reporting and Evaluation Initiatives

SUMMARY:

- The QBP indicators are building on and can inform other initiatives such as Quality Improvement Plans (QIPs) and Health Quality Ontario's Common Quality Agenda. They can also be incorporated into accountability tools such as Hospital Services Accountability Agreements and Ministry LHIN Performance Agreements.
- To ensure alignment between QBP indicators and QIPs within an organization it is important that staff and clinicians who implement QBPs work closely with the staff that develop and implement QIPs within the same organizations.

5.1. Ontario's reporting landscape

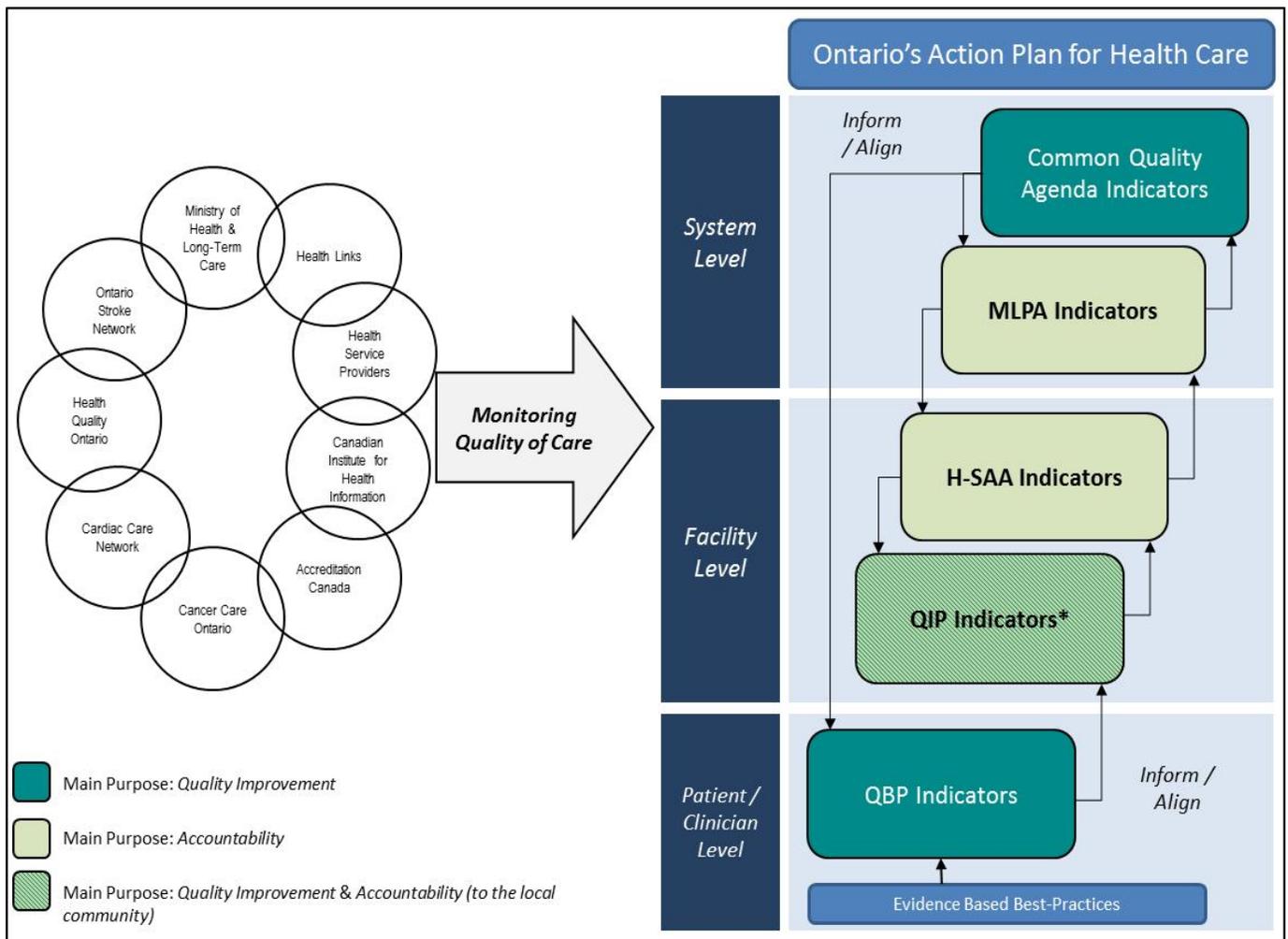
Hospital administrators, clinicians and LHINs are confronted with various reporting requirements and indicator reports. Examples include, but are not limited to, the Quality Improvement Plans (QIPs), accountability agreements such as the Hospital Service Accountability Agreements (H-SAA's), HQO's Common Quality Agenda (CQA), Cancer Care Ontario's System Quality Index, Canadian Institute for Health Information's (CIHI's) Canadian Hospital Reporting Project (CHRP), as well as Accreditation Canada (AC), Cardiac Care Network (CCN) and Ontario Stroke Network (OSN) program and audits.

The various reporting requirements and indicator reports serve different purposes, have different audiences and vary in terms of what is being measured. However, none of the reporting requirements and indicators (reports) are mutually exclusive. For example, QIPs can have a combination of both hospital indicators (e.g. C-difficile infections) that reflect system level priorities and a few QBP specific indicators where a given institution would like to focus its improvement efforts. Similarly, QIPs might include H-

SAA indicators based on current areas of interest and it may be quite likely that QBP indicators are included in future versions of the H-SAA's as corporate priorities develop.

Figure 6 illustrates how some of those (ministry) reporting requirements relate to each other. First, it makes a distinction between ‘**accountability**’ indicators and ‘**quality improvement**’ indicators. To clarify, accountability measures are classified as those that carry mandatory reporting requirements while quality improvement indicators are for discretionary use by hospitals based on current or future internal initiatives or requirements. It is important to note that some measures may have dual purposes. For example, hospital QIPs are meant as a way for hospitals to focus its efforts on key quality improvement opportunities while at the same time facilitating dialogues with the public regarding the quality of care provided by a hospital.

Figure 7: Summary of selected reporting requirements of Ontario hospitals



* **NOTE:** although the graph might not express this, QIP's are not only a tool to drive facility level change; they are also a tool to drive system level change.

Figure 6 also shows that **the various indicators are relevant to different audiences at different levels of Ontario’s healthcare system** (e.g. system level, facility level and patient-clinician level). A variety of measures are required to enable relevant decision-making at each of these various levels. For example, the ministry is interested in a few high-level outcome measures to assess the impact of QBP implementation at the system level. On the other hand, clinicians would likely require information on the specific outcomes of care that they provide coupled with performance on related process measures to identify relevant opportunities for improving their QBP care. The QBP indicators provide this level of detail while simultaneously summarizing cross-provincial standardized benchmark information.

The QBP system-level indicators are also largely aligned with the measures proposed under HQO’s Common Quality Agenda (CQA; see *table 4 below*). According to HQO, CQA indicators are not intended to be a reflection of the full scope of performance measurement for an individual sector or the overall health care system, but instead identify priority areas and aspirational targets.^v Table 2 summarizes the overlap between CQA and QBP quality indicators.

Table 2: Summary of overlap between QBP system-level quality indicators and HQO’s Common Quality Agenda measures

| System-level QBP Indicators | Included in HQO’s Common Quality Agenda System Integration indicators? |
|---|--|
| ALC days as a proportion of total length of stay | ✓ |
| 30-day all-cause readmissions | ✓ |
| Proportion of patients who had a follow up visit (primary care) within 7 days | ✓ |
| Patient experience | ✓ |

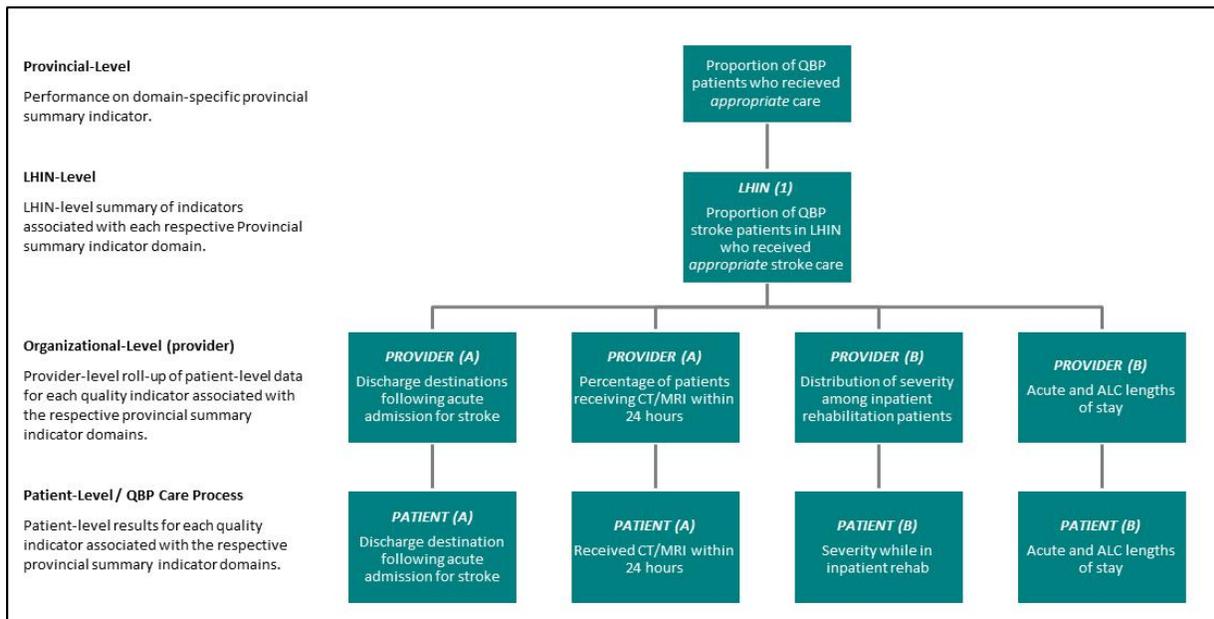
In summary, the various reporting requirements and indicator reports provide hospital, LHINs, patients and the ministry with a good understanding of the quality of the care provided in Ontario. It will be up to the hospitals in collaboration with the LHINs and ministry to identify the measures on which they would like to focus their quality improvement efforts and those that are appropriate for inclusion in accountability agreements.

5.2 Cascading

As previously outlined, the patient/clinician level QBP indicators are directly related to the small number of system-level outcome measures that the ministry is interested in monitoring to assess the implementation and impact of the QBPs. A number of these measures are also captured by HQO's CQA. The outcomes on the patient/clinical level QBP indicators can reasonably be expected to impact results on system-level indicators over time.

Figure 8 shows an example of a cascading indicator for the stroke QBP to illustrate the hierarchy of information given by QBP measures. The approach fulfills the need for the ministry to have a set of broader health system measures for evaluation purposes with a concurrent requirement for clinically relevant measures to enable quality assurance and improvement. The degree to which a direct roll up is possible will depend on the similarity of the indicators across the various levels of the health system. For example, the roll-up of readmission rates or measures related to patient experience from the patient to the system level is more straightforward than for indicators that reflect outcomes or appropriateness of care. In order to address this, the ministry and its partners will have to carefully analyze how the roll-up can or should be performed in order to generate meaningful information on the implementation impact of QBPs.

Figure 8: Example of a cascading indicator for the stroke QBP

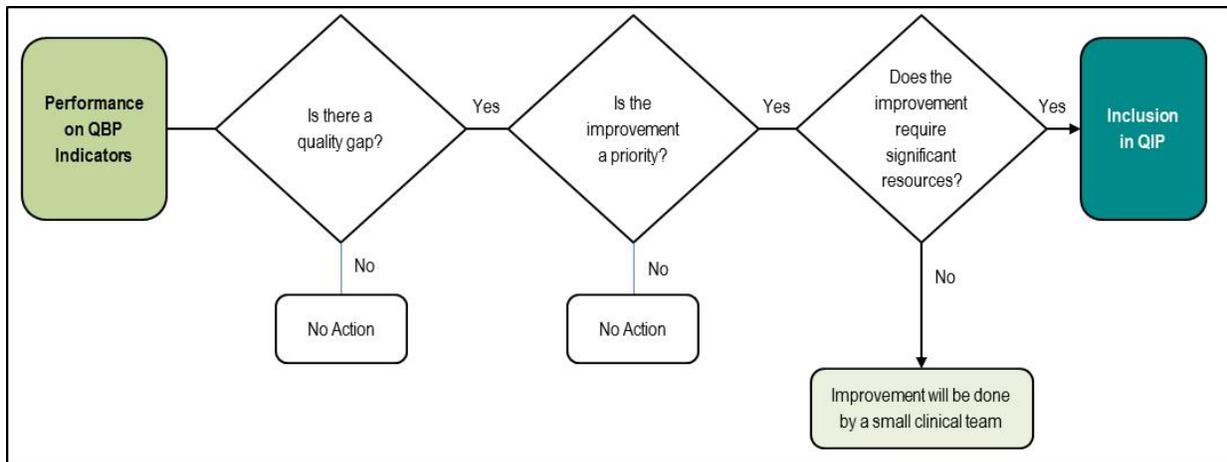


5.2.1 QBP indicators and QIP indicators

QBP and QIPs indicators are mutually reinforcing. One way to understand the relationship between QBP and QIP indicators is that QBP indicators can be integrated into QIPs.

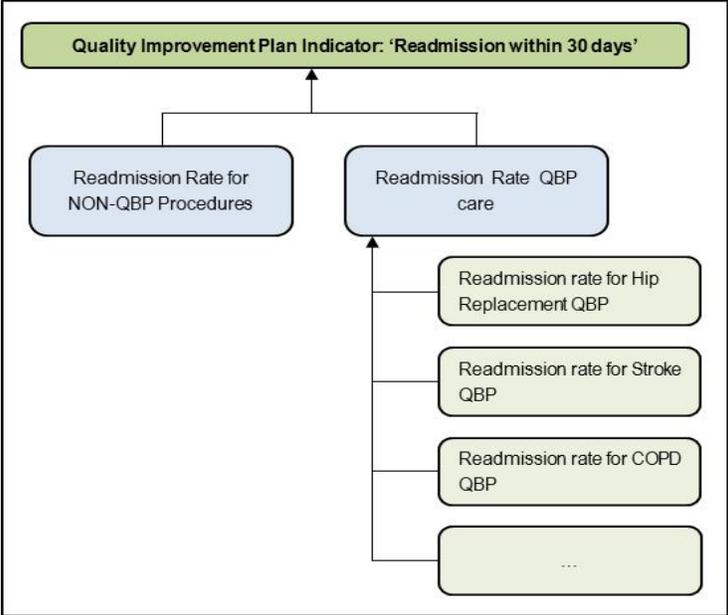
A key goal of the QIPs is to help organizations focus their efforts on key quality improvement opportunities. Based on initial experience of some hospitals in introducing QBPs and finding opportunities to improve, it is likely that not all QBP-related quality improvements require organization-wide attention. However, for those that do, significant resources are required and major changes might become organization-wide priorities. Hence relevant indicators might be included in the QIP. Figure 9 illustrates a simplified decision analysis of how an organization may elect to include QBP indicators in their QIP.

Figure 9: Potential decision tree for deciding which QBP indicators could be included in a QIP



Alternatively, QBP indicators might explain some of the outcome on QIP indicators and as such might help prioritization (see figure 10). For example, if a hospital has readmission rates in its QIP, it might also want to look at the QBP specific readmission rates. If one particular QBP readmission is relatively high it might provide directionality for a hospital’s improvement efforts.

Figure 10: QBP indicators as explanatory indicators for QIP indicators



Overall, considerations of QBP indicators and performance is one of several factors that should guide the development of an organization’s QIP.

6. Conclusion

The QBP integrated scorecard will help clinicians and administrators monitor the quality of care associated with each QBP and identify associated opportunities for improvement. As such, QBP indicators should not be viewed as additional reporting requirements or replacements for other tools such as the QIP. The QBP indicators, rather, are an additional source of information clinicians and hospitals can use in their efforts to improve the QBP quality of care and, in some instances, improve even broader organization-wide performance on indicators related to outcomes of care. The measures are powerful tools that provide province-wide standardized benchmark information to clinicians and administrators based on respective QBP best practices.

The integrated QBP scorecard approach is still in its infancy. Over time, and with the experience and involvement of clinicians, administrators, experts and patients and improved reporting and data, the QBP indicator approach will lead to a small core set of indicators that are of critical relevance for various users at different levels of Ontario's healthcare system. However, it is important to recognize that measurement alone is not enough to improve quality. Clinicians and administrators also need to have the knowledge and skills to plan and deliver sustainable health care improvements, share best practices and create opportunities to work with and learn from one another. One step in helping to build the knowledge opportunities critical for quality improvement was the creation of a provincial applied learning strategy called 'Improving & Driving Excellence Across Sectors' (IDEAS)^{vi} that was designed for health care managers, physicians and other front-line health professions. As Ontario's healthcare system's quality improvement journey continues and new priorities are identified it is likely that additional initiatives to support clinicians and administrators will emerge through collaboration between relevant stakeholders.

Thus, QBP Integrated Scorecard is a step in our province's journey towards excellence in quality.

7. Further Information

- Helpline
 - Email: HSF@ontario.ca
 - Phone: 416-327-8379
- The Ministry of Health's public website: www.health.gov.on.ca
- Access to the "Health Care Professionals" page
 - Excellent Care For All (www.health.gov.on.ca/en/ms/ecfa/pro/)
 - HSFR (<http://www.health.gov.on.ca/en/ms/ecfa/pro/initiatives/funding.aspx>)
- Password protected website for providers: www.hsimi.on.ca
 - Repository of HSFR resources, including HBAM education materials

Or visit:

Excellent Care for All Act

<http://www.health.gov.on.ca/en/ms/ecfa/pro/about/>

Health System Funding Reform

<http://www.health.gov.on.ca/en/ms/ecfa/pro/initiatives/funding.aspx>

Health Quality Ontario

www.hqontario.ca

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- v Royal College of Physicians (2013) National Hip Fracture Database - National report 2013. London <http://www.nhfd.co.uk/20/hipfractureR.nsf/>
- vi Health Quality Ontario (2013) Partnering for a Common Quality Agenda <http://www.hqontario.ca/Portals/0/Documents/home/hqt2013-common-quality-agenda-en.pdf> (accessed on Jan 20, 2013)
- vii Improving and Driving Excellence across Sectors (IDEAS): About IDEAS. Accessed on Feb 28 2014 from: <http://www.ideasontario.ca/about-ideas/>

