Quality Standards

Glaucoma

Care for Adults

Measurement Guide

March 2019

Health Quality Ontario

Let's make our health system healthier

Ontario

Health Quality Ontario

Contents

1 How to Use the Measurement Guide

This document is meant to serve as a measurement guide to support the adoption of the Glaucoma quality standard. Care for people with Glaucoma is a critical issue, and there are significant gaps and variations in the quality of care that people with Glaucoma receive in Ontario. Recognizing this, Health Quality Ontario released this quality standard to identify opportunities that have a high potential for quality improvement.

This guide is intended for use by those looking to adopt the Glaucoma quality standard, including health care professionals working in regional or local roles.

This guide has dedicated sections for each of the two types of measurement within the quality standard:

- **Local measurement:** what you can do to assess the quality of care that you provide locally
- **Provincial measurement:** how we can measure the success of the quality standard on a provincial level using existing provincial data sources

Important Resources for Quality Standard Adoption

Health Quality Ontario has created resources to assist with the adoption of quality standards:

- A *Getting Started Guide* that outlines a process for using quality standards as a resource to deliver high-quality care. It includes links to templates, tools, and stories and advice from health care professionals, patients, and caregivers. You can use this guide to learn about evidence-based approaches to implementing changes to practice
- A *Quality Improvement Guide* to give health care teams and organizations in Ontario easy access to well-established quality improvement tools. The guide provides examples of how to adapt and apply these tools to our Ontario health care environments
- An online community called Quorum that is dedicated to working together to improve the quality of health care across Ontario. Quorum can support your quality improvement efforts

2 Quality Indicators in Quality Standards

Quality standards inform providers and patients about what high-quality health care looks like for aspects of care that have been deemed a priority for quality improvement in the province. They are intended to guide quality improvement, monitoring, and evaluation.

Measurability is a key principle in developing and describing the quality statements; each statement is accompanied by one or more indicators. This section describes the measurement principles behind the quality indicators, the process for developing these indicators, and the technical definitions of the indicators.

An effective quality statement must be measurable. Measurement is necessary to demonstrate if a quality statement has been properly implemented, and if it is improving care for patients. This is a key part of the Plan-Do-Study-Act improvement cycle. If measurement shows there has been no improvement, you need to consider a change or try something different.

2.1 Measurement Principles

Health Quality Ontario uses the process, structure, and outcome indicator framework developed by Donabedian in 1966 to develop indicators for quality standards. The three indicator types play essential and interrelated roles in measuring the quality of health care and the impact of introducing and using quality standards.

The indicators provided are merely suggestions. It is not expected that every provider, team, or organization will be able measure all of them (or even want to measure all of them), but they can identify which indicators best capture areas of improvement for their care and what can be measured given existing local data sources.

2.2 Process Indicators

Process indicators assess the activities involved in providing care. They measure the percentage of individuals, episodes, or encounters for which an activity (process) is performed. In most cases, the numerator should specify a timeframe in which the action is to be performed, established through evidence or expert consensus. When a quality statement applies to a subset of individuals rather than the total population, the denominator should reflect the population of the appropriate subgroup, rather than the entire Ontario population. If exclusions are required or stratifications are suggested, they are reflected in the indicator specifications.

Process indicators are central to assessing whether or not the quality statement has been achieved; nearly all quality statements are associated with one or more process indicators. In most cases, the numerator and denominator for process indicators can be derived from the language of the quality statement itself; additional parameters (such as a timeframe) can also appear in the definitions section. In some cases, a proxy indicator is provided that indirectly measures the process. Proxy indicators are used only when the actual indicator cannot be measured with currently available data.

While most quality statements focus on a single concept and are linked with a single process indicator, some statements include two or more closely related concepts. In these cases, multiple process indicators can be considered to capture all aspects of the quality statement. For example, a quality statement might suggest the need for a comprehensive assessment with several components, and each of those components might have a process indicator.

Examples of process indicators include the percentage of patients with hip fracture who receive surgery within 48 hours, or the percentage of patients with chronic obstructive pulmonary disease who are offered clozapine after first- and second-line antipsychotics have been ineffective. Please refer to the published quality standards for more examples.

2.3 Structural Indicators

Structural indicators assess the structures and resources that influence and enable delivery of care. These can include equipment; systems of care; availability of resources; and teams, programs, policies, protocols, licences, or certifications. Structural indicators assess whether factors that are in place are known to help in achieving the quality statement.

Some quality statements have structural indicators associated with them. Structural indicators are binary or categorical and do not require the definition of a numerator and denominator. However, in some cases it could be useful to specify a denominator defining an organizational unit, such as a hospital, a primary care practice, or a local region. In many cases data to measure structural indicators are not readily available using existing administrative data, so local data collection might be required. This local data collection might require regional or provincial level data collection systems to be developed.

Structural indicators should be defined for a quality statement or for the quality standard as a whole when there is strong evidence that a particular resource, capacity, or characteristic is important for enabling the effective delivery of a process of care. It should be theoretically feasible for these structural elements to be implemented across Ontario, even if adoption is aspirational in some cases. In rare instances, a quality statement might have two or more associated structural indicators, if the quality standard advisory committee decides that multiple factors are crucial to the delivery of the quality statement.

Examples of structural indicators include the availability of a stroke unit, the existence of discharge planning protocols, or access to a specialized behavioural support team. Please refer to the published quality standards for more examples.

2.4 Outcome Indicators

Outcome indicators assess the end results of the care provided. They are crucial and are arguably the most meaningful measures to collect, but many health outcomes—such as mortality or unplanned hospital readmissions—are often the product of a variety of related factors and cannot be reliably attributed to a single process of care. For this reason, although relatively few quality statements are directly linked to an outcome indicator, a set of overall measures—including key outcome indicators—is defined for the quality standard as a whole, reflecting the combined effect of all of the quality statements in the standard. Similar to process indicators, outcome indicators should be specified using a defined denominator and a numerator that, in most cases, should include a clear timeframe.

Examples of outcome indicators include mortality rates, improvement (or decline) in function, and patients' experience of care. Please refer to the published quality standards for more examples.

2.5 Balancing Measures

Balancing measures indicate if there are important unintended adverse consequences in other parts of the system. Examples include staff satisfaction and workload. Although they are not the focus of the standard, the intention of these measures is to monitor the unintended consequences.

3 Local Measurement

As part of the Glaucoma quality standard, *specific* indicators were identified for each of the statements to support measurement for quality improvement.

As an early step in your project, we suggest that your team complete an *initial assessment* of the relevant indicators in the standard and come up with a draft measurement plan.

Here are some concrete next steps:

1. Review the list of identified indicators (in the quality standard), and determine which ones you will use as part of your adoption planning, given your knowledge of current gaps in care
2. Determine the availability of data related to the indicators you have chosen
3. Identify a way to collect local data related to your chosen indicators
4. Develop a draft measurement plan

The earlier you complete the above steps, the more successful your quality improvement project is likely to be.

3.1 Local Data Collection

Local data collection refers to data collection at the health provider or team level for indicators that cannot be assessed using provincial administrative or survey databases (such as databases held by the Institute for Clinical Evaluative Sciences or the Canadian Institute for Health Information). Examples of local data include data from electronic medical records, clinical patient records, regional data collection systems, and locally administered patient surveys. Indicators that require local data collection can signal an opportunity for local measurement, data advocacy, or data quality improvement.

Local data collection has many strengths: it is timely, can be tailored to quality improvement initiatives, and is modifiable on the basis of currently available data. However, caution is required when comparing indicators using local data collection between providers and over time to ensure consistency in definitions, consistency in calculation, and validity across patient groups.

3.2 Measurement Principles for Local Data Collection

Three types of data can be used to construct measures in quality improvement: continuous, classification, and count data. For all three types of data, it is important to consider clinical relevance when analyzing results (i.e. not every change is a clinically relevant change).

3.2.1 Continuous Data

Continuous data can take any numerical value in a range of possible values. These values can refer to a dimension, a physical attribute, or a calculated number. Examples include patient weight, number of calendar days, and temperature.

3.2.2 Classification Data

Classification (or categorical) data are recorded in two or more categories or classes. Examples include sex, race or ethnicity, and number of patients with depression versus number of patients without depression. In some cases, you might choose to convert continuous data into

categories. For example, you could classify patient weight as underweight, normal weight, overweight, or obese.

Classification data are often presented as percentages. To calculate a percentage from classification data, you need a numerator and a denominator (a percentage is calculated by dividing the numerator by the denominator and multiplying by 100). The numerator includes the number of observations meeting the criteria (e.g., number of patients with depression), and the denominator includes the total number of observations measured (e.g., total number of patients in clinic). Note that the observations in the numerator must also be included in the denominator (source population).

Examples of measures that use classification data include percentage of patients with a family physician and percentage of patients who receive therapy.

3.2.3 Count Data

Count data often focus on attributes that are unusual or undesirable. Examples include number of falls in a long-term care home and number of medication errors.

Count data are often presented as a rate, such as the number of events per 100 patient-days or per 1,000 doses. The numerator of a rate counts the number of events/nonconformities, and the denominator counts the number of opportunities for an event. It is possible for the event to occur more than once per opportunity (e.g., a long-term care resident could fall more than once).

$$Rate\ of\ 30\text{-}day\ hospital\ readmission =$$

$$\frac{Number\ of\ hospital\ readmissions\ within\ 30\ days\ of\ discharge\ [\mathbf{numerator}]}{Number\ of\ discharges\ from\ hospital\ [\mathbf{denominator}]}$$

3.2.4 Benefits of Continuous Data

It is common practice in health care to measure toward a target instead of reporting continuous measures in their original form. An example would be measuring the number of patients who saw their primary care physician within 7 days of hospital discharge instead of measuring the number of days between hospital discharge and an appointment with a primary care physician. Targets should be evidence-based or based on a high degree of consensus across clinicians.

When a choice exists, continuous data sometimes are more useful than count or classification data for learning about the impact of changes tested. Measures based on continuous data are more responsive and can capture smaller changes than measures based on count data; therefore, it is easier and faster to see improvement with measures based on continuous data. This is especially true when the average value for the continuous measure is far from the target. Continuous data are also more sensitive to change. For example, while you might not increase the number of people who are seen within 7 days, you might reduce how long people wait.

3.3 Benchmarks and Targets

Benchmarks are markers of excellence to which organizations can aspire. Benchmarks should be evidence-based or based on a high degree of consensus across clinicians. At this time, Health Quality Ontario does not develop benchmarks for the indicators. Users of these standards have variable practices, resources, and patient populations, so one benchmark might not be practical for the entire province.

Targets are goals for care that are often developed in the context of the local care environment. Providers, teams, and organizations are encouraged to develop their own targets appropriate to their patient populations, their current performance and their quality improvement work. Organizations that include a quality standard indicator in their quality improvement plans are asked to use a target that reflects improvement. Timeframe targets, like the number of people seen within 7 days, are typically provided with process indicators intended to guide quality improvement.

In many cases, achieving 100% on an indicator is not possible. For example, someone might not receive care in a wait time benchmark due to patient unavailability. This is why it is important to track these indicators over time, to compare results against those of colleagues, to track progress, and to aim for the successful implementation of the standard.

For guidance on setting benchmarks and targets at a local level, refer to:

- Approaches to Setting Targets for Quality Improvement Plans
- Long-Term Care Benchmarking Resource Guide

4 Provincial Measurement

In its quality standards, Health Quality Ontario strives to incorporate measurement that is standardized, reliable, and comparable across providers to assess the impact of the standards provincially. Where possible, indicators should be measurable using province-wide data sources. However, in many instances data are unavailable for indicator measurement. In these cases, the source is described as local data collection.

For more information on the data sources referenced in this standard, please see the **appendix.**

4.1 Accessing Provincially Measurable Data

Provincial platforms are available to users to create custom analyses to help you calculate results for identified measures of success. Examples of these platforms include IntelliHealth and eReports. Please refer to the links below to determine if you have access to the platforms listed.

4.1.1 IntelliHealth—Ministry of Health and Long-Term Care

IntelliHealth is a knowledge repository that contains clinical and administrative data collected from various sectors of the Ontario healthcare system. IntelliHealth enables users to create queries and run reports through easy web-based access to high quality, well organized, integrated data.

4.1.2 eReports—Canadian Institute for Health Information

Quick Reports offer at-a-glance comparisons for the organizations you choose. The tool also provides some ways to manipulate the pre-formatted look and feel of the reports. Flexible or Organization Reports offer you many choices to compare your organization's data with those of other organizations. With these customizable reports, you can view data by different attributes and for multiple organizations.

4.1.3 Applied Health Research Questions (AHRQ) — Institute for Clinical Evaluative Sciences

ICES receives funds from the Ministry of Health and Long-Term Care to provide research evidence to organizations from across the Ontario health care system (Knowledge Users). This knowledge is used to inform planning, policy and program development. Knowledge Users can submit an Applied Health Research Question (AHRQ) to ICES. As a health services research institute that holds Ontario's administrative data, ICES is well positioned to respond to AHRQs that directly involve the use of ICES data holdings.

5 How Success Can Be Measured for This Quality Standard

This measurement guide accompanies Health Quality Ontario's Glaucoma quality standard. Early in the development of each quality standard, a few performance indicators are chosen by the Quality Standards Advisory Committee to measure the success of the entire standard. These indicators guide the development of the quality standard so that every statement within the standard aids in achieving the standard's overall goals.

This measurement guide includes information on the definitions and technical details of the indicators listed below which were selected as the overall measures of success for this standard:

- Percentage of people diagnosed with glaucoma who receive at least one comprehensive eye examination annually
- Wait time between referral to specialist consultation for incisional glaucoma surgery
- Wait time between decision to treat and incisional glaucoma surgery
- Percentage of people treated for glaucoma who report high satisfaction with the eye care they receive
- Percentage of people with glaucoma who are legally blind due to visual field loss

Indicators are categorized as:

- Provincially measurable (the indicator is well defined and validated) *or*
- Locally measurable (the indicator is not well defined, and data sources do not currently exist to measure it consistently across providers and at the system level)

For more information on statement-specific indicators, please refer to the quality standard.

5.1 Quality Standard Scope

This quality standard focuses on care for adults 18 years of age and older with glaucoma or who are at risk for glaucoma. It addresses primary open-angle glaucoma and focuses on the assessment, diagnosis, and management of this condition. It applies to all care settings.

This quality standard does not address care for people with acute angle-closure glaucoma (a medical emergency that requires immediate treatment to prevent vision loss).

While the quality standard addresses care for adults with or at risk for primary open-angle glaucoma, some guidance in this quality standard may be relevant and applicable to people younger than 18 years of age or who have other forms of glaucoma, such as chronic angle-closure glaucoma and secondary open-angle glaucoma. However, eye care providers should consider that specialized skills and expertise may be required when providing treatment in these populations. If treatment is beyond an eye care provider's scope or expertise, they should consult an eye care provider with the appropriate expertise.

5.2 Cohort Identification

People who present to a physician with glaucoma can be identified in administrative databases using the following OHIP (Ontario Health Insurance Plan) ICD-9 (International Statistical Classification of Diseases and Related Health Problems, 9th Revision) diagnosis codes for physician visits and ICD-10-CA (International Statistical Classification of Diseases and Related Health Problems, 10th Revision) codes for emergency department visits and hospitalizations (confirmed diagnoses):

- ICD-9: Code 365
- ICD-10: Code H40

5.3 How Success Can Be Measured Provincially

The following indicators are currently provincially measurable in Ontario's health care system:

Process indicators:

- Percentage of people diagnosed with glaucoma who receive at least one comprehensive eye examination annually
- Wait time between referral to specialist consultation for incisional glaucoma surgery
- Wait time between decision to treat and incisional glaucoma surgery

Methodologic details for the provincially and locally measurable indicators are described in the tables below.

Table 1: Percentage of people diagnosed with glaucoma who receive at least one comprehensive eye examination annually

GENERAL DESCRIPTION	Indicator description	This indicator measures the percentage of people diagnosed with glaucoma who received at least one comprehensive eye examination in the past year Directionality: A higher percentage is better.
	Measurability	**Measurable at the provincial level**
	Dimension of quality	Effective, Efficient
	Quality statement alignment	**Quality Statement 1: Routine Eye Examination and Comprehensive Glaucoma Assessment** People at risk for glaucoma receive a routine eye examination. People suspected of having glaucoma, based on the routine eye examination, receive a comprehensive glaucoma assessment. **Quality Statement 2: Monitoring** People with glaucoma or at risk for glaucoma are monitored on an appropriate reassessment schedule, according to their current stage of disease and risk of progression to vision impairment.
DEFINITION & SOURCE INFORMATION	Calculation: General	**Denominator** Total number of people with a coded diagnosis of glaucoma in the past 5 years. Include in the denominator if at least one of the following criteria were met (used to ascertain a diagnosis of glaucoma) in the past 5 years: a. Two OHIP claims for glaucoma in one year *In each given fiscal year, look for at least 2 billings with an OHIP diagnosis) of:* ICD-9: Code 365; b. One ED visit or hospitalization for glaucoma *In each given fiscal year, look for at least one hospitalization with a DAD diagnosis (Any diagnosis: MRDx or other) or one ED visit with a NACRS problem (any problem of):* ICD-10: Code H40 ***c.*** Received surgical or laser trabeculoplasty for glaucoma *In each given fiscal year, look for at least one OHIP fee code of:* Fee Code: *E134, E132, E214* ***Inclusions*** a) Age => 18

		Exclusions (apply to both the numerator and denominator) a) Patients without a valid health insurance number b) Patients without an Ontario residence c) Gender not recorded as male or female d) Age < 18 e) Invalid date of birth f) Individuals who die during the lookback period Data source: OHIP Claims Database, NACRS, DAD, RPDB **Numerator** Number of individuals in the denominator who have one or more OHIP billed eye examination in the past year (one year only) - Any of the following OHIP database fee codes: A110, A111, A112, A114, A233-A240, C232-C239, V401, V402, V405, V406, V407, V408, V409, V450, and V451 Data source: OHIP Claims Database **Method** Numerator divided by the denominator times 100
ADDITIONAL INFORMATION	Limitations	There is no standardized data source or cohort for people with glaucoma in Ontario. This indicator estimates people with glaucoma based on interactions with the health care system where a glaucoma diagnosis was coded. The denominator will miss anyone with glaucoma who have not received any glaucoma-related health care services in the past 5 years, or where glaucoma was not coded as a diagnosis in the service. Some health care providers, such as Nurse Practitioners, do not bill OHIP so these visits would not be included in the denominator. ED visits and hospitalizations are included for those who did not visit their family physician, however these are quite rare. OHIP fee codes may also code glaucoma suspects as having a confirmed diagnosis, thereby falsely identifying people as having confirmed glaucoma. Self-report (for example, the Canadian Community Health Survey), may also be used for this indicator. However, people may not be aware of their glaucoma diagnosis. For example, those who have been told that they are at risk of glaucoma may state that they have received a diagnosis in a survey. If your local data collection system includes diagnosis information, that may be a preferable approach to identify people with glaucoma.

Abbreviations: ICD-10: 10th revision of the International Statistical Classification of Diseases and Related Health Problems; ICD-9: 9th revision of the International Statistical Classification of Diseases and Related Health Problems NACRS: National Ambulatory Care Reporting System, OHIP: Ontario Health Insurance Plan; DAD: Discharge Abstract Database; RPDB: Registered Persons Database

Table 2: Wait time between referral to specialist consultation for incisional glaucoma surgery

<table>
<tr><td rowspan="4">GENERAL DESCRIPTION</td><td>Indicator description</td><td>This indicator measures the median wait, in days, from an eye specialist or surgeon or central intake office receiving the referral from the patient's doctor, to the patient's first eye specialist appointment among those who undergo eye surgery.

Directionality: A lower number is generally better.</td></tr>
<tr><td>Measurability</td><td>Measurable at the provincial level</td></tr>
<tr><td>Dimension of quality</td><td>Timely</td></tr>
<tr><td>Quality statement alignment</td><td>Quality Statement 4: Referral and Timely Access to an Ophthalmologist
People with glaucoma are referred to and have timely access to an ophthalmologist for consultation, when clinically indicated.

Quality Statement 6: Incisional Surgery
People with glaucoma who are at risk of progressing to sight loss despite maximum tolerated medical therapy and laser therapy are offered incisional surgery.</td></tr>
<tr><td>DEFINITION & SOURCE INFORMATION</td><td>Calculation: General</td><td>The median wait, in days, from an eye specialist or surgeon or central intake office receiving the referral from the patient's doctor, to the patient's first eye specialist appointment.

Data excludes patients who did not have the surgery after their appointment with a surgeon.

Priority levels and target times for eye surgeries in Ontario are set by surgeons, specialists and health care administrators across the province, based on clinical evidence, to guide treatment decisions and to improve patient access and outcomes. Patients with emergency conditions (Priority 1) are seen immediately so they are not included in wait times data. Priority levels are defined as:

<table>
<tr><th>Priority level of patient's condition</th><th>Clinical description</th><th>Target time* to patient's first specialist appointment</th></tr>
<tr><td>Priority 1</td><td>High probability of disease occurrence or progression impacting morbidity or mortality.

Intractable agonizing symptoms</td><td>Patient sees surgeon within 7 days of referral received</td></tr>
<tr><td>Priority 2</td><td>Moderate probability of disease progression. Low probability of disease occurrence or progression impacting morbidity or mortality.</td><td>Patient sees surgeon within 30 days of referral received</td></tr>
</table>
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<table>
<tr><td></td><td></td><td>
<table>
<tr><td>Priority 3</td><td>All patients who do not meet the criteria of Priority 2 or Priority 4</td><td>Patient sees surgeon within 90 days of referral received</td></tr>
<tr><td>Priority 4</td><td>Minimal risk of disease progression impacting morbidity/mortality</td><td>Patient sees surgeon within 182 days of referral received</td></tr>
</table>
*The target time within which 9 out of 10 patients are seen.

Data source: Wait Time Information System™ (WTIS), Cancer Care Ontario.
</td></tr>
<tr><td>ADDITIONAL INFORMATION</td><td>Limitations</td><td>
1. This indicator is collected only for patients who have undergone their surgery. That is, patients who are still waiting are not included in the calculation. Overall, this is a small portion of people with glaucoma who are waiting for specialist care, as many people do not proceed with surgery.

2. This indicator is reported not at the surgeon level but rather at the level of the facility where the procedure took place.

3. Ninety among 114 surgical facilities in Ontario report surgical wait times to the WTIS; the remaining 24 facilities do not receive wait time funding for reporting and so do not report wait times.

4. Hospitals with small volumes will be more severely impacted by extreme waits. For example, an unusually long or short wait time for a single patient in a reporting period for hospitals that do not treat a lot of patients (e.g., a small hospital performing cataract surgery) will have a greater impact on the percentage of patients who underwent surgery within the target time.

5. Wait times may vary by surgeon which will not be apparent in this data as it is reported at the regional or institution level rather than individual surgeon.

6. There are other factors that affect wait times for a surgical procedure or diagnostic exam that do not relate to a hospital’s efficiency, to a particular doctor or the availability of resources.

They include:

a. Patient Choice – a patient with a non-life-threatening condition may choose a non-surgical treatment or may decide to delay treatment for personal or family reasons to a more convenient time.
b. Patient Condition – a patient’s condition may need to improve before the surgery or exam takes place.
c. Follow-up Care – a patient who has an existing condition may be pre-booked for a follow-up treatment or exam a long time in advance.
</td></tr>
</table>

		d. Treatment Complexity – a patient with special requirements may need specific equipment or a certain kind of facility and there is a delay until these can be scheduled. More information on Measuring wait times for eye surgeries can be found here: https://www.hqontario.ca/System-Performance/Measuring-System-Performance/Measuring-Wait-Times-for-Eye-Surgeries Health Quality Ontario, in collaboration with Cancer Care Ontario, publicly reports wait time data on a monthly basis: https://www.hqontario.ca/System-Performance/Wait-Times-for-Surgeries-and-Procedures/Wait-Times-for-Eye-Surgeries-including-Cataract-Surgery/Time-to-Patients-First-Eye-Specialist-Appointment

Table 3: Wait time between decision to treat and incisional glaucoma surgery

<table>
<tr><td rowspan="4">GENERAL DESCRIPTION</td><td>Indicator description</td><td>This indicator measures the median wait, in days, from deciding with the surgeon or specialist to proceed with the surgery, to having the glaucoma -eye pressure lowering surgery.

Directionality: A lower number is generally better.</td></tr>
<tr><td>Measurability</td><td>Measurable at the provincial level</td></tr>
<tr><td>Dimension of quality</td><td>Effective</td></tr>
<tr><td>Quality statement alignment</td><td>Quality Statement 6: Incisional Surgery
People with glaucoma who are at risk of progressing to sight loss despite maximum tolerated medical therapy and laser therapy are offered incisional surgery.</td></tr>
<tr><td rowspan="2">DEFINITION & SOURCE INFORMATION</td><td>Calculation: General</td><td>The median wait, in days, from deciding with the surgeon or specialist to proceed with the surgery, to having the glaucoma -eye pressure lowering surgery.

Data excludes patients who did not have the surgery after their appointment with a surgeon.

Priority levels and target times for eye surgeries in Ontario are set by surgeons, specialists and health care administrators across the province, based on clinical evidence, to guide treatment decisions and to improve patient access and outcomes. Patients with emergency conditions (Priority 1) are seen immediately so they are not included in wait times data. Priority levels are defined as:

<table>
<tr><th>Priority level of the patient's condition</th><th>Clinical description</th><th>Target time** from decision to having glaucoma -eye pressure lowering surgery</th></tr>
<tr><td>Priority 1</td><td>High probability of disease occurrence or progression impacting morbidity or mortality.

Intractable agonizing symptoms</td><td>Patient has surgery within 24 hours of decision</td></tr>
<tr><td>Priority 2</td><td>Moderate probability of disease progression. Low probability of disease occurrence or progression impacting morbidity or mortality.</td><td>Patient has surgery within 14 days of decision</td></tr>
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<table>
<tr><td></td><td></td><td>
<table>
<tr><td>Priority 3</td><td>All patients who do not meet the criteria of Priority 2 or Priority 4</td><td>Patient has surgery within 42 days of decision</td></tr>
<tr><td>Priority 4</td><td>Minimal risk of disease progression impacting morbidity/mortality</td><td>Patient has surgery within 112 days of decision</td></tr>
</table>

**The target time within which 9 out of 10 patients are treated.

Data source: Wait Time Information System™ (WTIS), Cancer Care Ontario.</td></tr>
<tr><td>ADDITIONAL INFORMATION</td><td>Limitations</td><td>1. This indicator is collected only for patients who have undergone their surgery. That is, patients who are still waiting are not included in the calculation.

2. This indicator is reported not at the surgeon level but rather at the level of the facility where the procedure took place.

3. Ninety among 114 surgical facilities in Ontario report surgical wait times to the WTIS; the remaining 24 facilities do not receive wait time funding for reporting and so do not report wait times.

4. Hospitals with small volumes will be more severely impacted by extreme waits. For example, an unusually long or short wait time for a single patient in a reporting period for hospitals that do not treat a lot of patients (e.g., a small hospital performing cataract surgery) will have a greater impact on the percentage of patients who underwent surgery within the target time.

5. Wait times may vary by surgeon which will not be apparent in this data as it is reported at the regional or institution level rather than individual surgeon.

6. There are other factors that affect wait times for a surgical procedure or diagnostic exam that do not relate to a hospital’s efficiency, to a particular doctor or the availability of resources.

They include:

a. Patient Choice – a patient with a non-life-threatening condition may choose a non-surgical treatment or may decide to delay treatment for personal or family reasons to a more convenient time.
b. Patient Condition – a patient’s condition may need to improve before the surgery or exam takes place.
c. Follow-up Care – a patient who has an existing condition may be pre-booked for a follow-up treatment or exam a long time in advance.</td></tr>
</table>

		d. Treatment Complexity – a patient with special requirements may need specific equipment or a certain kind of facility and there is a delay until these can be scheduled. More information on Measuring wait times for eye surgeries can be found here: https://www.hqontario.ca/System-Performance/Measuring-System-Performance/Measuring-Wait-Times-for-Eye-Surgeries Health Quality Ontario, in collaboration with Cancer Care Ontario, publicly reports wait time data on a monthly basis: https://www.hqontario.ca/System-Performance/Wait-Times-for-Surgeries-and-Procedures/Wait-Times-for-Eye-Surgeries-including-Cataract-Surgery/Time-from-Decision-to-Having-Eye-Surgery

5.4 How Success Can Be Measured Locally

You might want to assess the quality of care you provide to your patients with Glaucoma. You might also want to monitor your own quality improvement efforts. It can be possible to do this using your own clinical records, or you might need to collect additional data. In addition to the provincially measurable indicators, we recommend the following list of indicators, which cannot be measured provincially using currently available data:

- Percentage of people treated for glaucoma who report high satisfaction with the eye care they receive
- Percentage of people with glaucoma who are legally blind due to visual field loss

Methodologic details are described in the tables below.

Table 4: Percentage of people treated for glaucoma who report high satisfaction with the eye care they receive

GENERAL DESCRIPTION	Indicator description	This indicator measures the percentage of people treated for glaucoma who report high satisfaction with the eye care they receive Directionality: A higher percentage is better.
	Indicator status	**Developmental**
	Dimension of quality	Patient-Centred
	Quality statement alignment	**Quality Statement 1: Routine Eye Examination and Comprehensive Glaucoma Assessment** People at risk for glaucoma receive a routine eye examination. People suspected of having glaucoma, based on the routine eye examination, receive a comprehensive glaucoma assessment. **Quality Statement 2: Monitoring** People with glaucoma or at risk for glaucoma are monitored on an appropriate reassessment schedule, according to their current stage of disease and risk of progression to vision impairment. **Quality Statement 3: Information** Eye care providers speak with people with glaucoma or at risk for glaucoma about their diagnosis, prognosis, and management, and offer them relevant and accessible information about their condition at initial and subsequent visits. **Quality Statement 4: Referral and Timely Access to an Ophthalmologist** People with glaucoma are referred to and have timely access to an ophthalmologist for consultation, when clinically indicated. **Quality Statement 5: Medications and Laser Therapy** People with glaucoma or at risk for glaucoma are offered medications or laser therapy when clinically indicated. **Quality Statement 6: Incisional Surgery** People with glaucoma who are at risk of progressing to sight loss despite maximum tolerated medical therapy and laser therapy are offered incisional surgery.
DEFINITION & SOURCE INFORMATION	Calculation: General	**Denominator** Total number of people treated for glaucoma **Numerator** Number of people in the denominator who report high satisfaction with the eye care they receive

		Method Numerator/denominator × 100
	Data source	Local data collection
ADDITIONAL INFORMATION	Comments	Patient satisfaction has been shown to be a legitimate indicator of quality of care.[1] However, there is no consensus in the scientific literature on how to measure or define satisfaction in health care. Many surveys exist in the province to measure satisfaction, however few of these (if any) are specific to people with glaucoma. Given this, we do not recommend one specific tool or question. Patient satisfaction tends to act as a 'big dot' measure of quality of care. If satisfaction is deemed to be low, additional questions may be required to get to the root cause of the issue. The root cause may not be specific to one provider or practice and may require a transitional view of care that includes other health care providers. It may also be valuable to measure the satisfaction of informal caregivers caring for those with glaucoma.

1.The measurement of patient satisfaction. Yellen E, Davis GC, Ricard R. J Nurs Care Qual. 2002 Jul; 16(4):23-9.

Table 5: Percentage of people with glaucoma who are legally blind due to visual field loss

GENERAL DESCRIPTION	Indicator description	This indicator measures the percentage of people with glaucoma who are legally blind due to visual field loss Directionality: A lower percentage is better.
	Indicator status	**Developmental**
	Dimension of quality	Effective
	Quality statement alignment	**Quality Statement 1: Routine Eye Examination and Comprehensive Glaucoma Assessment** People at risk for glaucoma receive a routine eye examination. People suspected of having glaucoma, based on the routine eye examination, receive a comprehensive glaucoma assessment. **Quality Statement 2: Monitoring** People with glaucoma or at risk for glaucoma are monitored on an appropriate reassessment schedule, according to their current stage of disease and risk of progression to vision impairment. **Quality Statement 5: Medications and Laser Therapy** People with glaucoma or at risk for glaucoma are offered medications or laser therapy when clinically indicated. **Quality Statement 6: Incisional Surgery** People with glaucoma who are at risk of progressing to sight loss despite maximum tolerated medical therapy and laser therapy are offered incisional surgery.
DEFINITION & SOURCE INFORMATION	Calculation: General	**Denominator** Total number of people with glaucoma **Numerator** Number of people in the denominator who are legally blind due to visual field loss. Legal blindness is commonly defined as either of the following[2]: a. Best eye has less than 20/200 vision or less with the help of glasses or contact lenses b. Visual field is 20 degrees or less, even with the help of glasses or contact lenses. **Method** Numerator/denominator × 100
	Data source	Local data collection

ADDITIONAL INFORMATION	Comments	Blindness may not always be preventable; however, early assessment, regular monitoring and proper treatment may be able to delay or prevent blindness from occurring. As noted in the previous indicators, the denominator may be calculatable using administrative databases. Local data collection would be preferred in this case as blindness is not well captured in administrative data.

2: https://myhealth.alberta.ca/Health/Pages/conditions.aspx?hwid=stl17646&

6 Resources and Questions

6.1 Resources

Several resources are available for more information:

- The **quality standard** provides information on the background, definitions of terminology, numerators and denominators for all statement-specific indicators
- The ***Getting Started Guide*** includes quality improvement tools and resources for health care professionals, including an action plan template
- The **case for improvement deck** provides data on why a particular quality standard has been created and the data behind it
- The **data tables** provide data that can be used to examine variations in indicator results across the province

6.2 Questions?

Please contact qualitystandards@hqontario.ca. We would be happy to provide advice on measuring quality standard indicators, or put you in touch with other providers who have implemented the standards and might have faced similar questions.

Health Quality Ontario offers an online community dedicated to improving the quality of health care across Ontario together called Quorum. Quorum can support your quality improvement work by allowing you to:

- Find and connect with others working to improve health care quality
- Identify opportunities to collaborate
- Stay informed with the latest quality improvement news
- Give and receive support from the community
- Share what works and what doesn't
- See details of completed quality improvement projects
- Learn about training opportunities
- Join a community of practice

7 Appendix: Data Sources Referenced in This Quality Standard

Within this quality standard, there are several data sources used for provincial measurement. The data source(s) for each indicator are listed within the individual indicator specifications. More details on the specific data sources that Health Quality Ontario used to produce the indicators are noted below.

Discharge Abstract Database (DAD)
The DAD is a database of information abstracted from hospital records that captures administrative, clinical and patient demographic information on all hospital inpatient separations, including discharges, deaths, sign-outs, and transfers. CIHI receives Ontario data directly from participating facilities or from their respective regional health authorities or the MOHLTC. The DAD includes patient-level data for acute care facilities in Ontario. Data are collected, maintained and validated by CIHI. The main data elements of the DAD are patient identifiers (e.g. name, health care number), administrative information, clinical information (e.g. diagnoses and procedures) and patient demographics (e.g. age, sex, geographic location).

National Ambulatory Care Reporting System (NACRS)
The NACRS contains data for all hospital-based and community-based emergency and ambulatory care, including day surgeries, outpatient clinics and emergency departments. Data are collected, maintained and validated by CIHI. CIHI receives Ontario data directly from participating facilities or from their respective regional health authorities or the MOHLTC. Data are collected, maintained and validated by CIHI. Data elements of the NACRS include patient identifiers (e.g. name, health care number), patient demographics (e.g. age, sex, geographic location), clinical information (e.g. diagnoses and procedures), and administrative information.

Ontario Health Insurance Plan (OHIP) Claims Database
The OHIP claims database covers all reimbursement claims to the MOHLTC made by fee-for-service physicians, community-based laboratories and radiology facilities. The OHIP database at ICES contains encrypted patient and physician identifiers, codes for services provided, date of service, the associated diagnosis and fee paid. Services which are missing from the OHIP data include: some lab services; services received in provincial psychiatric hospitals; services provided by health service organizations and other alternate providers; diagnostic procedures performed on an inpatient basis and lab services performed at hospitals (both inpatient and same day). Also excluded is remuneration to physicians through alternate funding plans (AFPs), which could distort analyses because of their concentration in certain specialties or geographic areas.

Wait Time Information System (WTIS)
This is the first-ever information system for Ontario to collect accurate and timely wait time data. It is in place in 94 hospitals that do adult surgery and diagnostic imaging, and in 78 paediatric surgery hospitals. The system tracks all surgical procedures in Ontario. It makes it possible to collect wait time information; provides clinicians and other health professionals with the tools they need to effectively assess patient urgency using a defined wait times standard; measures and reports wait times and data on the utilization of procedures; supplies clinicians,

administrators and managers with near real-time information to use in monitoring and managing wait lists; and reports wait time information to the public on this website so that patients can manage their own care and the public can measure progress on reducing wait times.

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