

Quality Standards

Asthma

Care in the Community
for People 16 Years of Age and Older

July 2019

DRAFT

**Health Quality
Ontario**

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About This Quality Standard

The following quality standard addresses the **diagnosis and management of asthma in people 16 years of age and older**, with a focus on primary care and community-based settings.

This quality standard does not address the management of acute asthma exacerbations or care provided during emergency department visits and hospitalizations, but it does address transitions from hospital care to care in the community.

A separate quality standard addresses primary and community-based care for children and adolescents with asthma.

What Is a Quality Standard?

Quality standards outline what high-quality care looks like for conditions or processes where there are large variations in how care is delivered, or where there are gaps between the care provided in Ontario and the care patients should receive. They:

- Help patients, families, and caregivers know what to ask for in their care
- Help health care professionals know what care they should be offering, based on evidence and expert consensus
- Help health care organizations measure, assess, and improve their performance in caring for patients

Quality standards are developed by Health Quality Ontario, in collaboration with health care professionals, patients, and caregivers across Ontario.

For more information, contact qualitystandards@hqontario.ca.

Values That Are the Foundation of This Quality Standard

This quality standard was created, and should be implemented, according to the [Patient Declaration of Values for Ontario](#). This declaration “is a vision that articulates a path toward patient partnership across the health care system in Ontario. It describes a set of foundational principles that are considered from the perspective of Ontario patients, and serves as a guidance document for those involved in our health care system.”

These values are:

- Respect and dignity
- Empathy and compassion
- Accountability
- Transparency
- Equity and engagement

Health care professionals should acknowledge and work towards addressing the historical and present-day impacts of colonization in the context of the lives of Indigenous Peoples throughout

Canada. This work involves being sensitive to the impacts of intergenerational and present-day traumas and the physical, mental, emotional, and social harms experienced by Indigenous people, families, and communities. This quality standard uses existing clinical practice guideline sources developed by groups that may not include culturally relevant care or acknowledge traditional Indigenous beliefs, practices, and models of care.

Quality Statements to Improve Care

These quality statements describe what high-quality care looks like for adults with asthma.

Quality Statement 1: Diagnosis

Adults clinically suspected of having asthma undergo spirometry to demonstrate reversible airflow obstruction and, if negative, other lung function testing to confirm the diagnosis of asthma as soon as possible.

Quality Statement 2: Asthma Control

Adults with asthma regularly have a structured assessment to determine their level of asthma control and any reasons for poor control.

Quality Statement 3: Pharmacological Management

Adults with asthma receive appropriate pharmacotherapy and devices based on their current level of asthma control, including early initiation of inhaled anti-inflammatory therapy.

Quality Statement 4: Self-Management Education and Asthma Action Plan

Adults with asthma and their caregivers receive self-management education and a written personalized asthma action plan that is reviewed regularly with a health care professional.

Quality Statement 5: Referral to Specialized Asthma Care

Adults who meet criteria for severe asthma and/or have other appropriate indications are referred to specialized asthma care.

Quality Statement 6: Follow-Up After Discharge

Adults who have had an emergency department visit or been hospitalized for an asthma exacerbation have a follow-up assessment within 2 to 7 days after discharge.

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Scope of This Quality Standard

This quality standard addresses the diagnosis and management of asthma in adults 16 years of age and older, with a focus on primary care and community-based settings. It does not address the management of acute asthma exacerbations or care provided during emergency department visits or hospitalizations. A separate quality standard addresses primary and community-based care for children and adolescents with asthma.

Why This Quality Standard Is Needed

Asthma is a chronic inflammatory disorder of the airways in the lungs. In people with asthma, the airways become inflamed and obstructed, usually because they are hyperresponsive to internal and external factors, commonly called triggers (e.g., allergens, irritants).^{1,2} People with asthma typically experience difficulty breathing, shortness of breath, chest tightness, wheezing (a whistling sound produced in the airways during breathing), sputum (mucus) production, and/or cough. These symptoms can be episodic or persistent. As with many chronic conditions, the cause of asthma is not known with certainty, but it is thought to develop from interactions between genetic and environmental factors such as a family history of asthma and exposure to smoke, air pollution, or occupational vapours or particles.³

Asthma is one of the most common chronic conditions in Canada. In Ontario, more than 2 million people were living with asthma in 2016/17.^{4,5} In recent years, the incidence of asthma in Ontario across all age groups (the number of people newly diagnosed each year) has been decreasing; it dropped from nearly 10 new cases per 1,000 people in 1996/97 to 2.45 per 1,000 in 2016/17.⁶ At the same time, because people are generally living longer, the prevalence of asthma in Ontario for all ages (the number of people living with the disease) continued to increase; it rose from around 90 per 1,000 people in 1996 to 155 per 1,000 in 2016/17.⁷ Both incidence and prevalence vary substantially across the province; in 2016/17, both were highest in the Central West region and lowest in the Waterloo Wellington region.^{6,7}

Although asthma has no cure, most people can control their asthma by using appropriate controller medications, such as inhaled corticosteroids, and reducing their exposure to triggers. The primary goal of asthma care is to help people achieve and maintain asthma control, which reduces their risk of having an exacerbation (a flare-up or asthma attack) and improves their overall health and quality of life.³ Current guidelines stress that, with appropriate management in primary care, most people with asthma should be able to live symptom free. Exacerbations requiring oral corticosteroids, an emergency department visit, or hospitalization should usually be considered a failure of asthma management. Every asthma death should be considered preventable.⁸⁻¹⁰

However, it is estimated that 50% of people with asthma in Canada have uncontrolled disease, resulting in unnecessary reductions in quality of life and avoidable illness and deaths.^{11,12} In Ontario, about 85 people die from asthma each year (1,272 deaths from 2000 to 2015¹³). The age- and sex-adjusted all-cause mortality rate for people living with asthma remains higher than for the population overall (in 2008, there were 852 deaths per 100,000 people with asthma vs. 640 per 100,000 in the general population¹⁴).

Uncontrolled asthma also contributes to high health care use and costs. Overall use of health services for people with asthma has been shown to be much higher for people with uncontrolled

asthma¹⁵ and particularly high in the year prior to asthma-related deaths.^{1,16} Among people aged 15 years and older in Ontario in 2016/17, there were 21,886 asthma-specific emergency department visits¹⁷ and 8,393 asthma-specific hospitalizations.^{15,18}

Asthma is also associated with substantial indirect costs to society, such as absenteeism from school and work.³ The economic burden of asthma in Ontario (direct health care costs plus indirect social costs) was estimated at \$1.8 billion in 2011.¹⁹

These data highlight opportunities for improving the management of asthma in primary care and community-based care settings. This standard focuses on helping clinicians diagnose asthma appropriately, recognize and address uncontrolled asthma, escalate and taper medication optimally, empower people with asthma to self-manage using an asthma action plan, and support safe, effective transitions in care. Improving the quality of asthma care can help people better control their disease, preventing acute exacerbations, emergency department visits, hospital admissions, and deaths.

How to Use This Quality Standard

Quality standards inform patients, clinicians, and organizations about what high-quality care looks like for health conditions or processes deemed a priority for quality improvement in Ontario. They are based on the best evidence.

Guidance on how to use quality standards and their associated resources are included below.

For Patients

This quality standard consists of quality statements. These describe what high-quality care looks like for adults with asthma.

Within each quality statement, we've included information on what these statements mean for you, as a patient.

In addition, you may want to download this accompanying [patient guide](#) on asthma, to help you and your family have informed conversations with your health care providers. Inside, you will find questions you may want to ask as you work together to make a plan for your care.

For Clinicians and Organizations

The quality statements within this quality standard describe what high-quality care looks like for adults with asthma.

They are based on the best evidence and designed to help you know what to do to reduce gaps and variations in care.

Many clinicians and organizations are already providing high-quality evidence-based care. However, there may be elements of your care that can be improved. This quality standard can serve as a resource to help you prioritize and measure improvement efforts.

Tools and resources to support you in your quality improvement efforts accompany each quality standard. One of these resources is an inventory of indicator definitions (Appendix 2) to help

you assess the quality of care you are delivering, and to identify gaps in care and areas for improvement. These indicators can be used to assess processes, structures, and outcomes. While it is not mandatory to use or collect data when using a quality standard to improve care, measurement is key to quality improvement.

There are also a number of resources online to help you, including:

- Our [patient guide](#) on adult asthma, which you can share with can patients and families to help them have conversations with you and their other health care providers. Please make the patient guide available where you provide care
- Our [measurement guide](#) for adult asthma, with technical details on what you can do to measure the quality of the care you provide locally, and on how we will measure the success of the quality standard provincially
- Our [Getting Started Guide](#), which includes links to templates and tools to help you put quality standards into practice. This guide shows you how to plan for, implement, and sustain changes in your practice
- [Quorum](#), an online community dedicated to improving the quality of care across Ontario. This is a place where health care providers can share information, inform, and support each other, and it includes tools and resources to help you implement the quality statements within each standard
- [Quality Improvement Plans](#), which can help your organization outline how it will improve the quality of care provided to your patients, residents, or clients in the coming year

While you implement this quality standard, there may be times you find it challenging to provide the care outlined due to system-level barriers. Appendix 1 provides our recommendations to provincial partners to help remove these barriers so you can provide high-quality care. In the meantime, there are many actions you can take on your own, so please read the standard and act where you can.

How to Measure Success

The Asthma Quality Standard Advisory Committee identified a small number of overarching goals for this quality standard, which can be measured using the indicators below.

How Success Can Be Measured Provincially

These are the indicators that will be used to monitor the progress being made provincially:

- Percentage of adults with incident asthma whose diagnosis is confirmed with lung function testing
- Percentage of adults with asthma who visited the emergency department for an asthma-specific reason in the previous 12 months

How Success Can Be Measured Locally

To measure the quality of care adults are receiving for their asthma, we recommend clinicians and organizations use the following locally measurable indicators, which cannot be measured provincially at this time:

- Percentage of adults with asthma who had a structured assessment in the previous 6 months to determine their asthma symptom control and the reasons for poor control
- Percentage of adults with asthma who are prescribed inhaled anti-inflammatory therapy
- Average number of asthma symptom-free days in the previous 4 weeks among adults with asthma
- Average number of days missed from school or work due to asthma in the previous 12 months

For more information about these indicators, see Appendix 2 and our [measurement guide](#).

Quality Statements to Improve Care: The Details

Quality Statement 1: Diagnosis

Adults clinically suspected of having asthma undergo spirometry to demonstrate reversible airflow obstruction and, if negative, other lung function testing to confirm the diagnosis of asthma as soon as possible.

Definitions

As soon as possible: Spirometry, followed by other lung function testing if spirometry is negative or not possible, should be performed to confirm the diagnosis of asthma as soon as possible and within 3 months of a person seeking care for their respiratory symptoms. A trial of pharmacotherapy may be considered if testing cannot be reliably or expediently performed, but confirmatory testing should still be completed, regardless of the outcome of the therapeutic trial.⁸ Every attempt should be made to ensure the asthma diagnosis can be confirmed with lung function testing, especially if any changes in the person's condition suggest they may be able to undergo testing. This includes the re-evaluation of an adult diagnosed with asthma in childhood without objective measures.

Clinically suspected of having asthma: Asthma is clinically suspected in the presence of signs and/or symptoms of variable airflow obstruction and in the absence of an alternative diagnosis (e.g., other respiratory conditions, cardiovascular disease). Signs and/or symptoms of airflow obstruction include shortness of breath, chest tightness, wheezing, and/or cough. The presence of respiratory signs and symptoms should be assessed through a structured clinical history and physical examination, then documented in the medical record.

Respiratory symptoms characteristic of asthma often¹:

- Include more than one symptom (e.g., shortness of breath, chest tightness, wheezing, cough)
- Are worse at night and/or in the early morning
- Vary in intensity or over time
- Are caused by allergens (e.g., dust mites, pet dander, cockroaches, pollen, mould), irritants (e.g., infections, smoke, fumes, chemicals, extreme air temperatures, thunderstorms), or other triggers (e.g., rhinitis, sinusitis, nasal polyps, gastroesophageal reflux, food and drug reactions, exercise, laughter, hormonal changes during menstruation and pregnancy)

Other lung function tests: In Ontario, the following are recommended to confirm a diagnosis of asthma⁸:

- **Challenge tests** are an alternative method to diagnose asthma when spirometry is negative. They assess for airway hypersensitivity and hyperresponsiveness. Challenge tests are also known as bronchial provocation tests and can be direct, such as the methacholine challenge test, or indirect, such as the exercise challenge test. Methacholine challenge tests should not be performed within several weeks of an active infection. If safe to do so, inhaled corticosteroid (ICS) treatment should be withheld prior to testing for 4 to 8 weeks if the intent is to remove the effect on airway sensitivity and

responsiveness. Similarly, bronchodilators should be withheld in accordance with their duration of action.

- **Peak expiratory flow (PEF) measurement** assesses the presence of airflow variation over the span of 2 weeks. A variation in PEF of greater than 20% supports a diagnosis of asthma.

The measurement of airway inflammation, such as by measuring fractional exhaled nitric oxide levels (FeNO), is not yet widely available in Ontario, but there is emerging evidence for its utility in diagnosing asthma.²⁰

Spirometry: The preferred lung function test to diagnose asthma by assessing for airflow obstruction and its reversibility.⁸ The test measures airflow as the ratio of forced expiratory volume in 1 second (FEV₁), which is the volume of air exhaled during the first second of the forced vital capacity (FVC) measurement, and FVC, which is the volume of air forcibly exhaled from the point of maximal inspiration. Results are presented as a percentage of the predicted value or as an absolute value to be compared with the lower limit of normal (LLN) of the FEV₁/FVC ratio. Reference values to interpret the test are generally based on age, sex, and height and can include race.

Spirometry should be performed before and after the administration of an inhaled bronchodilator. A pre-bronchodilator FEV₁/FVC result less than the LLN (approximately < 0.70–0.80) demonstrates airflow obstruction. A post-bronchodilator increase in FEV₁ of at least 12% and 200 mL indicates that airflow obstruction is reversible and supports the diagnosis of asthma. A negative spirometry test does not rule out asthma, especially when asthma is controlled. In such cases or in situations where people cannot perform spirometry, other lung function testing is required to confirm the diagnosis of asthma, and a referral to specialized asthma care may be considered (see quality statement 5).

Sources

British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2016¹⁶
Canadian Thoracic Society, 2010,⁸ 2012,⁹ 2017¹⁰
Global Initiative for Asthma, 2018¹
National Institute for Health and Care Excellence, 2017²⁰
Registered Nurses' Association of Ontario, 2017³

Rationale

In Ontario, spirometry and other lung function testing to diagnose asthma is increasing but not yet routine. According to available administrative health data, about half of people with asthma had lung function testing to confirm their diagnosis in 2012/13.⁶

Often, asthma is diagnosed based on symptoms and history, without spirometry or other lung function testing.^{12,21} There is a risk of misdiagnosis when reversible airflow obstruction is not demonstrated with lung function testing, since other conditions can cause asthma-like symptoms.¹² In addition to inappropriate treatment, a false misdiagnosis of asthma can lead to delays in making the correct diagnosis.²¹

Without lung function testing, an asthma diagnosis may also be missed, leading to inappropriate treatment with non-asthma medications (e.g., antibiotics for chronic cough). Failure to diagnose

asthma and begin appropriate pharmacotherapy also increases the risk of the person having a severe asthma exacerbation.¹²

What This Quality Statement Means

For Adults With Asthma

If your symptoms include shortness of breath, a feeling of tightness in your chest, wheezing, or cough, your family doctor or nurse practitioner should make sure you have a breathing test before they diagnose you with asthma. They may offer you medication while you wait to have this test done.

For Clinicians

Administer or order spirometry for adults clinically suspected of having asthma to confirm a diagnosis of asthma. Testing should occur as soon as possible and ideally be completed within 3 months of a person seeking care for their respiratory symptoms. Longer wait times should not deter clinicians from ordering and seeking appropriate lung function testing before confirming a diagnosis of asthma. Document signs and symptoms of variable airflow obstruction obtained from clinical history, physical examinations, and objective measures as the basis for diagnosing asthma.^{16,20}

For Health Services Planners

Ensure that lung function testing is locally available and accessible. Ensure that health care professionals in primary care and community-based settings are aware of the local availability of lung function testing²⁰ and can order appropriate lung function testing for people clinically suspected of having asthma, including spirometry and challenge tests, without first referring to specialized asthma care. Ensure spirometry is performed within a quality assurance program by trained health care professionals.^{3,16}

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of adults clinically suspected of having asthma who undergo lung function testing within 3 months of seeking care for their respiratory symptoms
- Local availability of lung function testing

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 2: Asthma Control

Adults with asthma regularly have a structured assessment to determine their level of asthma control and any reasons for poor control.

Definitions

Reasons for poor control: Health care professionals should explore the following reasons for poor control, as these factors can increase the risk of more severe asthma exacerbations and contribute to poor quality of life:

- Inadequate adherence to controller medication (e.g., side effects, attitudes and goals for asthma treatment, affordability)
- Incorrect inhaler technique
- Exposure to irritants and allergic triggers (e.g., colds, smoke, air pollution, allergens, perfumes/scents, chemicals)
- Poor management of comorbidities (e.g., rhinitis, chronic rhinosinusitis, gastroesophageal reflux, obesity, obstructive sleep apnea, depression, anxiety)^{1,10}
- Impact of social determinants of health (e.g., education, employment, ethnicity and culture, family and social support, housing, geographic location, income, transportation and access to care)

Regularly: Symptom control and any reasons for poor control should be assessed using a structured assessment (1) at every asthma-related health care encounter; (2) after a severe exacerbation of symptoms; (3) when there is a change in treatment; and (4) at least every 6 months. In some cases, a phone or virtual health care encounter may be sufficient to assess asthma symptom control. Lung function should be assessed as described below. Adults with complex health needs may benefit from more frequent assessments.

Structured assessment to determine level of asthma control: Asthma control parameters for adults include measures of symptoms, lung function, and airway inflammation.

Symptom control over the previous 4 weeks should be assessed regularly, and at least every 6 months, using these criteria⁸:

- Daytime symptoms (target < 4 days/week)
- Nighttime symptoms (target < 1 night/week)
- Frequency of need for reliever medication (target < 4 doses/week)
- Physical activity (target normal)
- Absence from work or school due to asthma (target none)
- Frequency and severity of exacerbations (target infrequent and mild)

Lung function should be assessed with spirometry and other lung function testing as needed (1) at the start of treatment; (2) after 3 to 6 months of treatment to identify and document response to treatment and the person's personal best FEV₁ (forced expiratory volume in 1 second); and (3) annually for ongoing assessment of asthma control and risk of exacerbation.¹ The following measures of lung function should be assessed:

- FEV₁ (target \geq 90% of personal best)
- If spirometry is unavailable, peak expiratory flow (PEF) can be used (target diurnal variation < 10%–15%)⁸

Airway inflammation should also be assessed for adults with uncontrolled, moderate to severe asthma receiving care in specialist centres:

- Sputum eosinophils (target < 2%–3%)

Sources

British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2016¹⁶

Canadian Thoracic Society, 2010,⁸ 2012,⁹ 2017¹⁰

Global Initiative for Asthma, 2018¹

National Institute for Health and Care Excellence, 2017²⁰

Registered Nurses' Association of Ontario, 2017³

Rationale

Assessing control is an important gap in care for adults with asthma. A longitudinal audit of primary care practice in Ontario in 2012 and 2013 found that only 15% of patients had had an assessment to determine their level of asthma control at least once during the study period. Health care professionals assessed asthma symptom control with at least one question from guideline recommendations in only 6% of visits (261 of 4,122 visits).²² Among these visits, they asked 1.6 of a recommended five questions, on average. They asked about daytime symptoms in 61% of visits with any asthma control assessment; frequency of need for reliever medication (45%); nighttime symptoms (27%); physical activity limitations (23%); and school or work absenteeism (4%).²² All five asthma control criteria were assessed in only 1.5% (n = 4) of these visits.²²

In addition, there is a widening gap between current practice and the recommended annual assessment of lung function (see definition in this statement). The percentage of people who received asthma-related care and had lung function testing within that same year decreased by more than half in Ontario from 14% in 1996/97 to 7% in 2016/17.²³

The lack of ongoing assessment of asthma control is concerning because an estimated 50% of people with the disease have uncontrolled asthma.^{11,12} The audit of primary care practice in Ontario found that most people whose asthma control was assessed had uncontrolled asthma (135 of 136 patients).²² Uncontrolled asthma is most commonly associated with nonadherence to medication, incorrect inhaler technique, lack of objective diagnosis (see quality statement 1), and poor management of comorbidities.¹⁰ These and other reasons for poor control can be identified and addressed to help people achieve and maintain asthma control.¹⁰

What This Quality Statement Means

For Adults With Asthma

A health care professional should see you at least every 6 months to check on your asthma. If you have a severe flare up or you have a change in your medication, your health care

professional may need to see you more often. At these appointments, they should ask you about:

- Your asthma symptoms and what makes them worse
- Your use of medications
- Anything else that might be affecting how you feel

You can help by keeping track of these details between appointments.

For Clinicians

Assess asthma symptom control according to recommended criteria regularly and at least every 6 months. The structured assessment should determine the person's level of asthma symptom control and any reasons for poor control so they can be addressed before modifying pharmacotherapy (see quality statement 3). Whenever possible, ensure spirometry and other lung function testing as needed are done (1) at the start of treatment; (2) after 3 to 6 months of treatment to identify and document response to treatment and the person's personal best FEV₁; and (3) annually for ongoing assessment of asthma control and risk of exacerbation.

For Health Services Planners

Ensure that training, systems, processes, and resources are in place in primary care and community-based settings for health care professionals to regularly assess asthma symptom control and reasons for poor control according to recommended criteria. Ensure the local availability and accessibility of lung function testing to monitor asthma control.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of adults with asthma who had a structured assessment in the previous 6 months to determine their asthma symptom control and, if applicable, the reasons for poor control
- Percentage of adults with asthma who received a lung function test in the previous 12 months

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 3: Pharmacological Management

Adults with asthma receive appropriate pharmacotherapy and devices based on their current level of asthma control, including early initiation of inhaled anti-inflammatory therapy.

Definitions

Appropriate pharmacotherapy and devices: All adults with a confirmed diagnosis of asthma should be offered pharmacotherapy based on their current level of asthma control (see quality statement 2) and the most appropriate inhaler devices and spacer device to meet their needs. (A spacer device is a long tube with a valve that can be attached to metered dose inhalers to make it easier to inhale the medication.) Those with one or more criteria of uncontrolled asthma should have their pharmacotherapy escalated to help them gain control, but only after addressing other reasons for poor control. Reasons for poor control include, but are not limited to, symptoms of comorbid conditions, trigger exposures, inadequate adherence to controller medication, and incorrect inhaler technique (see quality statement 2). Pharmacotherapy should be offered and escalated as follows:

- **Step 1:** Adults who experience symptoms less than twice a month and have no risk factors for exacerbations may use as-needed inhaled short-acting reliever medication in the form of a short-acting β 2-agonist (SABA).¹⁰ As-needed use of a combined inhaled anti-inflammatory and long-acting reliever medication in the form of low-dose budesonide-formoterol (i.e., ICS/LABA) may be an alternative step 1 therapy.²⁴⁻²⁷
- **Step 2:** Adults who experience symptoms more than twice per week or have symptoms that cause waking one or more nights per week while taking as-needed SABA medication should be offered a daily inhaled anti-inflammatory medication in the form of a low-dose ICS with as-needed SABA reliever medication.^{10,16,20,28} Recent evidence suggests that the as-needed use of a combined inhaled anti-inflammatory and long-acting reliever medication in the form of low-dose budesonide-formoterol may be an alternative step 2 therapy.²⁴⁻²⁷ Daily use of an oral anti-inflammatory medication in the form of an LTRA with as-needed SABA reliever medication is a second-line step 2 alternative.¹⁰
- **Step 3:** Adults who have uncontrolled asthma while using a daily inhaled anti-inflammatory medication in the form of a low-dose ICS should be offered a daily combined inhaled anti-inflammatory and long-acting reliever medication at a low dose (i.e., an ICS/LABA). Those who have uncontrolled asthma while using as-needed low-dose budesonide-formoterol should similarly be switched to daily use of this medication. Second-line step 3 alternatives include continuing to take daily low-dose ICS and adding a daily LTRA or daily medium-dose ICS.¹⁰
- **Step 4:** Adults who have uncontrolled asthma while using a daily combined inhaled anti-inflammatory and long-acting reliever medication in the form of low-dose ICS/LABA should be offered a daily medium-dose ICS/LABA. Second-line step 4 alternatives include continuing to take a daily low-dose ICS/LABA and adding a daily LTRA or continuing to take a daily low-dose ICS/LABA and adding daily tiotropium.¹⁰

- **Step 5:** Adults who have uncontrolled asthma while using daily step 4 medications should be offered daily high-dose ICS/LABA and should be referred to specialized asthma care (see quality statement 5).

Once the person with asthma has achieved control with at least 3 to 6 months of daily anti-inflammatory medication, pharmacotherapy should be reduced to the lowest effective dose required to maintain asthma control, prevent future exacerbations, and minimize side effects.

Adults with clinically suspected asthma not yet confirmed with lung function testing may be prescribed a trial of therapy if testing cannot be reliably or expediently performed, but confirmatory lung function testing should still be completed, regardless of the outcome of the therapeutic trial (see quality statement 1).⁸

Asthma control: Parameters include measures of symptoms, lung function, and airway inflammation, as described in quality statement 2.

Sources

British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2016¹⁶

Canadian Thoracic Society, 2017¹⁰

Global Initiative for Asthma, 2019²⁶

National Institute for Health and Care Excellence, 2017²⁰

Registered Nurses' Association of Ontario, 2017³

Rationale

Asthma management aims to control the disease and, by doing so, prevent or minimize the risk of short- and long-term complications and death.⁸ Because uncontrolled asthma is commonly associated with undertreatment, a lack of adherence to medication, and/or incorrect inhaler technique, care delivery that follows guideline recommendations for pharmacological escalation can help to improve asthma control.

However, appropriate pharmacotherapy as a component of asthma management often depends on other key components of high-quality asthma care, such as regular assessment of asthma control and reasons for poor control (see quality statement 2) and the use of asthma action plans and asthma education (see quality statement 4).¹ Therefore, discussions about appropriate pharmacotherapy and devices between the person with asthma and their health care professional should promote patient empowerment, shared decision-making, and self-management. This can include discussions of the patient's preferences such as goals, beliefs, and concerns about asthma and medications, their preferences for strategies to achieve control and to reduce the risk of asthma exacerbations (while considering individual characteristics or phenotype), and practical issues such as inhaler technique, controller medication adherence, and the affordability of medications.¹

Lack of knowledge among prescribers about optimal escalation and tapering of asthma medication continues to be an important barrier to appropriate pharmacotherapy. Despite recommendations for the early initiation of inhaled anti-inflammatory therapy and for escalating or tapering the controller medication based on patients' asthma control level, a longitudinal practice audit in Ontario found large gaps in care.²² Many people with uncontrolled asthma (55%) were not prescribed any inhaled anti-inflammatory medication, and, among those who were prescribed anti-inflammatory medication, only half had it escalated from inhaled

corticosteroid (ICS) alone to ICS with a long-acting β 2-agonist (LABA) or ICS with a leukotriene receptor antagonist (LTRA).²²

What This Quality Statement Means

For Adults With Asthma

Most adults with asthma can live symptom free by regularly using their controller puffer and by avoiding triggers as much as possible. Your family doctor or nurse practitioner should talk with you about your goals, beliefs, and concerns about asthma and medications so you can together develop a treatment plan that works for you. They should:

- Explain how and when to use your medications
- Ask you to show them how you use your puffers to make sure you are confident using them

There are many different types of asthma medication. If your asthma symptoms continue on your current medications, talk with your family doctor or nurse practitioner about trying a different dose or a different asthma medication.

For Clinicians

Prescribe medications based on the person's level of asthma control. Escalate pharmacotherapy, according to definition above, only after addressing other reasons for poor control (see quality statement 2). Initiate a low-dose ICS as a regular controller medication for adults with a confirmed diagnosis of asthma who experience asthma symptoms more than twice per week or have symptoms that cause waking one or more nights per week. As an alternative, budesonide-formoterol, to be taken as needed, may be prescribed for the same indications. Provide clear instructions about when and how to properly use the medication and its delivery system. Teach proper inhaler technique and use of a spacer device, if needed, and ask people to demonstrate how they use their inhaler to ensure proper technique. (This patient education method is called "teach back.")

For people without a confirmed asthma diagnosis, prescribe a trial of pharmacotherapy only if lung function testing cannot be reliably or expediently performed (see quality statement 1). Confirmatory testing should still be completed, regardless of the outcome of the therapeutic trial.⁸

For Health Services Planners

Ensure that training, systems, processes, and resources are in place in primary care and community-based settings for health care professionals to prescribe appropriate pharmacotherapy and devices based on the asthma control level of adults with asthma. Ensure adults with asthma can access and afford the pharmacotherapy and devices most appropriate for them.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of adults with asthma who are prescribed inhaled anti-inflammatory therapy
- Percentage of adults with uncontrolled asthma who have their pharmacotherapy escalated after other reasons for poor control have been addressed

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 4: Self-Management Education and Asthma Action Plan

Adults with asthma and their caregivers receive self-management education and a written personalized asthma action plan that is reviewed regularly with a health care professional.

Definitions

Asthma action plan: A written personalized asthma action plan (sometimes referred to as an AAP) typically uses three “zones” (similar to traffic light colours: green, yellow, and red) to describe the level of asthma control. It is a collaboratively written set of instructions that are explained and provided to the person with asthma and/or their caregiver(s) to assist them with the following:

- How to assess their asthma control (self-monitoring)
- How to maintain good control by regularly using controller medication
- How to identify signs, symptoms, and/or peak flow rate indicating uncontrolled asthma
- What to do during periods of uncontrolled asthma, such as medications to add or increase, how much medication to take and for how long, and when and how to seek help (e.g., when to call their health care professional or go to the hospital)

Health care professional: Many types of health care professionals may be involved in providing and reviewing asthma action plans and providing self-management education. Asthma action plans can be provided by primary care providers, such as family doctors or nurse practitioners, or by respirologists, allergists, and other physicians. In addition, nurses, respiratory therapists, pharmacists, and other health care professionals who are certified respiratory educators (CREs) or certified asthma educators (CAEs) can review asthma action plans and provide self-management education.

Reviewed regularly: The written personalized asthma action plan should be reviewed at every asthma-related health care encounter, after a severe exacerbation of symptoms, when there is a change in the person’s level of asthma control or a change in treatment, or at least every 6 months.

Self-management education: This is tailored to the person’s learning needs and provided by a trained health care professional. It should include information and support related to the following issues³:

- Medication adherence (e.g., side effects, attitudes and goals for asthma treatment, affordability)
- Medication delivery device and inhaler technique
- Identification and avoidance or reduction of exposure to irritants and allergic triggers (e.g., colds, smoke, air pollution, allergens, perfumes/scents, chemicals)
- Smoking prevention and cessation for the person with asthma and other people in their household (e.g., vaping, tobacco, cannabis)

- Impact of comorbidities on asthma symptoms and importance of management of comorbidities (e.g., rhinitis, chronic rhinosinusitis, gastroesophageal reflux, obesity, obstructive sleep apnea, depression, anxiety)^{1,10}
- Use of peak flow meters when indicated

To ensure people are empowered to self-manage their asthma, health care professionals who provide self-management education and supports should consider the social determinants of health and the person's circumstances (e.g., education, employment, ethnicity and culture, family and social support, housing, geographic location, income, transportation and access to care).

Sources

British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2016¹⁶

Canadian Thoracic Society, 2010,⁸ 2012,⁹ 2017¹⁰

Global Initiative for Asthma, 2018¹

National Institute for Health and Care Excellence, 2017²⁰

Registered Nurses' Association of Ontario, 2017³

Rationale

Providing self-management education on inhaler technique, along with written personalized asthma action plans that reinforce understanding of pharmacotherapy and are regularly reviewed by a health care professional, can significantly improve people's asthma management and their health outcomes.^{9,29,30} In practice currently, self-management education remains poorly implemented and the provision of written asthma action plans has been low. For example, in a 2004 survey, only 22% of Canadian physicians reported consistently providing written asthma action plans, while 11% of patients reported receiving one.¹¹ The use of asthma action plans was found to be only 2% in a chart review conducted in primary care in Alberta, 0% for adults on a controller medication in a longitudinal practice audit of primary care in Ontario, and 0.1% in adults presenting to Ontario emergency departments for an acute exacerbation.^{6,29,31}

What This Quality Statement Means

For Adults With Asthma

Your health care professional should explain asthma to you, including what you can do to take care of yourself. You, your caregivers (if you want them involved), and your health care professional should work together to write your personal asthma action plan. This plan describes:

- Your medications and how to take them
- Things you can do each day to stay healthy
- What to do if your symptoms flare up

For Clinicians

Work with adults with asthma and their caregivers to create a written personalized asthma action plan. Provide them with asthma self-management education, as well as information about and referrals to local service providers who can help them learn how to avoid or reduce

exposure to triggers and improve their ability to self-manage (e.g., referral to team-based health and social services).

For Health Services Planners

Ensure that training, systems, processes, and resources are in place in primary care and community-based settings for health care professionals to provide and review asthma action plans and self-management education with adults with asthma and their caregivers. Ensure that adults with asthma and their caregivers have access to health care professionals trained in providing asthma self-management education and asthma action plans, including, but not limited to, respiratory therapists and other health care professionals who are CREs or CAEs.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of adults with asthma who have received asthma self-management education from a trained health care professional at least once
- Percentage of adults with asthma who have received a written personalized asthma action plan
- Percentage of adults with asthma who have a written personalized asthma action plan and who have had their asthma action plan reviewed in the previous 6 months

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 5: Referral to Specialized Asthma Care

Adults who meet criteria for severe asthma and/or have other appropriate indications are referred to specialized asthma care.

Definitions

Appropriate indications: Appropriate indications for referral to specialized asthma care include, but are not limited to, the following categories:

- Diagnostic uncertainty
- Uncontrolled asthma, including near-fatal exacerbations and uncontrolled asthma in pregnancy
- Severe asthma
- Confirmed or suspected work-related asthma (i.e., occupational or work-aggravated asthma)
- Suspected side effects of treatment
- Need for allergy testing to assess the possible role of environmental allergens

Severe asthma: “Asthma which requires treatment with high-dose ICS [as outlined in the current Canadian Thoracic Society position statement¹⁰] and a second controller for the previous year, or systemic corticosteroids for 50% of the previous year to prevent it from becoming ‘uncontrolled,’ or which remains ‘uncontrolled’ despite this therapy.”¹⁰ Before categorizing a person’s asthma as severe, health care professionals should assess asthma control using a structured assessment and thoroughly assess reasons for poor control (see quality statement 2). Further investigations and certain treatments for severe asthma may be better suited to care by asthma specialists.

Specialized asthma care: Depending on the clinical indication, one or more of the following professionals may provide specialized asthma care:

- A respirologist
- An allergist
- A general internist with expertise in respiratory medicine
- A health care professional with expertise in asthma and/or working within a specialized asthma clinic, such as a family physician, a nurse practitioner, a nurse, a respiratory therapist, or another health care professional who is a certified respiratory educator (CRE) or certified asthma educator (CAE)

Sources

British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2016¹⁶
Canadian Thoracic Society, 2010,⁸ 2012,⁹ 2017¹⁰
Global Initiative for Asthma, 2018¹
National Institute for Health and Care Excellence, 2017²⁰
Registered Nurses’ Association of Ontario, 2017³

Rationale

Most adults with asthma can effectively manage their disease and symptoms with appropriate pharmacotherapy, self-management education, and support from primary care. However, some people continue to have uncontrolled asthma despite appropriate pharmacological management (see quality statement 3) or require maximal pharmacotherapy to achieve control, and they may have severe asthma.^{1,10} In such clinical situations, a referral to specialized asthma care may be needed for expert advice about diagnosis and/or management.^{1,10} To promote patient-centred care, the referral process should involve an integrated approach in which there is collaboration, communication, and shared decision-making among health care professionals and the person with asthma.

What This Quality Statement Means

For Adults With Asthma

If you take your medication and avoid triggers as much as possible but continue to have asthma symptoms, or if your family doctor or nurse practitioner has other concerns, they should consult with or refer you to specialized asthma care.

For Clinicians

Refer adults with severe asthma (see definition in this statement) or other appropriate indications to specialized asthma care. After seeing the patient, the specialized asthma care provider should communicate the recommended plan for treatment and follow-up (if needed) to the primary care provider. In some cases, a consultation between the primary care provider and specialized asthma care provider may be required or sufficient; that is, the patient may not need to visit the specialized provider.

All clinicians involved should ensure the entire referral process involves collaboration, communication, and shared decision-making among health care professionals, the person with asthma, and their caregivers.

For Health Services Planners

Ensure systems, processes, and resources are in place so that all adults with asthma have timely access to specialized asthma care when needed upon referral from their primary care provider. Ensure health care professionals in primary care and community-based care are aware of the asthma services and referral processes in their communities.³

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of adults with severe asthma or one or more appropriate indications who are referred to specialized asthma care
- Percentage of adults with asthma who have two or more asthma-specific emergency department visits or one or more hospitalizations and who have a visit with a relevant specialist physician within 3 months of the index event

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 6: Follow-Up After Discharge

Adults who have had an emergency department visit or been hospitalized for an asthma exacerbation have a follow-up assessment within 2 to 7 days after discharge.

Definitions

Asthma exacerbation: This can occur in people with a pre-existing diagnosis of asthma (even when mild or well controlled) or, occasionally, as the first presentation of asthma. It is an episode characterized by a progressive worsening in symptoms of shortness of breath, cough, wheezing, or chest tightness and progressive decrease in lung function. Asthma exacerbations represent a big enough change from the person's usual status to require a change in treatment (e.g., the use of oral corticosteroids), an emergency department visit, or hospitalization. Exacerbations often occur in response to irritant or allergic trigger exposures (e.g., viral, bacterial, or fungal infection in the upper or lower respiratory tract, air pollution, smoke, pollen) and/or inadequate controller medication adherence. However, a subset of people present with exacerbations without trigger exposures.

Follow-up assessment: Adults should be assessed in primary care within 2 to 7 days of an emergency department visit or hospital discharge and reassessed regularly over subsequent weeks until they achieve asthma control and reach or surpass their personal best lung function (see quality statement 2). In some cases, a phone or virtual follow-up may be sufficient.¹

The follow-up assessment should be individualized and related to the details of the emergency department visit or hospitalization. Components of the follow-up assessment include, but are not limited to, a review of the following:

- The person's or their caregivers' understanding of the cause of the asthma exacerbation
- Asthma control and reasons for poor control (see quality statement 2)
- Changes in pharmacotherapy as needed, including discontinuation of oral corticosteroids (see quality statement 3)
- Asthma action plan (see quality statement 4)
- Self-management education, including medication adherence, inhaler technique, and avoidance or reduction of trigger exposures (see quality statement 4)

Sources

Advisory committee consensus
British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2016¹⁶
Global Initiative for Asthma, 2018¹

Rationale

Asthma exacerbations can be life-threatening emergencies and may require care in an emergency department or a hospitalization.¹ The subsequent transition from hospital to home can complicate a person's care, as transitions are vulnerable points in the provision of health care.³² Transitions pose a risk of information being lost or miscommunicated between health care settings, which can increase the person's vulnerability to adverse events.³³

The need for acute care in adults with asthma should be considered a failure of asthma management, and their transition back to primary care should provide an opportunity to address gaps in care and/or self-management.⁸ Gaps in the quality of hospital-based care may also increase vulnerability to adverse events. For example, the Ontario Asthma Regional Variation Study documented important care gaps in Ontario emergency departments, including underutilization of systemic steroids on discharge (in about 33% of adult patients) and failure to refer patients to specialized asthma care (about 2.7%).³⁴

Prompt follow-up in primary care can mitigate these risks. In some patients with respiratory or chronic illnesses other than asthma, early follow-up has been linked to improved patient outcomes and reduced rates of readmission, emergency department use, and death.³³

For more information on discharge planning and follow-up in primary care after discharge, please see the quality standard *Transitions From Hospital to Home*.

What This Quality Statement Means

For Adults With Asthma

If you have gone to the emergency department or been hospitalized because of an asthma flare-up, your family doctor or nurse practitioner should follow up with you within 2 to 7 days to see how you're doing and make any needed changes to your medications or your asthma action plan. At this visit, you can also ask questions to make sure you understand:

- What caused the flare-up
- What care you received
- What you can do to prevent asthma flare-ups

For Clinicians

Before an adult who has had an asthma exacerbation is discharged, the emergency department care team should tell the person with asthma to arrange a follow-up primary care appointment and send the person's discharge information directly to the primary care provider. If the person was hospitalized, the hospital care team should arrange for a follow-up assessment in primary care to ensure the person's treatment continues, their asthma symptoms are well controlled, and their lung function reaches their known personal best.

Complete a follow-up assessment in primary care for all adults with asthma within 2 to 7 days of an asthma-specific emergency department visit or hospitalization. In some cases, a phone or virtual follow-up may be sufficient.¹ The assessment should consist of (1) a medication review; (2) a review of strategies to improve asthma management, including medication adherence and inhaler technique; and (3) a written asthma action plan.^{1,16} Following discharge, consider referral to an asthma education program or specialized asthma care.¹

For Health Services Planners

Ensure systems, processes, and resources are in place so that all adults have timely access to follow-up in primary care after an asthma-specific emergency department visit or hospitalization. This includes ensuring that all adults with asthma have a primary care provider, that arrangements for a follow-up assessment in primary care are made, and that seamless communication is possible between hospital and primary care settings.

Quality Indicator: How to Measure Improvement for This Statement

- Percentage of adults who have a follow-up assessment in primary care within 7 days following an emergency department visit or hospitalization for an asthma exacerbation

Measurement details for this indicator, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Appendix 1: How the Health Care System Can Support Implementation

To come

Appendix 2: How to Measure Success

The Asthma Quality Standard Advisory Committee identified a small number of overarching goals for this quality standard, which can be measured using the indicators below.

How Success Can Be Measured Provincially

These are the indicators that will be used to monitor the progress being made provincially:

Percentage of adults with incident asthma whose diagnosis is confirmed with lung function testing

- Denominator: total number of adults with incident asthma
- Numerator: number of people in the denominator whose diagnosis is confirmed with lung function testing
- Data source: to come

Percentage of adults with asthma who visited the emergency department for an asthma-specific reason in the previous 12 months

- Denominator: total number of adults with asthma who visited the emergency department for an asthma-specific reason in the previous 12 months
- Numerator: number of people in the denominator
- Data source: to come

How Success Can Be Measured Locally

To measure the quality of care adults are receiving for their asthma, we recommend clinicians and organizations use the following locally measurable indicators, which cannot be measured provincially at this time:

Percentage of adults with asthma who had a structured assessment in the previous 6 months to determine their asthma symptom control and the reasons for poor control

- Denominator: total number of adults with asthma
- Numerator: number of people in the denominator who had a structured assessment in the previous 6 months to determine their asthma symptom control and the reasons for poor control
- Data source: to come

Percentage of adults with asthma who are prescribed inhaled anti-inflammatory therapy

- Denominator: total number of adults with asthma
- Numerator: number of people in the denominator who are prescribed inhaled anti-inflammatory therapy
- Data source: to come

Average number of asthma symptom-free days in the previous 4 weeks among adults with asthma

- Data source: to come

Average number of days missed from school or work due to asthma in the previous 12 months

- Data source: to come

To assess equitable delivery of care, clinicians and organizations can stratify the statement-specific indicators and the overall local indicators by patient socioeconomic and demographic characteristics, such as income, education, language, age, sex, and gender.

In addition to the overall measures of success, each quality statement within the standard is accompanied by one or more indicators. These statement-specific indicators, detailed below, are intended to guide the measurement of quality improvement efforts related to the implementation of the statement.

Quality Statement 1: Diagnosis

Percentage of adults clinically suspected of having asthma who undergo lung function testing within 3 months of seeking care for their respiratory symptoms

- Denominator: total number of adults clinically suspected of having asthma
- Numerator: number of adults in the denominator who undergo lung function testing within 3 months of seeking care for their respiratory symptoms
- Data source: local data collection

Local availability of lung function testing

- Data source: local data collection

Quality Statement 2: Asthma Control

Percentage of adults with asthma who had a structured assessment in the previous 6 months to determine their asthma symptom control and, if applicable, the reasons for poor control

- Denominator: total number of adults with asthma
- Numerator: number of adults in the denominator who had a structured assessment in the previous 6 months to determine their asthma symptom control and, if applicable, the reasons for poor control
- Data source: local data collection

Percentage of adults with asthma who received a lung function test in the previous 12 months

- Denominator: total number of adults with asthma
- Numerator: number of adults in the denominator who received a lung function test in the previous 12 months
- Data sources: local data collection, Discharge Abstract Database, National Ambulatory Care Reporting System, OHIP Claims Database

Quality Statement 3: Pharmacological Management

Percentage of adults with asthma who are prescribed inhaled anti-inflammatory therapy

- Denominator: total number of adults with asthma
- Numerator: number of adults in the denominator who are prescribed inhaled anti-inflammatory therapy
- Data sources: local data collection, OHIP Claims Database, Discharge Abstract Database, National Ambulatory Care Reporting System (65+ population)

Percentage of adults with uncontrolled asthma who have their pharmacotherapy escalated after other reasons for poor control have been addressed

- Denominator: total number of adults with uncontrolled asthma who have had other reasons for poor control addressed
- Numerator: number of adults in the denominator who have their pharmacotherapy escalated
- Data source: local data collection

Quality Statement 4: Self-Management Education and Asthma Action Plan

Percentage of adults with asthma who have received asthma self-management education from a trained health care professional at least once

- Denominator: total number of adults with asthma
- Numerator: number of adults in the denominator who have received asthma self-management education from a trained health care professional at least once
- Data source: local data collection

Percentage of adults with asthma who have received a written personalized asthma action plan

- Denominator: total number of adults with asthma
- Numerator: number of adults in the denominator who have received a written personalized asthma action plan
- Data source: local data collection

Percentage of adults with asthma who have a written personalized asthma action plan and who have had their asthma action plan reviewed in the previous 6 months

- Denominator: total number of adults with asthma who have a written personalized asthma action plan
- Numerator: number of adults in the denominator who have had their asthma action plan reviewed in the previous 6 months
- Data source: local data collection

Quality Statement 5: Referral to Specialized Asthma Care

Percentage of adults with severe asthma or one or more appropriate indications who are referred to specialized asthma care

- Denominator: total number of adults with severe asthma or one or more appropriate indications
- Numerator: number of adults in the denominator who are referred to specialized asthma care
- Data source: local data collection

Percentage of adults with asthma who have two or more asthma-specific emergency department visits or one or more hospitalizations and who have a visit with a relevant specialist physician within 3 months of the index event

- Denominator: total number of adults with asthma who have two or more asthma-specific emergency department visits or one or more hospitalizations

- Numerator: number of adults in the denominator who have a visit with a relevant specialist physician within 3 months of the index event
- Data sources: OHIP Claims Database, Discharge Abstract Database, National Ambulatory Care Reporting System

Quality Statement 6: Follow-Up After Discharge

Percentage of adults who have a follow-up assessment in primary care within 7 days following an emergency department visit or hospitalization for an asthma exacerbation

- Denominator: total number of adults who visit the emergency department or are hospitalized for an asthma exacerbation
- Numerator: number of adults in the denominator who have a follow-up assessment in primary care within 7 days following their discharge from the emergency department or hospitalization
- Data sources: local data collection, Discharge Abstract Database, National Ambulatory Care Reporting System (for providers captured in the OHIP Claims Database), OHIP Claims Database

Appendix 3: Glossary

Adult: people aged 16 years and older.

Caregiver: An unpaid person who provides care and support to an adult with asthma. This may be a spouse, family member, parent, legal guardian, or anyone identified by the person with asthma.

Health care professionals: Regulated professionals, such as nurses, nurse practitioners, occupational therapists, pharmacists, physicians, physiotherapists, psychologists, respiratory therapists, and social workers.

Health care providers: Health care professionals and also people in unregulated professions, such as administrative staff, behavioural support workers, personal support workers, recreational staff, and spiritual care staff.

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We focus on making health care more effective, efficient and affordable through a legislative mandate of:

- Reporting to the public, organizations, government and health care providers on how the health system is performing,
- Finding the best evidence of what works, and
- Translating this evidence into clinical standards; recommendations to health care professionals and funders; and tools that health care providers can easily put into practice to make improvements.

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Quality Standards

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