

Evolving Healthcare Quality Measures in

# ASTHMA

*Considerations for Hospitals*

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## Additional resources

**Agency for Healthcare Research and Quality:** <http://www.qualityindicators.ahrq.gov>

**American Hospital Association:** <http://www.aha.org>

**Medicare MACRA Program:** <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html>

**Medicare MSSP Program:** <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/index.html?redirect=/SharedSavingsProgram/>

**Medicare PQRS Program:** <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/index.html>

**Medicare Star Program:** <http://www.medicare.gov/find-a-plan/staticpages/rating/planrating-help.aspx>

**National Committee for Quality Assurance, HEDIS:** <http://www.ncqa.org/hedis>

**National Heart, Lung, and Blood Institute: Guidelines for the Diagnosis and Management of Asthma (EPR-3):** <http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines>

This list provides links to independent, third-party organizations. Neither Genentech USA, Inc. nor Novartis Pharmaceuticals Corporation has an affiliation with these organizations.

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## Asthma Care Has Become an Important Focus of Quality Improvement Efforts

Asthma is a common chronic condition affecting nearly 25 million Americans.<sup>1</sup> Although asthma can be effectively controlled with treatment, nearly half of asthma cases remain uncontrolled.<sup>2</sup>

### The prevalence of asthma in the United States is increasing

- Asthma prevalence increased from 3% of the U.S. population in 1970 to 5.5% in 1996, and to 7.8% in 2015<sup>1,3</sup>
- 24.6 million people in the U.S. are estimated to have had asthma in 2015<sup>1</sup>
  - Approximately 18.4 million are adults (7.6% of U.S. adults)<sup>1</sup>
  - More than 6 million are children under 18 years of age (8.4% of U.S. children)<sup>1</sup>
    - 4.7% (935,000) of U.S. patients aged 0-4 years
    - 9.8% (4 million) of U.S. patients aged 5-14 years
    - 10.2% (2.1 million) of U.S. patients aged 15-19 years
- In 2015, approximately 3,615 people died from asthma in the U.S.<sup>1</sup>
- Asthma remains uncontrolled in 50% of adult patients<sup>2</sup>
  - The National Heart, Lung, and Blood Institute (NHLBI) defines “control” as the degree to which the manifestations of asthma (symptoms, functional impairments, and risks of untoward events) are minimized and the goals of therapy are met<sup>4</sup>

### Goals of quality measures in asthma may include:

- Improvement in the quality of care and outcomes for asthma patients
- Increase in adherence to reporting requirements
- Improvement in transparency of care

In addition, asthma quality measures offer insights into care and outcomes across sites of care, as well as provide a baseline for improvement.

### The burden of asthma on healthcare systems is significant

- More than 10.5 million physician office visits occur annually, in addition to 1.3 million visits to hospital outpatient departments and 1.6 million emergency room (ER) visits annually<sup>1</sup>
- Asthma is the third most common reason for hospitalizations among children and adolescents, after pneumonia and acute bronchitis<sup>5</sup>
- An estimated 20% of children with asthma visited an ER in 2009<sup>6</sup>
- 439,000 patients were hospitalized with a 3.6-day average length of stay in 2010<sup>1,7</sup>
- Hospital-associated costs are nearly \$11 billion of the \$56 billion total cost of asthma<sup>6,8</sup>
- Inadequately controlled asthma can have a negative effect on an individual’s productivity and quality of life. In 2008, asthma was responsible for 14.2 million lost work days and 14.4 million lost school days<sup>9</sup>

### Quality measures are intended to improve outcomes in asthma care

Quality measures have become a standard part of clinical practice in today’s healthcare delivery system. Measures aimed at asthma treatment are designed to improve health outcomes by establishing practice standards.

Quality measures are having an increasingly significant effect on clinicians and hospital systems as the U.S. healthcare system transitions from fee-for-service (FFS) and pay-for-reporting models toward pay-for-performance and, ultimately, pay-for-*value* models.<sup>10</sup>

# Asthma Quality Measures Help Create Transparency in the Pursuit of Improved Patient Care and Outcomes

## Today's healthcare landscape encourages hospital and physician performance based on asthma quality measures<sup>11</sup>

Because of the high costs associated with uncontrolled asthma, quality measures have the potential to make significant improvement in both society and healthcare.<sup>11</sup> For example, proper medication management could potentially lead to significant savings.<sup>12</sup>

Treatment options for asthma are becoming more numerous. These agents include inhaled corticosteroids (ICSs), short-acting beta<sub>2</sub>-agonists (SABAs), long-acting beta<sub>2</sub>-agonists (LABAs), leukotriene receptor antagonists (LTRAs), and biologics.<sup>6</sup>

## Quality measures provide a structure to support optimal care and outcomes<sup>11</sup>

Quality measures are data-driven tools that help evaluate and track the quality of healthcare services provided by medical professionals and hospitals.<sup>13</sup>

### Quality measures are designed to encourage<sup>13</sup>:

- ✓ Optimal health outcomes
- ✓ Good clinical processes
- ✓ Patient safety
- ✓ Efficient use of healthcare resources
- ✓ Proper care coordination
- ✓ Patient-centered experience
- ✓ Adherence to clinical guidelines

Asthma quality measures typically fall into 3 classifications: measures related to process, outcome, and patient experience.<sup>14</sup>

**Process** measures determine if the services provided to patients are consistent with established clinical practice guidelines.<sup>14</sup>

- Process measures are seen as important predictors of improved patient outcomes

**Outcome** measures evaluate the patient's health as a result of the care received. For asthma, these can be related to resource utilization, such as<sup>15</sup>:

- Number of ER visits
- Hospital readmission rates

**Patient experience** measures in asthma are patient-reported outcomes, such as<sup>16-18</sup>:

- Frequency of rescue inhaler use
- Self-reported scoring on a range of symptoms including wheezing, coughing, shortness of breath, chest tightness or pain, and quality of sleep
- Loss of productivity

## An increased focus on transparency<sup>19</sup>

Hospitals are increasingly focused on performance as a result of transparency, reporting requirements, and the direct effect that quality rankings can have on reimbursement. Top-performing hospitals strive to improve their delivery of care and patient outcomes based on the following key indicators<sup>20</sup>:

- Length of stay
- Frequency of complications
- Mortality rates
- Readmission rates
- Patient satisfaction
- Operating margins

## Asthma quality measures help improve delivery of care

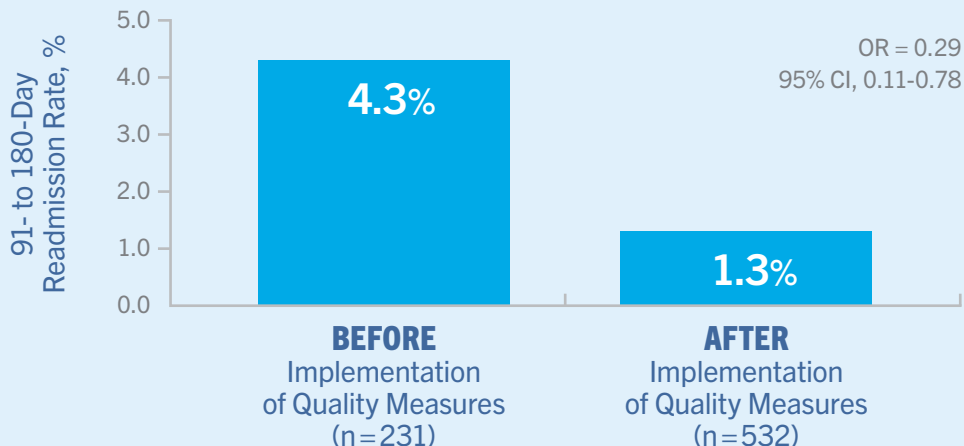
Implementing quality measures in asthma has proven to yield improved clinical outcomes, such as a reduction in hospital readmission rates.<sup>21</sup>

### Real-world experience

A study published in 2014 by Bergert et al. reported that 1 hospital was able to decrease the 91- to 180-day post-discharge readmission rates for pediatric asthma by 71% by implementing a comprehensive set of interventions and quality measures.<sup>21</sup>

- **Objective:** Measure the effect of implementing quality measures<sup>21</sup>
- **Setting:** A 207-bed pediatric hospital<sup>21</sup>
- **Population:** Ages 2 to 18 years (N = 763) with an asthma diagnosis at discharge<sup>21</sup>
- **Intervention:** A comprehensive set of interventions designed by an internal multidisciplinary asthma task force that includes<sup>21</sup>:
  - Patient and caregiver education
  - Clinician training via newsletters, quarterly medical staff meetings, and medical education conferences
  - Post-discharge follow-up appointments with a primary care provider
- **Results: 91- to 180-day post-discharge readmission rate.** During a 2-year period before the implementation of asthma quality measures (January 2006 to December 2007), the 91- to 180-day readmission rate was 4.3% (n = 231). After asthma quality measures were instituted (January 2008 to June 2012), the 91- to 180-day readmission rate decreased to 1.3% (n = 532)<sup>21</sup>

### Reduction in 91- to 180-Day Post-Discharge Readmission Rate<sup>21</sup>



CI, confidence interval; OR, odds ratio.

# Current Quality Metrics in Asthma for Health Plans, Health Systems, Hospital Networks, Providers, and ACOs

## The Joint Commission

The Joint Commission is an independent, not-for-profit organization that accredits and certifies nearly 21,000 healthcare organizations and programs in the United States.<sup>22</sup> There are no financial incentives tied to this program.

### Asthma Quality Measures for Accredited Hospitals

MEASURE	DESCRIPTION	TYPE OF MEASURE
eCAC-3: Home Management Plan of Care Given to Patient/Caregiver <sup>23,24</sup>	Electronic Children's Asthma Care-3 (eCAC-3): An assessment of the proposition of pediatric asthma patients discharged from an inpatient hospital stay with a Home Management Plan of Care (HMPC) document that was given to the pediatric asthma patient (ages 2 through 17 years) or caregiver	Process

## Agency for Healthcare Research and Quality (AHRQ)

AHRQ is part of the U.S. Department of Health & Human Services and is the lead federal agency responsible for improving the safety and quality of America's healthcare system.

### AHRQ Asthma Quality Measures for Hospitals

MEASURE	DESCRIPTION	TYPE OF MEASURE
PQI 05: Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate <sup>25</sup>	Prevention Quality Indicators #5 (PQI 05): Admissions with a principal diagnosis of chronic obstructive pulmonary disease (COPD) or asthma per 100,000 population, ages 40 years and older. Excludes obstetric admissions and transfers from other institutions	Outcome
PQI 15: Asthma in Younger Adults Admission Rate <sup>26</sup>	Prevention Quality Indicators #15 (PQI 15): Admissions for a principal diagnosis of asthma per 100,000 population, ages 18 to 39 years. Excludes admissions with an indication of cystic fibrosis or anomalies of the respiratory system, obstetric admissions, and transfers from other institutions	Outcome
PDI 14: Asthma Admissions <sup>27</sup>	Pediatric Quality Indicators #14 (PDI 14): Admissions with a principal diagnosis of asthma per 100,000 population, ages 2 through 17 years	Outcome

## Healthcare Effectiveness Data and Information Set (HEDIS)

The National Committee for Quality Assurance (NCQA) measures performance of commercial health plans on important dimensions of care and service.

### HEDIS Asthma Quality Measures for Commercial Health Plans<sup>28,29</sup>

MEASURE	DESCRIPTION	TYPE OF MEASURE
Medication Management for People With Asthma (MMA) <sup>28</sup>	Percentage of members 5 to 85 years of age who were identified as having persistent asthma and were dispensed appropriate medications, which they remained on during the treatment period; (1) for at least 50% of their treatment period and (2) for at least 75% of their treatment period	Outcome
Asthma Medication Ratio (AMR) <sup>28</sup>	Percentage of members 5 to 85 years of age who were identified as having persistent asthma and a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year	Outcome
Relative Resource Use for People With Asthma (RRU) <sup>29</sup>	Indicates how intensively a health plan uses healthcare resources to care for its members compared with other plans in the same region serving a similar population. These results show quality and cost data	Outcome

NOTE: Quality measures shown here reflect performance data collected in 2017.

## Centers for Medicare & Medicaid Services (CMS)

CMS implements quality initiatives to ensure quality healthcare for Medicare beneficiaries through accountability and public disclosure. One of its programs, the Medicare Shared Savings Program (MSSP), is designed to facilitate coordination and cooperation among accountable care organizations (ACOs). The goal is to improve the quality of care for Medicare fee-for-service beneficiaries and to share in the savings gained from reduced costs.

### Asthma Quality Measures for ACOs Participating in MSSP<sup>30</sup>

MEASURE	DESCRIPTION	TYPE OF MEASURE
<b>ACO-9: Ambulatory Sensitive Conditions Admissions: Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults<sup>30</sup></b>	All discharges with an ICD-10-CM principal diagnosis code for COPD or asthma in adults ages 40 years and older, for ACO-assigned or -aligned beneficiaries with COPD or asthma, with risk-adjusted comparison of observed discharges to expected discharges for each ACO	Outcome
<b>ACO-38: All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions (MCCs)<sup>30</sup></b>	Rate of risk-standardized acute, unplanned hospital admissions among Medicare FFS beneficiaries 65 years and older with multiple chronic conditions (MCCs) who are assigned to the ACO	Outcome

### Merit-based Incentive Payment System (MIPS)<sup>31,32</sup>

MIPS is part of a new Quality Payment Program introduced by CMS in 2016, as part of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). MIPS impacts the management and reporting of performance measures inherited from Meaningful Use (MU), the Physician Quality Reporting System (PQRS), and the Value-Based Modifier (VBM). MIPS consolidates and strengthens these programs while leveraging their respective performance measures, which have become increasingly familiar to practices over the past few years.<sup>31,32</sup>

MEASURE	DESCRIPTION	TYPE OF MEASURE
<b>MIPS #398: Optimal Asthma Control<sup>33</sup></b>	Composite measure of the percentage of pediatric and adult patients whose asthma is well-controlled as demonstrated by one of three age-appropriate, patient-reported outcome tools and who are not at risk for exacerbation	Outcome
<b>MIPS #444: Medication Management for People with Asthma<sup>34</sup></b>	Composite measure of the percentage of pediatric and adult patients whose asthma is well-controlled as demonstrated by one of three age-appropriate, patient-reported outcome tools and who are not at risk for exacerbation	Process

This is not a comprehensive listing of measures. For a full list, visit [qpp.cms/mips/quality-measures](http://qpp.cms/mips/quality-measures).

**This represents a summary of key quality measure sets and is not an exhaustive list. A number of other organizations have developed additional specialty measure sets.**

# Continued Action May Be Needed to Drive Quality Care, Improve Patient Outcomes, and Optimize the Patient Experience

## Key considerations in quality improvement for asthma care

- Organized systems of care that provide a continuum of care and a supporting infrastructure
- Continuous evaluation of current asthma quality measures as they evolve over time
- Quality measurement and improvement activities
- Shared decision-making and care coordination
- Leadership and advocacy within the healthcare system
- Improved understanding of patient needs to increase adherence
- Population health management for patient outreach

## Discussion topics

- Which quality measures in asthma care are important to your organization?
- How does your organization rate your success on asthma outcomes?
- How does your organization stay aware of evolving asthma quality measures?
- How does your organization get involved in the development of asthma quality measures?
- How have asthma quality measures changed patient care at your organization?
- Within your organization, who decides which quality measures to adhere to and how to best implement them?
- How are guidelines and pathways for asthma affecting your organization's decision-making?
- What is your organization doing to understand the needs of your asthma patients?

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