

IMPROVING ASTHMA CONTROL MEASURES FOR QUALITY IMPROVEMENT

How to Build an Improving Asthma Control Family of Measures

Measuring progress is essential to successful quality improvement (QI) initiatives. States that choose to implement programs to improve asthma control for beneficiaries of Medicaid and the Children's Health Insurance Program (CHIP) can select a family of measures to assess progress. There are three types of measures in quality improvement (QI): outcome measures, process measures, and balancing measures. Taken together, these three measure types make up a family of measures.

Below are suggestions for how to build a family of measures for a quality improvement project to improve asthma control.

- Review the measures in the tables below for outcomes, process, and balance measures to use in your quality improvement project. Adapt the measures as needed for your project.
- You may also want to use measures you are currently collecting or develop your own measures based on the needs of your state.
- An ideal family of measures includes no more than five to seven measures. Consider starting with one measure in each category and adding additional measures over time. These are the measures you will put into your run charts, which are graphs that displays performance on a measure over time.
- **Outcome measures:** Outcome measures capture what your quality improvement team is trying to achieve with your project. What are you trying to accomplish and how will you know there is an improvement? *Recommendation: 1-2 measures.*
- **Process measures:** Process measures capture how the incremental changes you are testing will collectively improve your outcome measure(s). What measures will best reflect the impacts of the changes in your quality improvement project? Your process measures should relate to your outcome and be calculated frequently (for example, monthly). *Recommendation: 3-4 measures.*
- **Balancing measures:** Balancing measures capture other consequences, both intended and unintended, that might result as part of your project. What measures are necessary to warn against unintended or negative consequences? What are other measures that you might want to observe? *Recommendation: 1 measure.*

Improving Asthma Control: Measurement Strategy

Outcome Measures		(Recommendation: 1-2 measures)	
Measure Name and Brief Description	Measure Specification Description	Data Source	Notes
Asthma Medication Ratio (AMR-CH): Percent of child beneficiaries where ratio of control medications/total asthma medications is 0.50 or greater	Numerator: Beneficiaries ages 5-18 who had a ratio of controller medications to total asthma medications of 0.50 or greater $\frac{\text{(Units of Controller Medication)}}{\text{(Units of Controller Medication + Units of Rescue Medication)}}$	Administrative data	The measure steward for this measure is NCQA (HEDIS). The measure is included in the Child Core Set .
	Denominator: Beneficiaries ages 5-18 who have persistent asthma Exclusions: Beneficiaries who had any diagnosis during the measurement year of: emphysema, COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes/vapors, cystic fibrosis, or acute respiratory failure; beneficiaries who had no asthma medications (controller or rescue) dispensed during measurement year; and beneficiaries in hospice.		
Asthma Medication Ratio (AMR-AD): Percent of adult beneficiaries where ratio of control medications/total asthma medications is 0.50 or greater	Numerator: Beneficiaries ages 19-64 that had a ratio of controller medications to total asthma medications of 0.50 or greater $\frac{\text{(Units of Controller Medication)}}{\text{(Units of Controller Medication + Units of Rescue Medication)}}$	Administrative data	The measure steward for this measure is NCQA (HEDIS). The measure is included in the Adult Core Set .
	Denominator: Beneficiaries ages 19-64 who have persistent asthma Exclusions: Beneficiaries who had any diagnosis during the measurement year of: emphysema, COPD, obstructive chronic bronchitis, chronic respiratory conditions due to fumes/vapors, cystic fibrosis, or acute respiratory failure; beneficiaries who had no asthma medications (controller or rescue) dispensed during measurement year; and beneficiaries in hospice.		
Number of asthma-related ED visits: Rate of Emergency Department Visit Use	Numerator: Asthma-related ED visits for beneficiaries ages 2 to 21 Denominator: Beneficiaries with asthma ages 2 to 21 Exclusions: None	Administrative data	CAPQuam specifications

Outcome Measures		(Recommendation: 1-2 measures)	
Measure Name and Brief Description	Measure Specification Description	Data Source	Notes
Asthma-related admissions for older adults rate (PQI05-AD): COPD or Asthma in Older Adults Admissions	<p>Numerator: All inpatient admissions with a principal diagnosis of COPD or asthma</p> <p>Denominator: Number of months for beneficiaries age 40 and older</p> <p>Exclusions: Cystic fibrosis and anomalies of the respiratory system</p> <p>Measure is reported per 100,000 beneficiary months. A lower rate indicates better performance. Some measure specifications may use a specific geographic area to define the population.</p>	Administrative data	<p>The measure steward for this measure is Agency for Healthcare Research and Quality (AHRQ).</p> <p>The measure is included in the Adult Core Set.</p>
Asthma-related admissions for younger adults rate (PQI15-AD): Asthma in Younger Adults Admissions	<p>Numerator: All inpatient admissions with a principal diagnosis of asthma</p> <p>Denominator: Number of months for beneficiaries ages 18-39</p> <p>Exclusions: Cystic fibrosis and anomalies of the respiratory system</p> <p>Measure is reported per 100,000 beneficiary months. A lower rate indicates better performance</p>	Administrative data	<p>The measure steward for this measure is Agency for Healthcare Research and Quality (AHRQ).</p> <p>The measure is included in the Adult Core Set.</p>

Process Measures		(Recommendation: 3-4 measures)		
Measure Name and Brief Description	Measure Specification Description	Data source	Notes	
Follow-up after ED visits rate: Percent of patients with an asthma-related ED visits who had a follow-up visit with their PCP within 14 days/within 30 days of the ED visits	Numerators: <ul style="list-style-type: none"> • Visits to a primary care provider that occurred within 14 days of an ED visits • Visits to a primary care provider within 30 days of an ED visits Denominator: All ED visits with a primary or secondary diagnosis of asthma for the target population Exclusions: Beneficiaries with concurrent or pre-existing COPD, cystic fibrosis, emphysema	Administrative data	CAPQuam specifications	
Beneficiaries with current Asthma Action Plans	Numerator: Beneficiaries with a documented and current Asthma Action Plan (AAP) Denominator: Beneficiaries with asthma in the target population Exclusions: None	Medical records, collected from QI site team	<i>Current</i> defined as an AAP that has been reviewed within 12 months of the previous AAP.	
Asthma self-management education (AS-ME) rate	Numerator: Beneficiaries with asthma who received AS-ME Denominator: Beneficiaries with asthma in the target population Exclusions: None	Collected from QI site team	Review of AS-ME packages from the Agency for Healthcare Research and Quality (AHRQ).	
Education in Proper Use of New Asthma Medication Delivery Device for Children with Asthma: Child beneficiaries with a new medication delivery device that have receiving instruction on using it (NQMC #10737)	Numerator: Children in the denominator who have documentation that the beneficiary or the caregiver(s) received education in the proper use of a new medication delivery device Denominators: <ul style="list-style-type: none"> • Children, ages 1 through 17 years, identified as having asthma, regardless of severity, prescribed and dispensed a new medication delivery device, in the target population • Children, ages 1 through 17 years, identified as having asthma, regardless of severity, prescribed and dispensed a new medication delivery device in the target population, in the target population Exclusions: None	Administrative data, medical records	Measure specifications from AHRQ, the measure steward.	
Beneficiaries with a documented asthma severity rating	Numerator: Beneficiaries with a documented asthma severity level Denominator: Beneficiaries with asthma in the target population Exclusions: None	Administrative data, medical records	See updates on clinical practice guidelines from the National Heart, Lung, and Blood Institute , the Global Initiative for Asthma , and ALA guidance .	

Process Measures (Recommendation: 3-4 measures)			
Measure Name and Brief Description	Measure Specification Description	Data source	Notes
Number of beneficiaries assessed for asthma symptoms: Asthma assessment (NQF 0001)	<p>Numerator: Beneficiaries who were evaluated during at least one office visit for the frequency (numeric) of daytime and nocturnal asthma symptoms</p> <p>Denominator: Beneficiaries with asthma ages 5-0</p> <p>Exclusions: None</p>	Administrative data, medical records	Measure information from NQF.

Balancing Measures (Recommendation: 1 measure)			
Measure name and Brief Description	Measure Specification Description	Data Source	Notes
Length of patient's asthma visit	<p>Responses to the question: "How does incorporating asthma management activities into your practice and patience visits impact the length of the patient's asthma visit?"</p> <p>Responses include: (1) Negatively to a major degree, (2) Negatively to a minor degree, (3) No change at all, (4) Positively to a minor degree, or (5) Positively to a major degree.</p> <p>Numerator: Number of providers responding either "Negatively to a major degree" or "Negatively to a minor degree" to the question above</p> <p>Denominator: Number of providers included in asthma intervention</p>	Collected from QI site team	
Overall practice flow and efficiency	<p>Responses to the question: "How does incorporating asthma management activities into your practice and patience visits impact your overall practice flow and efficiency for all patients?"</p> <p>Responses include: (1) Negatively to a major degree, (2) Negatively to a minor degree, (3) No change at all, (4) Positively to a minor degree, or (5) Positively to a major degree.</p> <p>Numerator: Number of providers responding either "Negatively to a major degree" or "Negatively to a minor degree" to the question above</p> <p>Denominator: Number of providers included in asthma intervention</p>	Collected from QI site team	

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