

Asthma

Measure 5: Education in Proper Use of New Asthma Medication Delivery Device for Children with Asthma

Description

This measure assesses the percentage of children, ages 1 through 17 years old with asthma of any severity, who are prescribed and dispensed a new medication delivery device and have documentation of the child or caregiver receiving education in proper use of the device. For the purposes of this measure, education in proper use is defined as verbal instruction, education, and/or demonstration. A higher proportion indicates better performance as reflected by appropriate education.

Calculation

This measure requires administrative and medical record data and is calculated as a percentage as follows:

Percentage of children ages 1 through 17 years old who were identified as having asthma, regardless of severity, who are prescribed and dispensed a new medication delivery device, who have documentation of the child or caregiver(s) receiving education in the proper use of the device.

Definitions

Education in the proper use	Documentation of verbal instruction, education and/or demonstration. Charting example: "patient instructed in proper technique for use"
New medication	A prescribed and dispensed inhaled asthma medication requiring a specific delivery device not previously dispensed in the one year prior to the measurement year.
New delivery device	For example: new prescription for a metered-dose inhaler (MDI) with valved holding chamber; changing from a nebulizer to a MDI or dry-powder inhaler (DPI); MDI to nebulizer or DPI; or DPI to MDI or nebulizer.

Eligible Population

Ages	Children no younger than 1 year on January 1 of the measurement year but younger than 18 years on December 31 of the measurement year.
Enrollment	Continuous enrollment during both the measurement year and the year prior to the measurement year.

Event/Diagnosis Diagnosis of asthma in the year prior to the measurement year (see Table 1).

Table 1: Codes to Identify Diagnosis of Asthma

Condition Name	ICD-9-CM Code(s)
Asthma	493
Extrinsic asthma	493.0
Extrinsic asthma, unspecified	493.00
Extrinsic asthma with status asthmaticus	493.01
Extrinsic asthma with (acute) exacerbation	493.02
Intrinsic asthma	493.1
Intrinsic asthma, unspecified	493.10
Intrinsic asthma with status asthmaticus	493.11
Intrinsic asthma with (acute) exacerbation	493.12
Chronic obstructive asthma	493.2
Chronic obstructive asthma, unspecified	493.20
Chronic obstructive asthma with status asthmaticus	493.21
Chronic obstructive asthma with (acute) exacerbation	493.22
Other forms of asthma	493.8
Cough variant asthma	493.82
Asthma unspecified	493.9
Asthma, unspecified type, unspecified	493.90
Asthma, unspecified type, with status asthmaticus	493.91
Asthma, unspecified type, with (acute) exacerbation	493.92

Specification

Denominator The number of children ages 1 through 17 years who were identified as having asthma, regardless of severity, who are prescribed and dispensed a new medication delivery device in the measurement year.

Numerator The number of children ages 1 through 17 years who were identified as having asthma, regardless of severity, who are prescribed and dispensed a new medication delivery device, and have documentation of the patient or the caregiver(s) receiving education in the proper use of a new medication delivery device in the measurement year.

Exclusions

Denominator

- Children with a diagnosis during the measurement year or the year prior to the measurement year indicating cystic fibrosis or bronchiectasis (Table 2)
- Children younger than 6 years old and have a diagnosis during the measurement year or the year prior to the measurement year indicating bronchopulmonary dysplasia, tracheomalacia, or bronchomalacia (Table 2)

- Children who are 6 years old or older and have a diagnosis during the measurement year or the year prior to the measurement year indicating bronchopulmonary dysplasia, tracheomalacia, or bronchomalacia (Table 2) *unless* there is also a diagnosis for an asthma variant listed in Table 1
- Children with a diagnosis indicating “Exercise induced bronchospasm” (Table 2) *unless* there is also a diagnosis for an asthma variant listed in Table 1

Table 2: Codes to Identify Exclusions

Exclusions for All Cases	ICD-9-CM Codes
Cystic fibrosis without meconium ileus	277.0, 277.00
Cystic fibrosis with meconium ileus	277.01
Cystic fibrosis with pulmonary manifestations	277.02
Cystic fibrosis with GI manifestations	277.03
Cystic fibrosis with other manifestations	277.09
Bronchiectasis	494
Bronchiectasis, without acute exacerbation	494.0
Bronchiectasis, with acute exacerbation	494.1
Exclusions for All Cases Younger than 6 Years Old	ICD-9-CM Codes
Chronic obstructive lung disease	496
Chronic lung disease, NOS	518.89
Tracheomalacia	519.11, 519.19
Chronic respiratory disease arising in the perinatal period	770.7
Bronchomalacia	748.3
Not Sufficient for Inclusion, 6 Years or Older	ICD-9-CM Codes
Chronic obstructive lung disease	496
Chronic lung disease, NOS	518.89
Tracheomalacia	519.11, 519.19
Chronic respiratory disease arising in the perinatal period	770.7
Bronchomalacia	748.3
Not Sufficient for Inclusion, All Ages	ICD-9-CM Code
Exercise induced bronchospasm	493.81