

Pediatric Asthma

Spirometry

Description

The percentage of patients aged 5 years to less than 19 years who were identified as having asthma, regardless of severity, with at least one spirometry test in the measurement year or the year prior. A higher proportion indicates better performance as reflected by appropriate guideline-based care.

Calculation

This measure requires administrative claims data and is calculated as follows:

The percentage of eligible patients with at least one spirometry test claim in the measurement year or one year prior. (numerator divided by denominator).

Definitions

Spirometry Testing Pulmonary function tests that are used to diagnose and monitor lung disease.

Codes Identify Spirometry Testing:

Description	CPT
Spirometry	94010, 94011, 94012, 94060, 94070, 94150, 94200, 94375, 94726, 94727

Eligible Population

Ages Patients ages 5 years to less than 19 years at the start of the measurement year.

Enrollment Continuous enrollment during both the measurement year and the year prior (no more than 30-day gap and must be enrolled in last month of measurement year)

Event/Diagnosis Diagnosis of asthma in the measurement year or the year prior (see Asthma Population Specification).

Codes to Identify Diagnosis of Asthma:

Mild intermittent asthma	J45.2
Mild intermittent asthma, uncomplicated	J45.20
Mild intermittent asthma with (acute) exacerbation	J45.21
Mild intermittent asthma with status asthmaticus	J45.22
Mild persistent asthma	J45.3
Mild persistent asthma, uncomplicated	J45.30
Mild persistent asthma with (acute) exacerbation	J45.31
Mild persistent asthma with status asthmaticus	J45.32

Moderate persistent asthma	J45.0
Moderate persistent asthma, uncomplicated	J45.40
Moderate persistent asthma with (acute) exacerbation	J45.41
Moderate persistent asthma with status asthmaticus	J45.42
Severe persistent asthma	J45.5
Severe persistent asthma, uncomplicated	J45.50
Severe persistent asthma with (acute) exacerbation	J45.51
Severe persistent asthma with status asthmaticus	J45.52
Unspecified asthma with (acute) exacerbation	J45.901
Unspecified asthma with status asthmaticus	J45.902
Unspecified asthma, uncomplicated	J45.909
Exercise induced bronchospasm	J45.990
Cough variant asthma	J45.991
Other asthma	J45.998
Eosinophilic asthma	J82.83

Specification

Denominator Eligible Population defined above, excluding conditions specified below.

Numerator Patients in the denominator with at least one code for spirometry within the measurement year or the year prior.

Exclusions

Pediatric asthma patients with prior diagnoses listed below in the measurement year or year prior and those under hospice care or who died during the measurement year are excluded.

Codes to Identify Exclusions:

Cystic Fibrosis	E84.0, E84.1, E84.8, E84.9
Interstitial Lung Disease	J84, J84.0, J84.01, J84.02, J84.03, J84.09, J84.1, J84.10, J84.11, J84.111, J84.112, J84.113, J84.114, J84.115, J84.116, J84.117, J84.17, J84.170, J84.178, J84.2, J84.8, J84.81, J84.82, J84.83, J84.84, J84.841, J84.842, J84.843, J84.848, J84.89, J84.9
Primary Pulmonary Hypertension	I27.0, I227.20, I27.23, I27.24, I27.29
Sarcoidosis	D86.0, D86.9
Other Chronic Lung Disease: Patients with other chronic lung diseases that are not asthma.	J98.4, J98.9
Lung Transplant	Z94.2, Z94.3
Bronchiectasis	J47.0, J47.1, J47.9
Hospice/Palliative care or Discharge status=Expired	ICD 10: Z51.5 (palliative care) UB rev: 0115,0125,0135,0145, 0155,0235,0650,0651,0652,0655, 0656, 0657,0658,0659

	<p>Type of Bill: 810,811,812,813,814, 815,817,818,819,820,821,822,823,824,825,827,828,829</p> <p>Place of service: 34</p> <p>CPT: G0182,G9473,G9474,G9475, G9476,G9477,G9478,G9479,Q5003,Q5004,Q5005,Q5006,Q5007, Q5008,Q5010,S9126,T2042,T2043,T2044,T2045,T2046,99377,99378</p> <p>Discharge status: 50 Hospice - Home; 51 Hospice - Medical Facility (Certified); 20- Expired, 40- Expired at Home, 41- Expired in a Medical facility, 42- Expired - Place Unknown</p>
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Notes

- Levels of analysis: PO, practice

References

- Global Initiative for Asthma (GINA) 2021 Reports: <https://ginasthma.org/gina-reports/>
- American Thoracic Society (ATS):
 - Standardization of Spirometry 2019 Update. An Official ATS and ERS Technical Statement: <https://www.atsjournals.org/doi/full/10.1164/rccm.201908-1590ST>
- Choosing Wisely: Spirometry for Asthma: <https://www.choosingwisely.org/patient-resources/spirometry-for-asthma/>