



MEDICAL POLICY STATEMENT Ohio Medicaid

Policy Name & Number	Date Effective
Pediatric Asthma-OH MCD-MM-1710	02/01/2025-10/31/2025
Policy Type	
MEDICAL	

Medical Policy Statement prepared by CareSource and its affiliates are derived from literature based on and supported by clinical guidelines, nationally recognized utilization and technology assessment guidelines, other medical management industry standards, and published MCO clinical policy guidelines. Medically necessary services include, but are not limited to, those health care services or supplies that are proper and necessary for the diagnosis or treatment of disease, illness, or injury and without which the patient can be expected to suffer prolonged, increased or new morbidity, impairment of function, dysfunction of a body organ or part, or significant pain and discomfort. These services meet the standards of good medical practice in the local area, are the lowest cost alternative, and are not provided mainly for the convenience of the member or provider. Medically necessary services also include those services defined in any Evidence of Coverage documents, Medical Policy Statements, Provider Manuals, Member Handbooks, and/or other policies and procedures.

Medical Policy Statements prepared by CareSource and its affiliates do not ensure an authorization or payment of services. Please refer to the plan contract (often referred to as the Evidence of Coverage) for the service(s) referenced in the Medical Policy Statement. If there is a conflict between the Medical Policy Statement and the plan contract (i.e., Evidence of Coverage), then the plan contract (i.e., Evidence of Coverage) will be the controlling document used to make the determination. According to the rules of Mental Health Parity Addiction Equity Act (MHPAEA), coverage for the diagnosis and treatment of a behavioral health disorder will not be subject to any limitations that are less favorable than the limitations that apply to medical conditions as covered under this policy.

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A. Subject

Pediatric Asthma

B. Background

Asthma is the most common chronic childhood disease - an estimated 5 million children in the United States have asthma with a disproportionate number living in poverty. Asthma is an immune-mediated, inflammatory disease, which is characterized by chronic, intermittent, and reversible lower airway obstruction caused by smooth muscle constriction and airway narrowing in response to an environmental trigger. In children, respiratory viral infections are the most common trigger of asthma exacerbation (eg, rhinovirus, influenza, and respiratory syncytial virus).

In general, children are more susceptible to disease and complications, and when combined with developmental issues makes treating asthma in children a difficult process with age-specific recommendations. For example, traditional pulmonary function testing is difficult to perform in children under 5 years of age, and physical signs of overt respiratory distress are often less prominent in older children and teens compared with infants and younger children. In addition, medication adherence and education, such as inhaled corticosteroids, are challenging. These issues in pediatric asthma treatment elevate the difficulty of inpatient admission during acute asthmatic distress.

C. Definitions

- **Acute Decompensation** – A clinical symptom of new or worsening signs and symptoms of heart failure.
- **Hemodynamic Instability** – An abnormality of the heart, blood vessels, or other organs resulting in cardiac arrest, obstructive shock, or persistent hypotension.
- **Hypoperfusion** – A supply of O₂ that does not adequately address the needs of cells. Failure of O₂ use leads to anaerobic metabolism which is the source of several detectable products and byproducts.
- **Hypotension** – Decrease in systemic blood pressure below accepted low values.
- **Inotropic/Inotropes** – Medications that increase cardiac contractility, which improves cardiac output (amount of blood pumped by the heart per minute), aiding in maintaining mean arterial pressure and perfusion to the body.
- **Ipratropium** – A bronchodilator medication that dilates the airways of the lungs. Used to treat bronchospasms associated with asthma exacerbations.
- **Metabolic Acidosis** – A disturbance in the homeostasis of blood plasma leading to an increase in hydrogen ion concentration in blood plasma.
- **Peak Expiratory Flow Rate (Peak Flow)** – Maximal flow rate that can be achieved during forceful expiration following full inspiration.
- **Short-Acting Beta Agonist** – First-line medications for acute treatment in asthma symptoms and exacerbations.
- **Vasopressors** – Medications that increase vasoconstriction, which leads to increased systemic vascular resistance (SVR). Increasing SVR leads to increased mean arterial pressure and increased perfusion to organs.

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- **Vital Sign** – Objective measurement of essential physiological functions (eg, temperature, heart rate, respiratory rate, blood pressure) of a living organism.
- **Wheeze** – A high pitched or coarse whistling sound heard in the respiratory airway when one breathes that is a result of a disease-caused airway obstruction.

D. Policy

- I. CareSource considers inpatient treatment for asthma in members younger than 18 years medically necessary when 1 or more of the following clinical criteria is met:
 - A. Hemodynamic instability, as indicated by 1 or more of the following:
 1. Vital sign abnormality not readily corrected by appropriate treatment, indicated by 1 or more of the following:
 - a. hypotension that persists despite appropriate treatment (eg, volume repletion, treatment of underlying cause)
 - b. orthostatic hypotension that persists despite appropriate treatment (eg, volume repletion)
 2. Hypotension that is severe, as indicated by 1 or more of the following:
 - a. lactate of 2.0 mmol/L (18 mg/dL) or more secondary to hypotension (ie, hypoperfusion)
 - b. metabolic acidosis (arterial or venous pH less than 7.35) not otherwise explained
 - c. mean arterial pressure less than 65 mm Hg
 - d. IV inotropic or vasopressor medication required to maintain adequate blood pressure or perfusion
 - B. Altered mental status – agitation (that is not developmentally appropriate), drowsy, or confused;
 - C. Ventilatory assistance needed;
 - D. Peak expiratory flow rate less than 25% of predicted or personal best before treatment;
 - E. Peak expiratory flow rate less than 40% of predicted or personal best after treatment;
 - F. Room air oxygen saturation less than 92% at the admitting facility at least 1 hour after completion of initial recommended treatment (ie, 3 doses of a short-acting beta agonist (SABA) with ipratropium for moderate to severe exacerbations administered every 20-30 minutes for 3 doses or continuously for 1 hour and administration of systemic steroids.
 - G. Capillary, venous, or arterial pCO₂ greater than or equal to 42, if a previous elevated pCO₂ baseline has not been established. For members with an elevated pCO₂ at baseline, an elevation of 2 mm Hg or greater above baseline.
 - H. Clinical finding (eg, moderate wheeze, breathlessness, head bobbing, nasal flaring, feeding difficulties, inability to maintain oral hydration, retractions, prolonged expiration) that persists despite observation care (eg, beta-agonist response not sustained for at least 4 hours);
 - I. Peak expiratory flow rate between 40% and 60% of predicted or personal best despite observation care;

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- J. Radiographic evidence of complication requiring inpatient treatment (eg, tension pneumothorax);
 - K. No baseline peak flow provided, or patient unable to perform peak flow, and ALL of the following:
 - 1. Finding indicative of a moderate to severe asthma exacerbation, as indicated by 1 or more of the following:
 - a. at least moderate wheeze (eg, wheeze during inspiration and expiration)
 - b. vital sign abnormality sustained despite appropriate treatment as indicated by 1 or more of the following:
 - 01. abnormal heart rate as defined as:
 - (1). < 70/min or > 180/min (for ages ≤ 3 yrs)
 - (2). < 60/min or > 150/min (for ages > 3 to 12 yrs)
 - (3). < 40/min or > 120/min (for ages > 12 yrs)
 - c. at least moderate degree of use of accessory muscles (eg, suprasternal or scalene retractions)
 - d. unable to speak in full sentences (as appropriate for age and development)
 - e. moderate or severe prolongation of expiration
 - f. silent chest (absent or markedly diminished breath sounds)
 - g. feeding difficulties
 - 2. Inadequate response to therapy, as indicated by 1 or more of the following:
 - a. deterioration of symptoms despite bronchodilator therapy
 - b. lack of significant improvement after 1 hour of bronchodilator therapy
 - c. current presentation represents a recurrence within 48 hours of last asthma exacerbation (eg, emergency department or hospitalization)
 - L. Change in clinical status requiring escalation of treatment, as indicated by 1 or more of the following:
 - 1. subsequent administration of magnesium sulfate outside of emergency department
 - 2. initiate or increase O₂
 - 3. increased frequency in bronchodilator therapy
 - 4. acute decompensation (eg, hospital-based rapid response system activated for timely clinical evaluation) requiring consideration of higher level of care
- E. Conditions of Coverage
N/A
- F. Related Policies/Rules
N/A

G. Review/Revision History

DATE		ACTION
Date Issued	09/25/2024	New policy. Approved at Committee.
Date Revised		

The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and is approved.

Date Effective	02/01/2025	
Date Archived	10/31/2025	This Policy is no longer active and has been archived. Please note that there could be other Policies that may have some of the same rules incorporated and CareSource reserves the right to follow CMS/State/NCCI guidelines without a formal documented Policy.

H. References

1. 2024 GINA Report, Global Strategy for Asthma Management and Prevention. Global Initiative for Asthma; 2024. Updated 2024. Accessed August 19, 2024. ginasthma.org
2. Abebe MM, Arefayne NR, Temesgen MM, et al. Incidence and predictive factors associated with hemodynamic instability among adult surgical patients in the post-anesthesia care unit, 2021: a prospective follow up study. *Ann Med Surg (Lond)*. 2022;74:103321. doi:10.1016/j.amsu.2022.103321
3. Asthma. Centers for Disease Control & Prevention. Accessed August 19, 2024. www.cdc.gov
4. Asthma, pediatric: P-60 (ISC). MCG Health, 28th ed. Updated March 14, 2024. Accessed August 19, 2024. www.careweb.careguidelines.com
5. Bacharier LB, Guilbert TW, Jartti T, et al. Which wheezing preschoolers should be treated for asthma. *J Allergy Clin Immunol Pract*. 2023;9(7):2611-2618. doi:10.1016/j.jaip.2021.02.045
6. Bhakta NR, Bime C, Kaminsky DA, et al. Race and ethnicity in pulmonary function test interpretation: an official American Thoracic Society statement. *Am J Respir Crit Care Med*. 2023;207(8):978-995. doi:10.1164/rccm.202302-0310ST
7. Burger M, Schaller DJ. *Metabolic Acidosis*. StatPearls Publishing; 2023. Accessed August 1, 2024. www.ncbi.nlm.nih.gov
8. Chen X, Han P, Kong Y, et al. The relationship between changes in peak expiratory flow and asthma exacerbations in asthmatic children. *BMC Pediatr*. 2024;24(1):284. doi:10.1186/s12887-024-04754-7
9. Cloutier MM, Baptist AP, Blake KV, et al. 2020 Focused updates to the Asthma Management Guidelines: a report from the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group. *J Allergy Clin Immunol*. 2020;146(6):1217-1270. doi:10.1016/j.jaci.2020.10.003
10. Craig S, Powell CVE, Nixon GM, et al. Treatment patterns and frequency of key outcomes in acute severe asthma in children: a Paediatric Research in Emergency Departments International Collaborative (PREDICT) multicentre cohort study. *BMJ Open Respir Res*. 2022;9(1):e001137. doi:10.1136/bmjresp-2021-001137
11. Devonshire AL, Kumar R. Pediatric asthma: principles and treatment. *Allergy Asthma Proc*. 2019;40(6):389-392. doi:10.2500/aap.2019.40.4254
12. DeVrieze BW, Modi P, Giwa AO. *Peak Flow Rate Measurement*. StatPearls Publishing; 2023. Accessed August 1, 2024. www.ncbi.nlm.nih.gov
13. Edwards LR, Borger J. *Pediatric Bronchospasm*. StatPearls Publishing; 2023. www.ncbi.nlm.nih.gov
14. Expert Panel Working Group of the National Heart, Lung, and Blood Institute (NHLBI) administered and coordinated National Asthma Education and Prevention Program Coordinating Committee (NAEPCC). 2020 Focused updates to the The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and is approved.

- Asthma Management Guidelines: a report from the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group. *J Allergy Clin Immunol*. 2020;146(6):1217-1270. doi:10.1016/j.jaci.2020.10.003
15. Hartert T. An overview of asthma management in children and adults. UpToDate. Updated June 14, 2024. Accessed August 19, 2024. www.uptodate.com
 16. Hsu E, Bajaj T. *Beta2-Agonists*. StatPearls Publishing; 2023. Updated June 20, 2023. Accessed August 16, 2024. www.ncbi.nlm.nih.gov
 17. Kaufman J, Marino M, Lucas J, et al. Racial and ethnic disparities in acute care use for pediatric asthma. *Ann Fam Med*. 2022;20(2):116-122. doi:10.1370/afm.2771
 18. Levy ML, Bacharier LB, Bateman E, et al. Key recommendations for primary care from the 2022 Global Initiative for Asthma (GINA) update. *NPJ Prim Care Respir Med*. 2023;33(1):7. doi:10.1038/s41533-023-00330-1
 19. Martin J, Townshend J, Brodlie M. Diagnosis and management of asthma in children. *BMJ Paediatr Open*. 2022;6(1):e001277. doi:10.1136/bmjpo-2021-001277
 20. Medical Review Asthma. InterQual. Accessed July 30, 2024. prod.cue4.com
 21. Meyer TE. Approach to diagnosis and evaluation of acute decompensated heart failure in adults. UpToDate. Updated May 9, 2023. Accessed August 19, 2024. www.uptodate.com
 22. Miller AG, Haynes KE, Gates RM, et al. Initial modified pulmonary index score predicts hospital length of stay for asthma subjects admitted to the pediatric intensive care unit. *Respir Care*. 2020;65(9):1227-1232. doi:10.4187/respcare.07396
 23. National Asthma Education and Prevention Program. Expert panel
 24. Patel P, Saab H, Aboeed A. *Ipratropium*. StatPearls Publishing; 2024. Updated February 19, 2024. Accessed August 16, 2024. www.ncbi.nlm.nih.gov
 25. Patel PH, Mirabile VS, Sharma S. *Wheezing*. StatPearls Publishing; 2023. Accessed July 31, 2024. www.ncbi.nlm.nih.gov
 26. Patel SJ, Teach SJ. Asthma. *Pediatr Rev*. 2019;40(11):549-567. doi:10.1542/pir.2018-0282
 27. Sapra A, Malik A, Bhandari P. *Vital Sign Assessment*. StatPearls Publishing; 2023. Updated May 1, 2023. Accessed August 16, 2024. www.ncbi.nlm.nih.gov
 28. Savona S, Rajpal S. 2019 ESC guidelines for the diagnosis and management of acute PE. American College of Cardiology. Accessed August 1, 2024. www.acc.org
 29. Scarfone RJ. Acute asthma exacerbations in children younger than 12 years: emergency department management. UpToDate. Updated November 16, 2022. Accessed August 19, 2024. www.uptodate.com
 30. Sharma S, Hashmi MF, Bhattacharya PT. *Hypotension*. StatPearls Publishing; 2023. Accessed August 1, 2024. www.ncbi.nlm.nih.gov
 31. VanValkinburgh D, Kerndt CC, Hashmi MF. *Inotropes and Vasopressors*. StatPearls Publishing; 2023. Updated February 19, 2023. Accessed August 16, 2024. www.ncbi.nlm.nih.gov
 32. Vyas DA, Eisenstein LG, Jones DS. Hidden in plain sight – reconsidering the use of race correction in clinical algorithms. *N Engl J Med*. 2020;383(9):874-882. doi:10.1056/NEJMms2004740

Approved ODM 10/31/2024

The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and is approved.

Independent medical review – 09/2024

Archived

The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and is approved.