

Guideline Highlights

Acute Exacerbation of Asthma

Focus Population: Age 0-18 years with an acute exacerbation of asthma

Exclude: ICU, intubation, ventilator support, conditions characterized by non-bronchodilator-responsive wheezing, children in severe respiratory distress

Goal: Correction of significant hypoxemia, rapid reversal of airflow obstruction, decreased likelihood of reoccurrence.

Recommendations

1. Assess the severity of the exacerbation with a brief and focused H&P upon presentation. Perform a more detailed assessment only after therapy has begun. Frequent and repeated clinical assessment of response to therapy is recommended.
2. Therapies recommended for ED/inpatient are oxygen, beta₂-agonist inhalations and oral corticosteroids.
 - If started on oxygen, maintain saturation 91-94%.
 - Prompt and aggressive use of beta₂-agonist inhalations is recommended for rapid reversal of airflow obstruction. Three albuterol treatments every 10 to 20 minutes can be given safely as initial therapy. Use MDI, with spacer, if patient is able to coordinate and albuterol is the only inhaled treatment.
 - Early treatment with oral corticosteroids is recommended for patients failing to respond promptly and completely to inhaled beta₂-agonist.
3. Additional therapy to be considered: ipratropium bromide and/or magnesium sulfate.
 - Ipratropium bromide (Atrovent) is recommended, in the ED only, for patients with moderate to severe acute exacerbations.
 - Magnesium sulfate is recommended for patients who have been maximized on standard therapy.
4. Neither theophylline nor aminophylline add additional benefit to standard therapy. CPT, incentive spirometry and mucolytics are **NOT** recommended during an acute asthma attack as may trigger bronchospasm.
5. Antibiotics are **NOT** recommended as a specific asthma treatment in the absence of an identified bacterial focus.
6. An MD orders weaning of O₂ and inhalation therapies during the first four hours after admission. Then weaning can be managed by trained RTs and RNs according to the CCHMC Asthma Aerosol and Oxygen Protocols.
7. Initiate consults promptly for inpatients with asthma when they are deemed appropriate.
8. For transition from inpatient to chronic management, early initiation of maintenance therapy, using a stepwise approach for asthma control, should be discussed with the PCP and family.
9. Discharge planning is expected to begin early, including an educational component enhancing the likelihood that the family, and ultimately the child, will become skilled in the ongoing management of asthma.
10. It is recommended that follow-up with the primary care physician occur 3-5 days after a visit for an acute exacerbation.

Discharge Criteria

1. Consider discharge to home from ED if severity of exacerbation is mild.
2. Child is on room air and stable on current therapies.
3. Required acute and maintenance therapies can be continued safely and competently at home, as discussed and agreed with PCP.
4. Follow-up plans are arranged.
5. Individualized patient/family education is completed.