Randall Children's Hospital

Co-Management and Referral Guidelines
Poorly Controlled Asthma
Randall Children's Pulmonology

Phone: **503-413-2050**
Fax: **503-413-2026**

Introduction

Asthma remains the most common chronic disease in childhood.

- At least half of children with asthma begin having symptoms before 2 years of age.
- Identifying children with poor lung function and repeated asthma flares can lead to improved symptom control and improved quality of life.
- Unnecessary hospitalizations and emergency department visits can be avoided with aggressive education and management.

Evaluation and Management

- Instruction regarding proper use of bronchodilator delivery systems including multidose inhaler with spacer or nebulizer (of little value without using a mask or mouth piece) should be provided both verbally and in writing.
- Use of an asthma action plan using sixth-grade language and reviewing the family's understanding of the steps in asthma management is shown to improve outcomes. Families should understand the difference between rescue bronchodilators and daily controller medications.
- The Childhood Asthma Control Test* (ACT) is a simple questionnaire and reliable way to identify children with poorly controlled asthma. The test is available online: ***http://www.asthma.com/resources/childhood-asthma-control-test.html***
  - Children who score less than 19 on the ACT should be considered poorly controlled.
  - Strong consideration should be given to starting these children on a trial of therapy with low-dose inhaled steroids (such as fluticasone 44 mcg, 2 puffs twice daily, or beclomethasone dipropionate hfa 40 mcg, 2 puffs twice a day, preferred by some insurers) for 3–6 months if they have not been treated previously, or doubling the dose for children already receiving inhaled steroids.
  - Linear growth should be carefully measured before and during steroid use.
  - Before increasing or changing controller therapy, the family should be asked about their understanding of and adherence to the regimen. Open-ended questions such as, "How many times a week do you think you forget to give his Flovent?" are helpful in allowing families to divulge the situation at home.

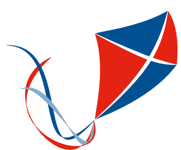
**The Childhood Asthma Control Test was developed by GSK.*

When to refer

Many families are reassured by a specialist evaluation in the following situations:

- When a child's asthma does not improve with treatment
- When there is a concern that the child has a wheezing or pulmonary disorder other than asthma
- When another condition(s) complicates asthma or its diagnosis
- When a child has required more than 2 bursts of oral corticosteroids in 1 year or has an exacerbation requiring hospitalization
- When a child or caregiver needs additional education on the diagnosis of asthma and/or the treatment plan
- When there are psychosocial, financial or family problems that interfere with the child's asthma action plan. In this case, consider referral to a mental health therapist and/or a social worker.

(continued)



RANDALL CHILDREN'S HOSPITAL
LEGACY EMANUEL

Referral process

Randall Children's Pulmonology

Phone: **503-413-2050** • Fax: **503-413-2026**

For urgent referrals, call Legacy One Call Consult & Transfer: 1-800-500-9111 to speak to the on-call pediatric pulmonologist.

Mariam Ischander, M.D.

John McQueston, M.D.

William Nichols, M.D.

Additional Resources

Sample asthma action plan:
http://www.nhlbi.nih.gov/health/resources/lung/asthma-action-plan.htm

Pedersen S.E., Hurd S.S., Lemanske R.F. Jr., et al. Global Initiative for Asthma, Global strategy for the diagnosis and management of asthma in children 5 years and younger. *Pediatric Pulmonology*. 2011 Jan;46(1):1–17. doi: 10.1002/ppul.21321. Epub 2010 Oct 20.
http://www.ncbi.nlm.nih.gov/pubmed/20963782?report=abstract

José A. Castro-Rodríguez, Catherine J. Holberg, Anne L. Wright, et al., A Clinical Index to Define Risk of Asthma in Young Children with Recurrent Wheezing, *American Journal of Respiratory and Critical Care Medicine*, Vol. 162, No. 4 (2000), pp. 1403–1406.
https://www.nescon.medicina.ufmg.br/biblioteca/imagem/0080.pdf

Guilbert T.W., Morgan W.J., Zeiger R.S., et al. Long-term inhaled corticosteroids in preschool children at high risk for asthma. *New England Journal of Medicine*. 2006 May 11;354(19):1985–97.
http://www.ncbi.nlm.nih.gov/pubmed/16687711

Information regarding MDI and nebulizer use in children

Patient education sheets for MDI with spacer use:
https://www.thoracic.org/patients/patient-resources/resources/metered-dose-inhaler-mdi.pdf
http://www.pedsinbrevard.com/wp-content/html/pa/pa_mdaeroch_art.htm

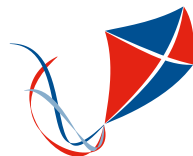
Patient information regarding use of a nebulizer:
http://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000006.htm

Ploin D, Chapuis FR, Stamm D, et al. High-dose albuterol by metered-dose inhaler plus a spacer device versus nebulization in preschool children with recurrent wheezing: a double-blind, randomized equivalence trial. *Pediatrics* 2000;106(2 Pt 1):311–7. ***http://www.ncbi.nlm.nih.gov/pubmed/10920157***

Dolovich MB, Ahrens RC, Hess DR, et al. Device selection and outcomes of aerosol therapy: evidence based guidelines. *Chest*. 2005; 127(1):335–371. ***http://www.ncbi.nlm.nih.gov/pubmed/15654001***

Updated February 2017

Find this and other co-management/referral guidelines online at: ***www.legacyhealth.org/randallguidelines***



RANDALL CHILDREN'S HOSPITAL
LEGACY EMANUEL

CHC-4590-0217 ©2017