

SUMMER 2012

# KITSAP COUNTY CHILD HEALTH NOTES

Promoting early identification and partnerships between families, primary health care providers & the community.

Distributed by: Kitsap County Medical Home Leadership Network in conjunction with Holly Ridge Center, Kitsap Public Health District & The ARC  
Contributors: Washington State Department of Health, Asthma Program and University of WA – Center on Human Development & Disability

## ASTHMA IN CHILDHOOD



**Asthma is the most common chronic disease of childhood in the United States.** The prevalence of asthma rose steadily from 1980 until the late 1990s, when it reached a plateau. In 2007, 9% of children 0 to 17 years of age (6.7 million children) had asthma. The lifetime prevalence of asthma in children is 13%. **The U.S. Centers for Disease Control and Prevention (CDC) identified Washington state's asthma prevalence as among the highest in the nation, and steadily increasing.** Approximately 80% of children with asthma develop symptoms before five years of age, with coughing and wheezing being the most common symptoms. Although wheezing is considered the hallmark of asthma, a cough that lasts more than three weeks should raise the suspicion for asthma.

Children with poorly controlled asthma have difficulty with exercise, sleep, school attendance and participation in their normal activities. Poor control also has an impact on the whole family, with parents often missing work or experiencing financial stress.

### DIAGNOSIS:

**Asthma severity is best determined at the time of diagnosis,** before treatment is initiated. There are 4 categories of severity: intermittent, mild persistent, moderate persistent and severe persistent. The 2007 Guidelines recommend objective measurement of pulmonary function (spirometry) as part of the initial evaluation. Most children older than age 6 or 7 years are capable of performing a forced expiratory maneuver, if coached by an experienced technician. Some centers can test children as young as 5 years of age.

### MEDICATIONS:

**There are two types of medication used for asthma: long-term control (“prevention”) medications,** which are taken daily to reduce airway inflammation, and **quick-relief medications,** which reverse acute airflow obstruction. All children with persistent asthma should be on a daily controller medication, using the NIH guidelines’ “stepwise” approach to selecting medication according to severity level.

**Inhaled corticosteroids (ICS),** such as fluticasone, are the medication of choice for all individuals who have persistent symptoms. **Leukotriene modifiers,** such as montelukast, may be used as an “add-on” therapy. **Short acting beta2 agonists (SABAs),** such as albuterol, relax airway smooth muscle and result in bronchodilation within minutes of administration. Use of SABAs more than 2 days/week is associated with poorly controlled asthma. There are other classes of medications, such as **anticholinergics** and **systemic corticosteroids** that are used for exacerbations of asthma.

### TREATMENT PLANS:

A child's asthma will be best controlled by a close partnership between the family and the child's health care provider, including planned visits for ongoing monitoring of asthma control. All patients should be given a **written asthma action plan** that includes instructions for how to control asthma everyday and how to recognize and manage asthma symptoms. A copy of the plan can be shared with the child's school.

### TREATMENT SUMMARY:

- Initial assignment of severity category, identification of asthma triggers, and development of treatment plan based on degree of severity
- Inhaled corticosteroids are the initial medication of choice for persistent asthma
- Environmental control is an important component of asthma management
- A written asthma action plan and patient education is critical in successful management
- Planned visits for ongoing monitoring of asthma control

### TREATMENT GUIDELINES:

"**Good Asthma Care on a Desert Island**", developed by The Washington State Department of Health and the Washington Asthma Initiative is a six-page, easy-to-use summary of the National Institutes of Health's "Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma."

[http://www.doh.wa.gov/portals/1/Documents/Pubs/345-261\\_AsthmaManagement.pdf](http://www.doh.wa.gov/portals/1/Documents/Pubs/345-261_AsthmaManagement.pdf)

The National Institutes of Health's **Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3)** from 2007 is the most up-to-date guide to evidence-based asthma care. It provides tables for determining asthma severity and initial treatment recommendation for three different age groups: 0-4 years of age, 5-11 years and 12 years and older.  
[www.nhlbi.nih.gov/guidelines/asthma/asthsumm.pdf](http://www.nhlbi.nih.gov/guidelines/asthma/asthsumm.pdf)

**Asthma home visits**, to address environmental triggers, medication adherence and provide advocacy and support, are an evidence-based strategy. Studies of home visits have shown improved health outcomes and quality of life for children with asthma, including reduction of asthma-related emergency department visits, school absenteeism and symptoms.  
[http://here.doh.wa.gov/materials/asthma-home-visits/13\\_AsthmaROI\\_E13L.pdf](http://here.doh.wa.gov/materials/asthma-home-visits/13_AsthmaROI_E13L.pdf)

**REFERENCES:**

- Expert Panel Report 3 (EPR-3): Guidelines for the Diagnosis and Management of Asthma – Summary Report 2007. J Allergy Clin Immunol November, 2007; 120 (5-supplement): S94-S138.
- Diagnosis and management of asthma in preschool and school-age children: focus on the 2007 NAEPP Guidelines. Curr Opin Pulm Med 2009; 15:52-56.
- Wood and Hill. Practical Management of Asthma. Pediatrics in Review 2009; 30:37.
- Hill and Wood. Asthma Epidemiology, Pathophysiology and Initial Evaluation. Pediatrics in Review 2009; 30:331.

**ASTHMA RESOURCES:**

Washington State Asthma Program	<a href="http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Asthma/AsthmaProgram">http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Asthma/AsthmaProgram</a>
<i>&gt;For Medical Professionals – Includes links to written asthma care plan templates (English and Spanish) and University of WA spirometry training for clinicians.</i>	
NIH Expert Panel Report 3	<a href="http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines">http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines</a>
American Acad. Of Allergy, Asthma and Immunology	<a href="http://www.aaaai.org">www.aaaai.org</a>
Asthma and Allergy Foundation of America	<a href="http://www.aafa.org">www.aafa.org</a>
Centers for Disease Control & Prevention- Asthma pages	<a href="http://www.cdc.gov/asthma">www.cdc.gov/asthma</a>

**SPECIAL NEEDS INFORMATION AND RESOURCES:**

<b>Local:</b>	CSHCN Program Coordinator Kitsap Public Health District	360-728-2240
<b>Regional:</b>	WithinReach Family Health Hotline <a href="http://www.withinreachwa.org">www.withinreachwa.org</a>	1-800-322-2588, 1-800-833-6388 TTD
	Parent to Parent Support Programs of Washington <a href="http://arcwa.org/parent_to_parent.htm">arcwa.org/parent_to_parent.htm</a>	(800) 821-5927
	Washington State Medical Home <a href="http://www.medicalhome.org">www.medicalhome.org</a>	
	The Center for Children with Special Needs <a href="http://cshcn.org">http://cshcn.org</a>	
<b>National/ Internet:</b>	American Academy of Pediatrics <a href="http://www.aap.org">www.aap.org</a> American Academy of Family Physicians <a href="http://www.aafp.org">www.aafp.org</a> Medlineplus.gov <i>A service of the US National Library of Medicine and the National Institutes of Health Health with information for families in English and Spanish</i>	<a href="http://www.nlm.nih.gov/medlineplus/">www.nlm.nih.gov/medlineplus/</a>