Asthma

Asthma Burden and Best Practices for Children with Asthma

Oregon Asthma Program
What is Asthma

Data

Risk factors

Best Practices: Guidelines-based self-management education

Oregon Asthma Program (CDC funded state program)

Resources

Leah Fisher, Oregon Asthma Program Coordinator
Current Asthma Prevalence in Oregon Children vs. Nationally

9.5% > 8.4%
Current Asthma Prevalence in Oregon Children vs. Oregon Adults

11.2% > 8.4%
Oregon Counties with higher than Average Current Asthma Prevalence (8th graders)
In Oregon Adults, AI/ANs are most likely to have Current Asthma.
Blacks are more likely to have asthma than both Whites and Hispanics.

Low Income Adults are more likely to have Current Asthma

Graph showing the percent current asthma by income level and year:
- < $15,000
- $15,000-$50,000
- > $50,000

2002:
- < $15,000: 17%
- $15,000-$50,000: 12%
- > $50,000: 8%

2003:
- < $15,000: 19%
- $15,000-$50,000: 14%
- > $50,000: 10%

2004:
- < $15,000: 20%
- $15,000-$50,000: 16%
- > $50,000: 12%
Risk Factors for Developing Asthma

- Genetic characteristics
- Occupational exposures
- Environmental exposures
What causes Asthma?

Genetic Characteristics

Environmental Exposures
Improve control by reducing exposure to Asthma triggers
OAP Interventions

Homes

Schools (SBHCs)

Communities/Tribes

Health Systems

2. Better care.
3. Lower costs.
Goal: Self-Management

- Achieve and maintain control of symptoms
- Maintain normal activity levels, including exercise
- Maintain pulmonary function as close to normal levels as possible
- Prevent asthma exacerbations
- Avoid adverse effects from asthma medications
- Prevent asthma mortality
Work in Homes

Guidelines-based Asthma Self-Management (educate caregivers)

Environmental Assessment

Referrals
Asthma Self-Management Education

Provide patient (or caregiver) with key educational messages:

- Basic Facts About Asthma
- Roles of Medications: Understanding the difference between Long-term control medication and quick-relief medications.

Source: http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf
Asthma Self-Management Education

Teach patient (or caregiver):

- Medication skills, such as correct use of the inhaler medications.
- Self-monitoring skills
- Identify current level of asthma control, goals for improvement, and teach how to self-manage worsening asthma.

Source: http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf
Asthma Self-Management Education

Asthma Triggers

- Pets
- Exercise
- Pollen
- Insects in the home
- Chemical fumes
- Stress
- Pollution
- Smoke
- Cold air

Source: http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf
Think about Asthma triggers when Assessing the Home Environment

Source: http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf
Referrals for Asthma

- Primary care physician
- Oregon Tobacco Quit Line (if parent use tobacco)
- Healthy Homes Program*

Source: http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf
Remember to breathe in slowly.

1. Take off the cap.
   Shake the inhaler.

2. Stand up.
   Breathe out.

3. Put the inhaler in your mouth
   or put it just in front of your
   mouth. As you start to
   breathe in, push down on
   the top of the inhaler and
   keep breathing in slowly.

4. Hold your breath for
   10 seconds.
   Breathe out.
Oregon Asthma Program
http://public.health.oregon.gov/DiseasesConditions/ChronicDisease/Asthma/Pages/index.aspx

National Environmental Education Foundation (NEEF)
https://www.neefusa.org/health/asthma

National Asthma Education and Prevention Program
http://www.nhlbi.nih.gov/about/naepp/

Asthma and Allergy Foundation of America
http://www.aafa.org

American Lung Association
http://www.lungusa.org

The Centers for Disease Control and Prevention
http://www.cdc.gov/asthma
Q & A

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Establish and Maintain a Partnership

The Expert Panel recommends that a partnership between patient and clinician be established to promote effective asthma management (Evidence A).

Building a partnership requires that clinicians promote open communication and ensure that patients have a basic and accurate foundation of knowledge about asthma, understand the treatment approach, and have the self-management skills necessary to monitor the disease objectively and take medication effectively (Clark et al. 1995, 1998, 2000; Evans et al. 1997; Love et al. 2000; Marabini et al. 2002; Smith et al. 2005; Wilson et al. 2005, 2006).

The Expert Panel recommends that when nurses, pharmacists, respiratory therapists, and other health care professionals are available to provide and support patient self-management education, a team approach through multiple points of care should be used (NHLBI 1995b,c). The principal clinician, care manager, or any other health professional trained in asthma management and self-management education can introduce the key educational messages (See figure 3–12.) and negotiate agreements with patients about the goals of treatment, medications to use, and the actions the patient will take to promote asthma control (Clark et al. 1995, 1998, 2000; Marabini et al. 2002; Wilson et al. 2005, 2006). All health care professionals who encounter patients who have asthma are members of the health care team and should reinforce and expand these messages during clinic visits, ED visits, pharmacy visits, telephone calls, and in community centers and schools. National certification for asthma educators is available in the United States. Although no published data are available comparing certified to noncertified educators, certification requires a minimum number of hours of experience and passing a standardized test.

It is the opinion of the Expert Panel that the health professional team members should consider documenting in the patient’s record the key educational points (See figure 3–12.), patient concerns, and actions the patient agrees to take (Evidence C). This record will enable all members of the team to be consistent and to reinforce the educational points and the progress being made. Communication strategies that unite the network of health care professionals should be developed and strengthened. See further discussion in the section on “Communication Techniques.”

**FIGURE 3–12. KEY EDUCATIONAL MESSAGES: TEACH AND REINFORCE AT EVERY OPPORTUNITY**

<table>
<thead>
<tr>
<th>Basic Facts About Asthma</th>
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<tbody>
<tr>
<td>The contrast between airways of a person who has and a person who does not have asthma; the role of inflammation</td>
</tr>
<tr>
<td>What happens to the airways in an asthma attack</td>
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<tr>
<th>Roles of Medications: Understanding the Difference Between:</th>
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<tbody>
<tr>
<td>Long-term-control medications: prevent symptoms, often by reducing inflammation. Must be taken daily. Do not expect them to give quick relief.</td>
</tr>
<tr>
<td>Quick-relief medications: short-acting beta2-agonists relax muscles around the airway and provide prompt relief of symptoms. Do not expect them to provide long-term asthma control. Using quick-relief medication on a daily basis indicates the need for starting or increasing long-term control medications.</td>
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<tr>
<th>Patient Skills</th>
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<tr>
<td>Taking medications correctly</td>
</tr>
<tr>
<td>- Inhaler technique (demonstrate to patient and have the patient return the demonstration)</td>
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<tr>
<td>- Use of devices, such as prescribed valved holding chamber (VHC), spacer, nebulizer</td>
</tr>
<tr>
<td>Identifying and avoiding environmental exposures that worsen the patient’s asthma; e.g., allergens, irritants, tobacco smoke</td>
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<tr>
<td>- Assess level of asthma control</td>
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<tr>
<td>- Monitor symptoms and, if prescribed, peak flow</td>
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<tr>
<td>- Recognize early signs and symptoms of worsening asthma</td>
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<tr>
<td>Using written asthma action plan to know when and how to:</td>
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<tr>
<td>- Take daily actions to control asthma</td>
</tr>
<tr>
<td>- Adjust medication in response to signs of worsening asthma</td>
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<tr>
<td>- Seek medical care as appropriate</td>
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TEACH ASTHMA SELF-MANAGEMENT

The Expert Panel recommends that:

- Clinicians teach patients and families the basic facts about asthma (especially the role of inflammation), medication skills, and self-monitoring techniques (Evidence A).

- Provide all patients with a written asthma action plan that includes daily management and how to recognize and handle worsening asthma. Written action plans are particularly recommended for patients who have moderate or severe persistent asthma, a history of severe exacerbations, or poorly controlled asthma (Evidence B).

- Clinicians teach patients environmental control measures (See “Component 3: Control of Environmental Factors and Comorbid Conditions That Affect Asthma” for evidence ranking on different control measures.).

Self-management education should include the following key points, adapted to meet the individual patient's needs:

- Figure 3–13 illustrates how education can be delivered across initial patient visits and followup visits.

- Teach basic facts about asthma so that the patient and family understand the rationale for needed actions. Give a brief verbal description of what asthma is, emphasizing the role of inflammation, and the intended role of each medication. Do not overwhelm the patient with too much information all at once, but repeat the important messages at each visit. Ask the patient to bring all medications to each appointment for review.

- Teach the patient necessary medication skills, such as correct use of the inhaler (See figure 3–14.) and VHC or spacer and knowing when and how to take quick-relief medications.

- Teach self-monitoring skills: symptom monitoring; peak flow monitoring, as appropriate; and recognizing early signs of deterioration.

- Identify current level of asthma control, goals for improvement, and teach how to self-manage worsening asthma by adjusting medications to regain asthma control.

- Teach relevant environmental control/avoidance strategies (See figure 3–15, "How To Control Things That Make Your Asthma Worse."). Teach how environmental allergens and irritants can make the patient’s asthma worse at home, school, and work as well as how to recognize both immediate and delayed reactions. Teach patients strategies for removing allergens and irritants to which they are sensitive from their living spaces. If possible, refer them to evaluated, effective, home-based education programs for allergen and irritant control.

- Advise all patients not to smoke tobacco and to avoid secondhand tobacco smoke. Emphasize the importance of not smoking for women who are pregnant and for parents of small children.