

ASTHMA HOME VISITS

Recommendations for Asthma Home Visits

SEPTEMBER 2016

Asthma home visits — low-cost interventions to improve asthma control.

The National Asthma Education and Prevention Program (NAEPP) of the National Heart, Lung, and Blood Institute (NHLBI) convened Expert Panels to prepare guidelines (EPR-3) for the diagnosis and management of asthma to help health care professionals bridge the gap between current knowledge and practice. The Guidelines include recommendations for Home-Based Interventions including asthma education for caregivers and allergen-control.

Allergen-Control

Studies demonstrate the benefits of programs provided in the patient’s home for multifaceted allergen control, although further evaluation of cost-effectiveness and feasibility for widespread implementation will be helpful (Evidence A). The Expert Panel recommends that multifaceted allergen education and control interventions delivered in the home setting and that have been shown to be effective in reducing exposures to cockroach, rodent, and dust-mite allergen and associated asthma morbidity be considered for asthma patients sensitive to those allergens (Evidence A).

“The most consistent and powerful change mentors noticed was a substantial improvement in children’s confidence about their asthma management. . . medications, breathing, and talking to adults about asthma, as well as a general sense among asthmatic children that they had the knowledge and skills to manage their asthma effectively”

- Interim Evaluation Report—Asthma Friendly Homes Program



Control for Allergens and Irritants

Home Visits

- Allergen-Control
- Asthma Education for Caregivers
- Toxic Stress Measures



Animal Dander (Allergen)

Allergens

- House dust mites
- Animal dander
- Molds
- Pollen
- Cockroach droppings

Irritants

- Tobacco smoke
- Air pollution
- Smoke from burning wood or grass
- Strong odors or fumes

Other

- Exercise-induced bronchoconstriction
- Medications such as aspirin or NSAIDs
- Toxic Stress
- Viral and bacterial infections
- Acid reflux
- Weather changes

Asthma Education for Caregivers

The NAEPP Expert Panel recommends that asthma education delivered in the homes of caregivers of young children be considered and that this area needs more research (Evidence C).

Key Educational Messages: Teach and reinforce at every opportunity:

- Basic Facts About Asthma
- Roles of Medications: Understanding the Differences Between: Long-Term Control Medications and Quick-Relief Medications
- Patient Skills— (Per NIH and EPR-3) Need for Allergic & Non-Allergic Trigger Management: Understand the need for skin or blood testing to reliably determine sensitivity to perennial indoor allergens and the importance of targeted exposure reduction to things which asthmatics are clinically sensitized and exposed.

Home Visit Resources and Supplies

- Allergy testing (Skin or Blood)
- Asthma Action Plan
- Asthma Basics—American Lung Association available online (for caregivers)
- Asthma Control Test (ACT)
- Asthma Home Environment Checklist (EPA)
- Cleaning Supplies
- Mattress/pillow casings
- Indoor Air Quality Testing
- Patient Health Questionnaire (PHQ9), Pediatric Symptom Checklist, Generalized Anxiety Disorder (GAD7), Adverse Child Events Survey (ACE)
- Peak Flow Meter
- Pest Control
- Spacers for inhalers
- Spirometer

Asthma Home Visits Staffing Models

It is recommended that two staff members conduct home visits: one to conduct an environmental scan and one to facilitate either asthma self management education or asthma control training for caregivers. A minimum of three home visits are recommended to allow for pre and post asthma knowledge assessment.

- Respiratory Therapist
- Certified Asthma Educator
- Environmental Specialist
- Community Health Worker
- School Nurse

Effects of Second-Hand Smoke

Tobacco smoke is also one of the most common asthma triggers, putting the 1.6 million Floridians with asthma at risk for an attack. Secondhand smoke contains more than 7,000 chemicals, including hundreds that are toxic and about 70 that can cause cancer. Children with asthma are particularly vulnerable to secondhand smoke exposure. Approximately one in 10 children in Florida have asthma, and studies show that asthma-affected children who are around secondhand smoke have more severe and frequent attacks.

Referrals should be made to the Quit Your Way resources: <http://www.tobaccofreeflorida.com/quityourway/>



ASTHMA HOME ENVIRONMENT

CHECKLIST

Home visits provide an opportunity to educate and equip asthma patients with the tools to effectively manage their disease in concert with a physician's care. This checklist—designed for home care visitors—provides a list of questions and action steps to assist in the identification and mitigation of environmental asthma triggers commonly found in and around the home. The checklist is organized into three sections—building information, home interior and room interior. The room interior is further subdivided by categories (such as bedding and sleeping arrangements, flooring, window treatments, and moisture control). This will allow the home care visitor to focus on the specific activities or things in a room—in particular the asthma patient's sleeping area—that might produce or harbor environmental triggers. The activities recommended in this checklist are generally simple and low cost. Information on outdoor air pollution follows the checklist. The last page includes information on U.S. Environmental Protection Agency (EPA) resources and an area for the home care visitor to record a home visit summary.

If the patient's sensitivities to allergens (such as dust mites, pests, warm-blooded pets and mold) and irritants (such as secondhand smoke and nitrogen dioxide) are known, the home care visitor should begin by focusing on relevant areas. This checklist covers the following allergens and irritants, which are commonly found in homes. Information is also provided on chemical irritants—found in some scented and unscented consumer products—which may worsen asthma symptoms.

Dust Mites

Triggers: Body parts and droppings.
Where Found: Highest levels found in mattresses and bedding. Also found in carpeting, curtains and draperies, upholstered furniture, and stuffed toys. Dust mites are too small to be seen with the naked eye and are found in almost every home.

Pests (such as cockroaches and rodents)

Triggers: Cockroaches – Body parts, secretions, and droppings.
Rodents – Hair, skin flakes, urine, and saliva.
Where Found: Often found in areas with food and water such as kitchens, bathrooms, and basements.

Warm-Blooded Pets (such as cats and dogs)

Triggers: Skin flakes, urine, and saliva.
Where Found: Throughout entire house, if allowed inside.

Mold

Triggers: Mold and mold spores which may begin growing indoors when they land on damp or wet surfaces.
Where Found: Often found in areas with excess moisture such as kitchens, bathrooms, and basements. There are many types of mold and they can be found in any climate.

Secondhand Smoke

Trigger: Secondhand smoke – Mixture of smoke from the burning end of a cigarette, pipe or cigar and the smoke exhaled by a smoker.
Where Found: Home or car where smoking is allowed.

Nitrogen Dioxide (combustion by-product)

Trigger: Nitrogen dioxide – An odorless gas that can irritate your eyes, nose, and throat and may cause shortness of breath.
Where Found: Associated with gas cooking appliances, fireplaces, woodstoves, and unvented kerosene and gas space heaters.



Use a spacer with a metered dose inhaler

Toxic Stress in Children

Toxic stress involves exposure to stressful and adverse experiences over a long period of time. Children are especially vulnerable to the effects of toxic stress because childhood is a crucial period for brain and physical development. Children who are exposed to toxic stress are at a high risk of developing illnesses.

Long Term Consequences of Toxic Stress

Anxiety, Asthma, Cancer, Depression, Frequent Back Pain, Frequent Headaches, Heart Disease, Weakened Immune System.

Examples of Toxic Stress

Addiction to Drugs/Alcohol (Family Member), Divorce/Separation, Death of a Loved One, Exposure to Domestic Violence, Extreme Poverty, Incarceration of Parent or Family Member, Neighborhood Violence, Mental Illness (Family Member), Neglect

Toxic Stress Screening Tools

Based on the literature review by the Center for Child Stress and Health, the following tools are recommended:

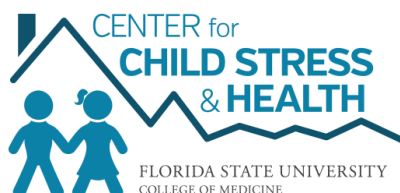
Children aged 5-11

- Patient Health Questionnaire (PHQ-9) - Mother
- Pediatric Symptom Checklist
- Adverse Child Events Survey (ACE)

Youth aged 12 and older

- Patient Health Questionnaire Modified for Adolescents (PHQ-A)
- Pediatric Symptom Checklist Youth self-report (PSC-Y)
- Pediatric Symptom Checklist
- Adverse Child Events Survey (ACE)

Referrals to behavioral health care should be made if the screening results indicate the individual is at risk. For additional information about toxic stress, go to: www.fsustress.org



The Florida Asthma Coalition (FAC), established in 2009, works to improve asthma outcomes and reduce associated costs for Floridians through various interventions. The Coalition has a designated steering committee and four workgroups. Membership includes state and local governmental agencies, schools, clinicians, advocacy groups, parents, and many non-government organizations.

Join the Coalition!

Do you want to stay involved in preventing and controlling asthma in Florida? Membership is open to anyone interested in asthma prevention, education, and disease management. Membership is **FREE!** Become a member by [completing the Membership Form](#) today!

For more information:

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