



Angela Martin, Senior Program Assistant
National Academy of Sciences
Keck Center, WS827
500 Fifth St. NW
Washington, DC 20001

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Re: Testimony submitted to the Institute of Medicine Committee on Valuing Community-based Non-Clinical Prevention Policies and Wellness Strategies

Dear Ms. Martin,

Health Resources in Action (HRiA) and the Asthma Regional Council of New England (ARC), along with the individuals and institutions signed below, respectfully submit the following comments regarding the Institute of Medicine's intentions of developing a framework that helps understand the value of community-based interventions. Specifically, we request that you examine and address the non-clinical best practice components of comprehensive asthma management—specifically the provision of home-based patient self management education and environmental assessment services. When these non-clinical services are provided by a range of well-trained providers and targeted to patients with poorly controlled asthma symptoms, they can result in dramatic health improvements, less reliance on urgent care, and in many cases cost savings to the health system. There are a number of reasons why these non-clinical approaches are called for:

1. Asthma has nearly doubled in the U.S. over the last few decades, with approximately 9.4% of children and 7.3% of adults with current asthma, and health disparities are acute. Asthma compromises the health and quality of life, and places a heavy financial burden on those with the disease, as well as an enormous strain on the health care system. Data from an August 2011 published report demonstrates that:

- Asthma symptoms in 70% of adults are considered to be “not well” or “very poorly” controlled, as defined by NHLBI's best practices put forward by its National Asthma Education and Prevention Program (NAEPP) EPR-3, *Guidelines for the Diagnosis and Management of Asthma*ⁱ and a study conducted by ARC found similar results for children;
- Twenty percent of adults with current asthma reported that it limited their usual daily activities to a moderate or great extent. The impact is greater among low income adults;ⁱⁱ
- Asthma disparities are evident. People of color have significantly higher hospitalization rates than non-Hispanic whites.ⁱⁱⁱ

2. Asthma is one of the most costly chronic diseases. Proper asthma management has the potential to save at least 25% of total asthma costs -- or close to \$5 billion nation-wide annually -- by controlling symptoms, which in turn reduces usage of urgent care health services. Among pediatric hospitalizations that could be prevented, asthma is responsible for the highest costs^{iv}. Furthermore, comprehensive asthma management has the potential to reduce “indirect” costs associated with absenteeism and presenteeism (low productivity) at work and at school.^{v, vi, viii}

3. There are national guidelines for best practices in comprehensive asthma management. NAEPP outlines four vital components of effective asthma management: 1) use of objective measures of lung

function to assess disease severity and control; 2) comprehensive pharmacologic therapy to reverse and prevent airway inflammation and constriction, and to manage asthma exacerbations; 3) patient education that fosters a partnership among the patient, family, and clinicians; and 4) environmental control measures to avoid or eliminate asthma triggers that contribute to asthma onset and severity.^{viii} While patients inconsistently receive proactive assessments of their lung function and symptoms in the clinic or properly use medications, relatively fewer patients have access to items “3” and “4” of asthma best practices: patient self-management education and control of environmental triggers. Part of the reason is a lack of capacity to deliver these essential components in the community, which is partially a result of sporadic and insufficient insurance reimbursements for these critical services.

4. There is a strong evidence base showing improvements in the health of children with poorly controlled asthma when primary and specialist clinical care is supplemented by home-based asthma education and environmental supports. Published reviews by the NAEPP (2007) and the CDC’s Task Force on Community Preventive Services (2008), along with evidence from innovative asthma management programs around the country show that these interventions—including in-depth asthma education, home environmental assessments, and mitigation of exposures that trigger asthma—can markedly improve patients’ quality of life, and often decrease urgent medical encounters at a reasonable cost. (Bibliography attached) When these interventions are targeted to high-risk patients, they may result in net cost savings to health payers who invest in them, as well as significant savings to other systems by diminishing or eliminating missed work and school days due to uncontrolled asthma. More specifically, the CDC found that “the combination of minor to moderate environmental remediation with an educational component provides good value for the money invested based on improvements in symptom-free days, savings from averted costs of asthma care, and improvement in productivity”^{ix} with evidence of:

- Return on Investment ranging from \$5.30 to \$14.00 for every dollar invested;
- Cost-effectiveness, as measured by costs per symptom-free day gained ranging from \$12.00 to \$57.00 (lower if indirect costs were included).^x

Because there have been few studies on adults, the CDC Task Force limited its conclusions to children and adolescents, although some research has shown improvements in adults resulting from home-based environmental interventions.^{xi, xii} Other benefits include reductions in health disparities, as well as improvements in quality of life and in co-morbidities such as depression, anxiety and obesity.

Why these non-clinical care components are important to effective asthma management strategies:

- *Importance of Asthma Education:* Asthma is a complicated disease. Many patients require multiple prescriptions as well as equipment to administer medications that keep their asthma under control and mitigate symptoms during an asthma attack. People with asthma must make their own decisions about when to use long-term control and quick relief medications, based on their symptoms and lung function. They must also take steps to reduce their exposure to environmental triggers that exacerbate their disease. Because of these complexities, people with asthma need proactive education and follow-up, typically via multiple sessions involving demonstration, practice, and reinforcement of information and proper techniques in their real-life living situations. In dozens of studies, asthma education sessions delivered in the home and/or workplace settings have helped patients overcome key factors in poorly managed asthma, including low expectations for controlling their disease, confusion over using different kinds of medications, misuse of medical equipment.^{xiii}
- *Importance of Home-Based Environmental Interventions:* A distinguishing characteristic of asthma is the importance of environmental exposures in exacerbating symptoms and, in some cases, contributing to the initial onset of the disease. Reducing exposure to environmental triggers can often make the difference between living productively with asthma and being severely impeded by symptoms. A variety of environmental factors associated with asthma are commonly found in homes of people from all socio-economic backgrounds, but sub-standard home environments— more frequently occupied by low-income people—are particularly problematic. Typically, dust mites, cockroaches, mold, as well as

dog and cat dander are the environmental allergens of most concern. Specific irritants also can exacerbate symptoms, including environmental tobacco smoke, cleaning chemicals, scents and fragrances, as well as nitrogen oxide from home heating appliances.^{xiv}

5. There is a critical lack of reimbursements by health payers for home-based preventative asthma care and a lack of knowledge about their cost and health benefits. ARC conducted a survey of 25 public and private payers across New England and found that payers often fail to align their reimbursements with evidence based practices. For community based care, significantly fewer than half of them reimburse for targeted care in the homes of people with uncontrolled asthma. Many even fail to reimburse for asthma education in the clinical setting.

6. A variety of providers of asthma education and environmental services have been shown to be cost effective. Based on ARC's insurance survey, there is little consistency as to the the types of providers that will be recognized for reimbursement by public and private insurers for home based services. Many will allow nurses, but not Respiratory Therapists, including those certified as Asthma Educators. Almost none will reimburse for the culturally competent care of Community Health Workers, whose cost effectiveness in providing home-based asthma care has been shown through multiple published studies.^{xv}

HRiA is a nonprofit organization dedicated to promoting public health and advancing medical research, in partnership with federal and state government agencies, academic and research institutions, nonprofits, and communities throughout the country. ARC is a coalition of nearly 75 public agencies, private organizations and researchers across New England working to tackle environmental and clinical aspects of pediatric and adult asthma; ARC is a program of HRiA but was founded by the Region I office of DHHS, HUD and the EPA in a multi-sectoral initiative to address asthma disparities in our region.

ARC and the University of Massachusetts Lowell have produced several business cases and white papers describing the cost effectiveness of the non-clinical components of evidence-based asthma management. The most relevant publication, "*Investing in Best Practices for Asthma: A Business Case*" (see link and list of other reports below footnotes), cites research and on-the-ground models demonstrating that comprehensive asthma management programs are either cost-effective or offer a return-on-investment. It also provides guidance about how to classify patients and target non-clinical interventions appropriately according to risk-level. Finally, it demonstrates that comprehensive asthma management can help people with asthma live healthy active lives, unimpeded by persistent breathing difficulties, trips to the emergency department or hospital, and missed school and workdays. Given this information, we must ask: how can we afford not to give people with asthma access to programs shown to improve quality of life and control costs?

We respectfully request that the value of community-based asthma interventions—both their justification and business case-be examined and promoted by the Institute of Medicine If you have questions, please contact Stacey Chacker, Director of Environmental Health at HRiA and the ARC at schacker@hria.org or 617-279-2240 ext. 536. Thank you for your consideration.

Sincerely,



Stacey Chacker, Director of Environmental Health
HRiA and Asthma Regional Council



Laurie Stillman, Chief Strategy and Policy Officer
Health Resources in Action

Organizations

American Lung Association of New England
Asthma Alliance of Indianapolis, Indiana

Asthma and Allergy Foundation of America, New England Chapter
Asthma Coalition of Rhode Island
Boston Public Health Commission, MA
Children's Hospital Boston, MA
Coalition for Environmentally Safe Communities, Virginia
Greater Brockton Asthma Coalition
Mass Allergy and Asthma Society
Massachusetts Coalition for Occupational Safety and Health
Massasoit Community College, Brockton, Massachusetts
National Latino Tobacco Control Network
New Hampshire Division of Public Health Services
Western Massachusetts Center for Healthy Communities, MA

Individuals

Megan Sandel MD, MPH, Med Director, National Center for Medical-Legal Partnership, Boston Med Center, MA
Molly Brett, Medical Student, Harvard Medical School
Eugene Barros, Healthy Homes Associate Division Director, Boston Public Health Commission, MA
Charles Levenstein, Professor Emeritus, University of Massachusetts- Lowell
Janet Primomo, University of Washington - Tacoma
Suzanne Allison, RN, BSN, Barnstead, NH
Reagan Nelson, Asthma & Allergy Foundation of America, St. Louis Chapter, Missouri
Debbie Koehl, MS, RRT, Chair, Asthma Alliance of Indianapolis, Indiana
Sara Swett, RN, BSN, MSN, Clinical Instructor, Pacific Lutheran University, WA
Kathy Cooper-McDermott, RN, AE-C, Groton, CT
Patsy Maloney, Professor, Pacific Lutheran University, WA
Lawrence Larson, DO, President, Pediatrics Northwest, Tacoma, WA
Dr. Jessica DeCook, Indianapolis, Indiana
Jennifer Lee, Clinton Township, MI
Linda Seidel, Sterling, MI
Crystal Fox, Millington, MI
Emily Denton, Indianapolis, Indiana
Judy Rodgers, RN Case Manager, Franciscan St. Francis Hospital, Indianapolis, Indiana
Dawn Mayer, Clinton Township, MI
Karen Daigle, MD, Pediatric Pulmonologist, Providence, Rhode Island
Danielle summers, Cumby, Indiana
Donna Needham, RN, AE-C, Thunder mist Health Center, Woonsocket, RI
Mary Walsh, Manager-Pediatric Ambulatory Programs, Tacoma, WA
Kathryn Blake, Pham, Senior Research Scientist, Nemours Children's Clinic, Jacksonville, FL
Eric Berard, DO, Woonsocket, RI
Maxine Hayes, MD, State Health Officer, Washington State Department of Health, Olympia, WA
Eugene Pinzer, Sr. Environmental Scientist, US Dept of HUD, Bethesda, MD
Courtney Wisinski, Healthy Homes Project Manager, Okemos, MI
Gini Gobeske, Public Health Nurse Consultant, Tacoma Pierce County Health Department, WA
June Tourangeau, AE-C, St. Joseph Center for Health, Providence, RI
Suzanne Blancaflor, MS, MPH, Haddam, CT

ⁱ Nguyen, Kimberly, et al *Factors Associated with Asthma Control Among Adults in five New England States 2006-2007*, Journal of Asthma, Vol 48, No 6, Pages 581-589, Aug 2011.

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Other sources:

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- b) "Asthma: A Business Case for Employers and Health Care Purchasers" and its companion "Insurance Coverage for Asthma, A Value and Quality Checklist for Purchasers of Health Care".
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