

INNOVATIONS

ARC

A Newsletter of the Asthma Regional Council of New England

A Program of The Medical Foundation

FALL 2007

ARC is a coalition of public agencies, private organizations and researchers in New England working to address the environmental contributors to asthma. Multidisciplinary leaders with knowledge, resources and determination have joined forces to swiftly identify and implement solutions to this growing public health epidemic through expanded application of innovative models and linkages to a larger network of potential partners.

ARC Embarks on New Strategic Plan

On March 30, 2007, ARC hosted a New England wide meeting of 55 representatives from public health, environment, education and housing to provide its Executive Committee with feedback on whether to “ramp down” or “ramp up” ARC’s role in bringing a coordinated response to the asthma epidemic in this region.

The Consensus Points of the Meeting were:

1. ARC should continue as an organization.
2. Asthma is still poorly managed clinically and environmentally, with the heaviest burden on low income and Black and Latino populations.
3. ARC should continue to focus on environmental contributors to asthma using its unique approach of promoting the voluntary adoption of best practices and policies
4. ARC’s **primary** work should focus on:
 - Coordination of regional activities;
 - Convening of stakeholders and partners;
 - Promoting best practices and policies;
 - Providing targeted technical assistance, education, and program implementation;
 - Tracking of disease status across region;
 - Keeping environmental public health (especially asthma) on the radar screen of policy makers; and
 - Bringing new resources to the region.
5. ARC should **secondarily** address other public health diseases and approaches that share commonalities with asthma (“Asthma+”). Asthma+ may be considered from two perspectives:
 - Environmentally-mediated conditions (e.g., CVD, unintentional injury, lead, CO, radon exposures, obesity/diabetes)
 - Intervention Modalities (e.g., healthy homes, smart growth)

Since that time, ARC received a planning grant to work with a professional management consultant (Rose Swenson) to come up with a honed business plan. To that end, in late August, a much smaller group of individuals came together to review the suggestions garnered at the March meeting, and discuss how to prioritize a limited number of objectives and policy areas for the region to pursue in the future.

Over the next two months, we hope to finalize a strategic plan and present a new, revitalized Action Plan to the ARC Council for discussion, hopefully at a December 2007 meeting. So stay tuned!

— Betsy Rosenfeld, Chair

MaineHealth Award

In May of this year, MaineHealth, an organization based in Portland that serves 75% of the state’s population, earned accolades from the Environmental Protection Agency for its innovative approach to improving the health

and quality of life for asthma sufferers. EPA’s 2007 National Environmental Leadership Award in Asthma Management recognized MaineHealth as a

continued on back cover



Pictured: Donna Levi, Rhonda Vosmus, and Julie Osgood of MaineHealth, along with Rear Admiral Kenneth Moritsugu, MD, MPH, Acting U.S. Surgeon General. Missing from photo: Deborah Deatrack, MaineHealth

ARC produces business case on best practices for asthma. To read more about this cutting-edge publication, see page 6

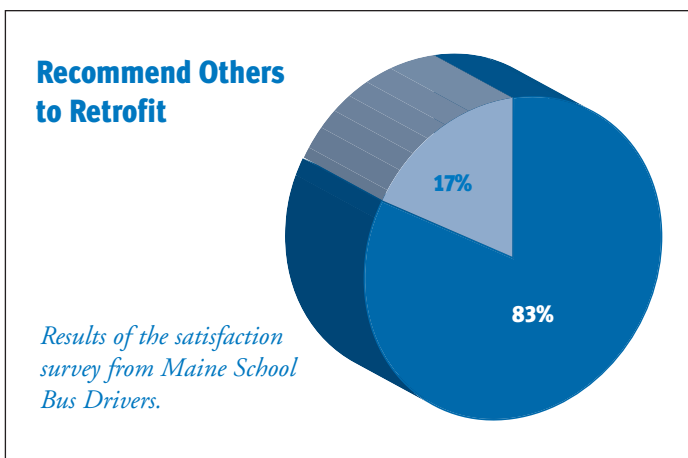


ME Bus Drivers Pleased with Retrofit Equipment

The ME DEP received a grant in October of 2003 to retrofit nearly 300 of the state's school buses with pollution control equipment. This effort was a featured story in the Summer 2006 edition of *Innovations*. Ellen Tohn, ARC Senior Advisor, conducted a survey of school transportation directors and school fleet managers to assess their experiences with the project and found intriguing results: overall, officials in ME were pleased with the retrofit installations and would recommend the program to others. Highlights of results include:

- Districts overwhelmingly reported that they would recommend others to retrofit their equipment
- 90% of participating districts rated the product as excellent or good
- Most (more than 70%) reported no problems with the equipment
- A majority of districts reported that they would like to retrofit their new buses

The results of this comprehensive project in ME give ARC and our partners continued hope that efforts to reduce harmful diesel emissions in school buses on the state level can be successful.



New England Clean Diesel Victories

Environment Northeast reported recently on a series of victories that New England states accomplished this summer.

Connecticut legislators voted to commit \$10 million over a two-year period to purchase and install pollution control devices on approximately 3,400 school buses in the state. This will cover all of the school buses that are suitable for retrofitting. The Connecticut Alliance Against Diesel Pollution (CAADP), formed by Environment Northeast in 2003, built momentum for this success throughout 2006 by pulling together a large list of supporting organizations, generating extensive press coverage, and orchestrating constituent outreach to individual legislators.

The Rhode Island General Assembly passed a law mandating clean-up of its fleet of diesel school buses. The new law calls for:

- Retiring the dirtiest buses, model year 1993 and older;
- Installing pollution control devices on the remaining school buses by 2010; and,
- The Department of Environmental Management to identify opportunities for cleaning up waste haulers and state vehicles, and to present its findings in a report to the General Assembly and Governor by January 1, 2008.

We are pleased to announce that the Consensus Building Institute, ARC, and Greater Boston Breathes Better received a grant to reduce diesel pollution emitted from construction vehicles at Boston healthcare facilities. The grant was awarded by the city of Boston. Please contact Kate Harvey at kharvey@cbuilding.org.



Newport Creatively Addresses Healthy Public Housing

In 2005, Jim Reed, Executive Director of the Newport Housing Authority (NHA) became concerned about the use of emergency medical care by Housing Authority residents and a potential increase in asthma among residents. In response, NHA undertook a series of activities to improve the health of residents, eventually forming the Healthy Residents Healthy Homes (HRHH) Coalition. The HRHH Coalition sought to reduce the burden that asthma places on families and individuals living at the Housing Authority through coordinated health, housing, and social service responses. The collaboration included the NHA, East Bay Community Action Agency, Rhode Island Department of Health, Hasbro Children's Hospital, Newport Hospital, Neighborhood Health Plan of Rhode Island, the Asthma Regional Council, the American Lung Association, and several other health and community organizations.

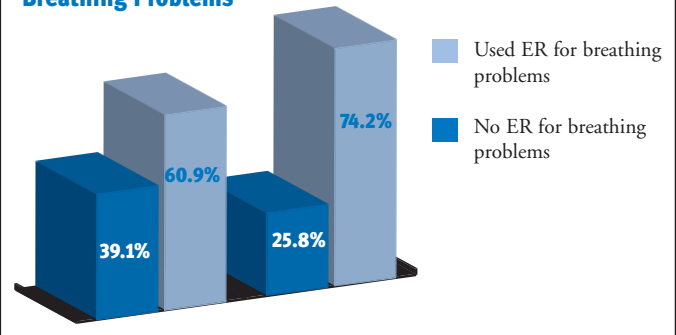
The Coalition created an initial network of knowledge that would allow them to take critical steps in improving the quality life of the residents that suffered for families:

- They developed and administered a baseline asthma survey to document asthma rates, environmental triggers linked to asthma, smoking rates, and access to health care services;
- Concurrent with the survey, the Coalition provided a 1/2 day training for all NHA staff on the environmental triggers linked to asthma; and
- They secured NHA Board adoption of a Healthy Housing Resolution, confirming the Housing Authority's commitment to a healthy housing program at the highest level of governance.

The survey results demonstrated that many residents were affected by asthma, mold was a common trigger, and that 41% of residents had someone in their household that did not have health insurance at some time during the last year. With funding from the U.S. EPA Region I, the Agency for Health Care Research and Quality and the Rhode Island Parent Information Network, the HRHH Coalition formed and trained a Healthy Homes Response Team to conduct unit assessments and use the results to initiate housing repairs, a family action plan to reduce asthma triggers, and improve linkages for social service responses

(e.g., connect residents to health care and/or medical care, assist families in advocating for their asthmatic children within the school system).

Asthma Households with Emergency Room Visits Due to Breathing Problems



During the first seven months of Response Team activities, the team contacted 50 families and completed 31 environmental assessments. These visits resulted in over 130 family action goals and over 100 maintenance requests. The most frequently identified family goals were: improve pest control and cleaning, receive asthma education, and schedule an appointment with a physician for reevaluation. The HRHH Coalition serves as an important example that a coordinated, integrated approach to asthma management can be achieved in a way that greatly impacts the lives of asthma sufferers.

One of the goals of this innovative effort is to share the approach, materials and lessons learned with others. The HRHH Coalition, in conjunction with the RI Department of Health, has posted an electronic tool kit at the following website: www.HEALTH.ri.gov.

For more information contact:

Jim Sattel, HRHH Project Manager

jsattel@ebcap.org, (401) 848-6697 ext 343;

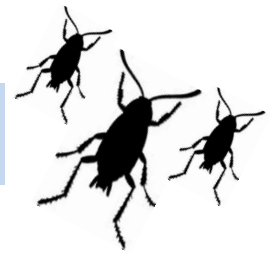
Nancy Sutton, Rhode Island Department of Health,

Nancy.Sutton@health.ri.gov, (401) 222-4040; or

Ellen Tohn, Tohn Environmental Strategies, LLC,

etohn@tohnenvironmental.com (508) 358-7770.

This article was written based on a report authored by Ellen Tohn, Senior Advisor to ARC, of Tohn Environmental Strategies.



ARC Fosters Promotion of Integrated Pest Management in New England

Controlling pests is an important intervention for preventing exacerbations of asthma. The skin and droppings left behind in the home by pests such as roaches and mice can trigger asthma attacks, allergies, and other health problems. The chemical pesticides commonly used to combat pests can also cause additional health problems.

Integrated Pest Management (IPM) is a multi-faceted approach that uses a range of pest control methods, including implementing sanitary practices and minor structural building alterations, rather than strictly relying on dangerous pesticide applications. Targeting pests this way is a more environmentally sound and effective approach in the long-run.

Tailored Interventions in Boston and Vermont show impressive results

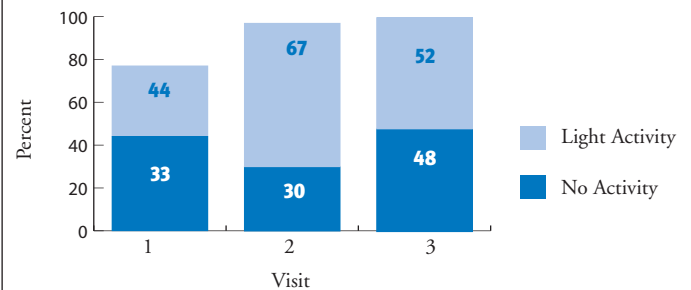
In 2003, ARC was awarded a 3-year HUD Healthy Homes grant. Laurie Stillman and Stacey Roberts coordinated the administrative aspects, while Ellen Tohn coordinated the programmatic aspects of the grant. Emily Litonjua and Margaret Reid led the team in Boston; Ron Rupp and Hendrika Maltby headed the Vermont team; and Dr. Megan Sandel and the National Center for Healthy Housing provided evaluation support. ARC reported results from the physical housing interventions in the last edition of Innovations. This edition covers the final piece of this important project: results from the IPM Pilot Project conducted at the Boston Housing Authority. This project yielded significant findings and speaks of the positive affects that IPM can bring in improving the quality of life of asthma sufferers everywhere.

Integrated Pest Management Pilot

The Boston Housing Authority IPM project was conducted in a low-income residence for the elderly and disabled with a long history of pest infestations. In multi-dwelling units, a successful IPM program hinges on how well maintenance and housing officials work in collaboration with residents. The ARC team achieved a successful level of cooperation by employing resident IPM assistants to engage their neighbors in the program. The yearlong IPM program showed to be significantly more effective than the traditional pesticide practices used in the past. Selected results are highlighted below:

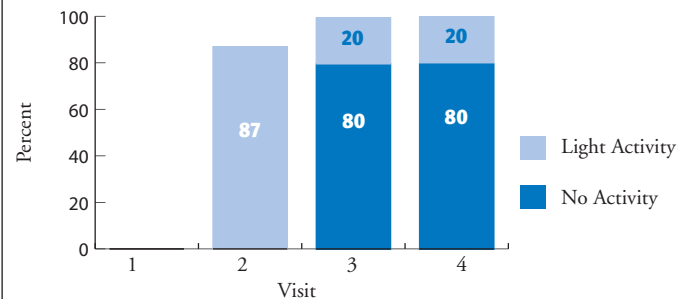
- 100% of units demonstrated little or no pest activity at the conclusion of the project, up from 77% at the project's initial stage.

Figure 1: Percent of Units with Light or No Pest Activity Across Time



Common areas saw a 67% reduction in pest activity.

Figure 2: Percent of Common Areas with Light or No Pest Activity Across Time



What else did we learn? First, the majority of residents *and* the building maintenance manager expressed satisfaction with the results. Second, program costs were manageable and BHA expects the approach to be cost effective over time. Lastly, results showed that IPM can be a powerful tool for reducing exposure to cockroaches and can bring added relief to those who live in inner-city multi-dwelling housing.

The program produced two useful educational DVDs as well. *Stop Pests in Your Homes* teaches residents how to avoid pest problems and how to combat them if they do exist. This DVD is also available in Spanish. *Integrated Pest Management: A Real Solution to Pest Problems* features a housing manager describing his experiences with running successful IPM programs in his buildings. These DVDS can be made available for free by contacting ARC.

ASTHMA SURVEILLANCE



ARC to Analyze New England's BRFSS Asthma Call-Back Survey Data

ARC recently received a grant from the U.S. Department of Health and Human Services, Region I (New England) to work with state public health epidemiologists to analyze the nation's first "Asthma Call-Back Survey". This new telephonic survey developed by the CDC "piggybacks" on some very basic adult and child asthma prevalence information collected from the 2006 BRFSS.

In order to better evaluate the epidemiology of asthma, the National Center for Chronic Disease Prevention and Health Promotion announced the availability of funds for more in-depth telephonic interviews of those respondents in the BRFSS who indicated that someone in their household had been given a diagnosis of asthma.

Healthy People 2010 (HP2010) goals include at least 7 objectives that require asthma surveillance data. Data to measure some of these objectives exist at the national level. However, there are few state-specific data systems that allow tracking of HP2010 goals related to asthma. The Asthma Call-Back Survey was designed to fill this gap in surveillance data so as to improve the public health community's ability to evaluate the disease. This survey will provide each participating state with information about the prevalence of asthma, proportion of asthmatics who visit hospital emergency departments for asthma-related care, the presence of in-home asthma triggers, and characteristics or status of asthma management and control in the population.

Five of the six New England states (CT, ME, MA, NH, VT) sought and received funding to conduct these in-depth phone interviews in 2006. Because these states are relatively small, and the number of interviewees identified for the

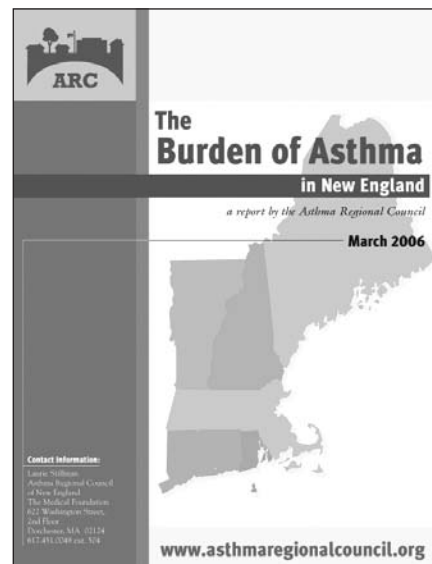
Asthma Call-back Survey is much smaller, the data from each state is mostly likely too small to produce statistically significant results, unless it is collected over a number of years.

ARC will overcome this limitation by combining and evaluating the call-back data from the five states, allowing us to examine a much larger pool of data, and analyze the findings in a regional

report. We have engaged the services of epidemiologist Mary Adams to conduct the analysis; Ms. Adams analyzed the region's BRFSS data for ARC twice before, most recently in ARC's report *The Burden of Asthma in New England*.

We are enthusiastic about beginning this project to help our states achieve an even more acute understanding of the asthma epidemic in our region, so that we can target our resources as appropriately as possible. We will soon be in contact with the state's Asthma Managers and BRFSS Coordinators to work collectively on this important project.

For more information, contact Laurie Stillman at ARC.



ARC's 2006 report "The Burden of Asthma in New England."

ANNOUNCEMENTS

New Educational Resources on IPM

Coming Late Fall 2007: ARC will release two important resources for promoting adoption of IPM in the region:

IPM Toolkit for Housing Managers – Will provide practical information for affordable housing managers on how to implement and evaluate an integrated pest management program that really works!

IPM Policy Options for Residential Real Estate – This report will provide policy-makers with regulatory and voluntary options for promoting IPM in both public and private residential settings in their states and localities.

IPM Conference Planned

ARC, and the Boston Public Health Commission, will be sponsoring an Integrated Pest Management conference in the Spring of 2008 entitled, *Getting the Bugs Out of Implementing IPM: A Conference for the Affordable Housing Community*.

For more information, contact Laurie Stillman at ARC.



ARC Releases Business Case for Best Practices in Asthma Management

Background

The National Asthma Education and Prevention Program (NAEPP) issued new guidelines specifying the essential components of effective asthma management programs, including patient education, objective monitoring of symptoms, and avoiding asthma triggers. Moreover, the CDC's *Healthy People 2010* objectives include increasing the proportion of persons with asthma who receive formal patient education from 8% to 30% (objective 24-6) and who receive care according to NAEPP guidelines (objective 24-7) (4,5).

The problem is, we are not doing a good enough job in giving asthma patients the tools they need to effectively manage their disease, as recommended by the NAEPP and the CDC. To demonstrate the problem, the CDC's *Morbidity and Mortality Weekly Report* (September 7, 2007 / 56(35); 912-915) analyzed the extent of "Asthma Self-Management Education Among Youths and Adults — United States," based on data collected by the National Health Interview Survey (2003). The findings of the survey suggest that a substantial proportion of youths and adults with current asthma lack the education necessary for effective self-management and control of asthma symptoms.

Evidence-based Solutions Needed

One of the major reasons why adequate education and home-based environmental programs are not provided is because our health system tends not to reimburse for, or be organized to provide, these prevention-oriented services. Based on ARC-sponsored research with health plans across New England, and based on our conversations with other asthma policy-makers, health payers want to understand what it would cost to implement these services and how they would impact health outcomes before investing in them.

ARC's Response

To answer these questions, ARC partnered with the University of Massachusetts Lowell to review the published research regarding the health and cost implications of home-based trigger reduction and educational programs. The results of their exhaustive research are presented in ARC's newest report: *Investing in Best Practices for Asthma: A Business Case for Education and Environmental Interventions*.

The "bottom line" research tells us:

- **Asthma Education** will result in health improvements and produce a *return on investment* (profit) for health organizations willing to provide these services.
- **Home-based Environmental Interventions** (home assessments, supplies, and services) are considered *cost effective* and will result in health improvements.

Both of these practices have stronger results when targeted to the highest risk patients (e.g. low SES, certain racial minorities, high utilizers of emergency services).

Policy Solutions

The Business Case will be an invaluable tool for asthma policy-makers interested in promoting more robust asthma management programs that include a home intervention program. ARC is interested in providing your agency or organization with technical assistance in this regard. Our goal is to ensure that health payers (both public and private) across the region will recognize the value of these prevention services and will underwrite them as a standard component of medical care for asthma.

This project was conducted with support from Children's Hospital Boston, the U.S. EPA Region I, and U.S. DHHS Reg I (New England).

For more information, contact Laurie Stillman at ARC.



ARC's newest report: *Investing in Best Practices for Asthma: A Business Case for Education and Environmental Interventions*



MISSION: ARC works to reduce the impact of asthma across New England through collaborations of health, housing, education, and environmental organizations, with particular focus on the contribution of schools, homes, and communities to the disease and with attention to its disproportionate impact on populations at greatest risk.

The Asthma Regional Council membership consists of senior representatives of the Environmental Protection Agency, the Department of Health and Human Services, and the Department of Housing and Urban Development as well as state governmental partners in health, housing, education and environment, large municipal housing and health authorities and select representatives from community based organizations and academic institutions.

The Council is lead by an Executive Director under the supervision of an Executive Committee drawn from the Council membership.

The current Executive Committee includes:

COMMITTEE MEMBERS:

Betsy Rosenfeld

U.S. Department of Health and Human Services, Region I (New England)

Suzanne Condon

Massachusetts Department of Public Health

Megan Sandel, MD, MPH

Boston Medical Center

Eileen Storey, MD, MPH

University of Connecticut Health Center

Dan Brown

U.S. Environmental Protection Agency, Region I

ARC RECEIVES FINANCIAL SUPPORT FROM THE FOLLOWING GENEROUS ORGANIZATIONS:

- Anonymous
- Boston Public Health Commission
- East Bay Community Action Program
- Maine Department of Environmental Protection Agency
- New Hampshire Department of Environmental Services
- U.S. Environmental Protection Agency, Region I (New England)
- U.S. Department of Health and Human Services, Region I (New England)
- University of Massachusetts-Lowell

EXECUTIVE DIRECTOR:

Laurie Stillman

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THE MEDICAL FOUNDATION

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of New England**

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“INNOVATIONS”

A newsletter on asthma and the environment

MaineHealth Award ...continued from front cover

national model for effective asthma management. MaineHealth’s AH! Program (Asthma Health) was selected from dozens of applicants from across the nation. “We are tremendously proud to receive this award, which recognizes MaineHealth’s commitment to helping children and adults in Maine who have asthma,” said Deborah Deatruck, Vice President for Community Health at MaineHealth. “Maine has the second highest asthma prevalence in the US among adults - only Massachusetts is higher – causes are poverty and poor indoor air quality, second hand smoke exposure, and high ozone/poor outdoor air quality. Asthma education, asthma-friendly policies, environmental changes, and improved clinical care are combined together in the AH! Program to make a big difference in the lives of children and adults with asthma in Maine.” When asked about the award, Robert Varney, Regional Administrator of the U.S. EPA said, “Maine Health exemplifies the type of leadership and innovation that make them worthy of this prestigious award. We are very proud of them and will continue to promote their work throughout our region, and nationally, working with some of our key partners in the region such as the Asthma Regional Council.” To read more about AH! Program, please visit www.mmc.org/mh_body.cfm?id=4089.

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