



Healthy Pest Free Housing Initiative

A Partnership to Reduce Pest Infestation and Promote Safe Pest Control Practices in Public Housing



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Asthma Prevention and Control
Boston Public Health Commission

Boston Public Health Commission

- Health Department for the city of Boston; Asthma Program since 1998
- Involved in multiple federally funded 'Healthy Homes' Initiatives which focused on private, section 8 and other subsidized housing occupied by children with asthma
- A partner with universities, CBOs and BHA in Healthy Public Housing Initiative
- Projects laid foundation of our current effort

Asthma and Housing

- Asthma rates have doubled over the last 30 years; most prevalent chronic disease in children and the #1 cause for hospitalization of children
- Allergens commonly found in the home have been shown to cause and/or exacerbate asthma

Public Housing and Asthma

- BRFSS (2001) documented 19% of adults living in Boston public housing had doctor diagnosed asthma
- A study of one Boston Housing Authority development found 48% of children reported doctor diagnosed asthma

Healthy Public Housing Initiative (HPHI) 2000-2004

- A research project focused on families with asthma living in Boston Housing Authority developments
- A collaborative of partners; many are active in the current initiative
- An attempt to identify *home environmental* factors that relate to high asthma rates in BHA

Cockroach Allergen

- HPHI found nearly 60% of asthmatic children had allergy to cockroaches
- Inner City Asthma Study found children who were both allergic to cockroach allergen and exposed to high levels of this allergen had 0.37 hospitalizations a year compared with 0.11 for the other children (Rosenstreich, 1997)

Mouse Allergen and Private, Subsidized Housing

- Healthy Homes 2 inspected homes of families with asthma in subsidized housing in Boston
- Over 70% of homes have a pest problem
- Many have both mouse and roach infestation but mouse infestation is most prevalent

Public Housing and Pesticides

- HPHI found every home tested had evidence *of at least one* banned or restricted pesticide
- Pest infestation and pesticide usage correlate to housing conditions
- Indoor pesticide residues can remain for years resulting in chronic exposure

Focus Groups: Pesticide Use

Residents use a variety of methods:

- “**Fog** because it is cheaper than Raid.”
- I use **Chinese Chalk** at the front entrance
- “I use **Tempo**. It is illegal to sell but there is a store in Jamaica Plain that sells it.”
- “Once we **fogged** three times in a week.”

Focus Groups, continued

- Residents are aware of the hazards of pesticides, concerned about children and asthma
- Expressed that infestation is so bad, that there is no choice
- Expressed interest in safer products if safer products are effective
- Trust friends, family, neighbors and doctors to provide accurate pest control information



Illegal and Restricted Pesticides

- *Chinese or Miracle Chalk* – Illegal
Can be confused with blackboard chalk
- *Tres Pasitos* - Illegal
Used in Latin American countries
- *Naphthalene mothballs* – Illegal
Look like candy
- *Tempo* – Restricted
Should be used in diluted form by licensed pest control operators

Pesticides and Health

- Low level acute exposure can result in ear, nose and throat irritation possibly exacerbating asthma; sub-acute poisoning results in flu like symptoms.
- Chronic exposure can affect the nervous system and may lead to neuro-developmental problems in children
- Pregnant women and children are particularly vulnerable

Why IPM

- HPHI: standard pest management practices at Boston Housing Authority are ineffective
- The Boston Healthy Homes programs: found *Integrated Pest Management* is effective and improves both environmental and health indicators
- HPHI affirmed importance of having residents educate other residents about IPM
- Focus groups found Residents are using dangerous pesticides out of desperation BUT would use another method IF proven effective

Integrated Pest Management (IPM)

- Reduces pest infestation by eliminating sources of food, water, shelter, and by blocking entry points. Diminishes reliance on pesticides.
- Employs safer, more effective alternatives to traditional pest control. Requires involvement by residents, managers and pest control companies.

IPM Principles

- MONITOR pest populations to determine where pests are hiding and entering
- BLOCK access
- ELIMINATE pest attractors: food and water
- USE low toxicity low risk pesticides

Healthy Pest-Free Housing Initiative (HPFHI)

- A multi-year demonstration project
- Funding: Kellogg Foundation & US EPA
- Collaborative partnership includes:
 - Boston Public Health Commission
 - Boston Housing Authority
 - Committee for Boston Public Housing
 - West Broadway Tenant Task Force
 - Boston University School of Public Health
 - Asthma Regional Council
 - Boston Urban Asthma Coalition
 - Mass Public Health Association



Goals of HPFHI

- Improve health and quality of life for public housing residents through the implementation of a comprehensive Integrated Pest Management program
- Provide asthma education and improve access to health services

HPFHI Implementation

- Undertake IPM in 15 developments over 3 years
- Use community health advocates for resident education, supported by a public information campaign, to promote safe pest control practices
- Include a bi-annual pesticide 'buyback'.

HPFHI Implementation, cont.

- Dedicate staff to implement program and develop sustainable policies and procedures to institutionalize IPM in all BHA housing
- Evaluate the program
- Work with health policy and advocacy organizations to disseminate outcomes

HPFHI: The future of pest control in affordable multi-family housing?

- Could a comprehensive IPM program be implemented and sustained in a large urban public housing system?
- What elements are necessary to a successful program?
- How can success be measured?
- Is it cost effective?