


Integrated Pest Management

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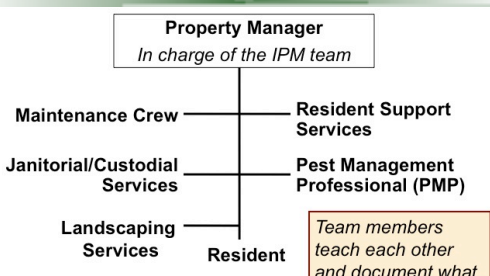
IPM Defined

- Integrated Pest Management (IPM) is the coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means and with the least possible hazard to people, property, and the environment (Environmental Protection Agency, 2010).
- In a structural setting, an IPM program consists of
 1. inspection,
 2. identification,
 3. establishment of threshold levels,
 4. employment of two or more control measures (which may be cultural, mechanical, biological, or chemical), and
 5. evaluation of effectiveness(Adapted from the National Pest Management Association's Urban IPM Handbook, 2006).



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The IPM Team



Team members teach each other and document what they see and do.

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1. Inspection

- Finds pests or evidence of pests visually or using a monitoring device.
- Done by everyone on the IPM team.
- Inspection of the premises can:
 - Determine the location and extent of the infestation
 - Determine conditions conducive to the infestation
 - Identify avenues of possible entry
 - Identify items or factors that would impact the development of a pest management program



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2. Identification

- Identifies the pest species.
- Done by someone trained in pest identification usually an entomologist or pest management professional.
- Allow IPM team members to target control by thinking like the pest—all pests need food, water, and shelter. Also, many pesticides are pest-specific.



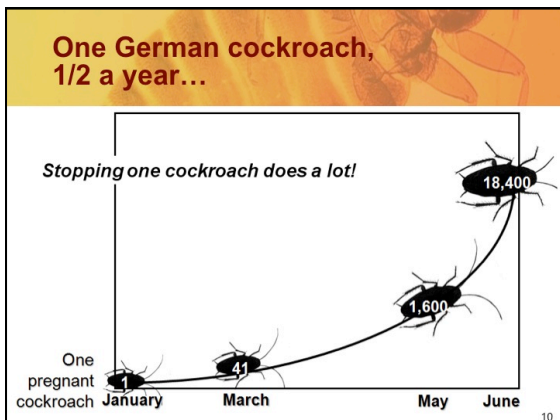
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3. Establishment of Threshold Levels

- An action threshold is the pest population level at which control measures are undertaken.
- Established by the IPM team in the property's IPM Policy/Plan.
- In housing, the level of infestation that is deemed unacceptable is low—zero tolerance for cockroaches, rodents, and bed bugs.



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4. Employment of 2 or More Control Measures

- Cultural, Mechanical, Biological, or Chemical
- Strategies chosen should be ones that are:
 - Least disruptive of natural controls;
 - Least hazardous to human health (including mental health of the resident);
 - Least toxic to nontarget organisms;
 - Least damaging to the general environment;
 - Most likely to produce a permanent reduction of the pest population; and
 - Practical in terms of time and expense.

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Control Measure: Cultural

- Residents and staff change normal practices or habits and thus make it harder for the pests to access food, water, or shelter.
- Residents may require education or hands-on support from the property manager, resident service coordinator, or social service agency.
- Guidance should be catered to the resident, provide detailed directions, and refer to specific areas and conditions in the home.

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Cultural Continued

- Consider the routines for:
 - Food preparation
 - Food storage
 - Trash removal
 - Eating (locations in the home)
 - Acquiring infested items and bringing them home, and
 - Cleaning
- Focus areas are determined by the pest:
 - Food sources: human food, pet food, cardboard glue, grease around the stove...
 - Water sources: dripping faucets, sweaty pipes, plant saucers, sinks...
 - Shelter (a place to hide)...

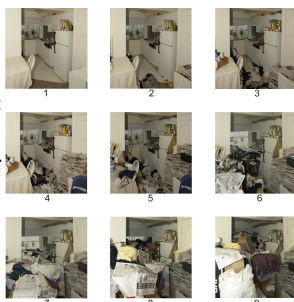


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Clutter Image Rating Scale

From

Frost, R. O., & Steketee, G. (2006). Compulsive hoarding and acquiring: workbook. Oxford, UK: Oxford University Press.



Control Measure: Mechanical

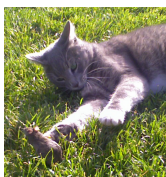
- Mechanical (or physical) control involves the use of traps, caulks, seals, or barriers to prevent pests from entering, establishing, and living in an undesired location.
- Often completed by maintenance staff or a licensed professional.
- May include any or all of the measures listed below:
 - Excluding (pest proofing) using barriers such as screens, seals, nets, and caulking
 - Manually removing pests using hands, snares, or by vacuuming
 - Setting traps including sticky, electric, light, multiple catch, and snap types
 - Using heat or cold to destroy pests



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Control Measure: Biological

- Biological control is the use of parasites, predators, or pathogens to control or manage pests.
- Not usually applied in structural IPM.
- Cats can't be relied on for rodent control.



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Control Measure: Chemical

- Using pesticides—chemicals that kill pests.
- Only licensed pest management professionals should apply pesticides.
- Pesticides should work *with* other control measures to gain sustainable control.
- Choose the lowest risk pesticide *for the job*.
- Risk = Toxicity + Risk of Exposure



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5. Evaluation of Effectiveness

- Assess and adjust the control measures that have been employed.
- Done by everyone involved in pest control.
- Plan to evaluate should
 - Identify areas overlooked;
 - Enhance program effectiveness;
 - Reapply or revise any pest management procedures as appropriate; and
 - Monitor for new infestations.



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IPM Reviewed

In a structural setting, an IPM program consists of

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IPM Resources

Websites

- The Northeastern IPM Center's IPM in Multifamily Housing website: www.stoppests.org
- The National Pesticide Information Center: <http://npic.orst.edu/>
- Boston's Healthy Pest Free Housing Initiative: <http://www.bphc.org/hpfi/AboutUs/Pages/home.aspx>

People

- Allison Taisey: aat25@cornell.edu or 607-220-6417
- Local Cooperative Extension Office: <http://www.csrees.usda.gov/Extension/>
- GreenShield Certified Company: <http://www.greenshieldcertified.org/>
- GreenPro Certified Company: <http://www.npmagreenpro.org/>



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Home

- IPM in Multifamily Housing Training → Materials for a day-long IPM in Multifamily Housing Training, including powerpoint presentations with instructor notes.
- Resident's Briefing → Materials for educating residents about their part in IPM, including training videos, brochure templates, and fact sheets.
- Resources → Documents referenced in the IPM in Multifamily Housing Training including HUD's Voluntary Guidance on IPM

Welcome to StopPests.org!

- Useful websites
- Other resources: guidances, case studies, etc.
- Finding an IPM Professional



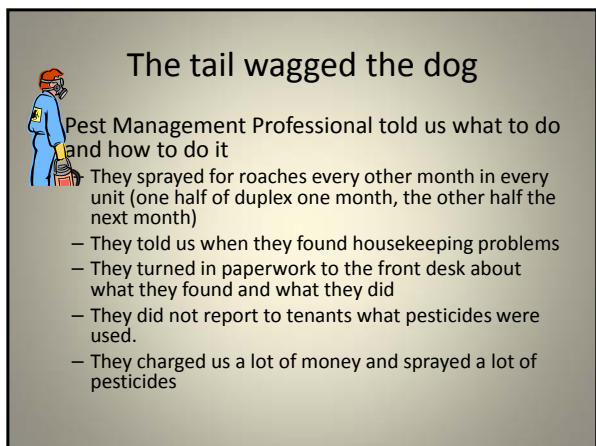
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IPM
Integrated Pest Management
for Healthier Homes

The slide features a central title 'IPM' with the subtitle 'Integrated Pest Management for Healthier Homes'. It is surrounded by illustrations of various pests: several roaches at the top, a mouse at the bottom right, and several ticks or mites at the bottom left.

Prior to
Integrated Pest Management



The tail wagged the dog

 Pest Management Professional told us what to do and how to do it


They sprayed for roaches every other month in every unit (one half of duplex one month, the other half the next month)

- They told us when they found housekeeping problems
- They turned in paperwork to the front desk about what they found and what they did
- They did not report to tenants what pesticides were used.
- They charged us a lot of money and sprayed a lot of pesticides

The tail wagged the dog

Property Managers re-acted rather than pro-acted pest control

- They accepted tenants without prior housekeeping checks
- They did annual inspections for housekeeping issues
- They did not enforce pest problem reporting
- They waited until routine PMP service was in to treat problem units (problem units were put on a "trouble list")
- They did not include tenants in the solution





The tail wagged the dog

Tenants put up with pests until they were infested and overrun.

- They brought pests with them
- They didn't have an understanding that they often contributed to the problem
- They replaced removed furniture with used furniture and mattresses
- They shared with their neighbors



And now with the implementation of IPM

The dog wags the tail

Pest Management Professionals are responding to our requests for services

- PMPs have all but eliminated pesticide sprays in the elimination of roaches, substituting instead, baits, gels, and boric acid
- PMPs are part of the education team with the tenants
- PMPs report whatever pesticides are used to the PMs and tenants
- PMPs work with us on what they will use and what to look for



The dog wags the tail

Property Managers take an active role in pest control

- PMs perform housekeeping inspections before applicant approval
- PMs show a pest management video at move in
- PMs perform housekeeping inspections thirty days after move in
- PMs meet and collaborate with the Pest Management Professional on what is recommended
- PMs track progress with problem units
- PMs follow an action plan with tenants and PMP.
- PMs enforce lease mandates on pest control

The dog wags the tail

Tenants are less tolerant of pests and more proactive in the elimination of them

- Tenants are receiving training in pest management
- Tenant Council meetings have provided segments on Pest Control
- Tenants commit to pest management in their leases
- Tenants report pest problems sooner for easier elimination
- Tenants prepare properly for pest control service
- Tenants dispose of used furniture and mattresses properly to avoid re-infestation.
- Tenants share less with their neighbors



We are still not finished...



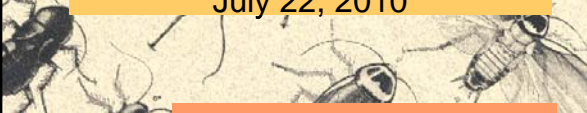
We need to:

- Write an RFP for IPM Pest Control services
- Maintain a high level of communications with the PMP
- Continue workshops and tenant education
- Provide supportive services for tenants who struggle with housekeeping issues or hoarding issues
- Focus on and strive for a “zero tolerance” pest position


Questions?



Healthier Homes: Integrated Pest Management
NAHRO Conference
July 22, 2010




Presented by John Kane,
Boston Housing Authority



Boston Housing Authority

Healthier Homes: IPM

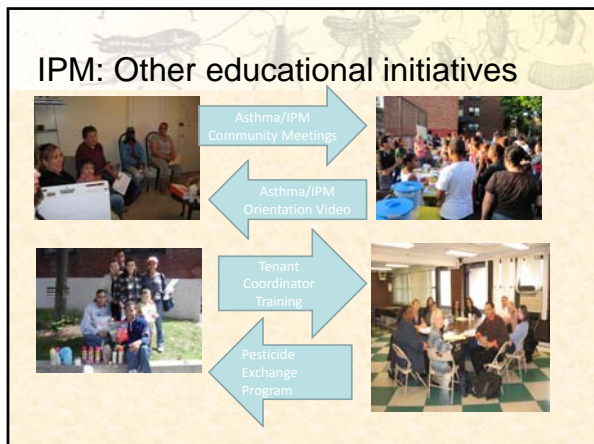


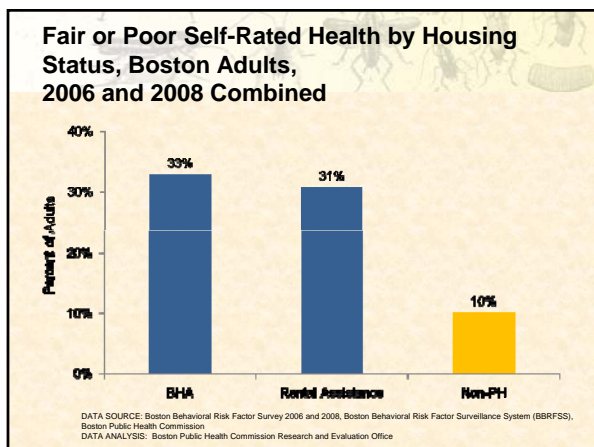
- Largest housing authority in New England
- Largest property owner in Boston
- 10% of Boston residents live in BHA subsidized housing
- Nearly 12,000 units of public housing; more than 25,000 residents
- The community is very diverse and very poor
- 80% of the residents earn less than \$25,000 annually

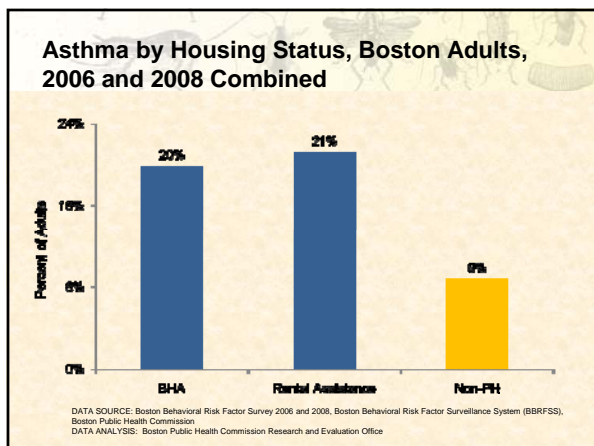
Healthy Homes: Partnerships

- Boston Public Health Commission, Committee for Boston Public Housing, West Broadway Task Force, Harvard and Boston University, and advocacy groups
- Healthy Public Housing Initiative led to Healthy Pest Free Housing Initiative







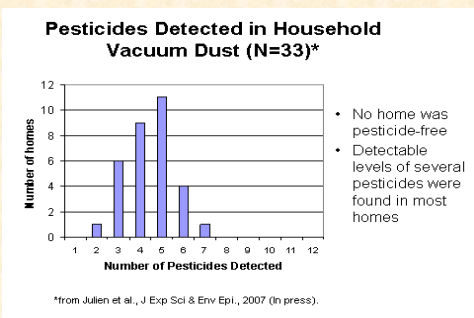


Healthy Housing: Pests

- The most significant pests we fight at BHA are cockroaches, rodents, and bedbugs.
- Cockroach allergens have been identified as the most important risk factor in asthma morbidity and mortality for children from low-income urban families and for the elderly.

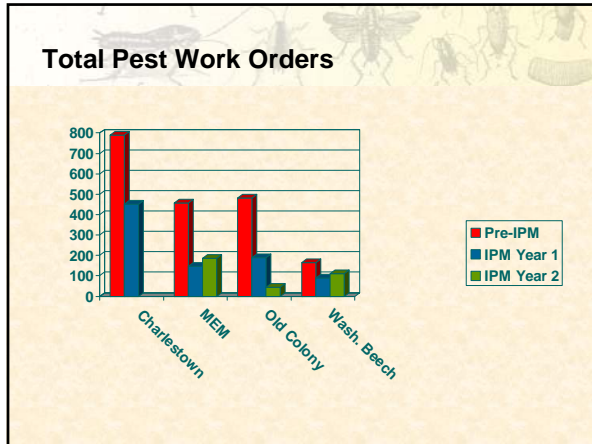
• Source: Journal of Community Health; C. Wang (2008)

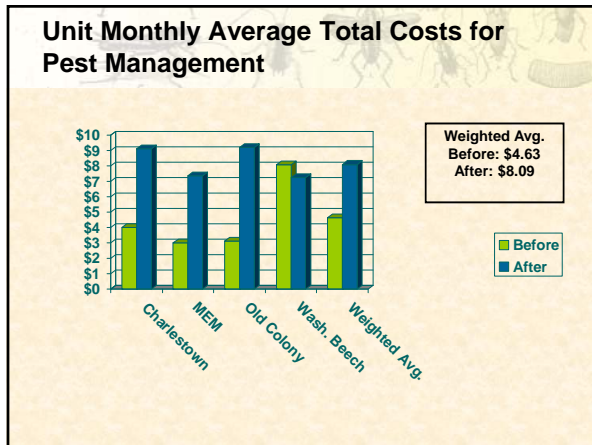
Healthy Housing: Pesticides

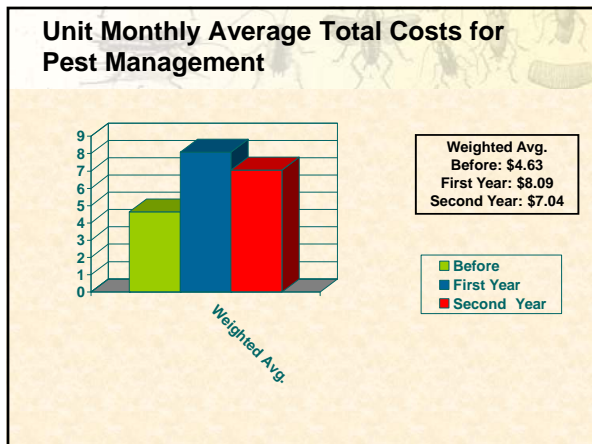


IPM: Key Elements

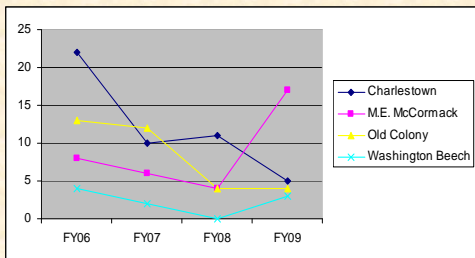
- How does it work at BHA:
- **Integrated** – shared responsibilities
- **Communication** – share IPM policies with residents and staff
- **Contract** – defines roles, inspect all units, document, develop focus list with persistent problems and inspect regularly
- **Exclusion** – Prevention – seal cracks and crevices
- **Education** – empower residents about things they can do to improve sanitation, reduce clutter, and prepare for IPM inspection
- **Treatment** – no sprays, use low-toxicity methods such as gel baits, tamper resistant traps
- **Supportive Services**
- **Lease Enforcement**
- **Evaluation**



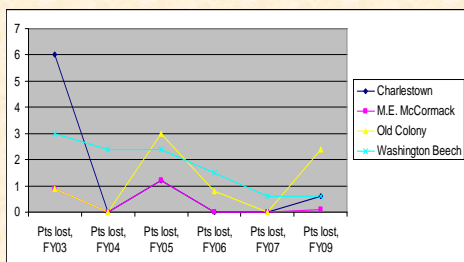




Decline in Housing Inspection Dept. complaints due to infestation

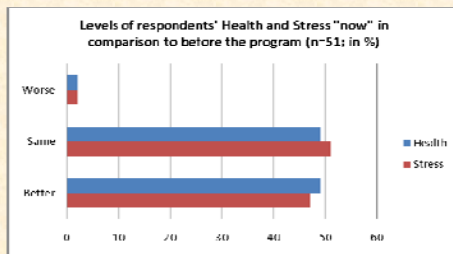


Point Losses in HUD inspection scores due to Infestation (Health and Safety)



Qualitative Results of Surveyed Residents (130 families):

- 97% said health now is the same or better
- 95% stress levels are the same or better



Qualitative Results of Surveyed Residents (130 families):

At the start of IPM, 33% of residents reported heavy infestation; now only 14% do so.

At the start of IPM, 35% of residents used pesticides themselves; now reduced to 5%.

Qualitative Results (surveyed 25 managers):

- 21 managers stated stress is lower
- 21 managers stated resident pest complaints have been reduced
- 20 have noticed a savings in their time since the inception of IPM
- 19 reported an increased job satisfaction

Cost Benefit Analysis

- \$4.63 to \$7.09 = +\$2.46
- Decrease pest infestations, pest work orders, pesticide use, stress, losses from REAC scores, HID complaints, court cases
- Increase or Improve quality of life, sense of health, job satisfaction, staff time, and achieve high performer status

Healthy Housing: Next Steps

Next Steps / Resources:

- Grant : Research can IPM reduce pesticide exposure in children
- Grant: Will increase in IPM intensity improve health outcomes
- Support HUD adoption of IPM as required practice
- Encourage property managers – implement IPM at your properties
- Resources: Safe Home brochures, IPM posters, Resident IPM video, weblinks:
<http://www.stoppests.org/>
- <http://www.bphc.org/Pages/Home.aspx> then select pests or asthma
- <http://www.hria.org/>

Questions?

- John Kane at
john.kane@bostonhousing.org or
617-988-4107

IPM in Boston Housing Authority



The End



Integrated Pest Management A Guide to A Healthy Home

NAHRO SUMMER CONFERENCE
Boston, MA
22-24 July 2010

Integrated Pest Management (IPM)

IPM as defined by EPA can be used to control pest by the most economical long term means with least possible hazard to people, property and the environment. Therefore, IPM is not a single pest control method, but a series of pest management evaluations, decisions, and controls.

2

Integrated Pest Management

- 7 U.S.C. 136r-1
- The Secretary of Agriculture and the Administrator shall make information on IPM widely available. Federal agencies shall use IPM techniques in carrying out pest management activities and shall promote IPM through procurement and regulatory policies and other activities.

3

Integrated Pest Management

Why is IPM important to HUD?

4

Integrated Pest Management

Pest Management is integral to our core mission of providing decent sanitary housing that is in good repair.

5

Integrated Pest Management

How do PHAs pay for IPM services?

6

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1937 Housing Act provides that the Secretary shall establish Operating Fund for the purpose of making assistance available to PHAs for the operation and management of public Housing.

7

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Each project of the PHA receives Project Expense Level (PEL) for cost associated with administration, management fees, maintenance, occupancy.

8

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In 2009, the American Reinvestment and Recovery Act (ARRA) provided \$4 billion to PHAs to carry out capital and management activities for Public Housing.

9

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Of that amount, \$1 billion was to be allocated through the Recovery Act Capital Fund Recovery Competition (CFRC) grants.

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Under the CFRC grants, IPM was mandatory for Category 4, Option 1 grantees to improve the health and living environments of our residents.

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Integrated Pest Management

HUDs FY 2010-2015 Strategic Plan goal 3 calls to Utilize Housing as a Platform for Improving Quality of Life of our residents by promoting housing management practices that protect the health of residents. Some examples include smoking cessation, pest management and green cleaning.

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Integrated Pest Management

The IPM Team

Residents: Identify, Report, "unclutter the clutter" and keep unit clean.

13

Integrated Pest Management

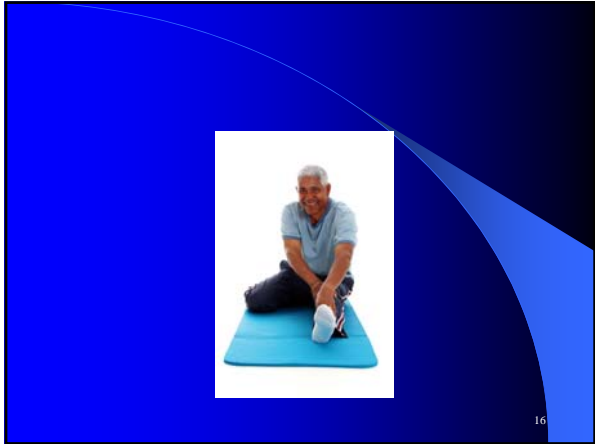
PHA: Repair physical damage; maintain structures and grounds; seal cracks; identify pests; treat; Monitor; educate residents and where necessary; the judicious use of pesticides.

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Integrated Pest Management

Working together using IPM fundamentals, PHAs and residents can improve health outcomes and improve the quality of life for public housing residents.

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Integrated Pest Management

- For additional information:
- <http://www.hud.gov/offices/ph/programs/ph/phecc/pestmang.cfm>
- Leroy.ferguson@hud.gov
- Phone: (202) 402-2411

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