INTEGRATED PEST MANAGEMENT IN EARLY CARE & EDUCATION PROGRAMS

ICEBREAKER QUESTIONS

1. What’s your name?
2. What’s the pest that bothers you the most?
3. What would you like to learn from today’s workshop?

WHY ARE WE HERE TODAY?

Goal: To protect the health of children, staff and the environment

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INTEGRATED PEST MANAGEMENT TOOLKIT FOR EARLY CARE AND EDUCATION PROGRAMS
CALIFORNIA CHILDCARE HEALTH PROGRAM

BY THE END OF TODAY, YOU WILL BE ABLE TO:

1. Identify the requirements for child care centers as specified in California’s Healthy Schools Act.
2. Define what is a pest, what is a pesticide and what is integrated pest management.
3. Explain why children are vulnerable to the health risks of pesticides.
4. Describe the health effects for children and staff exposed to pesticides and common pests.
5. Develop and implement IPM policies and practices in your program.
6. Identify simple and inexpensive IPM methods to prevent or manage common pests.
7. Inspect your child care facility for the presence of pests or conditions that attract pests using the IPM Checklist.
8. Share IPM information and resources with staff and parents.
OVERVIEW

A. Healthy Schools Act
B. Background
   - Pests
   - Pesticides
     - The health risks of pesticides to children & the environment
C. Integrated Pest Management

HEALTHY SCHOOLS ACT (HSA)
The HSA requires that all child care centers:
- Keep records about pesticide use;
- Maintain a registry of people to notify when pesticides are used;
- Notify parents and staff before pesticides are applied and
- Post warning signs in areas where pesticides will or have been applied.

HEALTHY SCHOOLS ACT (II)
The HSA encourages centers to:
- Keep pests out!
  - Remove their access to food, water and shelter
- Use IPM methods
  - ball stations
  - gel/paste in cracks/crevices
  - exempt materials (e.g. mint oil)
  - cleaners/sanitizers
- Use HSA exempt pesticides

WHAT DOES THE HSA REQUIRE?

Pest Management Professional (PMP)
If a child care center hires a PMP, the staff must inform the PMP that the facility must comply with the Healthy Schools Act. The PMP must notify the center 120 hours before applying nonexempt pesticides.

What are the most common indoor pests in California child care centers?

WHAT IS A PEST?
A pest is any living organism that causes damage or discomfort, or transmits or produces disease.

For complete list of your responsibilities, see CCHP Health and Safety Note on the Healthy Schools Act.
WHAT ARE THE MOST COMMON OUTDOOR PESTS IN CALIFORNIA CHILD CARE CENTERS?

- Fleas
- Other Snails or slugs
- Mice or rats
- Squirrels or gophers
- Ants
- Bees/wasps
- Spiders
- Weeds
- Other

WHAT PROBLEMS DO PESTS CAUSE?

- Health Problems
  - Spread Bacteria
  - Allergies
  - Trigger Asthma
- Building Damage
  - Rats Eat Wires
  - Mold & Termites Damage Building
- Parents & staff are upset when they see pests

WHAT ARE PESTICIDES?

Examples:
- Roach and ant spray
- Flea bombs
- Rat poison
- Weed killer
- Mothballs
- Insecticide chalk

Pesticides are poisons that are designed to kill or control living things.

CONCERNS ABOUT PESTICIDE-USE

- Health Outcomes
- Vulnerable Populations
- Environmental Damage
- Pest Resistance

Immediate
- Flu-like symptoms
- Skin Rash
- Breathing problems

Long-Term
- Asthma
- Cancer
- Damage to brain and nervous system
- Immune system damage
- Endocrine disruption

Children

- Pregnant women
- Elderly
- People with breathing or lung disorders

CONCERNS ABOUT PESTICIDE-USE

- Health Outcomes
- Vulnerable Populations
- Environmental Damage
- Pest Resistance

- Ground & surface water contamination
- Poisoning of aquatic animals
CONCERNS ABOUT PESTICIDE-USE

- Health Outcomes
- Vulnerable Populations
- Environmental Damage
- Pest Resistance

+ Pests can become resistant

WHAT WE KNOW ABOUT LONG TERM EFFECTS OF PESTICIDES

PROVEN HARM

PARTIALLY PROVEN

NOT YET RECOGNIZED

FOREVER UNRECOGNIZED

Pesticide use became widespread in the 1940's. Many pesticides are new and haven't been around for long, so we don't know their long term effects.

WHY ARE CHILDREN MORE VULNERABLE?

1. Higher exposures
   - Frequent contact with the ground or floor, where pesticides collect
   - Hand-to-mouth activity
   - Less varied diet
   - Eat, drink, and breathe more per kg
   - Spend most of their time indoors

   If a pesticide is present in air, food or water, a greater amount will be taken in by a child in proportion to their body size or weight than by an adult.

2. Metabolism
   - Metabolic pathways undeveloped
   - Reactivity to environment not yet in place

3. Don't recognize hazards
   - Can't read labels
   - Get into everything

In 2008, United States Poison Control Centers reported 43,526 cases of possible pesticide poisoning in children younger than six.

WHERE ARE PESTICIDES FOUND?

- Agricultural Fields
- Pesticide Drift
- Fruits & Vegetables
- Household Products
- Child Care Centers & Schools
- Public Housing

WHAT ARE THE PATHWAYS OF EXPOSURE FOR CHILDREN?

1. By eating
2. By breathing
3. Through skin
4. Across the placenta (in the womb)

HOW COMMON IS PESTICIDE-USE?

California Child Care Pest Management Survey

<table>
<thead>
<tr>
<th>Pest problem present</th>
<th>90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using any pesticides</td>
<td>55%</td>
</tr>
<tr>
<td>Using spray or fogger</td>
<td>47%</td>
</tr>
<tr>
<td>Using at least one IPM approach</td>
<td>65%</td>
</tr>
<tr>
<td>Aware of IPM</td>
<td>25%</td>
</tr>
</tbody>
</table>

HOW IS INTEGRATED PEST MANAGEMENT (IPM) USED?

A "common-sense" approach to:

- Preventing pest problems by:
  1. keeping pests out
  2. getting rid of their food, water and shelter.

- Managing pest problems by:
  1. using non-chemical approaches;
  2. using least-toxic pesticides when necessary and
  3. reducing the use of harmful pesticide.

SANITATION

- Conventional Pesticides
- Least Toxic Pesticides
- Physical - Mechanical
- Sanitation
- General Prevention
- Education, Communication & Policies

Implementation

- Intervention
- Toxicity

- Prevention
- Conventional Pesticides
- Least Toxic Pesticides
- Physical - Mechanical
- Sanitation
- General Prevention
- Education, Communication & Policies
IPM NUTS & BOLTS

1. Prevention
   • Keep Pests Out
   • Remove Pest’s Food, Water & Shelter
2. Inspect and Monitor
3. Identify Pests
4. Manage Existing Problems

PREVENTION: KEEP PESTS OUT
- Seal or block gaps around doors.
- Install doorsweeps.
- Patch holes in screens
- Seal gaps around pipes

Take home message: Close off entryways so pests can’t get into your facility in the first place!

PREVENTION: REMOVE PESTS’ FOOD & WATER
- Clean up food before pests are attracted to leftovers
- Eliminate sanitation & garbage problems
- Eliminate standing water, clogged sinks & leaking faucets
- Store food & art supplies in sealed containers

Take home message: Pests need food and water to survive. Take away their access to these things, and you’re taking away their diet!

PREVENTION: REMOVE PESTS’ SHELTER
- Replace cardboard boxes with plastic containers with lids
- Organize! Clutter provides hiding spots for pests and covers up their evidence
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PREVENTION: REMOVE PESTS’ SHELTER

Replace cardboard boxes with plastic containers with lids

Take Home Message: Without shelter, pests will pack their bags and find a new home outside of your ECE facility.

Organize! Clutter provides hiding spots for pests and covers up their evidence.

INTEGRATION

Use the IPM Checklist to look for:
• pests
• signs of pests and their damage and
• conditions that might attract pests.

INSPECTION

IDENTIFICATION

• The next step is to identify what kind of pest you have.
• Use Health & Safety Notes to understand pests’ lifecycle, food, and shelter.
• The statewide IPM program is a great resource: http://www.ipm.ucdavis.edu

MONITORING

• Regularly inspect the facility for pests and pest damage.
• Identify sources of food, water, and shelter that might attract pests.
• Identify where pests are living and breeding.
• Determine if and when treatment is needed.
• Assess whether current actions are working.

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Take Home Message: Without shelter, pests will pack their bags and find a new home outside of your ECE facility.

Take Home Message: Monitoring is an ongoing process!

MANAGEMENT

Often you can manage pests without using chemicals.
IPM-recommended techniques include:

Prevention:
• Vacuum to remove pests
• Wash areas with soap and water
• Place traps

Vacuum to remove pests
Vacuum to remove pests
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Wash areas with soap and water
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Place traps
Place traps
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Place traps
MANAGEMENT

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Take Home Message: Keeping things clean and in good repair is key to IPM!

MANAGEMENT: CHOOSING THE LEAST-RISK PESTICIDE

<table>
<thead>
<tr>
<th>Less risk of exposure</th>
<th>More risk of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamper-resistant bait station</td>
<td>Antimicrobials</td>
</tr>
<tr>
<td>Gel bait in a crevice</td>
<td>Foggers &amp; sprays that broadcast pesticides</td>
</tr>
</tbody>
</table>

Take Home Message: Use pesticides as a last resort! If needed, choose the least-risk application methods.

IMPLEMENTING IPM IN YOUR CENTER

1. Write an IPM policy.
2. Designate an IPM Coordinator.
3. Provide training for staff and parents.
4. Obtain information for any outside contractors.
5. If needed, hire a PMP that has IPM experience and knows about the HS A requirements.
6. If you have a pest problem, inspect buildings and grounds for sources of infestations and contributing conditions.
7. Establish pest monitoring procedures.
8. Identify any pests found and create an IPM Action Plan for each pest you find in your environment.
10. Evaluate the program on a regular basis.

HOW TO HIRE A PMP

1) Identify a PMP with experience in ECE facilities.
2) Call several PMPs and ask specifically if they are aware of the Healthy Schools Act and practice IPM.
3) Ask what services are included in the PMP’s IPM approach.
4) Confirm that the PMP understands which services require an ECE director’s explicit permission.
5) Ask whether they use indoor or outdoor sprays.
6) Ask about the qualifications, training and experience of anyone who will work on your site.
7) Ask for references from other clients.

If you already have a PMP, talk with him to make sure he’s using IPM methods.
IPM NUTS & BOLTS

1. Prevention
   - Keep Pests Out
   - Remove Pest's Food, Water & Shelter
2. Inspect and Monitor
3. Identify Pests
4. Manage Existing Problems

SCENARIO

You enter a child care facility and note that there is evidence of mice and mold in the kitchen. The staff say that they can't get rid of them and ask you for suggestions. They don't want to spray pesticides around the children.

What would you suggest?

(Hint: think about access, food, water and shelter)

ACKNOWLEDGEMENTS

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RESOURCES

**CALIFORNIA CHILDCARE HEALTH PROGRAM**
   * The Basics of Pest Management
   * IPM for Schools
   * The Basics of Pest Management
   * Save Money, Save Health

**California Department of Pesticide Regulation**
   • California laws and regulations on pesticide use
   • California state laws and regulations on pest management
   • California Statewide Integrated Pest Management Program

**EPA, Design for the Environment**
   • www.epa.gov/opp00001/ipm/schoolipm_a/how-to-manual
   • www.epa.gov/opp00001/ipm/schoolipm_a/epa_est_prevention.cfm
   • www.epa.gov/opp00001/ipm/schoolipm_a/pest-prevention.cfm
   • www.epa.gov/opp00001/ipm/schoolipm_a/ugc/pest-prevention.cfm

**National Pest Management Association (NPMA)**
   • www.npma.org

**Pest Control Operators of California**
   • www.pcoc.org

**The Safer Pest Control Project**
   • www.pestcontroloperators.org

**Our Water, Our World**
   • www.ourwaterourworld.org

**National Pesticide Information Center**
   • npic.orst.edu

**National Pest Management Association (NPMA)**
   • www.npma.org

**Our Water, Our World**
   • www.ourwaterourworld.org

**The Safer Pest Control Project**
   • www.pestcontroloperators.org

**IPM Institute of North America, Inc.**
   • www.ipmiina.org

**Maryland Department of Agriculture, Action Team**
   • Maryland Integrated Pest Management Program, Pesticide Regulation Section, Annapolis, MD.
   • www.ourwaterourworld.org

**University of California Statewide Integrated Pest Management Program**
   • www.ipm.ucdavis.edu

**US Pest Control Regulatory Agencies by State**
   • www.pestcontrolregulations.org

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