

Step 2: Visual Identification of Hazards

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KEY STEPS

1. Start with the resident

2. Visual (qualitative) identification of hazards
Observe Interpret Question

3. Support visual identification with quantitative measurement (if necessary)

4. Justify and prioritize hazards
w/TV? 1. ___ 2. ___ 3. ___

5. Identify interventions to address hazards

6. Communicate with the resident

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MODULE TOPICS

2. Visual (qualitative) identification of hazards

Observe Interpret Question

- Visual assessment tools
- Developing a hypothesis
- Risk assessment
- The assessment process
- Practice
- Extra focus on pests

STOP Who can list the eight Keep It principles?

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REMEMBER THE EIGHT PRINCIPLES

- 1. Dry
- 2. Clean
- 3. Pest-Free
- 4. Ventilated
- 5. Safe
- 6. Contaminant-Free
- 7. Maintained
- 8. Climate Controlled



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Visual Assessment Tools



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INTERVIEW AND VISUAL ASSESSMENT TOOLS

- Most interview tools have a visual assessment component.
- Bottom line is what works for you to do an assessment in a structured way.



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SAMPLE CHECKLISTS

- Allies Against Asthma
- ASTM D7297 IEQ Assessment
- CEHRC (available in the Essentials course materials)
- Children's Mercy Hospital Environmental Health Assessment form
- Environmental Protection Agency Home Visit
- Harvard School of Public Health
- U.S. Department of Housing & Urban Development Healthy Homes Rating System
- King County/Seattle
- Pediatric Environmental Home Assessment form



May be the same tool as the Interview tool in Step 1



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Developing a Hypothesis



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THE HYPOTHESIS

- Start with a hypothesis that covers the purpose of the assessment (not the complaint).
- A hypothesis is a testable statement.

Remember: only health providers can make health and environment connections.



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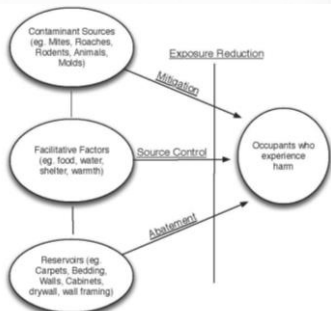
Risk Assessment



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HOME ENVIRONMENTAL ASSESSMENT SHOULD GUIDE EXPOSURE REDUCTION



Garcia, Christina E, MD, Kevin Kennedy, MPH, Jay M. Portney, MD, A New Model for Environmental Assessment and Exposure Reduction Current Allergy and Asthma Reports December 2012, Volume 12, Issue 6, pp 656-655



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ASSESSMENTS SHOULD:

- ◆ Identify the nature and extent of individual hazards: [Risk Assessment](#)
- ◆ Determine the relative risk of different hazards: [Risk Analysis](#)
- ◆ Evaluate the interactions and synergisms between individual hazards: [Risk Characterization](#)

Source: HUD Healthy Homes Issues: Residential Assessments, March 2006



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RISK ASSESSMENT

Risk Assessment is a systematic method of collecting and interpreting scientific information relating environmental hazards to human health.

Risk Assessment is a process of quantifying the likelihood of harmful effects from a hazard.

Risk assessment is NOT making medical statements or connections.

Risk Assessment in the Federal Government: Managing the Process, National Research Council, © 1983



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HOME ASSESSMENTS ARE RISK ASSESSMENTS

Risk Assessment Steps*

- Hazard Identification
- Hazard Evaluation
 - Consider dose-response
- Exposure Assessment
- Risk Characterization

*National Research Council, 1983



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RISK ASSESSMENTS INCLUDE RISK-BENEFIT

ANALYSIS WITH THE GOAL:

to reduce exposure to hazard whenever possible

- Example: Avoid sun exposure

to accept substantial hazard only for great benefit

- Example: Flying versus driving

to accept minor hazard for modest benefit; and

- Example: Hair dying or coloring

to accept no hazard at all when the benefit seems relatively trivial

- Example: Tanning beds (is there a health risk?)

Philip Handler (1979), President of U.S. National Academy of Sciences 1969 to 1981



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The Assessment Process



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OBSERVE, INTERPRET AND QUESTION

- **Observe, interpret and question steps** are a mini-sequence, within the evaluation.
 - **First** - observe hazards and identify them.
 - **Second** - interpret what you see.
 - **Third** - follow up questions for the resident based on what you've observed.
- Water stain example, ask the resident "Did this water stain appear recently or has it been there a while?"



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MORE ON INTERPRETATION

- Interpretations are a combination of professional knowledge, experience and logic.
- Some interpretations may require research evidence to support conclusions.

What myths have you encountered?



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WHAT ABOUT RENTAL PROPERTY?

- Assessment allowed if non-destructive
- Family should provide report to Landlord
- Issues identified that are code violations may need to be reported to code enforcement.



ACUTE HAZARDS: (REVIEW)

Hazards that require immediate attention due to the potential for posing an imminent danger to life and health.

Examples include:

- Physical: loose stairs, child access to crawl spaces, structural deterioration or significant damage etc.,
- Biological hazards: Sewer back ups on carpets where people are using the room, etc.,
- Chemical hazards: poisons, drugs, chemicals, lead paint/dust hazards, detectable carbon monoxide or gas leaks, etc.,



CHRONIC HAZARDS: (REVIEW)

Hazards which do not pose an immediate danger to life and health but do promote allergies, asthma, lead poisoning, pesticide exposure, or other chronic health conditions.

Examples include:

Physical: Poor HVAC maintenance, windows in disrepair, foundation cracks, minor roof damage, plumbing leaks

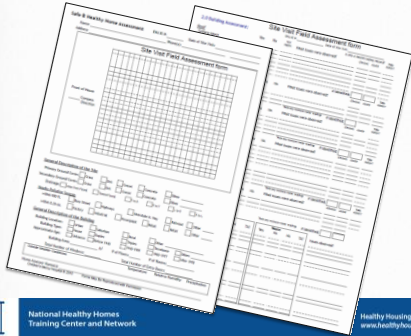
Biological: Observed/reported pests, condensation and microbial growth, open cracks/gaps in siding, wet/damp drywall

Chemical: poorly operating stove, lack of ventilation/ exhaust fans in bathrooms and over gas stoves



REFER TO SITE VISIT FORMS

Same forms that will be used in the site visit.

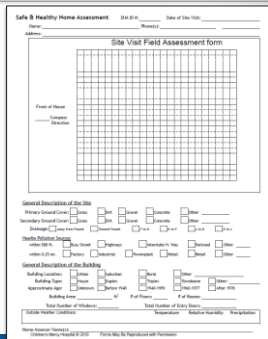


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QUALITATIVE OR VISUAL ASSESSMENT

- Areas to Assess:
 - Exterior
 - Structural Components
 - Mechanical Components
 - Room by Room Visual Assessment
 - Floor Plan



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HOME ASSESSMENT PROCESS

Where should a home assessment start?

- Outside?
- Living Room?
- Basement?
- Child bedroom?



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WHAT ARE WE LOOKING FOR?

- Visual evidence of damage
- Evidence of moisture issues
- General condition of exhaust vents
 - Check for negative flow
- Are they connected?
- Furnaces, boilers, fireplaces vented
 - Check both ends if possible



Photos © 2010 Children's Mercy Hospital



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HOME APPLIANCES, LIMITED ASSESSMENT

2.0 Appliance Assessment:

		Note any moisture meter readings				# identified:	
Stove	Type:	Yes	No	NA	TA?	Action!	What issues were observed?
	Burners/oven operating properly						
	Gas stoves - No CO detected						
	Steel or brass gas line						
	Working exhaust system						
	Exhausted to outside						
	Cord condition OK						
							# identified: <input type="text"/>
Washer		Yes	No	NA	TA?	Action!	What issues were observed?
	Water draining properly						
	No reported/visible water leaks						
	GCFI installed/working						
	Cord condition OK						
							# identified: <input type="text"/>



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WHAT ARE WE LOOKING FOR AND ASKING?

- Bath, dryer, and range exhaust fans
 - Do they work?
 - Are they used?
 - Exhaust to outside?
- Gas stove used as heater?
- Smoke alarm ever go off?
- CO Monitor present and working?
 - Ever go off?
- Do they bake or cook for long periods?



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Extra Focus on Pests



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Exercise on Identify pest problems



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VISUAL IDENTIFICATION OF HAZARDS

AREAS	Keep it Principles						
	Dry	Clean	Pest-free	Ventilated	Safe	Contaminant-free	Maintained
Building – exterior shell							
Area around the building							
Mechanical equipment and appliances							
Interior rooms							
Kitchens and bathrooms							



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