

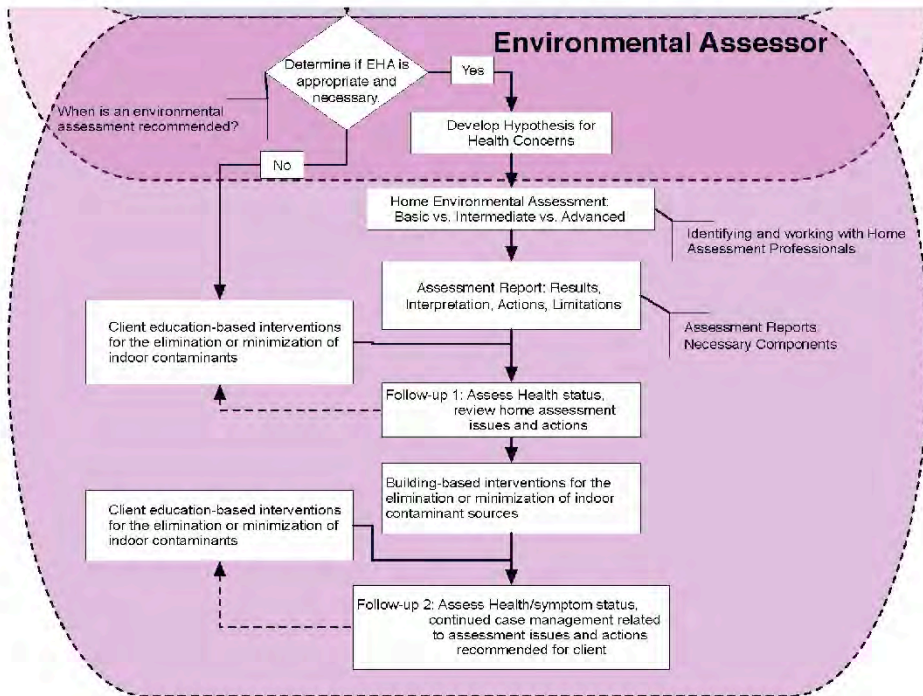
Healthy Home Environmental Assessment Principles

Communicating Results and Intervention Strategies

Healthy Home Environmental Assessment Principles

1. Initial contact and collection of information
2. Establish a clear purpose for the assessment
3. Formulate initial hypotheses
4. Site visit and walk-through
5. Qualitative and Quantitative Assessment
- 6. Generate Assessment Report with Actions**
- 7. Educate for Solutions**

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HH Actions Start with Education



In Home Education

Prior to arriving at client's home:

- Review client's health history
- Understand client's home concerns
- If assessment warranted:
 - Determine what educational materials & supplies may be necessary
 - Explain assessment process to client (everything you plan to do)
 - Determine whether client can help during assessment

In-Home Education

During the home assessment:

- Provide education during teachable moments
 - Visual walk-through of home
 - One-on-one education
- Provide relevant education based on client health history, housing history, and home assessment
- Explain significance of concerns related to health
 - Based on evidence-based research when possible
- Answer questions
- Schedule follow up to deliver assessment results

Healthy Home Education Plan

After the Home Assessment:

- Develop healthy home action plan
 - Recommend feasible interventions
- Discuss action plan with family
 - During initial assessment & report delivery
- Reinforce the education provided during initial home assessment
- Continue to follow up if time allows
 - Tracking behavior changes
 - Ongoing education

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Risk Analysis- Prioritizing Home Hazards

Identify, Justify, Prioritize...

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Risk Analysis



Exercise #8

- Identify 5 hazards observed during the visual assessment.
- Justify why each of these hazards is a health and/or safety concern based on your knowledge.
- Prioritize these hazards, determine whether they are acute or chronic hazards, and rank them starting with the highest priority to take action to resolve.

Home Assessment Report Goals

- Always START and END with people.
- Communicate assessment results in a way that the occupant understands.
 - Multiple levels of understanding
- Assessment communicates both what was good, and what was bad.
- Use photos from their home to reinforce issues.
- Rule out concerns .
- Communicate about hazards identified.
- Provide specific actions families can take.
- Connect assessment with interventions.

Key Home Assessment Report Components

- Background Information
 - Client Contact Information
 - Assessment Site Location
 - Assessor's Contact Information
- Introduction
 - Reason for Assessment
 - Assessment Scope of Services
- Results of Qualitative & Quantitative Assessment
- Conclusions
- Recommendations
- Limitations
- References

Results of Testing

- The most confusing part of a report.
- How results are presented is essential to the client's comprehension.
- Important to have an understanding of:
 - Units of measurement.
 - Accuracy of instruments and methods.
 - How to interpret results and what they mean.

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Protocols

If a standard protocol is recommended, it should be summarized and specifically sited from a retrievable source.

References

Any references used in developing procedures and in guiding the interpretation of analytical data should be cited and included in the report.

Appendix C – References Used For This Report

- 1) Allergenz MK 3 Air Sampler User Guide, Allergenz/Bioscience Press, Div. Of Allergenz, San Antonio, TX 78208.
- 2) "Bioaerosols: Assessment and Control", American Conference of Governmental Industrial Hygienists. ©1998. ACGIH, Cincinnati, OH 45240
- 3) "Field Guide for the Determination of Biological Contaminants in Environmental Samples", American Industrial Hygiene Association, ©1999, American Industrial Hygiene Association, Fairfax, VA 22031.
- 4) "NIOSH Manual of Analytical Methods (NMAM)", 4th ed. DHHE (NIOSH) Publication 91-113 (August, 1994).
- 5) "OSHA Technical Manual", January 1999, Occupational Safety and Health Administration (OSHA), Washington, D.C.

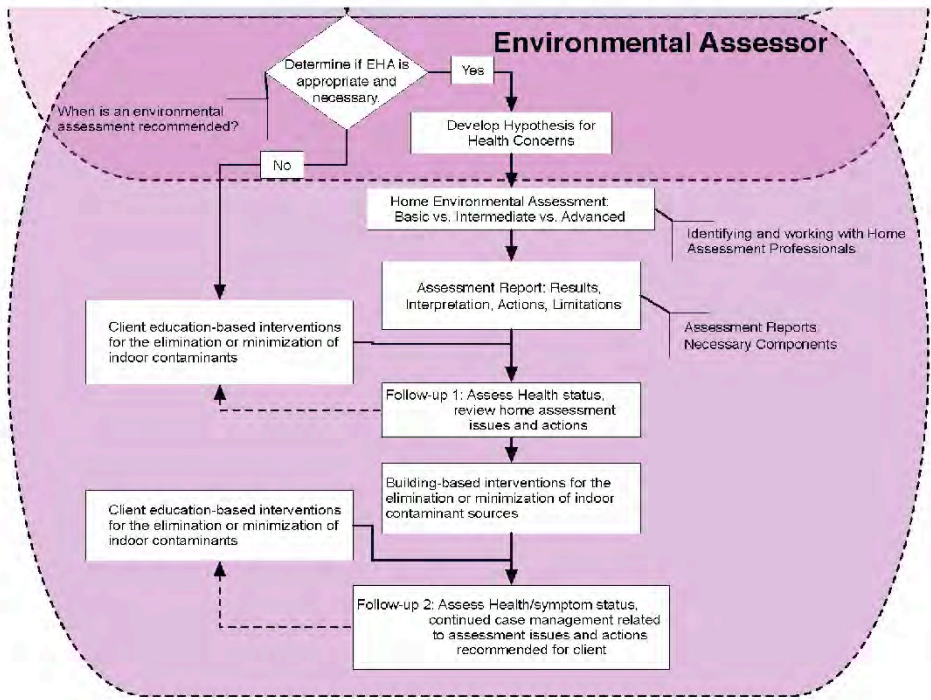
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Healthy Home Action Plan

- Goal of plan is to eliminate or reduce exposure to likely sources that trigger symptoms or cause illness:
- Environmental factors (eg: carpeting)
 - Lifestyle choices (eg: smoking)
- Prioritize Simplest Actions First
- What interventions to consider?
 - Actions to take inside
 - Actions to take outside
- When you know where the likely sources are, you learn how to control them.

Home Intervention Strategies

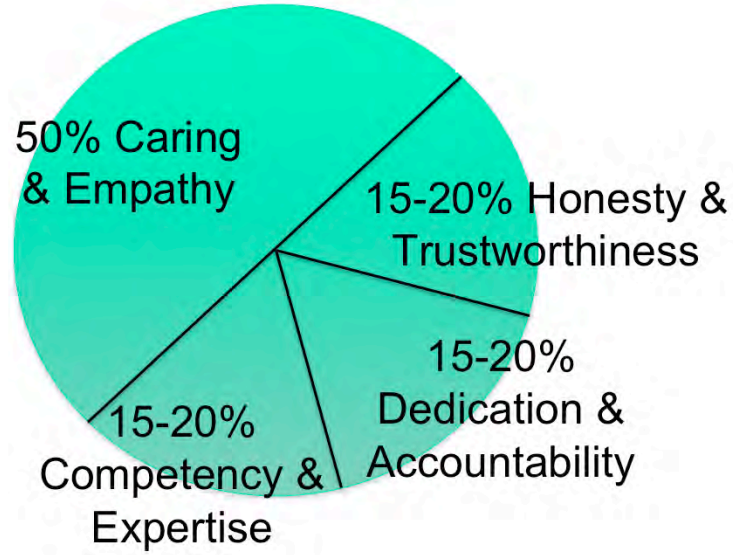
- Use an Intervention Summary for each home
- Base interventions on assessment results & prioritize based on hazard & risk reduction
- Prioritize:
 - Acute- address defects/hazards that require immediate attention due to the potential for posing an imminent hazard for children.
 - Chronic- address defects/hazards which do not pose an immediate risk to children but do promote allergies, asthma, lead poisoning, pesticide exposure, or other chronic health conditions.



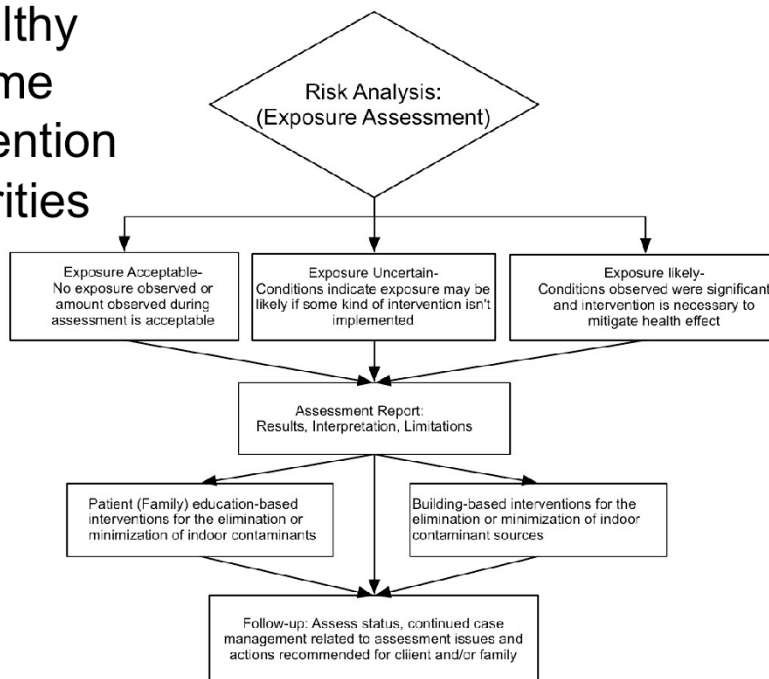
Risk Communication

- Dangers of Poor Communication
- Effective Use of Language
- Psychology of Hazard Communication

Factors that Inspire Trust and Credibility



Healthy Home Intervention Priorities



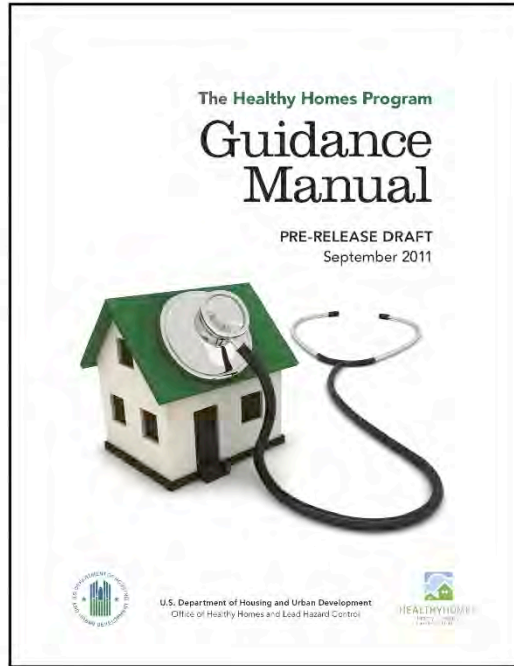
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Exercise #9 - Writing Healthy Home Action Plans

- Of the hazards you identified in the home you assessed, select one of these and write what action steps you think are necessary to resolve this hazard.
- Identify key messages you might provide as part of your communication about this hazard to the client living in this home.

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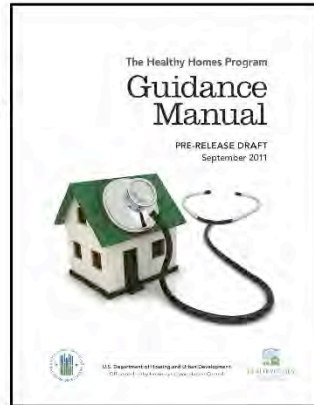
A New Guide for Healthy Home Program Development and Operations



[http://portal.hud.gov/hudportal/HUD?
mode=disppage&id=HHGUIDANCEMANUAL](http://portal.hud.gov/hudportal/HUD?mode=disppage&id=HHGUIDANCEMANUAL)

Healthy Home Guidance Manual

- Chapter 1 Introduction
- Chapter 2 Community Involvement
- Chapter 3 Program Design
- Chapter 4 Assessment
- **Chapter 5 Intervention Strategies**
- Chapter 6 Program Evaluation
- Chapter 7 Sustainability





HUD Healthy Home Intervention Priorities

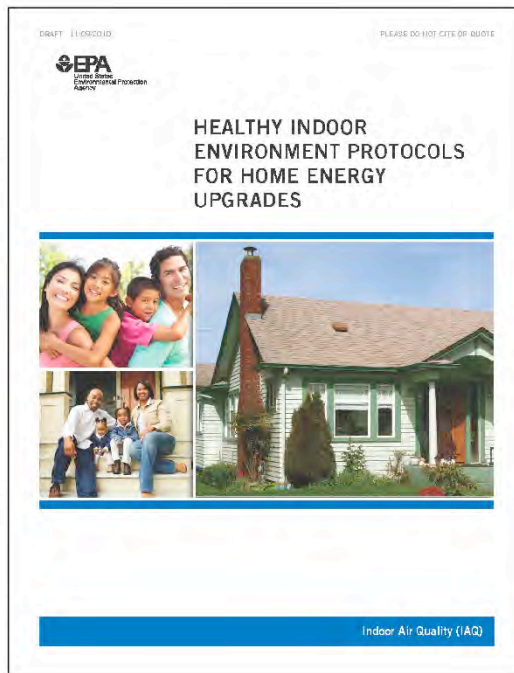
High priority items are indicated with an [A] and lower-priority items with [B] or [C].

Description
Vent clothes dryer to exterior using rigid metal ducting, not flexible plastic. [A]
Repair plumbing leaks [A]
Correct mold problems [A]
Clean evaporator pan under refrigerator [A]
Install range hoods that vent to exterior [A for gas; B for electric]
Repair dry floor drain traps if sewer gases detected [A]
Assure that at least one window in each room can open [A]
Remove basement, bath and kitchen wall to wall carpet [A]
Install smoke and carbon monoxide alarms [A]
Repair deteriorated bath and tub caulk [B or C]
Install pleated filter in forced-air heating system [A]
In the crawl space, seal /cover scil with poly. [A]
Seal crawl space from house air. [A]
Assure adequate runoff from downspout away from house. [A: wet walls; B: other]
Caulk windows. [A]
Caulk wood siding vertical seams. [A]
Caulk door seams. [A]
Repair roof and chimney flashing if damaged or evidence of interior leaking is observed. [A]
Check furnace chimney draft and, if inadequate, check cleanout opening. [A]
Redirect flow from gutters to functioning downspout. [B]
Check return and supply ducts (only if in garage, crawl space, or attic) for leaks. [B]
Remove debris from the crawl space, make rocent proof. [B]
Wood-earth contact—assure 6 inch minimum gap. [C]
Repair or replace leaky chimney flue. [A]
Seal basement concrete if moisture probe indicates high moisture content. [C]

<http://portal.hud.gov/hudportal/HUD?mode=disppage&id=HHGUIDANCEMANUAL>

New EPA Indoor Environmental Protocols for Energy Audits-

- Voluntary Guidelines
- Includes:
 - Protocols
 - Minimum Actions
 - Expanded Actions



PRIORITY ISSUES	ASSESSMENT PROTOCOL	HEALTHY INDOOR ENVIRONMENTS	
		Minimum Actions	Expanded Actions
			
PRIORITY ISSUES	ASSESSMENT PROTOCOL	HEALTHY INDOOR ENVIRONMENTS	
		Minimum Action	Expanded Actions

What to look for during the Home Energy Audit

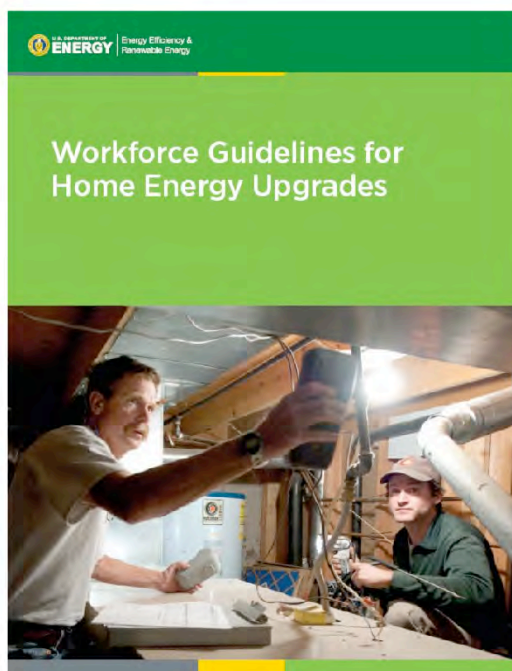


Minimum Actions to ensure the Home Energy Retrofits “Don’t Make it Worse”

PRIORITY ISSUES	ASSESSMENT PROTOCOL	HEALTHY INDOOR ENVIRONMENTS	
		Minimum Actions	Expanded Actions
			
HEALTHY INDOOR ENVIRONMENTS		Minimum Actions	Expanded Actions

Expanded Actions
to further improve
IAQ in Home
Energy Retrofits
(funds permitting)

Helpful
Guidance For
Some
Important
Interventions



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Economic Evaluation of Home-Based Environmental Interventions to Reduce Asthma Morbidity

Tursynbek Nurmagambetov, Sarah Beth Link, Verughese Jacob, Sajal Chattopadhyay, David Hopkins, Deidre Crocker, Gema Dumitru, Stella Kinyota

- December 2009, CDC National Webinar
 - Home-Based multi-component interventions with environmental focus reduce symptom days and improve quality of life

- Economic Evaluation
 - Cost-benefit studies show net positive returns on investment - Benefit/cost ratio from 5.3 to 14
 - Health Benefit in symptom free days and reduced health services compared to the costs of interventions implemented

Asthma Education, Home Assessments, and Interventions Pay for Themselves

ARC
Asthma Regional Council

Investing in Best Practices for Asthma: A BUSINESS CASE

August 2010 Update

AL THOMAS,
PhD
Heppin SeL and Molly Jacob, MPH,
University of Massachusetts Lowell
Laurie Stillman, MM,
Health Resources in Action

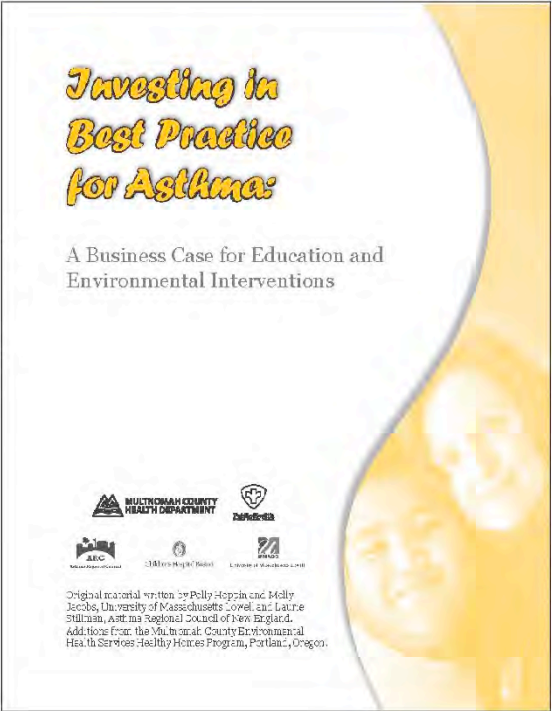
Produced for the
Asthma Regional Council of New England (ARCN) at
Health Resources in Action (HRIA), in partnership
with the University of Massachusetts Lowell.

Health Resources in Action
Advancing Public Health and Global Research

University of
Massachusetts Lowell
UMASS

UMASS gratefully acknowledges THE GEORGE FUNDATION for their support of ARC in the development of this document.

Asthma Education, Home Assessments, and Interventions Pay for Themselves



Environmental Intervention- Leveraging Resources

- Donated HH Supplies
 - Smoke Detectors- Red Cross, Fire Dept.
 - CO Detectors- Some Fire Depts
 - Radon Test Kits - State Radon Offices
 - Child Safety Kits - Child Advocacy Organizations
- Discounted HH Supplies- Create publicized partnerships to get large discounts
 - Healthy Home Supply Manufacturers (filters, paint, caulk, etc)
 - Hardware Stores- Local or National
 - Home Improvement - Some more receptive than others
 - National Retailers- Have Local Donation Committees
 - Buy Local so families can find replacement supplies and buy local too.

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Benefits to Health and Housing Collaboration

- Collaboration is a *process in which each participant develops full commitment to a common mission.*
- A health and housing collaboration can:
 - Promote long-term success
 - Build long-term community capacity
 - Empower members
 - Produce concrete and measurable change

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Resources to Help Clients Improve Their Home Environment

Look for programs in your community-

- Community Development Organizations
- Neighborhood Improvement Organizations
- Home Weatherization Programs
- Utility sponsored energy efficiency grants
- HUD Healthy Homes Grant Programs

Other Local Resources

- Minor Home Repair Programs
- Asthma Coalitions
- Chronic Disease Coalitions
- School Nurse and Social Worker
- Faith-Based Organizations

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National Resources

- CDC
 - www.cdc.gov/healthyplaces/healthyhomes
- EPA
 - www.epa.gov/asthma
 - www.epa.gov/iaq/pubs/index
- HUD Office of Healthy Homes and Lead Hazard Control
 - www.hud.gov/offices/lead
- National Center for Healthy Housing
 - www.NCHH.org
