



Lead and Healthy Homes – Federal Perspective



Using Housing as a Platform for Improving Health

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“Traditional” Model

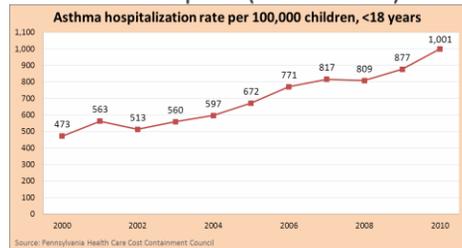
- ▶ This story happens every day:
 - A young child has an asthma attack, is taken to the ER. The mother has to take off work, the child misses school. This cycle happens several times each year. The child is put on long-term maintenance medication for asthma.



“Traditional” Model

- ▶ This story happens every day:
 - A young child has an asthma attack, is taken to the ER. The mother has to take off work, the child misses school. This cycle happens several times each year. The child is put on long-term maintenance medication for asthma.
 - *This family’s home has substantial mold hazards created when the hot water heater broke, has water leaks and intrusion, has evidence of pests, has little exhaust or air exchange, and other problems.*
- ▶ This results in excessive and avoidable costs—costs absorbed by residents, taxpayers, and the health care sector.

Child Asthma Hospitalization Philadelphia (2000-2010)



The Need for Healthier Housing

- ▶ Approximately 30 million U.S. housing units have significant physical, chemical and/or radiological problems that place their occupants at risk for illnesses and injuries.
 - Nearly 6 million U.S. housing units have with moderate to severe physical housing problems
 - About 24 million housing units have one or more lead-based paint hazards. Of these homes, 1.2 million house low income households with one or more children under age six
 - More than 6.8 million housing units have radon exposures above the current EPA action level.
 - In addition, in over 86 million homes, allergen levels are at levels associated with doctor-diagnosed allergies.

The Need for Healthier Housing

- ▶ Besides the physical health toll an at-risk home can have on its inhabitants (thousands of unnecessary emergency visits annually due to housing related accidents and illness), the monetary costs of unhealthy homes are enormous.
 - Total annual costs for certain childhood environmental diseases are estimated to be \$54.9 billion: \$43.4 billion for lead poisoning, \$2.0 billion for asthma, \$0.3 billion for childhood cancer, and \$9.2 billion for neurobehavioral disorders. This sum amounts to 2.8 percent of total U.S. health care costs.



The Need for Healthier Housing

- ▶ **Lead-Based Paint**
 - 24 million households have lead-based paint hazards, including 1.2 million homes with children <6 yrs. old
 - Estimated cost of medical treatment = \$43.4 billion/year
- ▶ **Pests**
 - Significant trigger of asthma attacks and allergies
 - Pesticide misuse/overuse poses health risks: poisoning costs ~\$1 billion /year



The Need for Healthier Housing

- ▶ **Physical Hazards**
 - For children less than 20, 55% of unintentional deaths from injuries occur at home
- ▶ **Environmental Tobacco Smoke**
 - Associated with acute respiratory and ear infections, and severe asthma attacks. Responsible for 150,000-300,000 new cases of bronchitis and pneumonia annually among children less than 18 months



The Need for Healthier Housing

- ▶ **Excess Moisture**
 - ~21% of asthma cases in U.S. are linked to dampness and mold at a cost of \$3.5 billion/year
- ▶ **Carbon Monoxide**
 - Household exposure to CO results in > 300 deaths and ~9,600 ER visits annually
- ▶ **Radon**
 - Exposure to radon gas leads to 20,000 annual lung cancer deaths



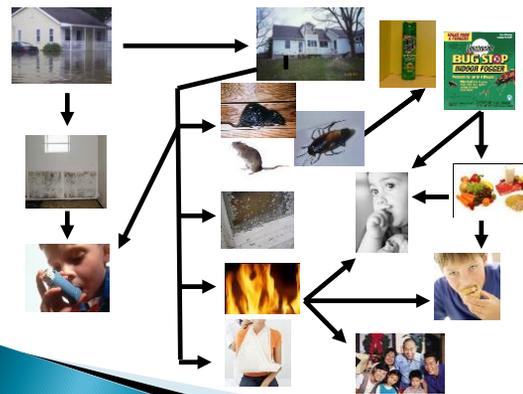
Healthy Housing Makes Economic Sense

- ▶ Every dollar spent to reduce lead hazards cuts healthcare costs by an average of \$119 nationally.
- ▶ Every dollar spent to reduce asthma triggers in homes cuts health care costs by an average of \$10.



Need for Better Solutions

- ▶ Today, you can almost predict the health of an individual based upon their zip code.
- ▶ Far too many of our homes don't meet basic health homes principles - **dry, clean, ventilated, free from pests and contaminants, well-maintained, and safe.**
- ▶ Need focus on prevention/upstream solutions to down stream problems
- ▶ House is a system – problems are inter-related



Need for Better Solutions

- ▶ Directing resources toward housing deficiencies linked to a single disease or condition rather than working to improve the overall housing environment is inefficient and does not address residents' health and safety risks holistically.
- ▶ A coordinated approach which addresses multiple hazards simultaneously results in enhanced health benefits at lower cost.



Need for Better Solutions

- ▶ Holistic approaches lead to significant cost benefits and demonstrated cost effectiveness
- ▶ HH model focus on prevention/upstream solutions to offset "down stream" costs (medical, etc.)
- ▶ HH model can help prevent housing-related injuries and illnesses, yield reductions in associated health care and social services costs, and improvements in the quality of life

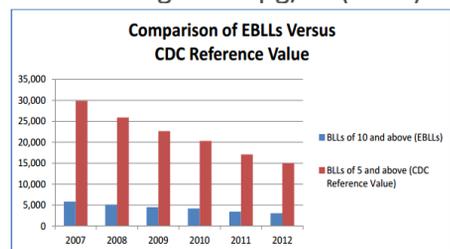


Lead Remains a Major Hazard

- ▶ There Is No Safe Level of Lead Poisoning
- ▶ Even low levels of lead poisoning cause cognitive harm and affect the cardiovascular, immunological and endocrine systems.
- ▶ Low EBL of 4 $\mu\text{g}/\text{dL}$ at 3 years old significantly more likely learning disabled
- ▶ BLL as low as 5 $\mu\text{g}/\text{dL}$ had lower scores in third grade level learning and math tests
- ▶ Between 10 to 19 $\mu\text{g}/\text{dL}$ significantly lower test scores in all 5 content areas 4th grade standardized tests



CDC New Reference Level Lead Poisoning to $\geq 5 \mu\text{g}/\text{dL}$ (2012)



Approximately 5,000 children in Philadelphia



Lead Updates

- ▶ Work Beyond the 10-year strategy
- ▶ Dust Clearance Evaluation
- ▶ Lead-Safe Housing Rule Update
- ▶ Lead Focus in HUD Strategic Plans/Federal Strategy



Using Housing as a Platform for Improving Health

- ▶ HUD 2010-2015 Strategic Plan
- ▶ Focus on people goals and place-based goals
- ▶ Health outcomes are cross cutting goals:
 - Utilize HUD-funded housing assistance to improve health outcomes
 - Focus on implementing HH housing management practices (reduction in use of high-cost health services / prevalence and severity of asthma in HUD housing)
 - Promote energy efficient buildings and locations for efficient communities that are healthy, affordable and diverse.
 - Improve residents' health and safety (reduce the number of homes with indoor environmental hazards including lead hazards)



HUD Healthy Homes Strategic Plan

- ❖ **Building a National Framework:** Foster partnerships for implementing a healthy homes agenda.
- ❖ **Creating Healthy Housing through Key Research:** Support strategic, focused research on links between housing and health and cost-effective methods to address hazards.
- ❖ **Mainstreaming the Healthy Homes Approach:** Promote the incorporation of healthy homes principles into ongoing practices and programs.
- ❖ **Enabling Communities to Create and Sustain Healthy Homes Programs:** Build sustainable local healthy homes programs.

Interagency Healthy Homes Work Group

- ▶ HUD created Federal Interagency HH Work Group
 - Participants: HUD, CDC (and other parts of HHS), EPA, DOE, DOL, USDA
 - Reduce barriers / promote collaboration / work across silos
- ▶ HHWG developed a “Strategy for Action”
 - Unifies federal action to advance healthy housing
- ▶ **Vision: Achieve meaningful reductions in the number of American homes with residential health and safety hazards.**



Advancing Healthy Housing – A Strategy for Action

Goal 1	• Establish Federally-Recognized Criteria for Healthy Homes
Goal 2	• Encourage Adoption of Healthy Homes Criteria
Goal 3	• Build Capacity to Address Health Hazards in Housing
Goal 4	• Educate the Public; Build Market-Driven Support for Healthy Homes
Goal 5	• Support Research that Informs and Advances Healthy Housing



Other Initiatives

- ▶ **Health Insurance Coverage of Services Critical to Asthma Care: A Pilot Summit**
 - Initiative to bring together key local, state, and federal decision makers, including Medicaid and private insurance providers, to explore how in-home asthma management programs can be more widely incorporated into the standard of care for communities and encourage reimbursement by health-care payers for these activities.
 - HHS is a key player and will be critical to changing policies and practice by shifting the realities of skyrocketing health-care expenditures to making investments in value-based care related to comprehensive asthma management programs



Other Initiatives

- ▶ **Implementation of the Federal Radon Action Plan**
 - New radon testing and mitigation requirements by the Office of Multifamily Housing impacting 100,000 housing units annually.
 - This requirement will be applicable to current participants who apply for mortgage refinancing and FHA multifamily mortgage insurance applications for both new and substantial rehabilitation, with the exception of refinancing of existing insured mortgages pursuant to HUD’s Section 223(a)(7) program (but for which a radon assessment is encouraged even if not required).



Other Initiatives

- ▶ **Smoke Free Policies:** An estimated 500 PHAs have adopted smoke-free policies. The OHHLHC completed smoke-free tool kits for PHA management and residents. Possible additional actions for smoke-free public housing.
 - Published “**Change is in the Air**” Action Guide



Other Initiatives

- ▶ **Healthy Home Rating System**
 - Conducted trainings around the country. HHRT uses a risk-assessment methodology and is a system (not a standard) developed to enable risks from hazards to health and safety in dwellings to be removed or minimized. The HHRT is not a “standard”, but rather an assessment tool.
- ▶ **Social Impact Bonds/Pay for Success**
- ▶ **Disaster recovery**
 - Health focused outreach/materials/training



FOCUS ON OUTCOMES

Healthy Homes Health Kids Child Health Outcomes* Jan 2011-Dec 2013

	Pre-intervention (first home visit)	Post-Intervention (3 months after home remediation)	Change
No. of hospitalizations for asthma in past 6 months	1.7	0.3	70% fewer hospitalizations
No. of emergency room visits for asthma in past 6 months	3.8	0.9	76% fewer ER visits
No. of doctor's visits for asthma in the past 6 months	3.7	1.4	62% fewer doctor's visits
No. of missed school days or daycare because of asthma in the past month	4.0	1.9	53% fewer missed days of school or daycare
Use of Albuterol pump in the past two weeks	8.6	3.9	55 % fewer uses of Albuterol Pump

* Numbers are average of 117 children surveyed based on pre and post test questionnaires

Disclaimer

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