

UTILIZING FEDERAL FUNDS TO IDENTIFY AND ADDRESS HOUSING RELATED HEALTH HAZARDS IN TRIBAL HOUSING

TUESDAY SEPTEMBER 17TH 1:30PM - 3:00PM

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U.S. Department of Housing and Urban Development (HUD)



Introductions

- Name
- Agency
- Position
- How does Health and Housing Impact you or your job
- #1 housing hazard

Agenda for Presentation

- What is the OLHCHH
- What is Healthy Homes?
 - Hazards vs Impacts
 - 8 Principles of a Healthy Home
 - Common Hazards
- Our work and resources
- Federal Funding to Identify and Address Housing Related Health Hazards

What is OLHCHH?

- The Office of Lead Hazard Control and Healthy Homes (OLHCHH) is an office within the Department of Housing and Urban Development (HUD) that protects children and families from health and safety hazards in housing.
- The Office was established in 1992
- 5 Divisions:
 - Lead and Healthy Homes Programs Division
 - Grant Services Division
 - Program and Regulatory Support Division
 - Policy and Standards Division
 - Business Operations Division

OLHCHH's Mission, Vision, and Goals

Mission

To help all Americans, but especially children and other vulnerable populations in low-income households, reach their full potential by making homes safe and healthy.



Vision

To lead the nation to a future where homes are both affordable and designed, constructed, rehabilitated, and maintained in a manner that supports the health and safety of occupants.



Goals

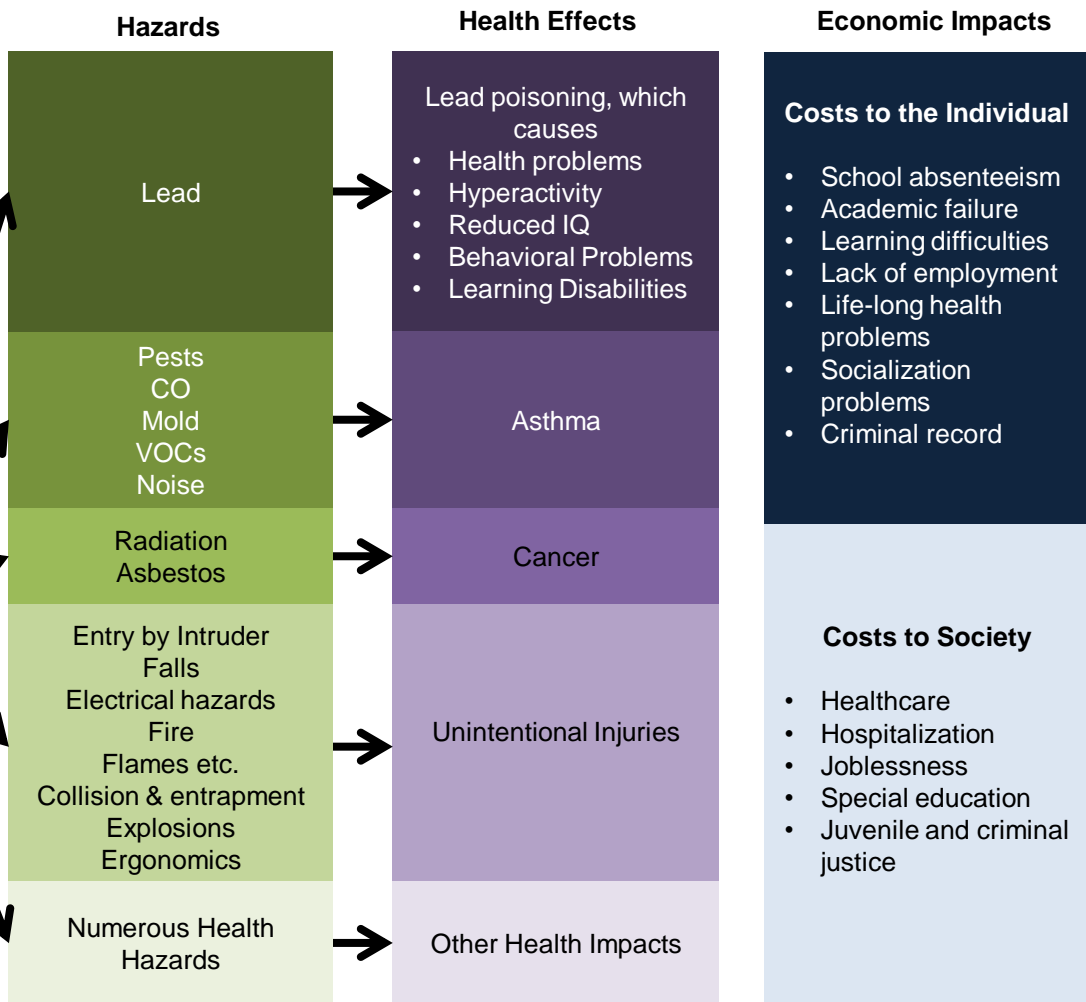
Building a National Framework

Creating Healthy Housing through Key Research

Mainstreaming the Healthy Homes Approach

Enabling Communities to Create and Sustain Healthy Homes

What is Unhealthy Housing?



(Based on: OLHCHH, 2014, Healthy Homes Rating System Operating Guidance; Loyola University 2015)

Housing Problems

These are some examples of housing problems surveyed in the American Housing Survey:

Signs of rats	Signs of mice	Signs of cockroaches	Holes in floors
Open cracks or holes (interior)	Broken plaster or peeling paint (interior)	No electrical wiring	Exposed wiring
Room without electric outlets	Flush toilet breakdowns	Heating problems	Electric fuses or breakers blown
Water supply stoppage	Water leaks	Exterior building condition problems	Sewage disposal breakdowns

(HUD & Census, 2013, American Housing Survey)

Hazards

These are the health and safety hazards examined by the Healthy Homes Rating System:

Damp & Mold Growth	Cold	Heat	Asbestos and man-made fibers	Biocides	Carbon Monoxide et al.
Lead	Radiation	Uncombusted fuel	Volatile organic compounds	Crowding and Space	Entry by Intruders
Lighting	Noise	Domestic Hygiene etc.	Food Safety	Personal Hygiene	Water Supply
Falls in baths etc.	Falls on the level	Falls on stairs etc.	Falls from windows etc.	Electrical hazards	Fire hazards
Hot surfaces etc.	Collision/Entrapment	Ergonomics	Explosions	Structural collapse	

Health Effects

Health and safety hazards trigger, worsen, or cause a wide range of health effects. Here are some of the most prevalent housing-related health effects:

Asthma & allergies	Cancer	Lead poisoning	Unintentional injuries	Death
Depression	Anxiety	Cardiovascular conditions	Arthritis	Respiratory conditions
Genitourinary disease	Unconsciousness	Cognitive impairment	Headaches	Mental disorders
Gastrointestinal illness	Skin infections	Neurological problems	Mental retardation	Behavioral problems

8 Principles of a Healthy Home

Keep It Clean

Keep It Well
Ventilated

Keep It Pest
Free

Keep It Safe

Keep It Dry

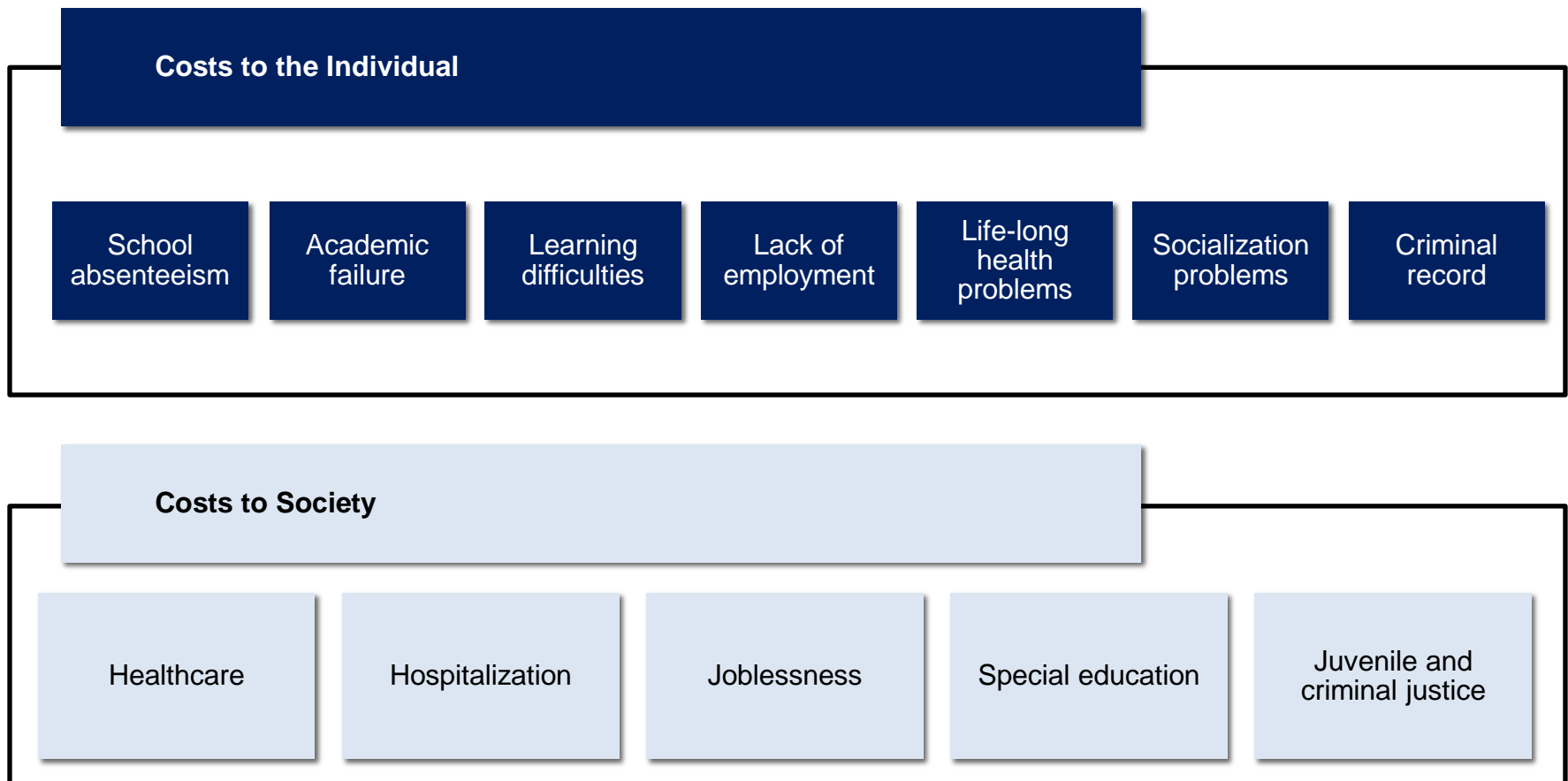
Keep It
Contaminate
Free

Keep It
Maintained

Keep It
Thermally
Controlled

Economic Impacts

Health and safety hazards impose a considerable economic burden on Americans living in unhealthy housing and on society as a whole.

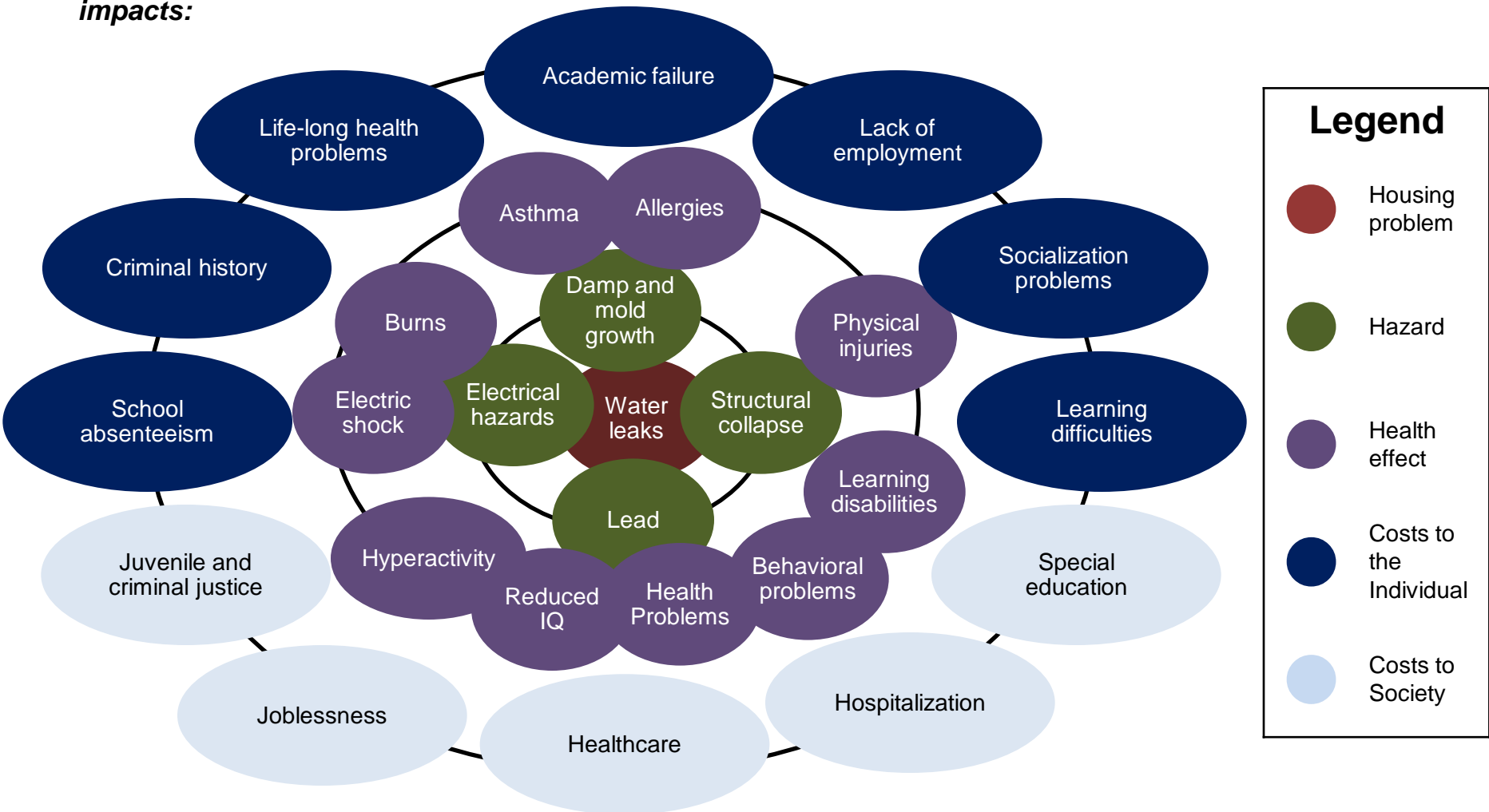


(See Gould, 2009; Trasande & Lui, 2011; Loyola University 2015)

Multiple Impacts

Housing problems cause a ripple effect of impacts.

Here is an example of how a single housing problem can lead to multiple health effects and economic impacts:



Housing Quality and Health: *Asthma & Allergies*

Related Hazards¹

Domestic hygiene, pests,
and refuse

Carbon monoxide and fuel
combustion products

Damp & mold growth

VOCs

Noise⁴

Extent of the Problem²

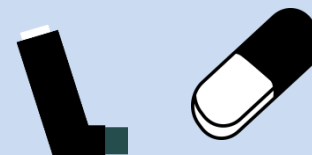
~24 million homes
*have elevated levels of four or
more allergens that have
been associated with
symptoms of allergic asthma
among residents.*

Asthma
affects
18.7 million
U.S. adults and
6.8 million
U.S. children.



Economic Impact³

\$3.5 billion per year
*for asthma due to dampness
and mold in the home.*



1. (OLHCHH, 2014, Healthy Homes Rating System Operating Guidance)
2. (The number of homes was calculated by multiplying 18% (Salo et al., 2008) by 133 million (HUD & Census, 2013, American Housing Survey); CDC, 2012)
3. (Mudarri & Fisk, 2007)
4. Children under combined exposure to traffic related noise and air pollution have been found to have relative risks of chronic bronchitis, asthma and skin allergies, which cannot be explained by air pollution alone.

Housing Quality and Health: *Cancer*

Related Hazards¹

Radiation

Asbestos

Extent of the Problem²

6.8 million homes
*have radon exposures above
the current EPA action level.*

Lung cancer
from radon exposure causes
21,000 deaths
in the U.S. each year.



Economic Impact³

> \$2 billion per year
*for radon-induced lung
cancer deaths*



1. (OLHCHH, 2014, Healthy Homes Rating System Operating Guidance)
2. (EPA, 2013; EPA, 2003)
3. (Oster, Colditz, Kelley, 1984)

Housing Quality and Health: *Lead Poisoning*

Related Hazards¹

Lead hazards, from

- Chipping, peeling, flaking, chalking paint in houses built before 1978
- Lead contaminated soil
- Lead containing household items or products

Extent of the Problem²

23.2 million homes
have at least one lead-based paint hazard.

Lead poisoning
affects
535,000
U.S. children ages 1-5.



Economic Impact³

\$5.9 billion
per year in medical costs and

\$50.9 billion
per year in lost productivity due to cognitive impairment.



1. (OLHCHH, 2014, Healthy Homes Rating System Operating Guidance)
2. (Dewalt et al. 2015; Jacobs et al. 2002)
3. (Trasande & Lui, 2011)

Housing Quality and Health: *Unintentional Injuries*

Related Hazards¹

Entry by Intruder

Falls

Electrical hazards

Fire

Flames, hot surfaces, etc.

Collision & entrapment

Explosions

Ergonomics

Extent of the Problem²

18,000 deaths

*related to injuries occur
annually in U.S. homes.*

**12 million nonfatal
injuries**

occur annually in U.S. homes.



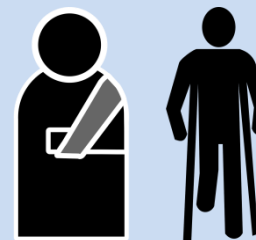
Economic Impact³

> \$200 billion

*annually in direct and indirect
costs, with*

\$90 billion

due to falls alone.



1. (OLHCHH, 2014, Healthy Homes Rating System Operating Guidance)

2. (Mack & Liller, 2012)

3. (Zaloshnja et al., 2005)

American Housing Survey

- According to the American Housing Survey (2013), almost **6.0 million** homes (or 5% of all occupied units) have moderate or severe physical problems.
- Most common housing problems:

Signs of cockroaches in the last 12 months

• 11.9 million homes (10% of all occupied units)

Signs of mice in the last 12 months

• 10.6 million homes (9% of all occupied units)

Water leakage from outside structure

• 9.5 million homes (8% of all occupied units)

Fuses or breakers blown in the last 3 months

• 8.2 million homes (7% of all occupied units)

Water leakage from inside the structure

• 7.9 million homes (7% of all occupied units)

American Housing Survey (Cont.)

- The American Housing Survey also identified housing and appliance characteristics. Some of these housing and appliance characteristics may cause or contribute to hazards, including:

Gas fuel used	• 88.9 million units (67% of all housing units)
Lacking complete kitchen facilities	• 5.6 million (4% of all housing units)
Gas clothes dryer	• 21.1 million (16% of all housing units)
Use of steps required to enter from outside	• 20.7 million (16% of all housing units)

Top Housing Hazards that Effect Health

- Lead based paint
- Improper ventilation/Indoor Air Quality
 - Inadequate HVAC
 - Radon
- Asthma/Allergy Triggers
 - Mold/moisture
 - Pests/Rodents
- Overcrowding
- Home Safety
 - Slips/trips/falls
 - Hazardous household products
 - Missing or Improper Working CO and Smoke Detectors
 - Electrical Issues/Fires

Tribal Housing Data

- *Census/ACS data also confirm that physical housing problems for AIAN households in tribal areas remain much more severe than for U.S. households, on average.*
- *Top Physical Problems in Tribal Housing*
 - *Plumbing*
 - *Kitchen*
 - *Electrical*
 - *Heating*
- One or more of these physical problems affected 13 percent of AIAN households in tribal areas. This number is much higher—by three times—than the comparable number for all U.S. households at that time—4 percent
- HUD publication HOUSING NEEDS OF AMERICAN INDIANS AND ALASKA NATIVES IN TRIBAL AREAS

Why is it so important to address housing related health hazards?

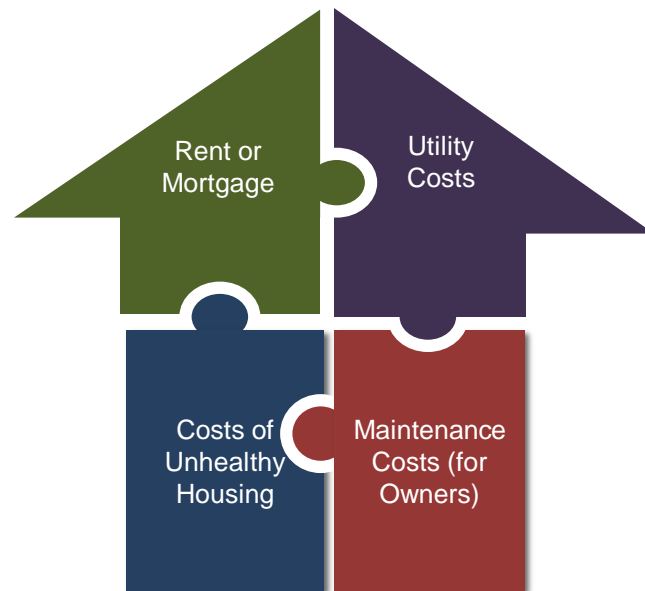
- The most vulnerable populations spend up to 90% of their time indoors

Tribal Housing Related Health Issues

- Approximately 12% of American Indian/Alaska Native (AI/AN) households across the United States lack adequate access to safe drinking water
- On Native American lands, roughly 12% of residents lack complete plumbing facilities, compared to 1% of the general U.S. population
- Approximately 25% of Native American children and 20% of Native American adults have been diagnosed with asthma in their lifetime...more than all other race and ethnic groups

Housing Costs as a Percent of Income

- Both owners and renters spend a high percent of their income on housing costs*.



The costs of living in unhealthy housing are a piece of the housing cost puzzle.

	All occupied units	Owner-occupied	Renter-occupied
Median monthly housing ¹ cost	\$891	\$929	\$850
Median monthly housing cost as a % of income	23%	19%	33%

* Housing costs include rent or mortgage payments, utility costs, property insurance, etc.

Lead

- Lead poisoning is entirely preventable through prevention and remediation.
- Once a child has been poisoned, the impairment it causes may be irreversible:
 - Reduced IQ
 - Behavioral problems
 - Learning disabilities
 - Damage hearing and the nervous system; including the brain
- There is no safe blood lead level.
- Dust from lead base paint is the biggest threat to young children.

(See Gould, 2009; CDC, 2015)

Indoor Air Quality

- Poor indoor air comes from:
 - What people do in their homes (smoking, pets, hobbies) and
 - What people have in their homes (products, new furniture, carpet)
- Poor Indoor Air Quality can be effected by:
 - Inadequate ventilation
 - Improper or inadequate HVAC systems
 - Radon
 - 2nd leading cause of lung cancer deaths in the U.S.
- Test for Radon
- Do not smoke commercial tobacco inside the home/car
- Open Windows
- Keep pets out of bedrooms and off furniture

Asthma and Allergy Triggers

- More than 6 million children in the U.S. have asthma
- Another 40-50 million people have allergies

- Asthma can be controlled

- Triggers include:
 - Pet dander
 - Mold/moisture
 - Pests/rodents
 - Dust mites
 - Commercial Tobacco Smoke
 - Cleaning products

Home Safety

- Leading cause of death in the home are:
 - Falls (slips, trips)
 - Drowning
 - Fire
 - Poisoning (hazardous products)
 - Suffocation
 - Choking
 - Firearms
- The very young and older adults are the most likely to get hurt at home.

Return on Healthy Homes Investments

Inputs

For every \$1 spent on **asthma reduction programs**¹

For every \$1 spent on **lead hazard control programs**²

For every \$1 spent on **radon mitigation programs**³

Return On Investment (ROI)

...there is a return of between \$5.30 and \$14.00.

...there is a return of between \$17 and \$221.

...there is a return of \$4.95.

Outcomes

- Reduced healthcare costs
- Increased school attendance
- Increased employment attendance
- Increased income due to attendance
- Fewer deaths

1. (Nurmagambetov et al., 2011)

2. (Gould, 2009)

3. (Healthy Housing Solutions, 2014)

Compliance and Enforcement

- The Regulatory and Program Support Division...
 - Provides training and technical assistance
 - Enforces the **Lead-Based Paint Disclosure Rule**
 - Works with HUD program offices on compliance with the **Lead Safe Housing Rule**
- Since 1999, OLHCHH's enforcement efforts have resulted in:
 - Over **188,000** units made lead-safe and
 - Almost **\$1.5 million** in penalties

Protect Your Family From Lead in Your Home

EPA United States Environmental Protection Agency

CPSC United States Consumer Product Safety Commission

HUD United States Department of Housing and Urban Development

September 2013

Guidance and Performance Criteria

FIGURE 5.4 Forms of Paint Deterioration



FIGURE 5.4a Peeling paint



FIGURE 5.4b Alligatoring paint



FIGURE 5.4c Blistering paint



FIGURE 5.5 Baseboard showing a de minimis amount of deteriorated paint.



FIGURE 5.7 Impact surface on door and frame.

- **Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing**

- OLHCHH has published two editions of The Guidelines, which is a technical manual for lead hazard evaluation and control in federally-assisted housing.

- **The Healthy Homes Guidance Manual**

- OLHCHH promulgated a Healthy Homes Program Guidance Manual to provide practical guidance for successfully developing and implementing a local healthy homes program.

- **The Healthy Homes Rating System**

- OLHCHH developed the Healthy Home Rating System (HHRSS), a risk assessment system to identify the likelihood and impact on resident health from housing-related health hazards such as radon, lead-based paint, carbon monoxide, fall hazards, and more.

Outreach

- **OLHCHH’s Website**

- OLHCHH maintains a website that has information about upcoming events; information about our programs; and resources for homeowners, tenants, and stakeholders.
http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/.

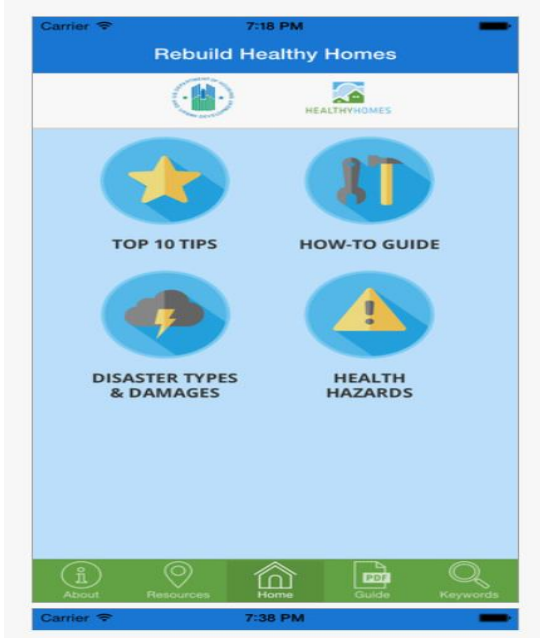
- **The Healthy Homes eNewsletter**

- **Disaster Recovery**

- OLHCHH is working with FEMA, EPA, HHS, OSHA, other offices within HUD, and external partners to integrate healthy homes principles into disaster recovery materials. OLHCHH’s disaster recovery materials are available at http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/outreach.

- **Rebuild and Healthy Homes Apps**

- OLHCHH developed an application titled Rebuild Healthy Homes. It is a “how-to-guide” on safely reentering your home after a disaster. It is available in iTunes and Google Play.



Tips to Keep Your Home Safe and Healthy

Tips to Keep Your Home Safe and Healthy

- A home has a unique place in our everyday lives. Homes are where we start and end our day, where our children live and play, and where friends and family to celebrate.
- It is well established that a person's health is directly related to the home, since poor housing conditions can cause or contribute to numerous illnesses and injuries. Poor housing conditions are associated with a wide range of health conditions, including lead poisoning, asthma, respiratory infections and injuries.
- *You can create a healthier home for your family by following these tips*
 - Install smoke and carbon monoxide detector. Test batteries monthly and replace at least twice a year.
 - Clean and replace air filters every 90 days. If you have pets, you should replace more frequently.
 - Do not allow smoking in your home or car. Ask family members or guests to smoke outside.
 - Test your home for radon. Install a mitigation system if the test results is 4 pCi/L or higher.
 - Keep chemicals, including cleaning products and pesticides, away from children.
 - Remove shoes before entering your home to keep contaminants and toxins outside of the house.
 - Clean and maintain gutters, downspouts and the roof to prevent moisture from entering your home. Fix leaks right away
 - If you live in a home built before 1978, test your home for lead paint. Ask your doctor to test your child's blood for lead.
 - Prevent slips, trips and falls by keeping floors clear, cleaning up spills and installing handrails on stairs and ramps.
 - Install properly working locks on doors and windows. Install window guards and stops.

What's Next?

- Funding Opportunity for Tribal Entities
- National Lead Poisoning Prevention Week
 - October 20th – 26th, 2019
- National Healthy Homes Month
 - June
- National Healthy Homes Conference
 - June 29th – July 2nd

Funding Opportunity

Tribal Healthy Homes Production Grant Program

- First funding made available in FY2017
 - Awarded 13 applicants
 - Representing
 - Alaska (3)
 - Montana (4)
 - Arizona (2)
 - North Dakota (1)
 - New York (2)
 - North Carolina (1)
- Second round made available in FY2018
 - In process of finalizing

Funding Opportunity

- Eligible Entities
- Eligible Activities
 - Salary/Fringe
 - Travel
 - Training
 - Inspection/Assessment of Housing Units
 - Remediation of Hazards
 - Clearance/Re-assessment
 - Equipment/Supplies

Funding Opportunity

Rating Factor I Applicant and Partner Capacity

Funding Opportunity

Partner Opportunities

- Early Headstart/Preschool Programs
- Faith Based
- Philanthropy
- PEHSU
- Rebuilding Together/Habitat for Humanity

Funding Opportunity

How can Partners Play a Role?

Funding Opportunity

Rating Factor II
Applicant Need

Funding Opportunity

Applicant Need

- Housing
- Household Income
- Health Issues
- Other Issues Contributing to Need

Funding Opportunity

Rating Factor III

Applicant Financial Capacity and Accountability

Resources and Information

- [OLHCHH grantees](#)
- [National Center for Healthy Housing](#)
- [Health Dept data](#)
- [Housing Dept data](#)
- [www.grants.gov](#)

Contact Information

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