

## No place like home: Creating safe and healthy homes for all people

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National Center for Healthy Housing

## Presentation Topics

- Why do we care about healthy housing?
- What are the priority hazards in the home?
- What “intervention” strategies work for addressing housing-related hazards?
- What types of policies and programs are needed to improve housing?

## Housing Then...



## Is Housing a Shared Commons? Is Housing Part of the Infrastructure?

### What is The Commons?

“The commons is everywhere. It is the air we breathe, the words we speak, the traditions we respect. It is tangible and intangible, ancient and modern, local and global. It is everything we inherit together, as part of a community, as distinct from things we inherit individually. It is everything that is not privately or state-owned. ...”

## Cuyahoga River ca. 1960



## Housing now...



**Relationship Between Interior Problems and Exterior Problems**  
Based on the American Housing Survey - 2005 National Data for Occupied Housing

Exterior Problem	Homes (000s)	Percent Increased Likelihood of Finding an Interior Problem if an Exterior Problem is Present <sup>1</sup>									
		Leaks		Rodents		Heating		Structural			Resident Dissatisfied
		Interior	Exterior	Rats	Mice	Heating Problem	Fire/CO Danger	Cracks in Walls	Holes in Floors	Paint/ plaster	
Sloping outside walls	1,168	150	190	640	240	270	350	530	1,300	800	1,950
Foundation crumbling or has open crack or hole	2,111	140	230	430	220	240	130	530	900	560	680
Hole in roof	1,680	140	460	460	220	220	220	520	930	750	800
Missing bricks, siding, other outside wall material	2,471	150	160	610	220	180	270	440	870	670	770
Boarded up windows	862	110	100	610	230	210	410	420	1,100	580	680
Broken windows	3,212	170	130	410	210	190	210	400	690	520	540
Sagging roof	1,888	120	230	570	220	180	250	460	1,070	550	750
Missing roofing material	3,588	80	180	290	110	140	130	250	490	340	350
One or more ext. problem	10,464	140	220	290	190	180	190	440	680	580	510
Two or more ext. problem	3,442	150	260	560	250	240	290	590	1,180	730	910
Three or more ext. problem	1,517	170	280	800	260	290	390	660	1,570	980	1,280
Four or more ext. problem	698	180	290	1,340	290	350	480	720	2,040	1,160	1,610
Five or more ext. problem	402	170	260	1,240	260	310	400	620	2,050	1,070	1,260
Six or more ext. problem	247	80	180	1,120	210	290	290	540	1,990	720	1,220
Seven or more ext. problem	140		100	1,160	150	250	300	380	1,480	640	1,160
Eight or more ext. problem	71			580				570			490

## Unhealthy housing is not evenly distributed

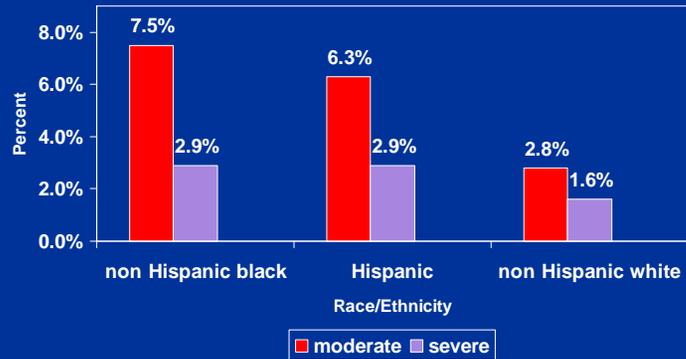
MAY 2005 ♦ THE NATION'S HEALTH

### VITAL SIGNS

Perspectives of the president of APHA

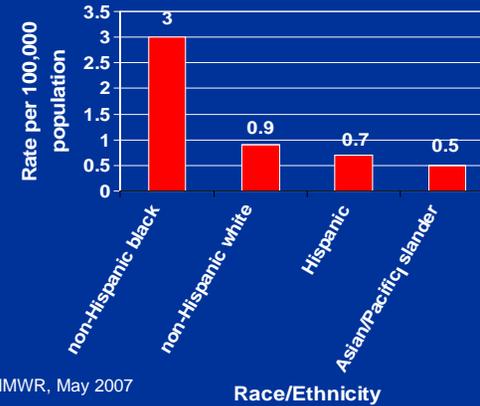
**Safer housing: A key step to  
overcoming health disparities**

## Race/ethnicity of people living in homes with severe and moderate physical problems



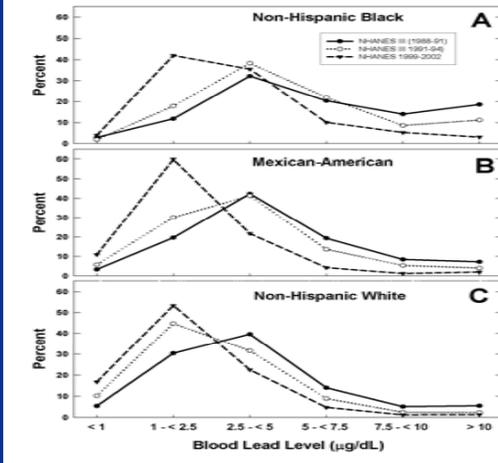
Source: American Housing Survey, 2005

## Unintentional fire/burn death rates among children aged 1-9 years by race/ethnicity



Source: CDC, MMWR, May 2007

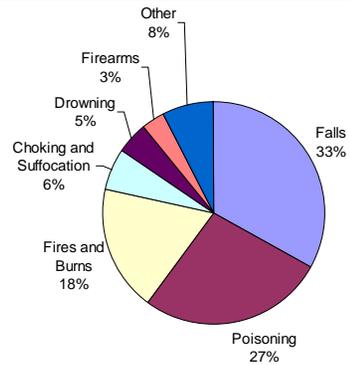
Children aged 1- 5 years, NHANES III (Phases I and II) and 1999-2002



## Health Care and Productivity Costs for Illnesses and Injuries:

- **Asthma-\$18.3 billion a year**
  - \$10.1 billion in direct medical costs
  - \$8.2 billion in lost work/school
- **Injuries**
  - Burns-\$7.5 billion a year
  - Falls in 2000-\$81 billion in lifetime costs
- **Depression-\$83.1 billion in lifetime costs**
  - \$26.1 billion in medical care
  - \$5.4 billion mortality costs related to suicide
  - \$51.5 billion in lost productivity

## Hazards Can Be Physical,



## Place of Injuries in US Children

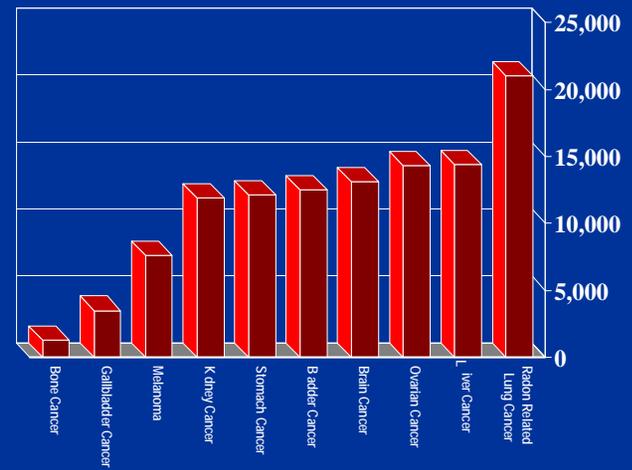
Place	Total Injury Visits/yr
Home	4,010,000
School	811,000
Public	2,210,000
Other	841,000
Unknown	2,341,000

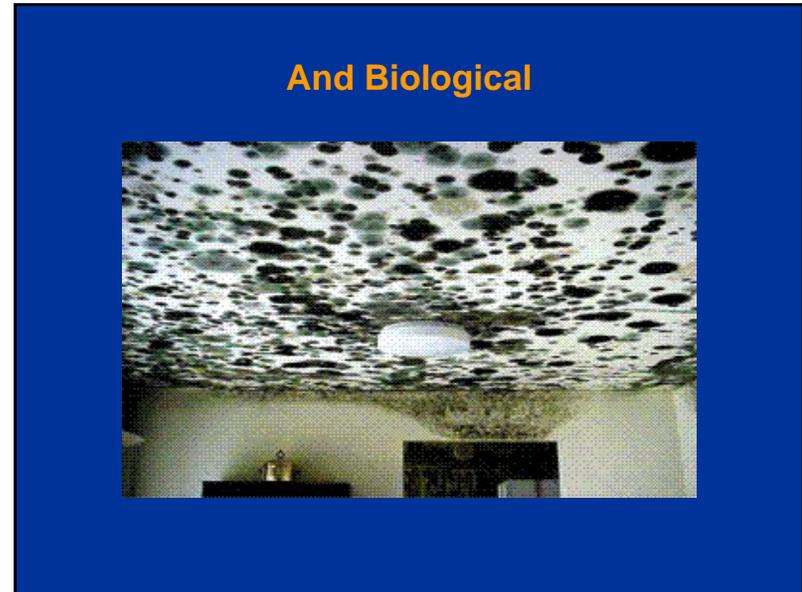
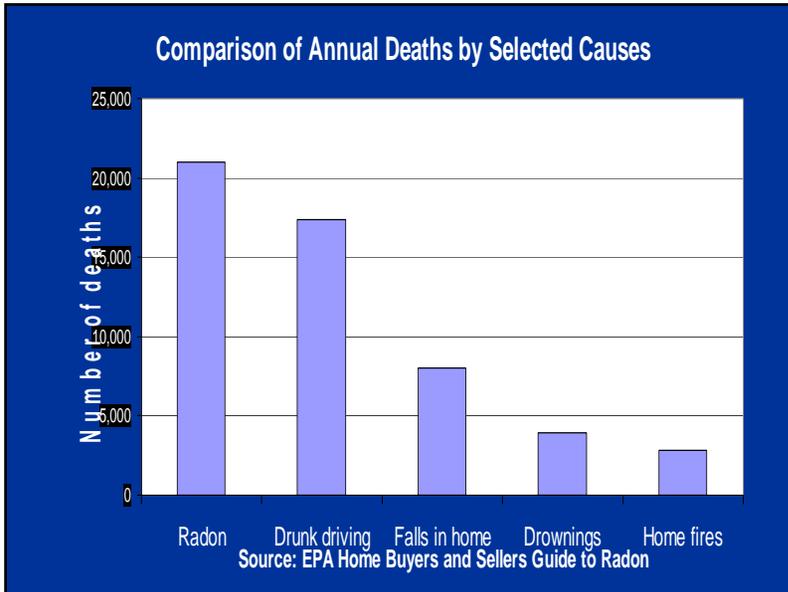
Phalen et al. National Hospital Ambulatory Medical Care Survey

## Chemical



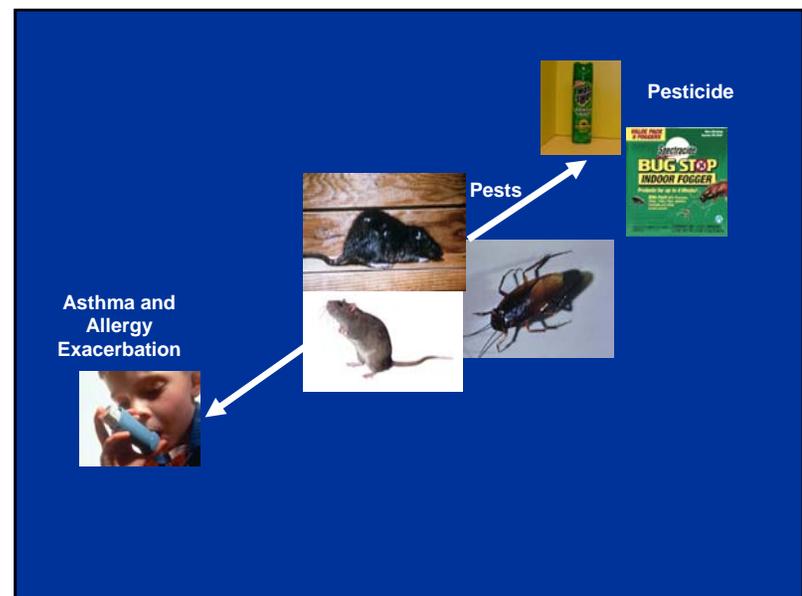
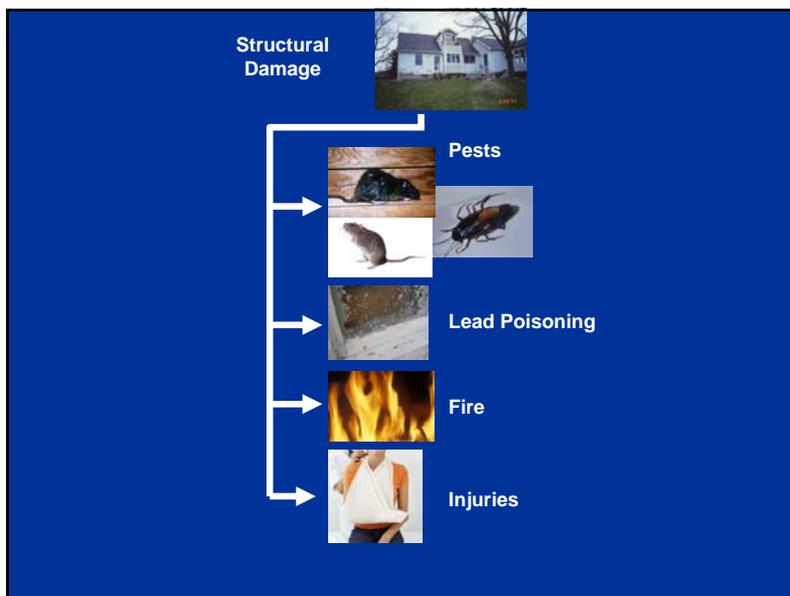
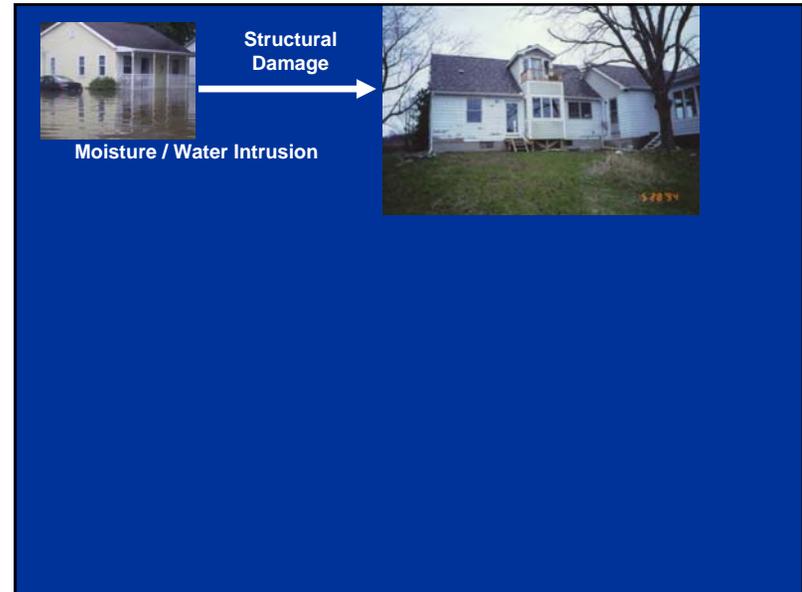
Comparative U.S. Cancer Deaths in 2004

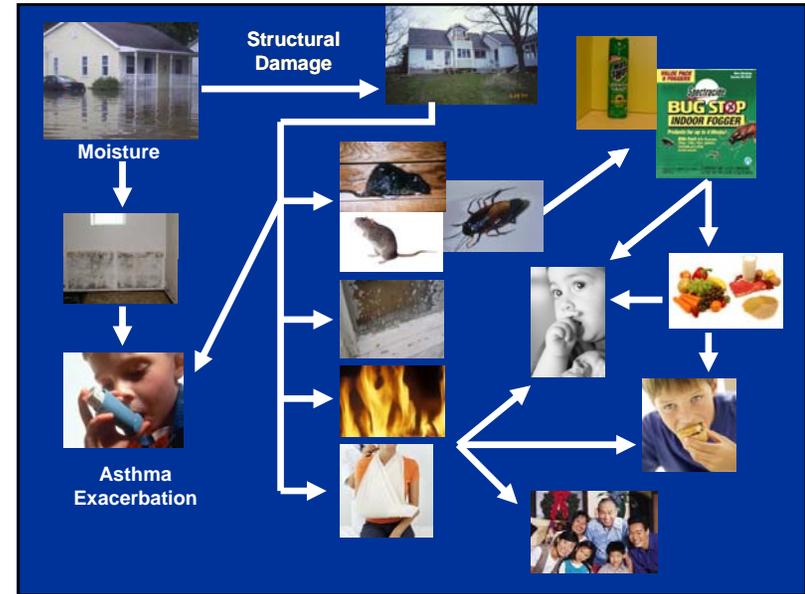
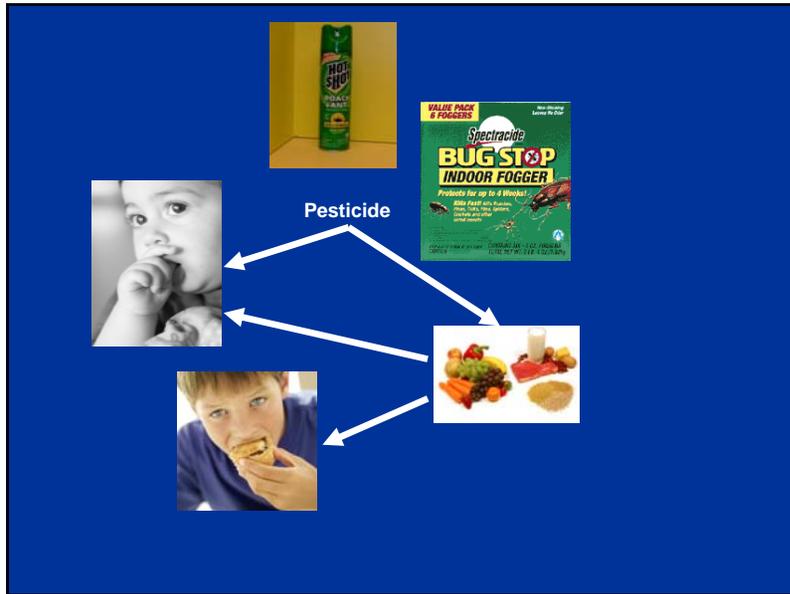




*If evolution really works, how come mothers only have two hands?* Milton Berle

- ### Core Principles of a Healthy Home
- 
- Categorical Approach:
    - Allergens/asthma
    - Asbestos
    - Combustion products
    - Lead
    - Asthma
    - Insects and Rodents
    - Pesticides
    - Injuries
  - Holistic Approach:
    - Dry
    - Clean
    - Pest-free
    - Ventilated
    - Safe
    - Contaminant-Free
    - Maintained





## Today's Chronic Diseases & Injuries Asthma, Cancer, Neurological Deficits, Others

National Center for  
Healthy Housing

**Housing Interventions  
and Health:**  
A Review of the Evidence

January 2009  
National Center for Healthy Housing

## What Works? Proven Healthy Housing Improvements

- Multi-faceted Asthma Interventions
- Integrated Pest Management
- Moisture Intrusion Reduction
- Radon Mitigation
- Lead Hazard Control
- Smoke & CO Alarms
- 4-Sided Pool Fences
- Pre-Set Hot Water Temperature
- Section 8 Vouchers

## Integrated Pest Management

- Severe asthma reduced from 37% to 9% following IPM<sup>1</sup>
- Insecticides were lower in air and absent in maternal blood<sup>2</sup>
- More effective against pests than routine spraying<sup>3</sup>



1 Sandel et al. Can IPM Impact Urban Children With Asthma?  
 2 Williams et al. An Intervention to Reduce Residential Insecticide Exposure During Pregnancy Among An Inner City Cohort. EHP 114: 1684-1689  
 3 Miller & Meek 2004. Cost and Efficacy Comparison of IPM with Monthly Spray Insecticide Applications J Econ Entomology 97 552-569

## Training Needs

- Cross-trained housing, environmental, energy, and health workforces (to identify and remediate housing hazards)
- Healthy housing jobs as part of “Green Jobs” efforts
- Training of Community Health Workers/Promotores for hard-to-reach audiences
- Training in Health Impact Assessment for Planners

## Pediatric Environmental Home Assessment

Pediatric Environmental Home Assessment				
HOME VISIT EXERCISE ANSWER SHEET				
<b>RESIDENT REPORTED INFORMATION</b> <small>Red X responses indicate areas of greater concern.</small>				
<b>General Housing Characteristics</b>				
Type of ownership	<input type="checkbox"/> Own house	<input type="checkbox"/> Market rate rental hsg.	<input checked="" type="checkbox"/> Subsidized rental hsg.	<input type="checkbox"/> Shelter
Age of home	<input type="checkbox"/> Pre-1950	<input checked="" type="checkbox"/> 1950 -1978	<input type="checkbox"/> Post-1978	<input type="checkbox"/> Don't know
Structural foundation	<input checked="" type="checkbox"/> Basement	<input type="checkbox"/> Slab on grade	<input type="checkbox"/> Crawlspace	<input type="checkbox"/> Don't know
Floors lived in (check all that apply)	<input type="checkbox"/> Basement	<input type="checkbox"/> 1 <sup>st</sup>	<input checked="" type="checkbox"/> 2 <sup>nd</sup>	<input type="checkbox"/> 3 <sup>rd</sup> or higher
Heating	Fuel used	<input type="checkbox"/> Natural gas / LPG	<input checked="" type="checkbox"/> Oil	<input type="checkbox"/> Electric <input type="checkbox"/> Wood
	Sources in home	<input checked="" type="checkbox"/> Radiators	<input type="checkbox"/> Forced hot air vents	<input type="checkbox"/> Space heater or oven <input type="checkbox"/> Other:
	Filters changed	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Don't know <input checked="" type="checkbox"/> No filter
	Control	<input type="checkbox"/> Easy to control heat	<input checked="" type="checkbox"/> Hard to control heat	
Cooling	<input type="checkbox"/> Windows	<input checked="" type="checkbox"/> Central/window AC	<input type="checkbox"/> Fans	<input type="checkbox"/> None
Ventilation (check all that apply)	<input checked="" type="checkbox"/> Opens windows	<input type="checkbox"/> Kitchen & bathroom fans	<input type="checkbox"/> Central ventilation	
<b>NOTES: PARENT REPORTS BIGGEST CONCERNS ARE DUST AND MICE</b>				

## Policy Needs

- Integrated Funding Streams
- Integrated Programming
- Funding for housing repair
- Housing regulations implementation and enforcement (e.g. federal, state, local codes)
- Visibility for Healthy Housing
- Connections between Healthy Housing and Broader Place-Based Initiatives

Figure 1: Selected Annual Property Maintenance Costs Per Unit

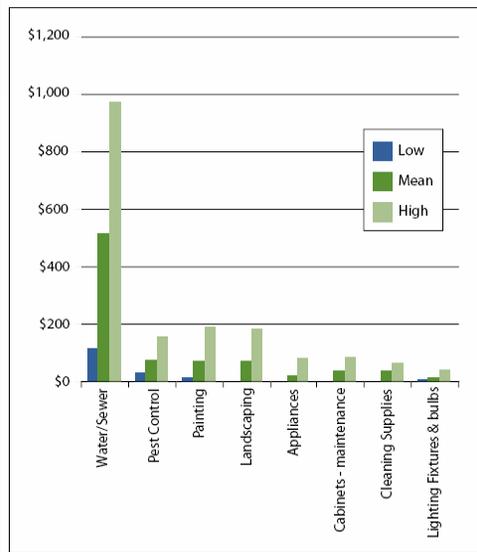


Figure 1 at left graphically presents the same information. The data clearly point to water/sewer utilities as a dominant expense. A second category of expenses merits attention: pest control, painting, landscaping (which is also categorized by tremendous variation), cabinet maintenance/replacement, cleaning supplies and appliances (generally replacement).

### Selected Annual Property Maintenance Costs Per Unit

	Low	Mean	High
<b>WATER AND SEWER</b>	\$117	\$516	\$977
<b>PEST CONTROL</b>	\$32	\$75	\$156
<b>PAINTING</b>	\$13	\$72	\$189
<b>LANDSCAPING</b>	\$0	\$72	\$187
<b>CABINETS - MAINTENANCE</b>	\$0	\$34	\$83
<b>APPLIANCES</b>	\$0	\$22	\$79
<b>CLEANING SUPPLIES</b>	\$2	\$33	\$65
<b>LIGHTING FIXTURES AND BULBS</b>	\$6	\$17	\$38
<b>OVENS AND RANGES</b>	\$0	\$15	\$26
<b>WINDOWS</b>	\$0	\$5	\$26
<b>LIGHTING - FIXTURES ONLY</b>	\$0	\$9	\$18
<b>KITCHEN AND BATH FANS</b>	\$0	\$9	\$2
<b>LIGHTING - BULBS ONLY</b>	\$0	\$3	\$6
<b>CABINETS - NEW</b>	\$0	\$0	\$0



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### The Financial Burden

NON Smoking Room		Smoking Room	
Labor - 12hrs*35/hr	= \$420	Labor - 24hrs*35/hr	= \$840
Paint - 3 Gallons	= \$60	Paint - 3 Gallons	= \$60
Ceiling Paint-2 Gln	= \$40	Ceiling Paint -2 Gln	= \$40
Carpet Shampoo	= \$50	Carpet Shampoo	= \$50
		Primer	= \$100
		Replace Rug Burns	= \$600
<b>Total</b>	<b>= \$570</b>	<b>VS.</b>	<b>= \$1,070 - **\$1,690</b>

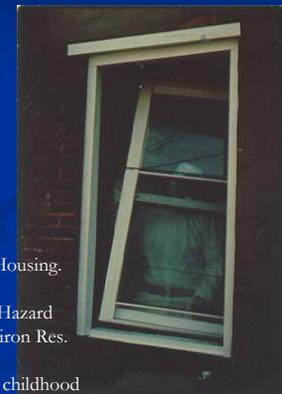
\*Depending on Carpet Condition.  
\*\*Additional costs could be added for cabinets/countertops.



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## Lead-Safe Window Replacement

- Windows have highest lead levels<sup>1</sup>
  - 78%-95% improvement after intervention<sup>2</sup>
- Net** benefits due to higher lifetime earnings (from avoided IQ deficits), energy conservation, and increased home value = **\$67 billion**<sup>3</sup>



1 Jacobs et al. 2002. Prevalence of LBP Hazards in US Housing. EHP 110: A559-A606

2 Wilson et al. 2006. Evaluation of HUD-Funded Lead Hazard Control Treatments at Six Years Post-Intervention, Environ Res. 102(2) 237-48.

3 Nevin R, et al. 2008. Monetary benefits of preventing childhood lead poisoning with lead-safe window replacement, Environ Res 106: 410-419

## Federal Stimulus

- \$100 million, HUD Office of Healthy Homes and Lead Hazard Control (OHHLHC)
- \$5 billion for weatherization activities
- \$1 billion for a new Prevention -Wellness Trust and \$500 million for the health workforce
- \$6.3 billion for increasing energy efficiency in federally-supported housing programs.
  - Including new insulation, windows, and frames.
- \$2 billion for the Neighborhood Stabilization Program
- \$2.25 billion for the HOME program and \$1 billion for CDBG

## Weatherization Plus Health



## Weatherization Plus Health

- Install CO & smoke alarms
- Eliminate standing water
- Repair interior & exterior water leaks
- Replace un-vented gas appliances with direct or power-vented equipment
- Install kitchen & bath fans that exhaust to the exterior.
- Exhaust clothes dryers to the outside
- Use lead-safe practices and conduct lead dust clearance testing
- Test for radon
- Patch exterior holes using pest-resistant materials
- Replace old lead-acid laminated windows with new energy efficient lead-free

## Healthy Homes Legislation

- Introduced in 2008, plans for reintroduction in 2009:
  - Healthy Housing Council Bill
  - The Safe and Healthy Housing Act of 2009
  - Code enforcement bill, H.R. 4401 and S. 2458

# National Healthy Housing Policy Summit

- Who:
  - 40 Roundtable Participants
    - Affordable housing
    - Public health
    - Energy efficiency
    - Community organizing
    - Green building
- What:
  - Organizational commitments
  - Feedback on policy strategies
  - Long-term partnerships
- Why:
  - Raise awareness and build political support
  - Seize opportunity for progress



# State of the Nation's Healthy Housing

[http://nchh.org\\_staging.pointclick.net/Policy/State-of-Nations-Healthy-Housing.aspx](http://nchh.org_staging.pointclick.net/Policy/State-of-Nations-Healthy-Housing.aspx)



# State of the Nation's Healthy Housing (47 MSAs)

- Anaheim - 1st
- Sacramento 8th
- San Bernardino - 12th
- San Jose - 14th
- San Diego - 32nd
- Los Angeles 41st
- Oakland 42nd
- San Fran 44th

**State of the Nation's Healthy Housing**  
 Housing Conditions by Metropolitan Statistical Area (MSA) - Year 2008

MSA	Score
Anaheim	1st
Sacramento	8th
San Bernardino	12th
San Jose	14th
San Diego	32nd
Los Angeles	41st
Oakland	42nd
San Fran	44th

# Tailored Healthy Housing Policies



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