Ten Years of the National Safe and Healthy Housing Coalition in the United States: Lessons Learned

David E. Jacobs, PhD, CIH

Chief Scientist, National Center for Healthy Housing, USA



Wellington, New Zealand November 4 2019



Florence Nightingale

"The connection between health and the dwelling of the population is one of the most important that exists."

Cited in Lowry, S, BMJ, 1991, 303, 838-840



Cuyahoga River ca. 1960



Is Housing a Shared 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."

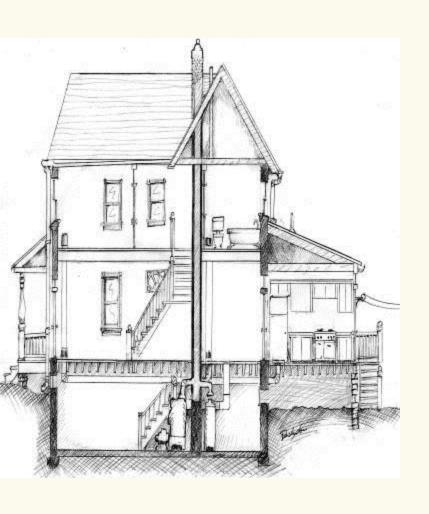
Fragmentation of Housing & Health

- Should a Healthy Home Cost More?
- Why are Healthy Homes Investments Unlike Other Home Improvements?
- Finding Market Vehicles to Provide Incentives to Promote Investment in Healthy Homes
- Cost of NOT Making Homes Healthy

Re-establish the Collaboration Between The Built Environment & Health

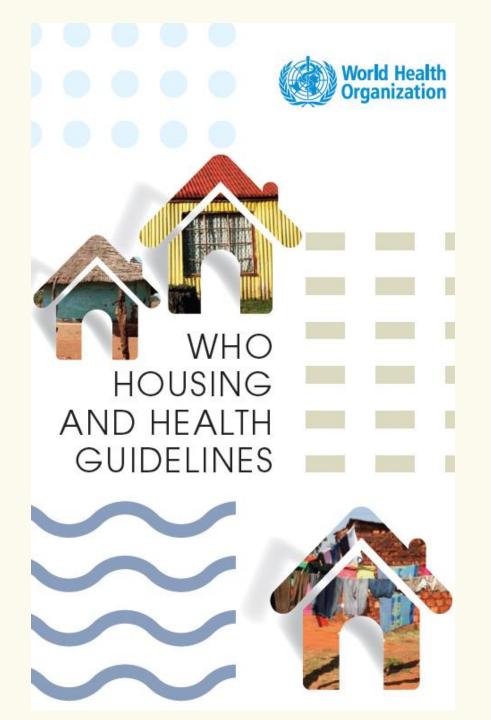
- Builders & Weatherization Professionals
- Green Developers
- Public & Environmental Health
- Housing Professionals
- Banks & Other Financial Institutions
- Government
- Rehab Professionals
- CITIZENS!!
- Many others

Healthy Homes Principles



Keep It:

- 1. Dry
- 2. Clean
- 3. Ventilated
- 4. Pest-Free
- 5. Safe & Accessible
- 6. Contaminant-Free
- 7. Maintained
- 8. Affordable
- 9. Thermally Controlled



Translating Research to Practice Building the Evidence Base Systematic Reviews

Surgeon General's Call to Action

The Surgeon General's Call to Action To Promote Healthy Homes

2009

A healthy home is sited, designed, built, renovated, and maintained in ways that support the health of residents.



A healthy home is sited, designed, built, renovated, and maintained in ways that support the health of residents.





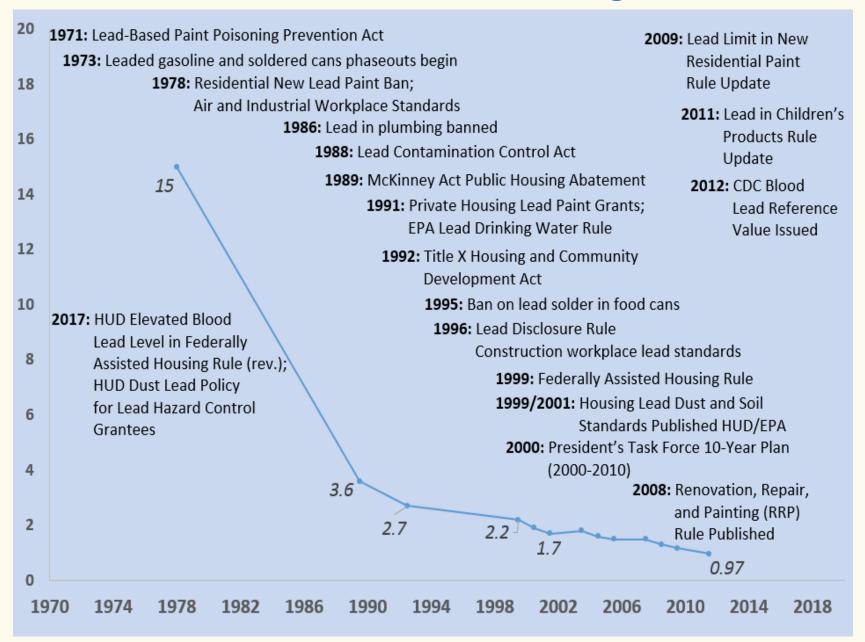
National Healthy Housing Standard



Research & Advocacy

- Alliance to End Childhood Lead Poisoning
- National Center for Lead-Safe Housing
 - Now the National Center for Healthy Housing

U.S. Policies vs. Children's Average Blood Lead



The Origin of US Healthy Housing



Pictured left to right at a September 2012 Healthy Homes ceremony at the City Club of Cleveland honoring former U.S. Rep. Louis

Figure 5.5 Unhealthy Heating System Using Basement Air

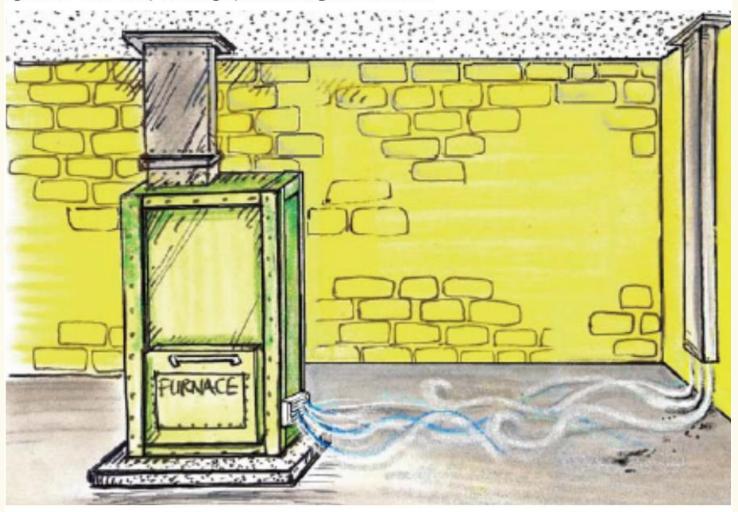


Figure 5.6 Healthy Heating System Using Outdoor Air or Air From Living Spaces

Figures 5.5 and 5.6 courtesy of Environmental Health Watch/Cuyahoga County Board of Health, Cleveland, Ohio

National Safe and Healthy Housing Coalition

National Center for **HEALTHY HOUSING**

Who We Are ▼

Information and E

HOME ▶ BUILD THE MOVEMENT ▶ NATIONAL SAFE AND HEALTHY HOUSING COALITION

National Safe and Healthy Housing Coalition

CELEBRATING 10 YEARS OF ADVOCACY: 2009 - 2019

The National Safe and Healthy Housing Coalition is a broad, voluntary coalition of over 600 members, including 400 organizations, working to improve housing conditions nationwide through education and outreach to key national stakeholders and federal public decision makers. The coalition promotes policies for safe and healthy housing in the United States, with special emphasis on those who are disproportionately impacted.

View an all-new infographic about the makeup and activities of the coalition.



International, National, and Regional NSHHC Member Organizations

* - Steering Committee Members

INTERNATIONAL, NATIONAL, AND REGIONAL COALITION MEMBERS	
International	
Habitat for Humanity International	Atlanta, GA
International Code Council	Washington, DC
OK International	San Francisco, CA
Safe Kids Worldwide	Washington, DC
National	
Advocates for Basic Legal Equality, Inc.	Fletcher, NC
American Association of Radon Scientists and Technologists, Inc. (AARST)	Chicago, IL

Steering Committee Members

Alameda County Health Department	
Asthma and Allergy Foundation of America	
Boston Public Health Commission	
Childhood Lead Action Project	
Green and Healthy Homes Initiative	
Lead and Environmental Hazards Association	
Marion Public Health	
Metropolitan Tenants Organization	
National Association for State Community Services Programs	
National Center for Healthy Housing (Co-Chair)	
Omaha Healthy Kids Alliance	
Public Citizens for Children and Youth	
Rebuilding Together	
Rodin Center for Social Justice, Loyola University Chicago	
Rural LISC	
Tribal Healthy Homes Network (Co-Chair)	

National Safe and Healthy Housing Coalition Workgroups

The National Safe and Healthy Housing Coalition periodically institutes open-membership workgroups around a particular healthy housing topic or policy priority. Previous workgroups have included the Codes and Standards Workgroup and the Medicaid and Affordable Care Act Workgroup.

Coalition Facts and Activities

July 2009 founded 600

individual members

400 organizations represented

52

49 states, DC, Guam, and Puerto Rico represented

Organizational Makeup

80% of membership operates with a state and/or local focus

Steering Committee

Comprised of 16 elected members; governs coalition activities

Policy

Support national policy agendas and funding requests

Quarterly Webinars

Learn from colleagues and experts

Monthly Action Alerts

Receive updates about events, sign-on letters, and new resources

Regular Hill Meetings

Visit with your members of Congress (Coalition members have met with congressional offices over 175 times since 2013 alone!)



To join this unified national movement or simply learn more about the Coalition, related legislative news and priorities, coming events and activities, and more ...

ILLINOIS

2018 Healthy Housing Fact Sheet

Unhealthy conditions found in hazardous housing can lead to lead poisoning, asthma, respiratory illness, cancer, and unintentional injuries, resulting in missed school days and poor school performance for children, as well as missed work days for parents. To protect the health of Illinois families and prevent continued increases in associated healthcare costs and societal consequences, full federal funding is needed for critical programs and services:

Left received funding

	SHICE ZUTU:
CDC's Healthy Homes and Lead Poisoning Prevention Program	YES
CDC's National Asthma Control Program	YES
CDC's Environmental Health Tracking Network	NO
HUD's Office of Lead Hazard Control and Healthy Homes	YES
HUD's Community Development Block Grants (CDBG)	YES
HUD's HOME Investment Partnerships Program	YES
EPA's Lead Categorical Grants	YES
EPA's Radon Categorical Grants	YES
EPA's Drinking Water Revolving Fund	
HHS' Maternal and Child Health Block Grants	YES
HHS' Low Income Home Energy Assistance Program (LIHEAP)	YES
DOE's Weatherization Assistance Program	YES

Full funding to federal programs such as these will help to address many of the risks and burdens facing the residents and families of Illinois, including:



In Illinois, 31% of children live in households with a high housing cost burden, and 18% of children live in poverty.



894 Illinoisans above the age of 65 died from unintentional falls in 2016.



67% of Illinois housing was built prior to 1978; **59% of these homes have a prevalence of lead-based paint**.



In 2016, **7,108** Illinoisan children tested had an elevated blood lead level (5 µg/dL or more); **1,345** of them had blood lead levels of 10 µg/dL or more.



Over 8% of adults and 7% of children have current asthma in Illinois (2015).



Illinois' asthma expeditures are expected to reach \$2.2 million by 2020, a growth of 53.6% since 2010.



Over 41% of homes tested in Illinois have radon amounts above the EPA action level in their indoor air. Up to 1,160 people in Illinois develop radon-related lung cancer each year.



On average, **67 Illinoisans die annually from carbon monoxide exposure** (2011-2015). This is the second highest number of any state during this period.

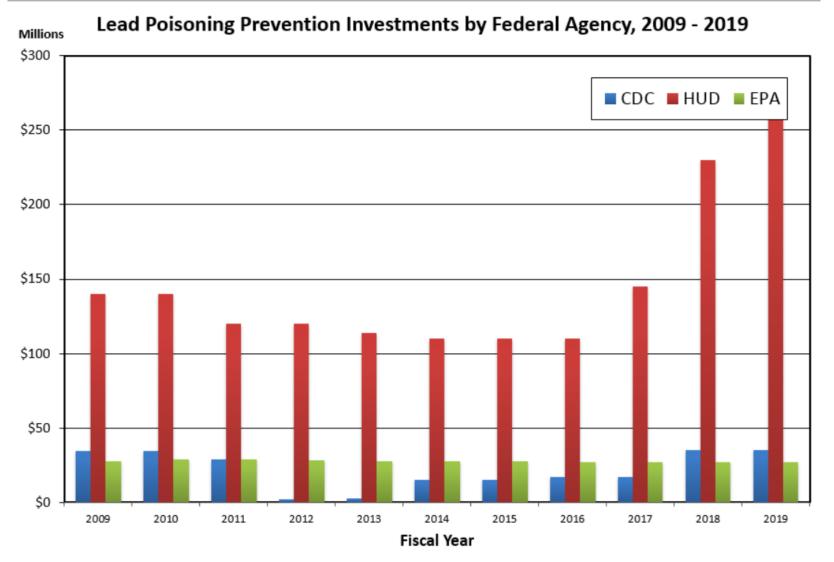
National Center for HEALTHY HOUSING

September 2018. For **references**, additional **state-specific** healthy homes information, and to learn how you can **engage your members of Congress** on these vital issues...

visit: http://bit.ly/StatePro

contact: sgoodwin@nchh.org

How the Coalition Began



Hill Day Feb 28, 2019

- Held in conjunction with a <u>National Lead Poisoning</u> <u>Prevention and Healthy Homes Conference</u>
- 60 participants took four hours to meet with 62 congressional offices.
- Spread across 13 groups, staffed by group leads from the National Center for Healthy Housing, <u>Childhood</u> <u>Lead Action Project</u>, <u>Environmental Defense</u> <u>Fund (EDF)</u>, the <u>Green & Healthy Homes</u> <u>Initiative (GHHI)</u>, the <u>Healthy Homes Coalition of West Michigan</u>, the <u>Tribal Healthy Homes Network</u>, <u>Trust for America's Health (TFAH)</u>
- In 2016, the last time we hosted a Hill Day, we took 27 participants from 12 states to roughly 80 meetings over the course of a whole day.



The Michigan Hill Day Team: Paul Haan of the Healthy Homes Coalition of West Michigan with constituent advocates Alisa Culbreath, Taquita "Moe" Culbreath, and Tabitha Williams; Representative Bill Huizenga's (R-MI-2) legislative assistant, Andrew Kohlrieser; and Karyn Ferrick from the City of Grand Rapids.

Research in Healthy Housing

- Researchers focus on the unknown, because that is the challenge of discovery
- But policymakers act on what is known, not unknown
- Bridging the research/policy gap.
- Quantify the magnitude of the problem, pass legislation, document solutions, estimate costs and benefits, pass legislation, implement & evaluate results

The MIGHHTY STUDY: Moving Into Green Healthy Housing: The Yield in health

Moving Into Green Healthy Housing

David E. Jacobs, PhD, CIH; Emily Ahonen, PhD; Sherry L. Dixon, PhD; Samuel Dorevitch, MD, MPH; Jill Breysse, MHS, CIH; Janet Smith, PhD; Anne Evens, PhD; Doborah Dobrez, PhD; Marjie Isaacson, PhD; Colin Murphy, MS; Lorraine Conroy, PhD; Peter Levavi, JD, MPP

Journal of Public Health Management Practice, 2015, 21(4), 345–354



Statistically Significant Results (p<0.05)

- Housing conditions and self-reported physical and mental health
- Hay fever, headaches, sinusitis, angina, and respiratory allergy.
- Asthma severity (lost school/work days, disturbed sleep, and symptoms)
- Improved sadness, nervousness, restlessness, and child behavior

Green Building Standards and Health Outcomes

- Breysse et al. 2015 (showing improvements in mental health, falls, and adult general health);
- Colton et al. (showing improved PM _{2.5}, NO₂, and 47% fewer sick building symptoms);
- Breysse et al. 2011 (showing improved general health in adults, asthma and non-asthma respiratory health);
- Takaro et al. 2011 (showing reduced asthma symptom free days, ER visits, caretaker quality of life and lower asthma triggers);
- Jacobs et al. 2014 (showing improvements in allergens and adult general health);
- Jacobs et al. 2015 (showing improved mental health, asthma, hay fever, sinusitis, and lost school days due to asthma);
- Garland et al. (showing decreases in continuous daily respiratory symptoms, asthma symptoms disrupting sleep in the past month, urgent visits to a healthcare professional for asthma in the past 3 months, fewer days with asthma symptoms, asthma episodes, and days of work, school, or daycare missed).



Breathe Easy Home Health Improvements in Asthma

Health Outcome	Change
Symptom-free days/2 weeks	4.8 more days/2 weeks (p=0.004)
Urgent Clinical Care Trips (% reduction)	41.2% (p=0.002)
Asthma Triggers in House Dust	2.0 before/0.03 after
Caretaker Quality of Life Score	4.9 before/5.8 after



Research

Damp housing, gas stoves, and the burden of childhood asthma in Australia

Luke D Knibbs¹, Solomon Woldeyohannes¹, Guy B Marks^{2,3}, Christine T Cowie⁴

Key Findings

- 26% of Australian homes have dampness problems
- 38% have gas stoves
- Nearly 8% of childhood asthma attributable to damp housing
- 12.3% of asthma is related to unvented gas stoves
- If gas stoves had high efficiency exhaust hoods, the burden of disease is reduced.
- Conclusions: Exposure to damp housing and unvented gas stoves is common in Australia & associated with asthma burden

Health Effects & Intervention Studies (1)



NTP Monograph

Health Effects of Low-Level Lead

"Pb is one of the most extensively studied environmental toxicants, with more than 28,900 publications on health effects and exposure in the peer-reviewed literature."

Based on an April 2012 PubMed search for keyword (MeSH) "lead" or "lead poisoning."

Health Effects and Intervention Studies (2)

Baltimore Dust Control -1982 St. Louis Retrospective. Baltimore Traditional/Modified Boston Retrospective Baltimore Experimental New York Paint Abatement Massachusetts Retrospective Baltimore Three-City Soil Cincinnati Three-City Soil-Seattle Track-In Toronto Soil and Dust 1990 St. Louis Retrospective -Boston Three-City Soil HUD Demonstration / CAP Study Milwaukee Retrospective LBP Minneapolis Dust Control New York Chelation Rouyn-Noranda Soil St. Jean-Sur-Richelieu Milwaukee Retro. Educational Paris Paint Abatement Baltimore Follow-up Paint Granite City Educational Leadville/Lake Educational Trail Dust Control New Jersey CLEAR Dust Control Boston Interim Dust Rochester Educational Baltimore R&M LBP Milwaukee Pro. Educational New Zealand Retrospective LBP East St. Louis Educational **HUD Abatement Grant Program**

EPA 747-B-98-001 December 1998

REVIEW OF STUDIES ADDRESSING LEAD ABATEMENT EFFECTIVENESS: UPDATED EDITION

Only 33 studies (plus one recent one)

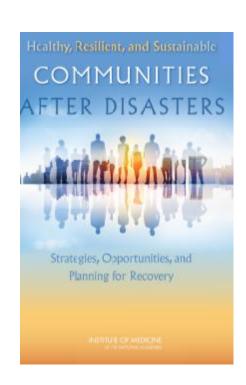
Why the Imbalance?

- Health effect studies estimate dose and determine health effects, controlling for confounders
- Intervention studies mean changing the home or environment

- Health effect studies may involve a participant and a researcher
- Intervention studies include other players-owners, landlords, code officials, construction, designers, planners

Healthy Housing & Disaster Recovery

- Policy study from the Institute of Medicine examined methods of integrating health into disaster recovery operations
- Specifically included recommendations on housing.
- Increasingly important in the context of climate disruption.





Recommendation 12: Ensure Healthy and Affordable Post-Disaster Housing.

To reduce housing-related health risks, federal, state, and local governmental housing agencies should:

- require that new residential construction and substantial rehabilitation of existing residences financed with public funds after disasters comply fully with Enterprise Green Communities standards or their equivalent and with the minimum requirements set forth in the National Healthy Housing Standard.
- Federal and state funding agencies should <u>tie these</u>
 <u>requirements to recovery funds</u>, and private funders should consider <u>incentivizing compliance</u> with these standards.
- Additionally, multiple affordable housing options should be considered during redevelopment to ensure that people of all

Nation come levels can remain in the community.

HEALTHY HOUSING

Healthy Housing

- Limitations of the Medical & Housing Professions
 - Treat Only After Getting Sick
 - Housing Quality by Complaint
- Challenges
 - Focus & Breadth
 - Investment & Market Failures
- More Than Another Good Idea
- Necessity & Invention

"Knowing is not enough;
we must apply.
Willing is not enough;
we must do."
—Goethe



MARCH FOR SCIENCE

EARTH DAY

APRIL 22, 2017

#marchforscience



Cuyahoga River ca. 1960



Cuyahoga River ca. 2017



Acknowledgment

 Henry Halloran Trust, University of Sydney, Australia provided key support for this presentation

David E Jacobs PhD, CIH djacobs@nchh.org