



# Green & Healthy Homes Initiative Model

November 16, 2020  
9:00 AM - 12:00 PM PST

**BayREN Regional Forum  
Linking Energy, Equity and Public Health**

# Session Outline

1. Research into Racial and Social Inequities Related to Housing

2. Addressing Inequities with EE and Healthcare Financing

3. Policy and Programmatic Pathways to Maximize EE Benefits

# Centering Racial Equity in our Work

**Vision:** Advancing racial and health equity and opportunity through healthy housing.

**Mission:** The Green & Healthy Homes Initiative is dedicated to addressing the social determinants of health and the advancement of racial and health equity through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing and unjust policies for children, seniors and families to ensure better health economic and social outcomes in low-income communities of color.

**Operating Value:** Ensuring racial equity in all policies, practices and actions

\*Engaged staff in a 9-month process to develop a Racial Equity Action Plan that we have begun to implement

# GHHI History

1986

2009

2015

2015

2016

2016

2017-2020



**Founded**  
Parents Against Lead became the Coalition to End Childhood Lead Poisoning

**Becomes GHHI**  
Expand scope and scale to break the link between unhealthy homes and unhealthy families nationally



**EPA Asthma Award**  
Proud recipient of EPA's National Environmental Leadership Award in Asthma Management



**Social Innovation Fund Award**  
Award expands to 6 national sites to advance asthma Pay for Success across private business models

Robert Wood Johnson Foundation

**RWJF Award**  
Award expands Pay for Success portfolio to 11 asthma projects including state governments

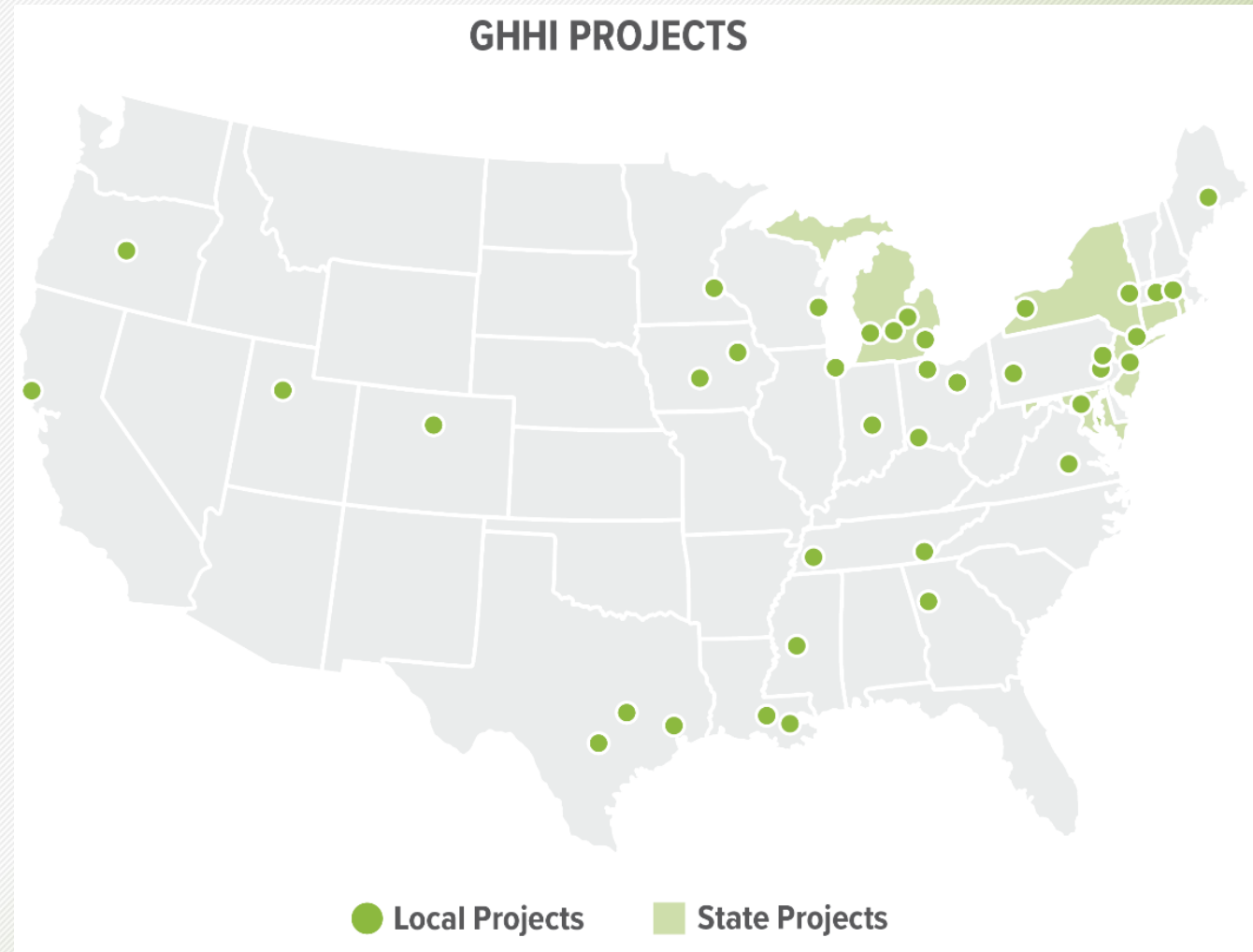


**National Lead Summit**  
Launched concept paper on addressing lead-poisoning through Social Impact Bond

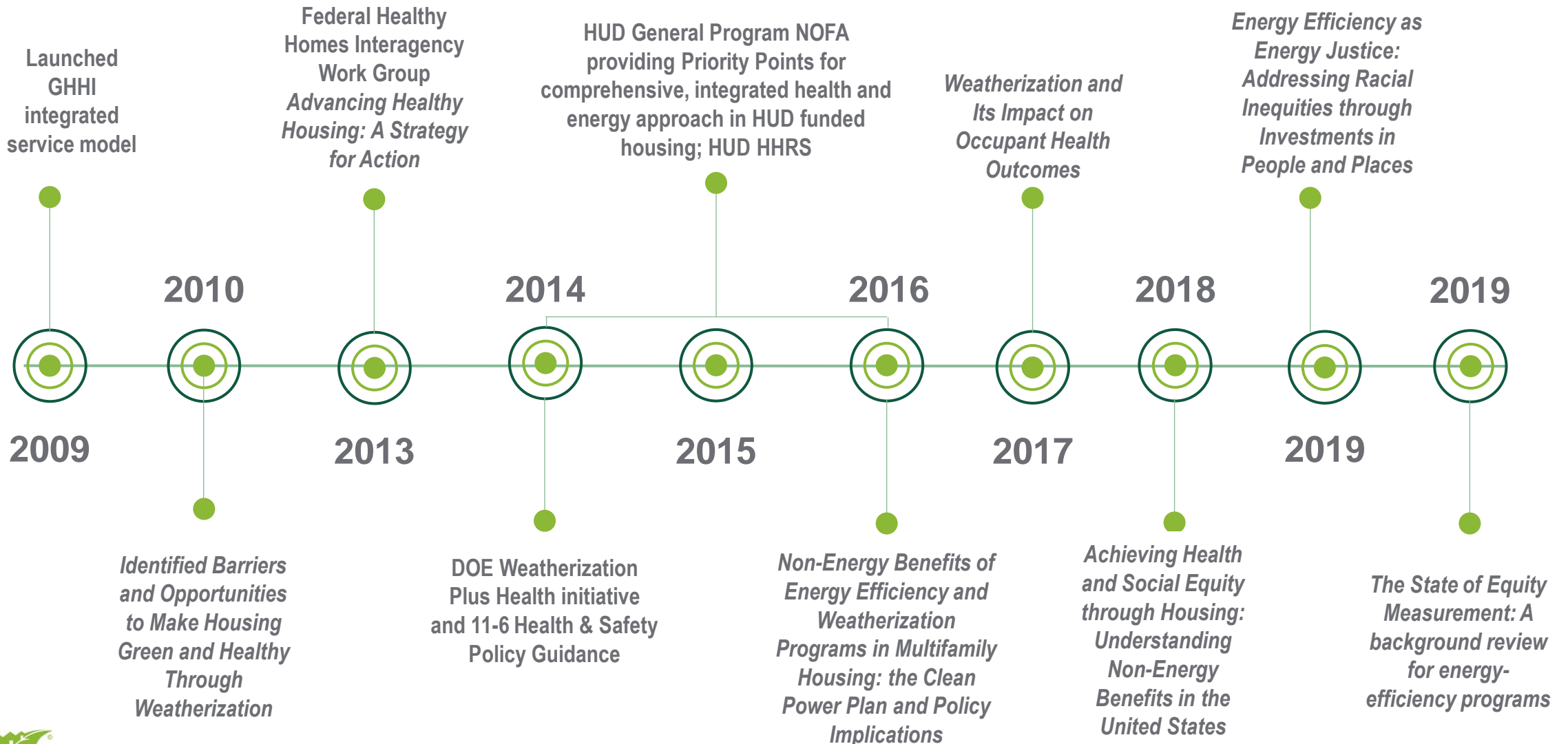
**National Initiative for Asthma Reimbursement - EPA-supported Technical Assistance**  
Providing technical assistance to support comprehensive asthma interventions

# GHHI Model Implementation

- Supports local implementation of program alignment, braiding of funds, and coordination of intervention services
- Development of innovative funding sources to address gaps and build sustainability
- Over 65 GHHI Partner Sites nationwide




# GHHI's Research into Health Equity & Non-Energy Benefits







# Cost Burden of Health Inequities related to Unhealthy Housing

30M families live in unhealthy homes  Homes with environmental hazards are making their residents sick

14.4M missed days of school each year  Asthma is the top reason students miss school

14.2M missed days of work each year  Collateral burden of sick children is missed days of work for parents and caretakers

 Low income families spend 20% of monthly income on energy costs  
  
VS.  
  
3.5% in other households

 \$81B+ spent on asthma  \$31B+ spent on slip & fall injuries  \$43B+ spent on lead poisoning

Over \$155B in economic costs related to these hazards each year

# Role of Energy Efficiency in Equity and Public Health

## INPUT



**Comprehensive Intervention**

- Energy Efficiency
- Electrification
- Weatherization
- Healthy Homes



### ENERGY OUTPUTS

- reduced kWh consumed
- reduced energy demand



### ENERGY BENEFITS

- improved service reliability
- reduced system maintenance needs



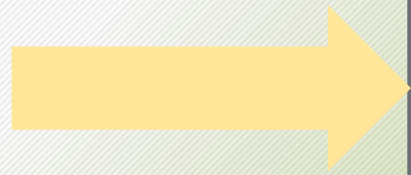
### NON-ENERGY OUTPUTS

- improved air quality
- increased thermal comfort
- reduced toxins



### NON-ENERGY BENEFITS

- environmental quality
- occupant health
- family economic security



### LONG TERM IMPACTS

- neighborhood quality improvement
- reduced health disparities
- school attendance
- economic productivity

**Achieving Health and Social Equity through Housing:**  
Understanding the Impact of Non Energy Benefits in the United States



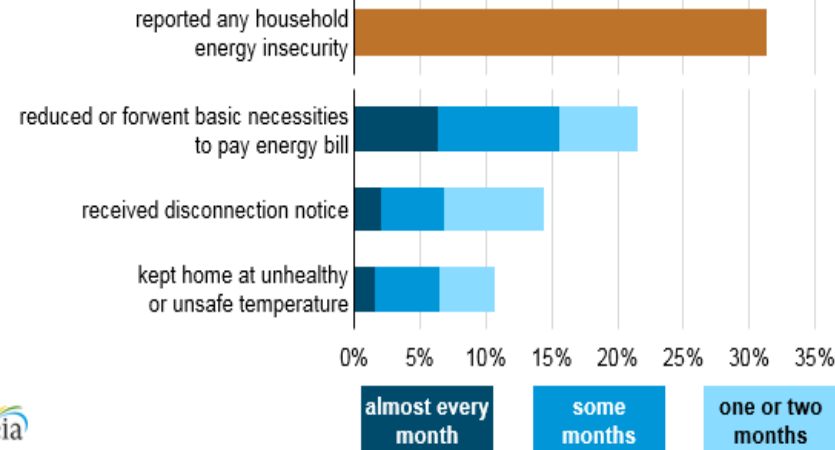


# Context: Adverse outcomes for African Americans

- Housing burden
- Energy burden and shut-offs
- Bundled burdens/economic trade-offs
- Health burdens
- Extreme weather and climate impacts
- Depletion of the resilience reserve
- Racist housing policies
- Historical disinvestment

## One in three U.S. households faces a challenge in meeting energy needs

Households that experienced energy insecure situations, 2015  
percent of households

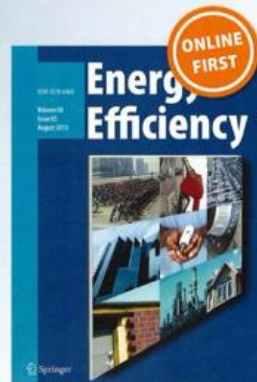


Source: U.S. Energy Information Administration, Residential Energy Consumption Survey 2015

*Energy efficiency as energy justice:  
addressing racial inequities through  
investments in people and places*

**Jamal Lewis, Diana Hernández & Arline  
T. Geronimus**

Energy Efficiency  
ISSN 1570-646X  
Energy Efficiency  
DOI 10.1007/s12053-019-09820-2



# Measuring Equity in Energy Efficiency Programs

## Six Dimensions of Equity

Historical legacies

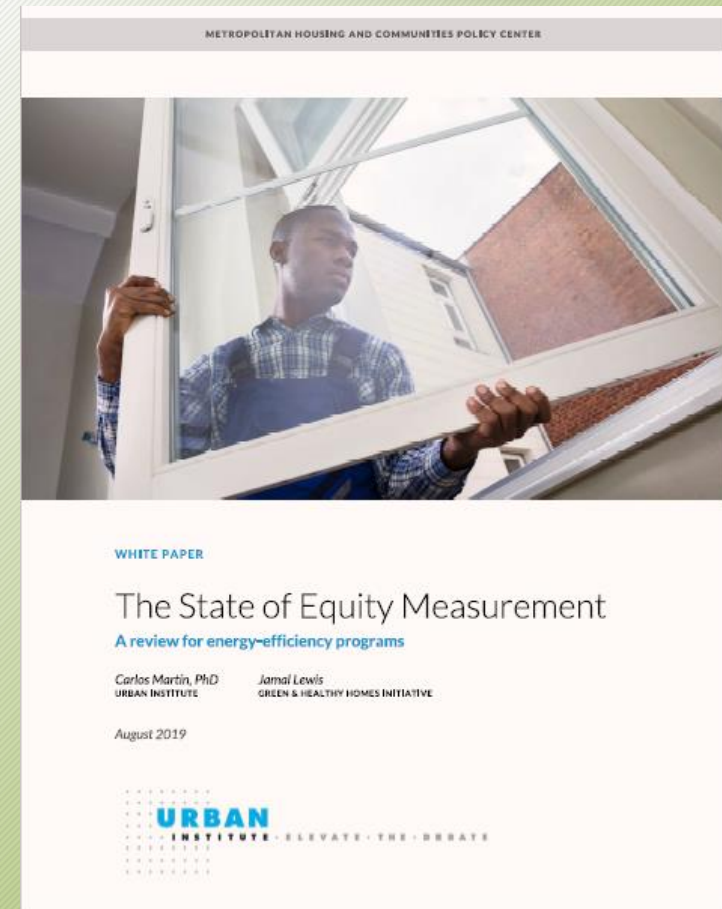
Awareness of populations

Inclusion of other voices

Access discrimination

Output differences

Disparate impacts



# GHHI's Whole-House Strategy

**Based on a combination of education, assessment, and home modifications to address:**

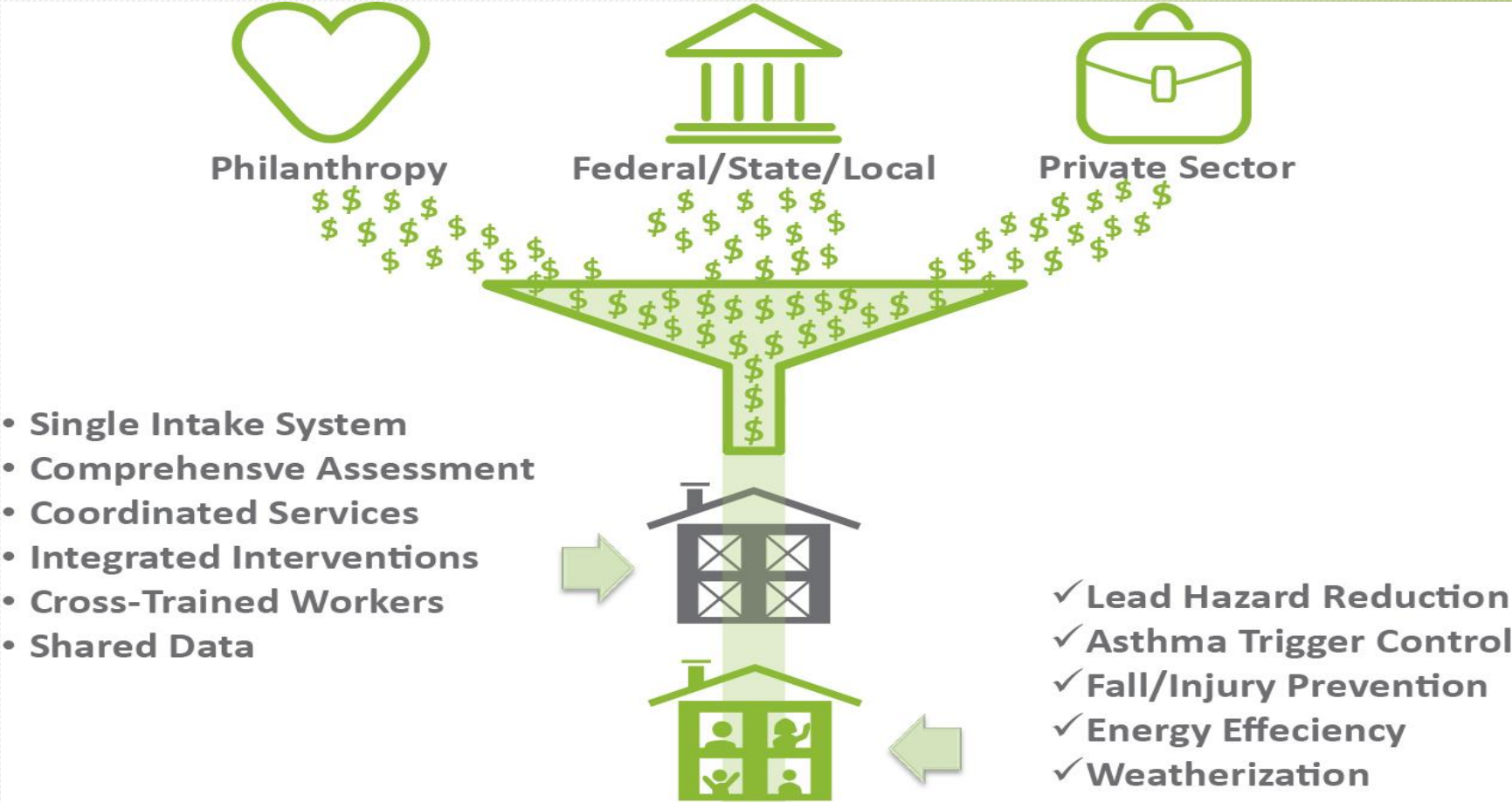
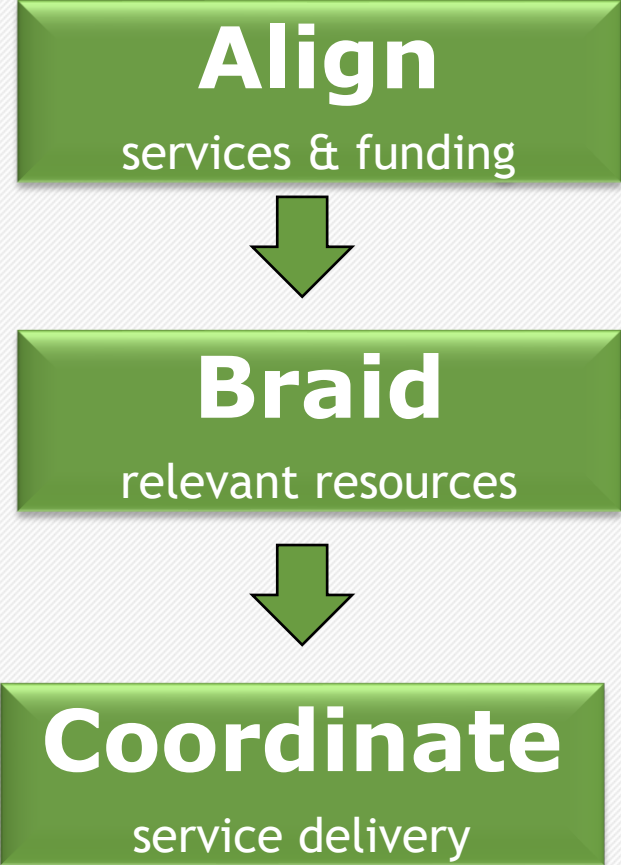
Hazards Recognition, Hazards Risk Assessment, Risk Management Strategies

- Lead-based paint hazards
- Asthma triggers (Mold, pests, VOCs, etc.)
- Injury hazards (Falls, fire, poisoning, etc.)
- Radon and asbestos hazards
- Energy efficiency/weatherization issues

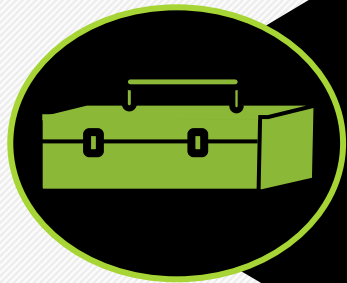
**Conducted by cross-trained assessors, educators, and crews addressing housing issues holistically**



# The GHI Model: Address the whole home



# Secure Health Care Sector Investments in Energy and Housing Projects



**Medicaid, CHIP Waivers & State Plan Amendments**

**Hospital Community Benefits**

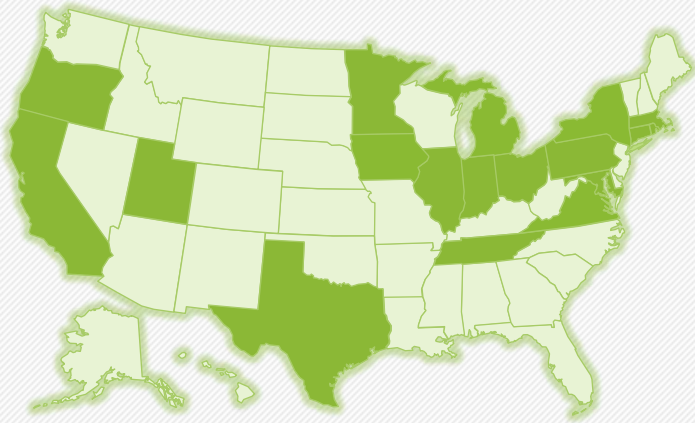
**Pay for Success**

**MCOs and Value-based Payments**

**Medicare Advantage Plans**

**Administrative Resources**

# Secure Health Care Sector Investments in Energy and Housing Projects



- Allegheny County - UPMC and Allegheny Co. Health Department
- Baltimore - Priority Partners MCO
- Buffalo - Oishei Children's Hospital and IHA MCO
- **Chattanooga - green | spaces and Erlanger Children's hospital**
- **Chicago - Presence Health, Elevate Energy, & NextLevel MCO**
- Cincinnati - People Working Cooperatively
- **CT Green Bank, Connecticut Medicaid and CT DOH**
- Grand Rapids - Priority Health MCO, Healthy Homes Coalition of West Michigan
- Houston - UnitedHealthcare & Baylor
- Houston - Community Health Choice MCO
- Indiana - Indiana Joint Asthma Coalition
- Iowa – Healthy Homes Des Moines
- **Marin - Contra Costa Health Services & MCE**
- Memphis - Le Bonheur Children's Hospital & UnitedHealthcare, Amerigroup, and BlueCare
- Minneapolis - MN Energy Efficiency For All
- **New York City - Affinity Health Plan, AIRnyc, & AEA**
- New York City - LISC
- **NYSERDA, New York Medicaid and NYSDOH**
- Oregon - Community Services Consortium
- Philadelphia - National Nursing Care Consortium
- Richmond City Health District
- Rhode Island - State Medicaid and Integra Accountable Entity
- San Antonio - SA Asthma Collaborative
- Salt Lake - University of Utah Health Plans and Salt Lake County
- Springfield - Health New England MCO, Baystate Health, Public Health Institute of Western Mass
- Worcester - UMass Memorial Hospital

## Funders



# GHHI Maryland Healthy Homes Technical Study (2013-2017)

## Medicaid Cost Effectiveness Analysis

Group	Group Total			Per Person				
	Baseline* Total Cost	Follow Up** Total Cost	Change (Total Cost)	Baseline* Cost (Mean)	Follow Up** Cost (Mean)	Change (Mean)	Baseline* Cost (Median)	Follow Up** Cost (Median)
Control	\$1,210,057	\$995,435	-\$214,622	\$5,063	\$4,165	-\$898	\$3,165	\$1,927
Treatment (Overall)	\$1,935,183	\$1,538,921	-\$396,262	\$8,097	\$6,439	-\$1,658	\$3,776	\$2,863
Tier 1	\$1,001,088	\$933,248	-\$67,840	\$7,821	\$7,291	-\$530	\$3,856	\$2,702
Tier 2	\$934,065	\$605,616	-\$328,449	\$8,415	\$5,456	-\$2,959	\$3,747	\$3,279

\*Represents money spent in 12 months prior to intervention.

\*\*Represents money spent in 12 months post intervention completion.

Change from Baseline to Follow Up costs and Return on Investment over 12 months:

Group	Change in Total Cost of Care	Percent Change	Program Costs	ROI
Tier 1	-\$67,840	-6.8%	\$84,674	0.71
Tier 2	-\$328,449	-35.2%	\$564,829	0.58
<b>Over all</b>	<b>-\$396,289</b>	<b>-20.5%</b>	<b>\$649,786</b>	<b>0.61</b>

# Advancing Equity at the State Level while Improving Health Outcomes and Climate Goals

- New York
  - NYSERDA developing a New York State Healthy Homes VBP Pilot through \$10,000,000 of New York's Clean Energy Fund (rate payer dollars) for feasibility assessment, pilot implementation and market support activities - Energy Efficiency and Health
- Connecticut
  - Connecticut Green Bank/DPH developing a multi-agency energy and health pilot to leverage the state's substantial energy efficiency program capacity with Medicaid funded interventions to address asthma triggers, lead hazards and injury risks - Energy Efficiency and Health
- New Jersey
  - Advancing a State-administered Whole House Pilot in alignment with the state's clean energy and electrification goals - Energy Efficiency and Health
- Michigan
  - Statewide lead poisoning prevention fund and statewide lead law to drive investment in lead hazard elimination (Energy Star windows)
- Rhode Island
  - Planning a healthy homes workforce training that advances racial equity in impacted community of Central Falls
- Pennsylvania
  - Implementing PA CARES Act-funded healthy homes projects including asthma pilot development and racial equity and COVID response analysis



# Maryland Energy Efficiency Plus

- Funded at \$21 million over 3 years by Exelon/Constellation Merger
- Provided funds specifically to:
  - Address common deferral reasons, such as electrical system upgrades (e.g. knob and tube wiring) and roof repair and replacement
  - Expand energy services provided, including conversions of oil to natural gas
  - Expand health/safety services provided, such as mold removal
- Per house budget of \$36,000 with \$30,000 used for health safety

# Explore State Agency Partners - New York State Healthy Homes Project - Integrating Health, Energy and Housing

## Goal

Build capacity for services throughout the state and design an integrated delivery model

## Outcome

Reduce energy usage, asthma episodes, household injury and lead poisoning and related energy and medical costs

## Approach

Evaluate the possibility of supporting energy, health and housing services through sustainable public and private funding.

## Commitment

\$10,000,000 in NYSERDA funding for pilot implementation

## Partners

NYSERDA, NYSDOH, NYHCR



# Illinois ComED Utility Project

**Project Goal:** To develop a coordinated service delivery model that achieves a whole-home retrofit for utility customers with significant health, safety and energy needs and that leverages both time and financial resources of ComEd and AMITA Health.

Intervention design: Targets high-utilizing asthma patients of local hospital who are uninsured or under-insured and most likely to also need energy efficiency improvements. Exploring if targeting multi-family buildings with multiple asthma patients for efficiency opportunities.

Funding: Pilot combines community benefit dollars from local hospital system, utility R&D dollars to investigate new service delivery models, and local grants

Results:

- Phase 1 of pilot increased asthma control of 19 of 20 patients
- Phase 1 lacked energy efficiency dollars, which will be addressed via phase 2



# Federal Opportunities to Advance Equity

- Interagency Coordination (HUD, CDC, DOE, EPA)
  - Transfers between agencies for investments that benefit other agencies
- Funding to empower communities as partners
  - Encourage matching funds for environmental justice grants
- Require states to have an equity plan
- Uplifting Black and Latinx contractors
- Highlighting partners that provide whole house interventions - Co-Benefits
- Adopt integrated energy, health and housing models that increase energy efficiency and improve health in low-income housing through collaboration
- Support affordable EnergyStar appliances and materials

A photograph showing two individuals in full white protective suits, including hoods and respirators with pink filters, looking out of a window. The window frame is white and set into a red brick wall. The background outside the window shows a grey sky and a building with horizontal siding. The image is partially overlaid with a green semi-transparent box on the left side containing contact information.

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