



Connecticut Green & Healthy Homes

**Working Together to Advance Connecticut's
Health, Energy and Housing Goals**


Funder's Roundtable
February 23, 2018

Defining the Need in Health, Housing and Energy

GHHI - Breaking the Link Between Unhealthy Housing and Unhealthy Children




The Burden of Unhealthy and Energy Inefficient Homes




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



\$51B+ spent on asthma




\$31B+ spent on slip & fall injuries



\$50.9B+ spent on lead poisoning

Over \$100B in taxpayer funding is spent each year to address the impact of these hazards

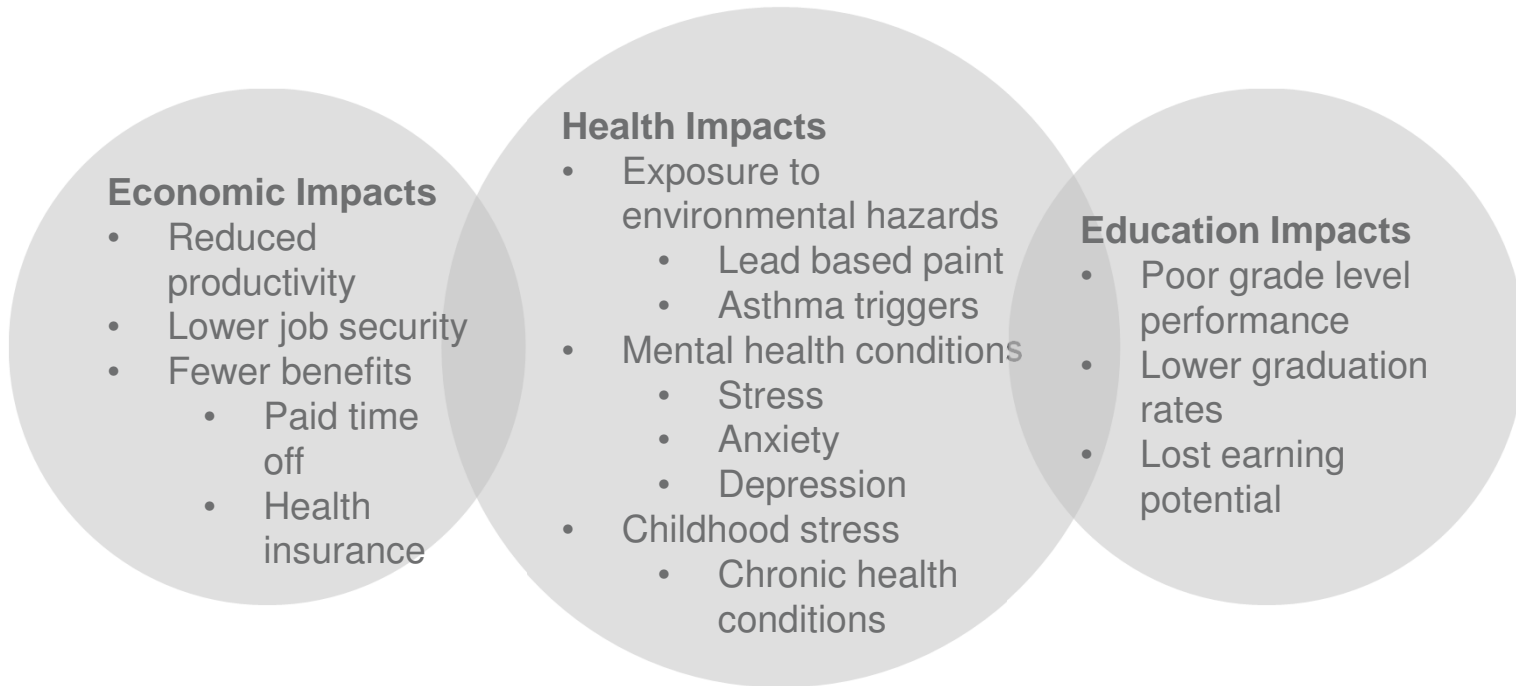


Low income families spend 20% of monthly income on energy costs

VS.

3.5% in other households

Equity - Impacts of Housing and Energy Insecurity

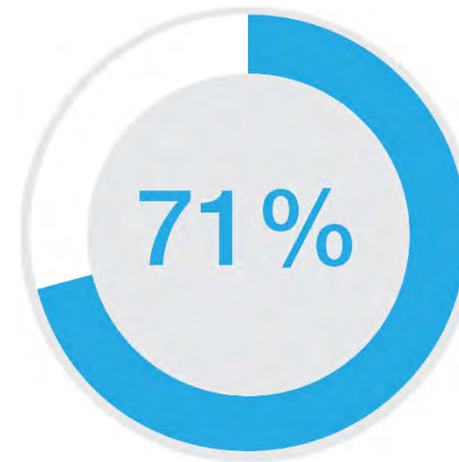


Equity - Affordable and Safe Housing Shortage



only 35 affordable units for every 100
extremely low income households

Poor quality housing with hazardous conditions is increasingly common for low and moderate income households due to the limited availability of affordable housing stock.



extremely low income households spend more than 50% of income on rent + utilities

Source: Andrew Aurand, Dan Emmanuel, Diane Yentel, and Ellen Errico. "The Gap: A Shortage of Affordable Homes." National Low Income Housing Coalition (March 2017). <http://nlihc.org/research/gap-report>

Connecticut's Energy Needs

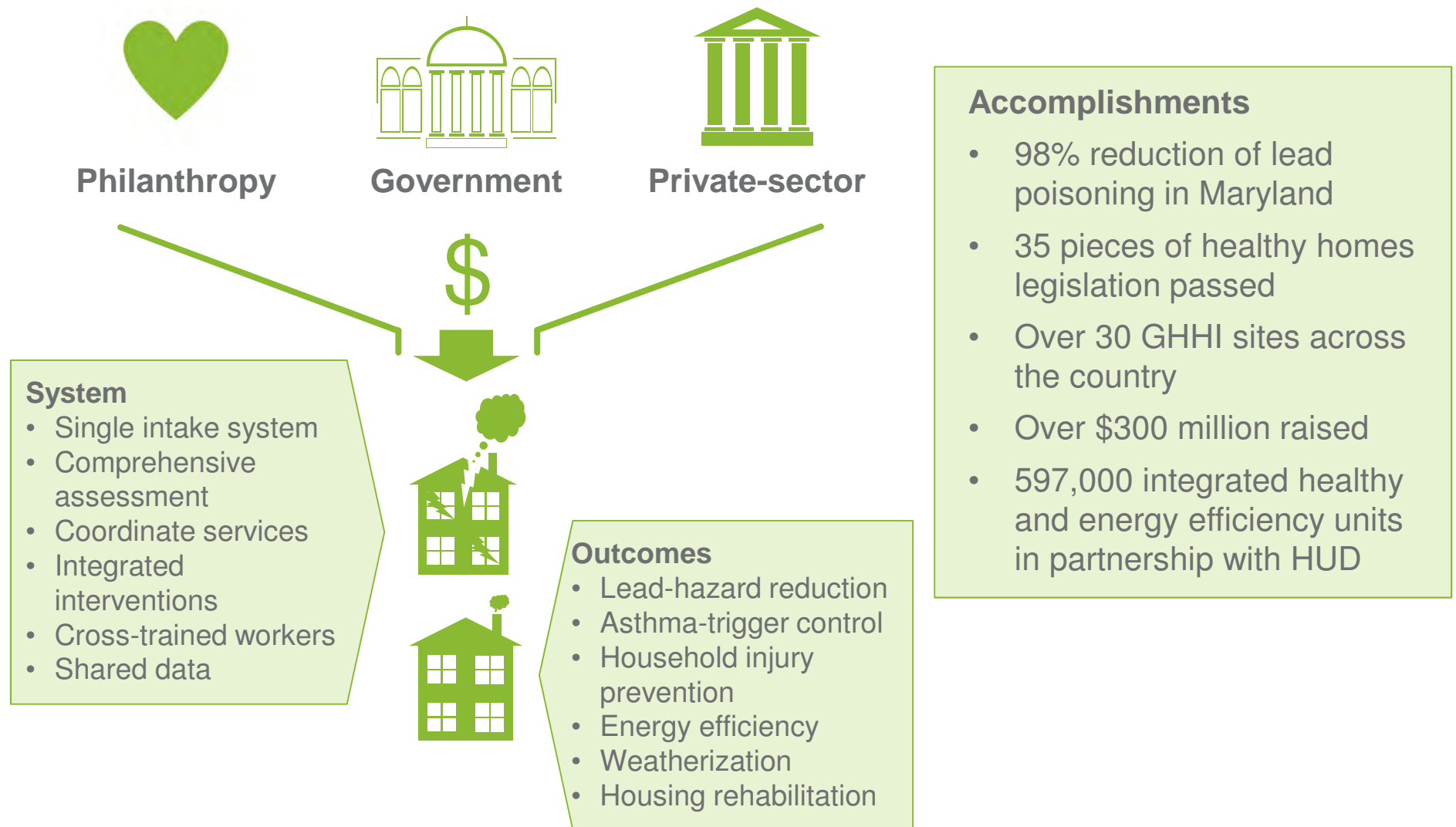
- The **average energy burden** for a Connecticut household is **11.8% of annual income, 30% higher than the national average** energy burden.
- The energy burden is higher for Connecticut's lowest income families can be as much as 58% of annual income on energy.
- The **average energy burden for low-income households is 60% higher than the national average.**
- **Over 430,000 households meet the income eligibility criteria** for Connecticut's residential energy efficiency programs.
 - 25% are older adults living alone
 - 16% have a child younger than 6 years
 - 12% are non-elderly disabled

Connecticut's Health Outcomes Related to Poor Housing Conditions

- The state had **over 21,700 annual asthma-related hospitalizations**, and **over \$102 million in Medicaid claims related to asthma**.
- Statewide, falls are the leading injury-related cause of mortality for older adults, and the fourth leading cause across all ages. **Falls were involved in over 42,000 hospitalizations statewide over 5 years.**
- Over **2,100 children under the age of six are diagnosed with elevated blood lead levels in Connecticut**. Just under 75% of these children were diagnosed with blood lead levels of 5-9 mg/dL.

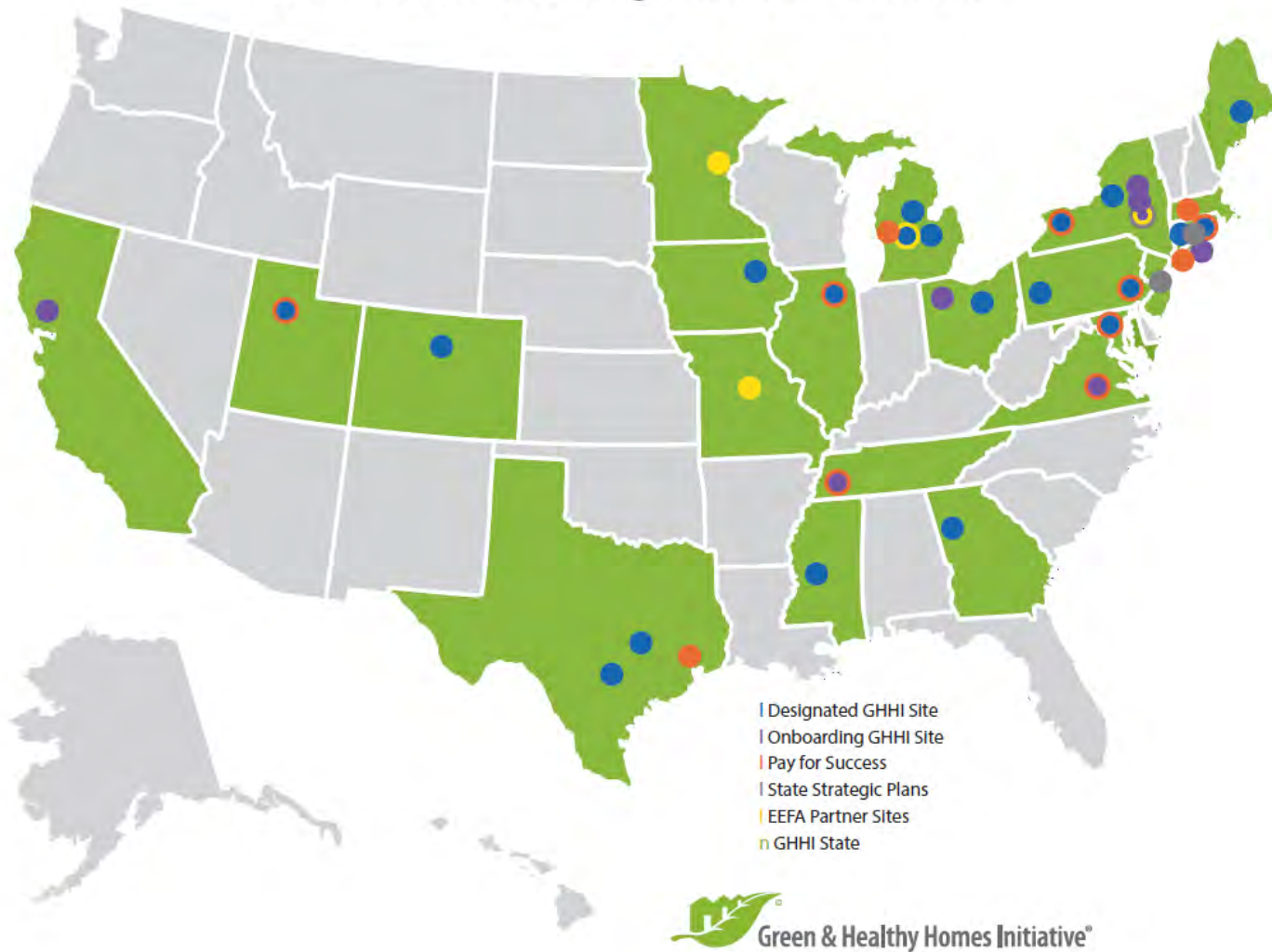
The GHHI Model: “No Wrong Door”

Aligning services and funding, braiding relevant resources, coordinating service delivery to produce results



GHHI National Footprint

GHHI at Work: Building a National Movement



The Business Case for Lead and Healthy Homes

Lead poisoning costs society **\$50.9 billion** annually and yet is **entirely preventable**

Impacts during Childhood



- **535,000** children under 6 with elevated blood lead level
- 700% increase in school drop out rate
- 600% increase risk of juvenile delinquency
- Lower IQ, ADHD, special education



Impacts in Adulthood

- Diminished earnings from lower IQ
- Higher likelihood of incarceration
- Higher social service usage

ROI between \$17-221 per dollar invested in preventive lead remediation

Increased lifetime earnings of \$1,024,000 per child if lead poisoning prevented

Asthma results in **\$50 billion in annual medical costs**, and 40% of costs are tied to environmental triggers in the home



6.8 million children
18.7 million adults
1.58 million hospital days

\$500-\$1,000
cost of ER visit

\$7,500-20,000
cost of hospitalization



\$1
invested in asthma interventions

\$5.30 - \$14
return on investment

Non-Energy Benefits

- GHHI research captures the true value of energy-efficiency interventions, by measuring the health, economic and other benefits that accrue at the individual, household, and community level.

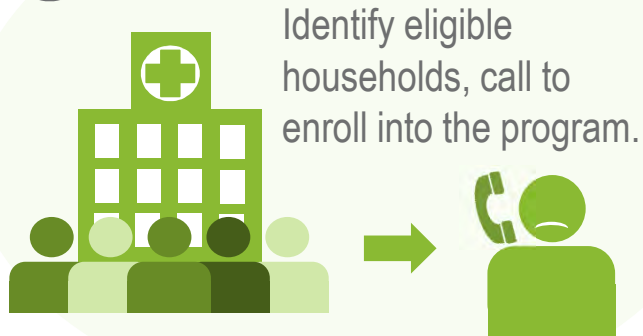
Achieving Health and Social Equity through Housing:
Understanding the Impact of Non Energy Benefits in the United States

 Green & Healthy Homes Initiative®

Support For an Integrated Statewide Model for Housing, Health and Energy

Evidence-based Interventions Produce Measurable Results

1 Intake and enrollment



2 Initial Home Visit



3 Healthy Homes education and home repairs



4 Evaluation of outcomes



Policy Innovations in the National Context

Current Medicaid Support for Housing and Health:

MARYLAND: \$7.2 million in CHIP funds for asthma trigger and lead hazard remediation

MICHIGAN: \$119 million in CHIP funds for lead hazard remediation and related services; workforce development

MISSOURI: Medicaid funding allowable for Asthma resident education; Environmental assessment services

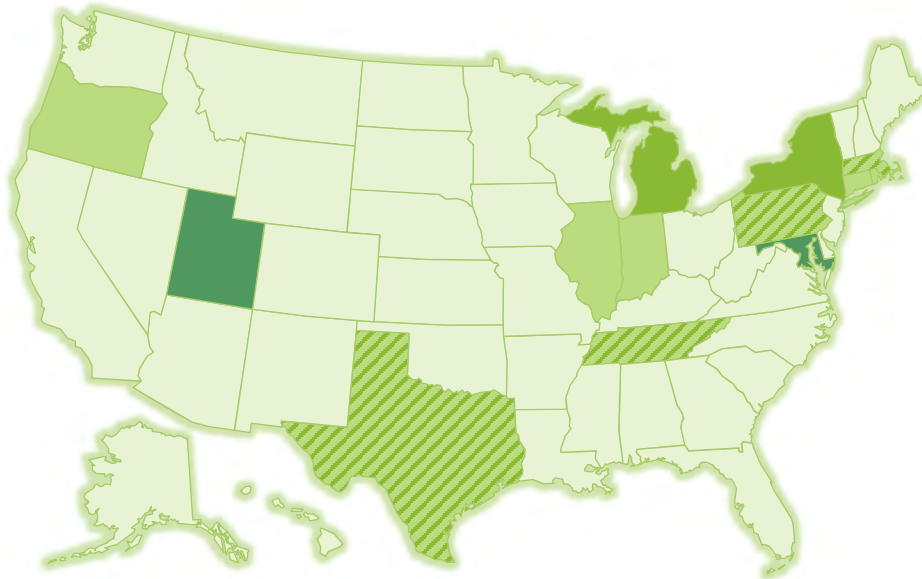
OREGON: Rule 1115 Waiver allowing for flexible services including asthma home visiting resident education

Hospital Community Benefits: Boston Medical Center, Presence Health, CT Children's Medical Center

Innovative Partnerships in Tennessee

Overview of GHHI's Social Innovation Work

19 projects with healthcare and housing partners across the country



Funders



Transaction structuring

- Baltimore*-Johns Hopkins Medicine
- Salt Lake County-U. of Utah Health Plans

Feasibility ongoing

- Chattanooga-green|spaces
- Philadelphia-Energy Coordinating Agency
- Worcester-UMass Memorial
- Oregon-Community Services Consortium
- Indiana-Indiana Joint Asthma Coalition
- Chicago-Presence Health
- Houston-Community Health Choice
- Rhode Island-State Medicaid
- New York State Energy Research and Development Authority (NYSERDA)
- CT – Connecticut Greenbank

Post-feasibility transition

- Buffalo-YourCare Health Plan
- Grand Rapids-Spectrum Health
- Houston-UnitedHealthcare
- Memphis-Le Bonheur Children's Hospital
- New York City-Affinity Health Plan
- Philadelphia-Health Partners Plans
- Springfield-Baystate Health

Researching a Statewide Approach to Delivering Integrated Health and Housing Services in New York



GHHI is providing technical assistance to NYSERDA, DOH and HCR to evaluate the efficacy of a statewide, comprehensive energy, health and housing model that can produce long term benefits for residents and long term public sector cost savings. In Project Design Phase currently. Goals of project include:

- Reducing energy usage, asthma episodes, household injury. lead poisoning and related energy and medical costs
- Researching and evaluating the possibility of supporting energy, health and housing services through sustainable public and private funding
- Increasing current capacity for these services throughout the state and designing an integrated delivery model

Harnessing Connecticut's Potential for Statewide Service Delivery

Connecticut Green & Healthy Homes Project

Connecticut's Strong Partnerships and Capacity in Housing, Health and Energy Sectors



Connecticut Green & Healthy Homes: Opportunity

Opportunity: Connecticut Energy Efficiency Fund Home Energy Solutions Program is a strong framework for housing health and safety interventions in low income households, sustainably supported through a mix of public, philanthropic and private capital investment:

- **Health Insurance Value-based and Performance-based Payments**
- **Funding medically-necessary housing interventions through CHIP & Medicaid**
- **Hospital Community Benefits Investment**
- **Public/Philanthropic Investment (leveraged to attract private capital)**
- **Federal Funds: Fannie Mae, USDA Rural Development Housing Preservation, Maternal/Child Health Block Grant Funds**

Strategies to Address Current Gaps in Housing, Health and Energy

Challenge	Gap	Examples of Solutions
Injury prevention for older adults	Funding	Philanthropic Investment in 'Aging in Place'
Lead and asthma hazard remediation	Funding	Innovations in Medicaid policy, Maternal/Child Health Block Grant Funds, Public/Philanthropic Investment (leveraged to attract private capital),
Roof problems, Knob and Tube Wiring and other Code issues	Funding	Fannie Mae Healthy Homes grants, Innovations in Medicaid policy, State investments in Affordable Housing
Services in rural CT	Funding	USDA Rural Development Housing Preservation Funding,
Workforce capacity	Training and employment opportunities matched to program needs	BPI Healthy Homes certification, CHW certification

Connecticut Green & Healthy Homes: Opportunity

**Goal: Short-term and Long-term investment
to support an integrated approach to
housing, health and energy in Connecticut**

Return on Investment Analysis & Pilot Design: \$150,000

Pilot Implementation: \$5 Million

Contact Information

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The Connecticut Green and Healthy Homes Project

Working Together to Advance Connecticut's
Health, Energy and Housing Goals

February 23, 2018



Needs and Opportunities in Health, Housing and Energy



Needs in Connecticut



- CT spends **\$135 million** for acute asthma care annually.
- Falls, largely in elderly, resulted in **98,938** emergency department visits in 2014.
- **45%** of housing was built before 1950, and over **70%** of housing is more than 50 years old.
- Energy Affordability Gap ranges from **\$1,250 to \$2,500/year**.
- Residents spend **\$5.2 billion/year** to heat, cool, light and provide hot water – more than state’s budget for health care or education.

Opportunities to Build On



- Connecticut is a **national leader in residential energy-efficiency services and clean energy financing**.
 - ~20,000 households annually receive efficiency services.
 - \$185 million of residential financing catalyzed in last 5 years.
- The unique **organization of the state's public insurance delivery system** may enable support for healthy housing services with proven health outcomes.
- Robust **public-private leverage models** in place in housing and energy sectors (DOH, CHFA, and CGB).
- State **agencies share a vision** for improving housing quality to advance goals across the housing, health and energy sectors.
 - Significant coordination exists among **health and housing sectors, and judicial branch** to identify and remediate health & safety issues.
 - **Energy and housing** agencies have been coordinating for several years.

Project Goals

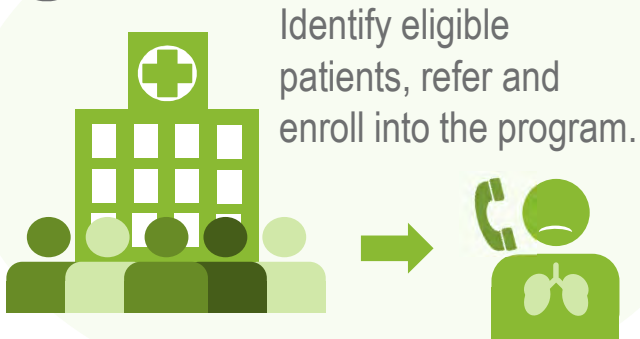
Over Three Phases



- To provide a **comprehensive analysis** of the economic, technical and operational **feasibility** of a statewide integrated service delivery model for housing, health and energy services in Connecticut.
- To identify **sustainable support** via public, private and philanthropic investment in housing, health and energy work.
- To advance this work in Connecticut by **leveraging and expanding existing resources** to implement a comprehensive, integrated housing assessment and intervention model.

Overview of an Integrated Housing, Health and Safety Intervention

1 Intake and enrollment



2 Initial Home Visit



3 Asthma education and home repairs



4 Evaluation of outcomes



Harnessing Connecticut's Potential for Integrated Statewide Service Delivery



Key Phase I “Pre-Feasibility” Findings

Critical resources exist which can be scaled...



CONNECTICUT
GREEN BANK

Opportunity to Leverage Existing Programs to Develop Infrastructure for Service Delivery



- The **capacity of Connecticut’s energy services is very large** relative to Connecticut’s size, and there is an opportunity to leverage this service provider network to expand access to housing-based health and safety interventions.
- Connecticut’s **home visiting health programs align well with the vision of a statewide integrated approach**, which utilizes evidence-based home visiting services paired with structural interventions to improve health outcomes and reduce energy burdens.
- But...we need to do a **skills assessment** and identify any **cross-training and workforce development** needs
 - e.g. additional training for community health workers; or
 - BPI Healthy Home Evaluator certification for energy efficiency staff.

Key Phase I “Pre-Feasibility” Findings

Critical resources exist which can be scaled...



Opportunity to Leverage and Scale Toolbox of Innovative Funding Solutions for Connecticut

- Connecticut is already utilizing **innovative strategies to attract and leverage investment** in housing, health and energy interventions
 - Further exploration and leveraging of resources can sustainably support a broader approach to housing, health and energy
- Consider harnessing the **recent innovations in HUSKY Healthcare**, which focus on patient-centered care coordination, measure the value of patient care in terms of improved health outcomes and avoided unnecessary healthcare utilization, and offer opportunities for providers to share in savings
 - Additional research is needed to understand the opportunity for Medicaid and other sources of public and private investment in this work.

CT Green & Healthy Homes Project

Timeline and Key Milestones



Phase I - \$74,000 funded by CGB

- ✓ Pre-Feasibility Research (Jun 2017-Feb 2018)
- ✓ Stakeholder Convenings (Fall 2017, Winter 2018)

Phase II - \$150,000 funded by TBD

- Feasibility Research and Full Report (Summer 2018)
- Pilot Project Design (Spring-Fall 2018)

Phase III – \$5 million funded by TBD (estimate)

- Pilot Project Development and up to 3-year Implementation and Evaluation (Fall 2018-2021)

Next Step – Phase II

Analyze Medicaid Data to Make the Business Case



- **Analyze health care utilization rates and associated costs** for the asthma, injury and elevated blood lead subpopulations within Connecticut's Medicaid population
- **Project potential cost savings** as a result of the evidence-based treatment effect of the proposed interventions, and characterize other factors that impact the potential for return on this investment
- **Examine the incentives for reducing healthcare costs** through investment in housing services, and to whom these incentives accrue within the HUSKY Healthcare Program, in order to build the business case for investment in the proposed model
- **Continue to grow the support of partners** throughout the state – research continues into the additional operational and funding considerations that will impact the feasibility of implementing a statewide integrated housing, health and energy services in Connecticut.

Phase II Continues – Assuming there is a Business Case *(There will be!)*



Once the business case for an integrated intervention is made, the project moves onto:

- **Pilot project design** customized to fit the needs, assets and resources in Connecticut.
- Lead **working groups to develop project model and make recommendations** for pilot project sites.
 - Develop Connecticut state specific green & healthy homes project model that integrates energy efficiency interventions with health interventions
 - Project design for how Medicaid funded resident education, housing assessments and interventions (to reduce asthma episodes, lead hazards, household injury risks) would be integrated with state funded weatherization and energy efficiency interventions and other housing interventions
 - Design would produce comprehensive interventions where home-based environmental health hazards are remediated and energy burden is addressed

Phase III Pilot Implementation

Proving Out the Model



CGB, DPH, and other project partners will implement the innovative model in Pilot Project sites in Connecticut

- By studying the actual data from the Pilot Project sites, the State will test its hypothesis that these comprehensive home interventions provide better health outcomes at a cost savings to taxpayers as compared to repeated asthma hospitalizations/ER visits, lead poisonings and other home-based environmental health hazard related medical costs (as well as providing material energy savings that will reduce the household cost burden)
- If this hypothesis is substantiated by the Connecticut Green & Healthy Homes Pilot Data, the State would then propose that Medicaid managed care organizations fund resident education and healthy homes housing interventions in coordination with energy efficiency programs through new program model

Partners in Connecticut Green & Healthy Homes Project



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