

# Federal Reserve Bank of Cleveland

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Green & Healthy Homes Initiative

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# Social Determinants of Health

Five Key Factors Underlying SDOH:

## 1. Economic Stability

- **Poverty**
- **Employment**
- **Food Security**
- **Housing Stability**

## 2. Education

- **High School Graduation**
- **Enrollment in Higher Education**
- **Language and Literacy**
- **Early Childhood Education/ Development**

## 3. Neighborhood and Built Environment

- **Access to Healthy Foods**
- **Quality of Housing**
- **Crime and Violence**
- **Environmental Conditions**

## 4. Health and Health Care

- **Access to Health Care**
- **Access to Primary Care**
- **Health Literacy**

## 5. Social and Community Context

- **Social Cohesion**
- **Civic Participation**
- **Discrimination**
- **Incarceration**



# Housing's Direct Links to Social and Physical Determinants of Health

The link between residential housing and health are known to include three inter-related aspects:

- Conditions of the home environment
- Conditions of the neighborhood
- Housing affordability

# The Burden of Unhealthy and Energy Inefficient Homes

9M 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

Parents miss work days to  
take care of their sick  
children with asthma

\$51B+ spent  
on asthma

\$31B+ spent  
on slip & fall  
injuries

\$43B+ spent  
on lead  
poisoning

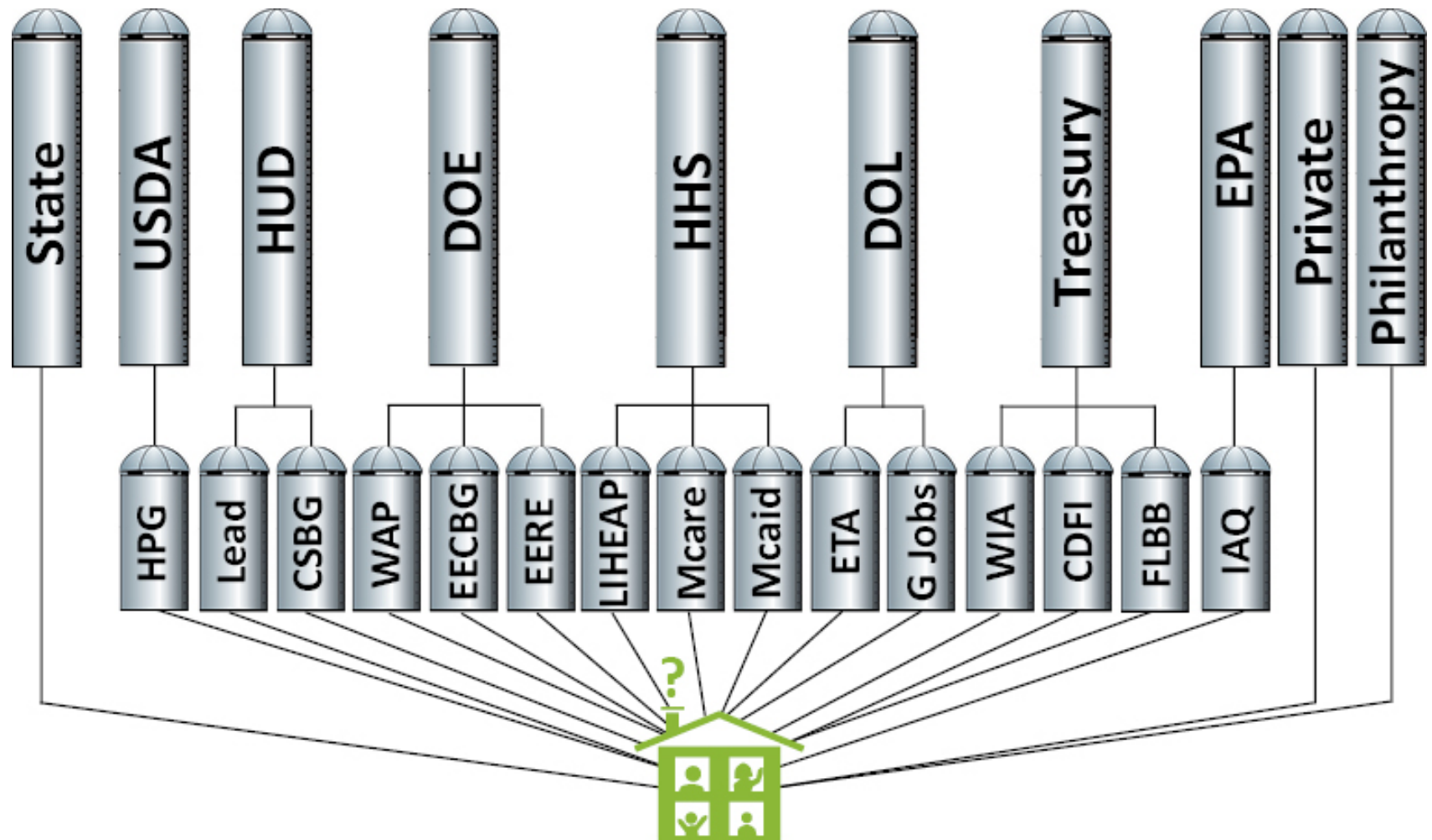
Over \$100B in  
taxpayer funding is  
spent each year to  
address the impact of  
these hazards

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

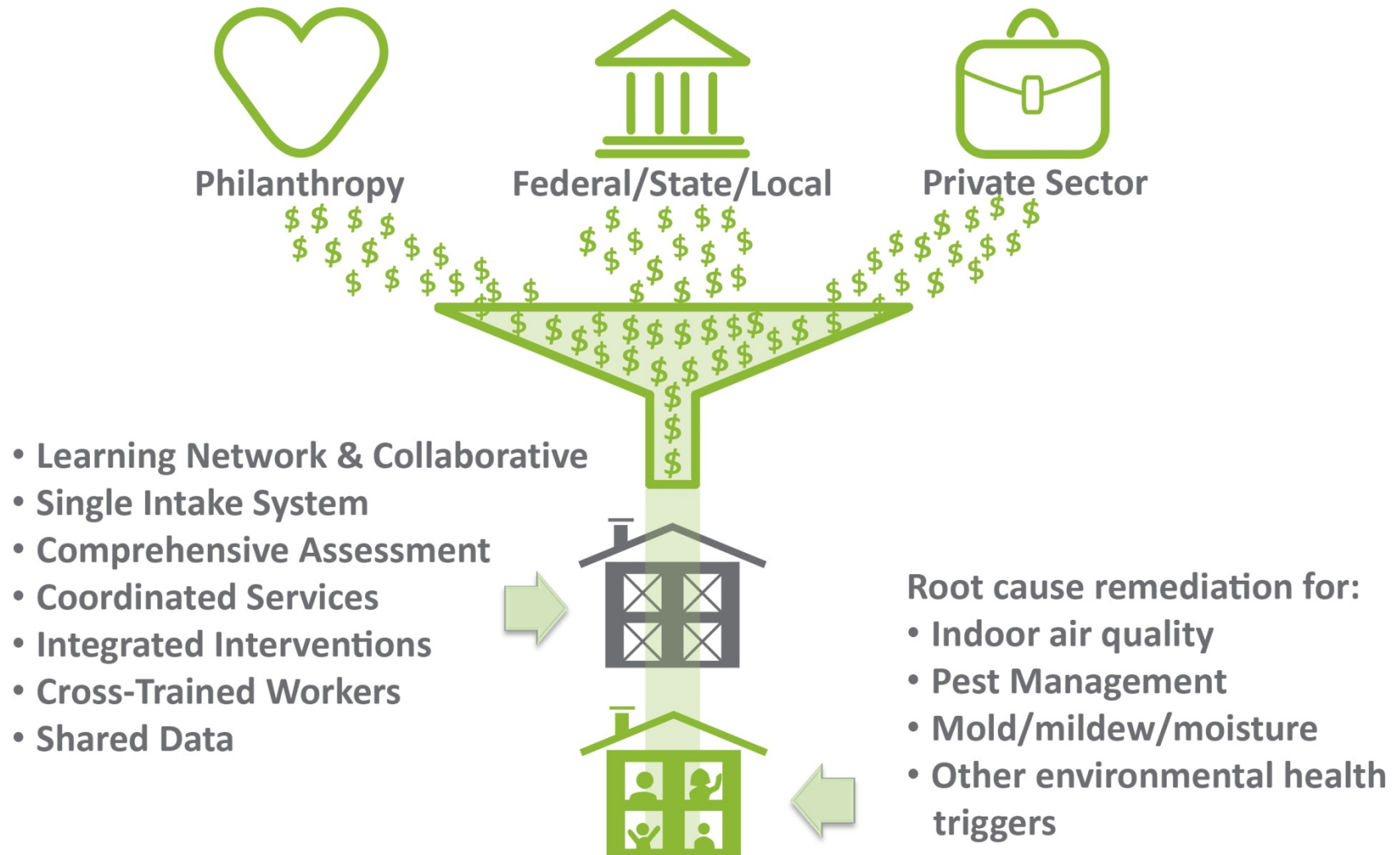
VS.

3.5% in other  
households

# Where Do Families Currently Go For Help?



# GHHI - Model that Benefits Families



# GHHI Baltimore Family Outcomes

## Smith Family

### Pre-Intervention Situation:

- Family of four with a son who has severe asthma
- History of repeated asthma episodes resulting in hospitalizations on average of three times per year (Average stay: 1 week)
- Deteriorated, lead hazardous windows; high dust mite levels; mouse infestation; lack of venting; high VOC usage; poorly weatherized

**Costs: \$12,256 – Asthma specific costs \$1,472**

**Partners:** HUD OLHCHH (HHD), CDBG, CSBG, Maryland Energy Admin., Foundations

**Results:** Allergens and lead hazards remediated; Home weatherized

### Outcomes:

- Son was not hospitalized due to asthma triggers in the home in the 12 months post-intervention
- **Avoided medical costs of \$48,300 in first year alone**
- Annual energy cost savings of \$721



# The Integrated Model Produces Measurable Results

## GHHI Baltimore

- **66%** reduction in asthma-related hospitalizations
- **62%** increase in asthma-related perfect school attendance
- **88%** increase in participants reporting never having to miss a day of work due to their child's asthma episode

## GHHI Philadelphia

- **70%** fewer asthma-related client hospitalizations
- **76%** fewer asthma-related client ED visits

## GHHI Cleveland

- **58%** reduction in asthma-related client hospitalizations
- **63%** reduction in asthma-related client ED visits



# Strong Evidence Base for Healthy Homes

2007

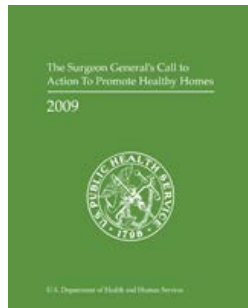


National Institutes  
of Health

Patients who have asthma at any level of severity should:

- Reduce, if possible, exposure to allergens to which the patient is sensitized and exposed.
- Know that effective allergen avoidance requires a multifaceted, comprehensive approach; individual steps alone are generally ineffective.

2009



## Surgeon General's Call to Action to Promote Healthy Homes

- Describes the steps to protect themselves from disease, disability and injury that may result from home health hazards
- Know that effective allergen avoidance requires a multifaceted, comprehensive approach; individual steps alone are generally ineffective.

2011



CENTERS FOR DISEASE  
CONTROL AND PREVENTION

...the Task Force recommends the use of home-based, multi-trigger, multicomponent interventions with an environmental focus for children and adolescents with asthma, on the basis of strong evidence of effectiveness in reducing symptom-days, improving quality of life scores or symptom scores, and reducing the number of school days missed.

# Business Case for Healthy Homes

- For every \$1 spent on lead hazard control programs there is a \$17-\$221 return on investment
- Managed Care Organizations on average spend \$7500-\$20,000 per year per member who has asthma and a history of hospitalization
- 40% of asthma episodes are triggered by environmental hazards in the home
- Return on investment: HHS's economic review of published studies showed a return of \$5.3 to \$14 for each \$1 invested in environmental asthma interventions
- Household injuries cause more than 10 million emergency room visits per year and \$222 billion in medical costs

## Avenues to Innovative Financing

**Hospital Community  
Benefits**

**2016 Managed Care  
Regulations**

**2014 Medicaid Rule  
Change**

**Social Impact Bonds /  
Pay for Success**

**Waivers**

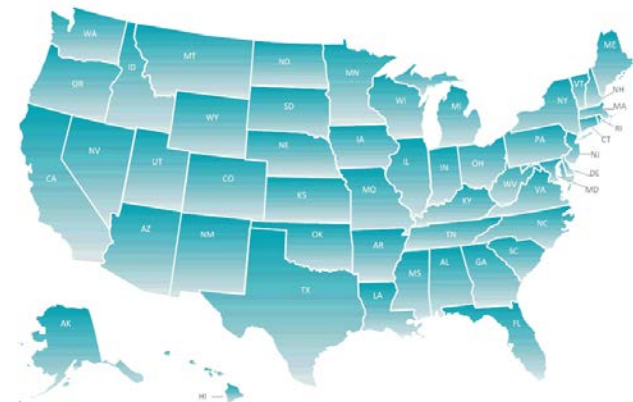
**Readmission  
Reduction Program**

# Hospital Community Benefits

- IRS now requires every non-profit hospital do a Community Health Needs Assessment (CHNA) every 3 years by the hospital, and then adopt an implementation plan
- Community benefit investments can encompass “physical improvements and housing” and “environmental improvements.”
- St. Joseph’s Health System (Orange, CA) invested in construction of affordable housing
  - 81-unit development for very limited-income seniors
  - 23-unit development for homeless people with HIV/AIDS

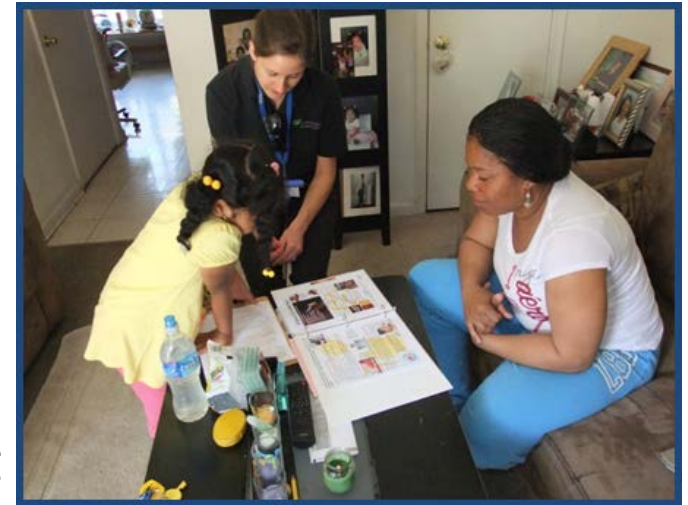


Community Benefit State Law Profiles  
*A 50-State Survey of State Community Benefit Laws through the Lens of the ACA*



# Medicaid Rule Change (2014)

- Opened up Reimbursement for non-clinical professionals
- Services must be recommended by a licensed clinical provider (physician or RN), but could be performed by other professionals such as certified asthma educators in the home
- To take advantage, each state has to submit a State Plan Amendment (SPA) to CMS laying out what services would be offered, the costs for those services, and what certification will be used
- Good fit for education, case management, community health worker services



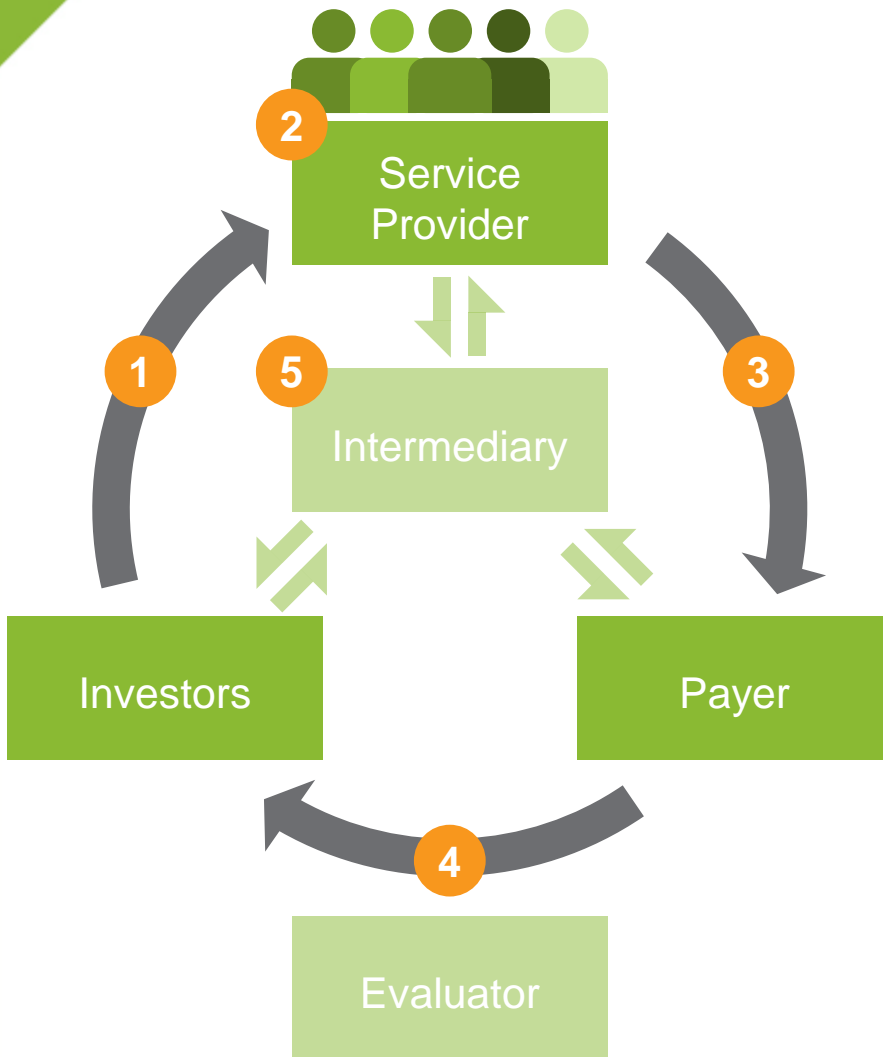
# Medicaid Waivers

- Purpose is to pilot or demonstrate projects that
  - Expand eligibility,
  - Provide services not typically covered by Medicaid,
  - Use innovative delivery systems
- Submitted by a state to CMS (Centers for Medicaid and Medicare Services)
- Approved for 5-year period typically, must be “budget neutral”
- Public comment for any proposed waiver before approval by CMS, and a requirement of timely review of any requests

## Managed Care Regulations (2016)

- Potential path forward for payments for home services through **“services in lieu of state plan services”**
- Services need to be:
  - Medically appropriate and cost-effective
  - Enrollees cannot be required to receive services
  - Services are provided at the option of the managed care provider
  - Included in the contract between managed care providers and state Medicaid
- Pay for Success may be opened up through **value-based purchasing** authority, allowing States to direct their managed care organizations to enter into arrangements with providers that can utilize outcomes based payment.

# How does Pay for Success work?



## Steps

- 1** Investors provide upfront capital for service delivery
- 2** Service Provider implements intervention for target population
- 3** Intervention results in a benefit to the Payer, usually cost savings
- 4** Payer repays Investors if and only if outcomes are verified, often by independent Evaluator
- 5** An intermediary may provide project and financial management services

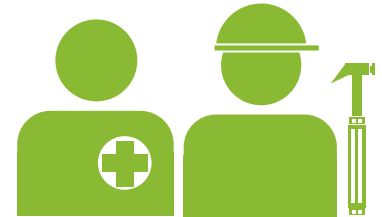


# Pay for Success is a win-win-win for all partners



## Payer

- Realize cost savings
- No financial risk - only pay for what works
- Learn what programs are effective
- Bridge timing gap between services and cost savings



## Service Providers

- Obtain new flexible funding
- Build program capacity
- Scale services
- Grow evidence base
- Strengthen partnerships



## Beneficiaries

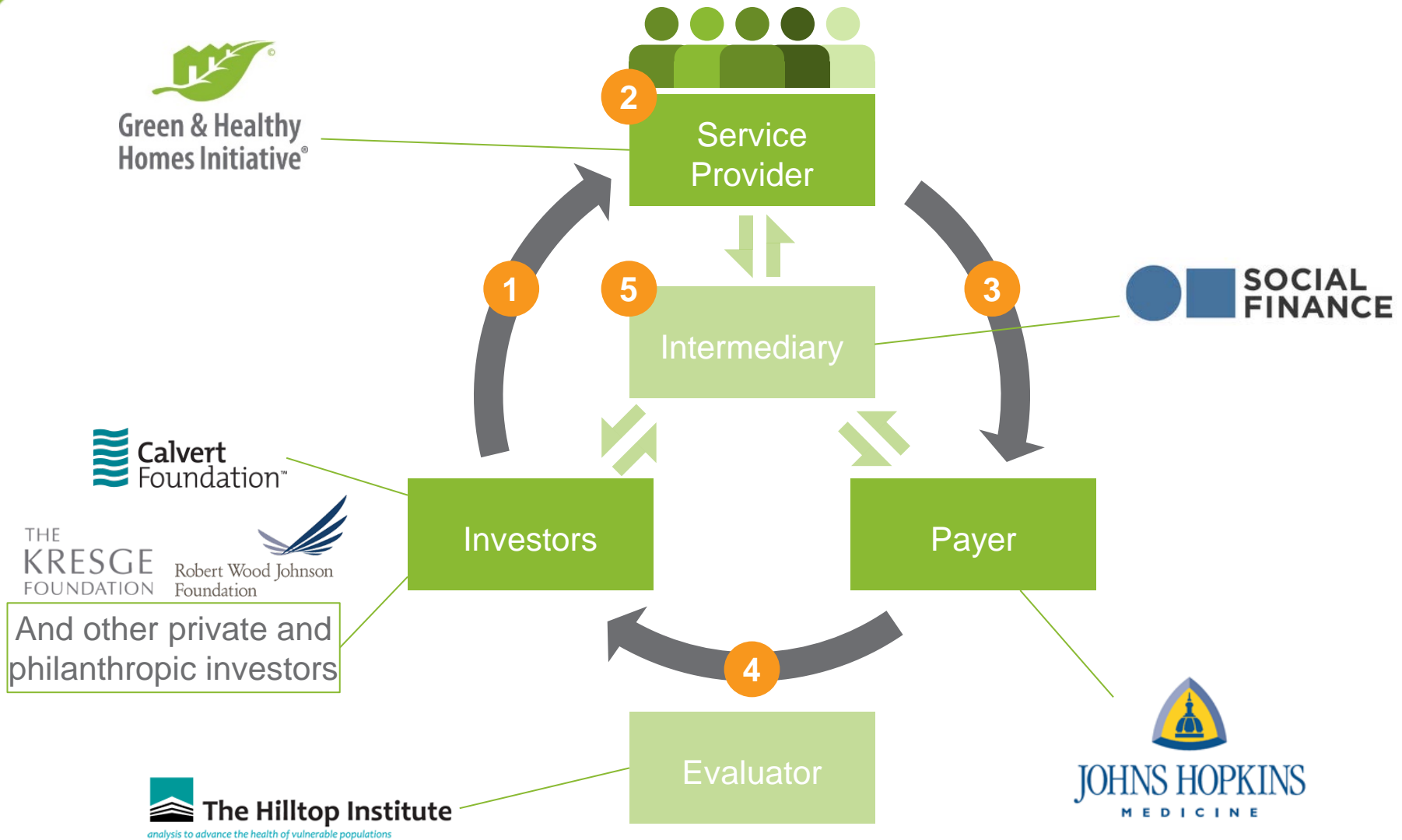
- Improved outcomes at greater scale
- Progress toward systemic change



## Investors

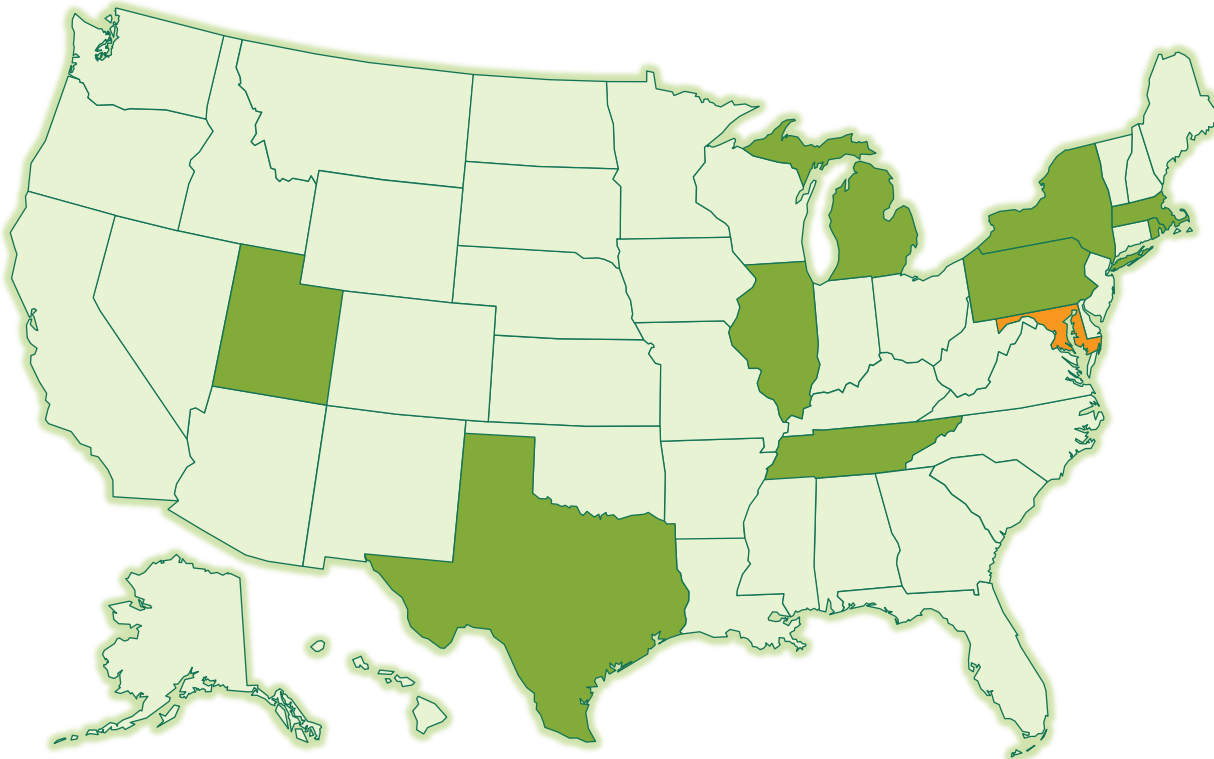
- Catalyze and expand social impact
- Receive return on investment

# GHHI's Pay for Success Model



# GHHI's work across the country



## Leading 11 asthma-focused PFS projects



Funders of asthma PFS  
feasibility studies:

Corporation for  
**NATIONAL &  
COMMUNITY  
SERVICE** 

  
Robert Wood Johnson  
Foundation

-  GHHI feasibility studies
-  GHHI transaction structuring

### Feasibility studies

- New York, NY
- Buffalo, NY
- Chicago, IL
- Grand Rapids, MI
- Houston, TX
- Memphis, TN
- Philadelphia, PA
- Rhode Island State
- Salt Lake County, UT
- Springfield, MA

### Transaction structuring

- Baltimore, MD

## Other Innovative Financing and Funding

- DC Water Bond
- Maryland PSC Consumer Investment Funds  
\$19.6M-MDDHCD; \$19M-BCDHCD
- New York Attorney General Funds  
\$2.3M-GHHI Buffalo; \$1M-GHHI Greater Syracuse
- Rhode Island Attorney General Funds - \$697,000 - GHHIRI
- DOE WIPP Grants - \$3M-New Haven; \$1.28M-Baltimore
- Utility Funds - Constellation Energy Funds - \$1M - furnace replacement and roof repair

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