Federal Reserve Bank of Cleveland

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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

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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

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

VS.

- 3.5% in other households

- Over $100B in taxpayer funding is spent each year to address the impact of these hazards
Where Do Families Currently Go For Help?

- State
- USDA
- HUD
- DOE
- HHS
- DOL
- Treasury
- EPA
- Private
- Philanthropy

- HPG
- Lead
- CSBG
- WAP
- EECBG
- EERE
- LIHEAP
- Mcare
- Mcaid
- ETA
- G Jobs
- WIA
- CDFI
- FLBB
- IAQ

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GHHI - Model that Benefits Families

- Learning Network & Collaborative
- Single Intake System
- Comprehensive Assessment
- Coordinated Services
- Integrated Interventions
- Cross-Trained Workers
- Shared Data

Root cause remediation for:
- Indoor air quality
- Pest Management
- Mold/mildew/moisture
- Other environmental health triggers

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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

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.

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.

…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.

Source(s): NIH EPR 3 Asthma Guidelines (http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines)
CDC, Community Guide for Asthma (https://www.thecommunityguide.org/asthma/index.html)
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
- 2014 Medicaid Rule Change
- Waivers
- 2016 Managed Care Regulations
- Social Impact Bonds / Pay for Success
- 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
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

**Beneficiaries**
- Improved outcomes at greater scale
- Progress toward systemic change

**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

**Investors**
- Catalyze and expand social impact
- Receive return on investment
GHHI’s Pay for Success Model

1. Investors
2. Service Provider
3. Payer
4. Evaluator
5. Intermediary

And other private and philanthropic investors
GHHI’s work across the country
Leading 11 asthma-focused PFS projects

Funders of asthma PFS 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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