A Cross Section Partnership: Asthma Home-Based Interventions in Humboldt Park

October 5, 2018
Our Mission

We promote smarter energy use for all.

We give people the resources they need to make informed energy choices.

We design and implement efficiency programs that lower costs, and protect the environment.

We ensure the benefits of energy efficiency reach those who need them most.
Why is health important to our mission?

1. Health and safety upgrades are a precursor to doing energy work. If we can address health issues in buildings, we can do more energy retrofits.

2. We know from the research side that when we do energy work well, we improve occupant health outcomes.

H&S + EE = Healthy, safe, affordable housing
Presence Health

- Large, integrated nonprofit health system, based in Illinois
- Recently acquired by Ascension and joined with AMITA
- Working to address the following prioritized community health needs in Cook County:
  - Access to care and community resources
  - Chronic disease
  - Mental health and substance use
  - Social determinants of health (including housing)
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

Source: GHHI
Housing Equity

The impacts of housing and energy insecurity

**Health Impacts**
- Exposure to environmental hazards
  - Lead based paint
  - Asthma triggers
- Mental health conditions
  - Stress
  - Anxiety
  - Depression
- Childhood stress
  - Chronic health conditions

**Economic Impacts**
- Reduced productivity
- Lower job security
- Fewer benefits
  - Paid time off
  - Health insurance

**Education Impacts**
- Poor grade level performance
- Lower graduation rates
- Lost earning potential

Source: GHHI
Spotlight on Chicago’s West Side

Asthma in the Presence Saints Mary and Elizabeth Service Area
Case study: Asthma in PSMEMC Service Area

- A community served by our hospital suffered very high rates of hospitalization for asthma, especially among children.

- Illinois rate of hospitalization among children was 156 per 100,000 with a range from 63.5 to 233.

- West Side Chicago rates for children ranged from 145 to 487 per 100,000.
Case study: Asthma on Chicago’s West Side

We identified that these communities also had high levels of old, crowded, and poorly maintained building stock.

- Crowded housing
- Housing 75+ years old
Case study: Asthma on Chicago’s West Side

Even higher correlations with building violations and lead exposure ($R^2$ of 0.67)

- Childhood lead poisoning (2000)
- Building violations

West Side communities
Focus area communities
Background on Asthma Pilot
The Team

Identifies and enrolls high-utilizing asthma patients, provides asthma education and PCP connection.

Leverages expertise in energy efficiency and weatherization sectors to assess and remediate environmental triggers of asthma.

Provides comprehensive technical assistance modules, including stakeholder analysis, intervention planning, and sustainable funding options ranging from Pay For Success (PFS) financing to direct reimbursement.
Evidence: Community Guide

- Strong evidence to support the use of home-based, multi-trigger, multicomponent asthma interventions to treat children and teens.
- Programs with minor or moderate environmental remediation and an educational component provide good value for the investment.
- Cost-benefit analyses show a return of $5.30 to $14.00 for each dollar invested.
GHHI National Footprint

**GHHI at Work:** Building a National Movement

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Pilot Overview and Case Study
The Chicago Pilot

- **Timeframe:** December 2017 to September 2018
- **Budget:** $100,000 (philanthropy, community benefit, in-kind contributions)
- **Eligibility:** At least 1 ED or inpatient admit for asthma in past 12 months, uninsured, under 65 years old
- **Enrollment:** 20 patients, identified through Presence Health records
- **Neighborhood:** Humboldt Park
- **Data:** Presence and Elevate are using Efforts to Outcomes (case management software) to track client cases
<table>
<thead>
<tr>
<th>Tier 1 (Up to $400)</th>
<th>Tier 2 (up to $2000)</th>
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<tbody>
<tr>
<td>• Food storage</td>
<td>• Replace venting and pitch on Domestic Water Heaters</td>
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<tr>
<td>• Mattress cover</td>
<td>• Install Bathroom vent (Auto Humidity Detector)</td>
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<tr>
<td>• Pillow cases (2)</td>
<td>• Seal/caulk around tub/Install overflow plate kit on tub</td>
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<tr>
<td>• HEPA Air Purifier</td>
<td>• Furnace clean &amp; tune</td>
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<tr>
<td>• Green cleaning supplies</td>
<td>• Replace moldy drywall by bathroom, kitchen, and hallway</td>
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<tr>
<td>• Carbon Monoxide Alarm (2)</td>
<td>• Install doors for mechanical area – bi-fold louver doors</td>
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<tr>
<td>• Smoke Detector</td>
<td>• Install smoke/carbon monoxide detector</td>
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<tr>
<td>• Dehumidifier</td>
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<tr>
<td>• Vacuum</td>
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Case #91740

- 3 unit building
- Patient lives in basement unit
- Patient is 19 years old
- Hospitalized for asthma within the past 12 months
- Unemployed
- Lives with his father and his younger siblings
Issue: Humidity

Installed bathroom fan vented to the outside.
Issue: Point Source Moisture/Mold (before)

Moldy drywall by bathroom, kitchen, and hallway. Additionally, the Combustion Appliance Zone (CAZ) was not properly closed off.
Issue: Point Source Moisture/Mold (after)

Moldy walls removed; new water resistant drywall was installed. Additionally, a door was added to properly close the CAZ.
Issue: Furnace/High Carbon Monoxide

- Clean and Tune
- Replaced sensor
Domestic Water Heater is negatively pitched. Additionally, we found the flue pipe had material blocking the full use of the pipe.
Issue: Point Source Moisture/Tub sealing (before)
Issue: Point Source Moisture/Tub sealing (after)
Issue: Bulk Water/Foundation Leak

- Neighbors downspouts dumped water onto the concrete gangway between the two buildings.
- Causes water in basement unit (patient’s home)
- **ISSUE NOT RESOLVED:** Neighbor did not respond to a letter where we asked permission to extend their downspouts.
- Recommendation: 6 feet away from your foundation
Category of Measure

- Health and Safety (Asthma) - 59%
- Health and Safety (Non-Asthma) - 34%
- Energy Efficiency - 7%
Common Issues

- Mold
- Poor ventilation
- Pests
- Combustion safety (Appliances that burn natural gas, emitting Carbon monoxide)
- No carbon monoxide detector
- No smoke detector
Pathways to Sustainability
How can we sustain programs like ours?

Near-term (Pilot funding)

- Philanthropic Support + Community Benefit

Long-term (Sustainable funding)

- Reimbursement Under Existing Rules/Regulations
- Policy Change to Expand Reimbursement
Options Under Existing Policy

- Hospital Community Benefit
- Contracting with Medicaid MCOs
  - Admin Budget
  - Pay for Success Financing
How does Pay for Success work?

1. Investor provides upfront capital for service delivery
2. Service Provider implements intervention for target population
3. Intervention results in a benefit to the Payer, usually measured in cost savings
4. Payer returns capital (value-based purchase) to Investor only if outcomes are met, verified by an independent evaluator*

Source: GHHI
### Pros and Cons of Using Existing Options

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<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<td>• Fewer stakeholders to engage</td>
<td>• Relies on ability to sell the idea to payers,</td>
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<td>• Can begin immediately</td>
<td>• vulnerable to setbacks with changes in leadership and organizational priorities</td>
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<td>• an individual-level rather than a systemic solution</td>
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# Using Policy Change to Support our Model

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<th>1115 Waiver</th>
<th>Health Services Initiative</th>
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<td>• Uses Medicaid</td>
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<td>• Must be budget neutral</td>
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<td>• Approval process for waivers can be lengthy</td>
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<td>• Used by MA, NY, OR to support similar models</td>
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<td>• Uses CHIP (kids only)</td>
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<td>• Federal match covers 85% of program cost</td>
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<td>• Faster approval via State Plan Amendment process</td>
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<tr>
<td>• Used by MD to support similar model + lead</td>
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HSIs are promising, but questions remain...

- Is Illinois’ CHIP admin budget already being utilized for other programs/HSIs?
- Where would the state portion come from? How much to request?
- Whether/how to engage lead and other broader healthy homes stakeholders
- In general, how applicable is the MD HSI model to Illinois?
Next Steps for Collective Action

- Continue working with through existing coalitions (IPHI, PASH, Illinois Asthma Partners, etc.) to identify and work towards shared policy goals
- Ensure key stakeholder groups are at the table:
  - Providers - SUHI, the SIU program
  - Payers - e.g. Medicaid MCOs
  - State Agencies – IDPH, IDHS, HFS
  - Local advocacy groups
- Leverage national policy expertise (e.g. GHHI, Policy LearningLab) to learn what other states have done
- Other steps?
Questions?
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