Using Energy Efficiency to Improve Health and Housing

Presented at the 2019 MES Resilience, Health and Energy

February 20, 2019

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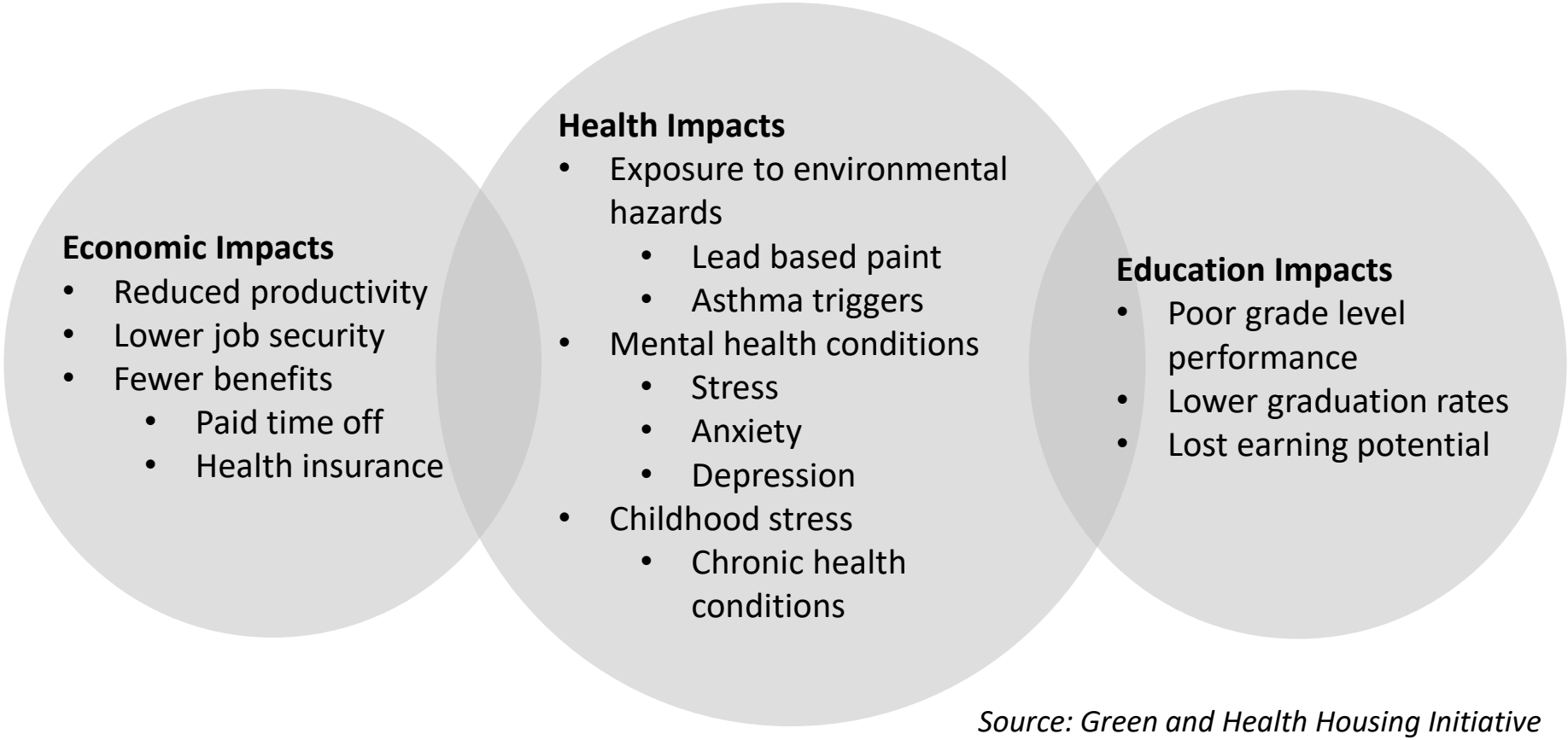
The Impact of Housing and Energy Insecurity



Source: Green and Health Housing Initiative

The Pilot

Asthma in the Presence Health Saints Mary and Elizabeth Service Area

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The Team

Presence Health®

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

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

Green & Healthy Homes Initiative®

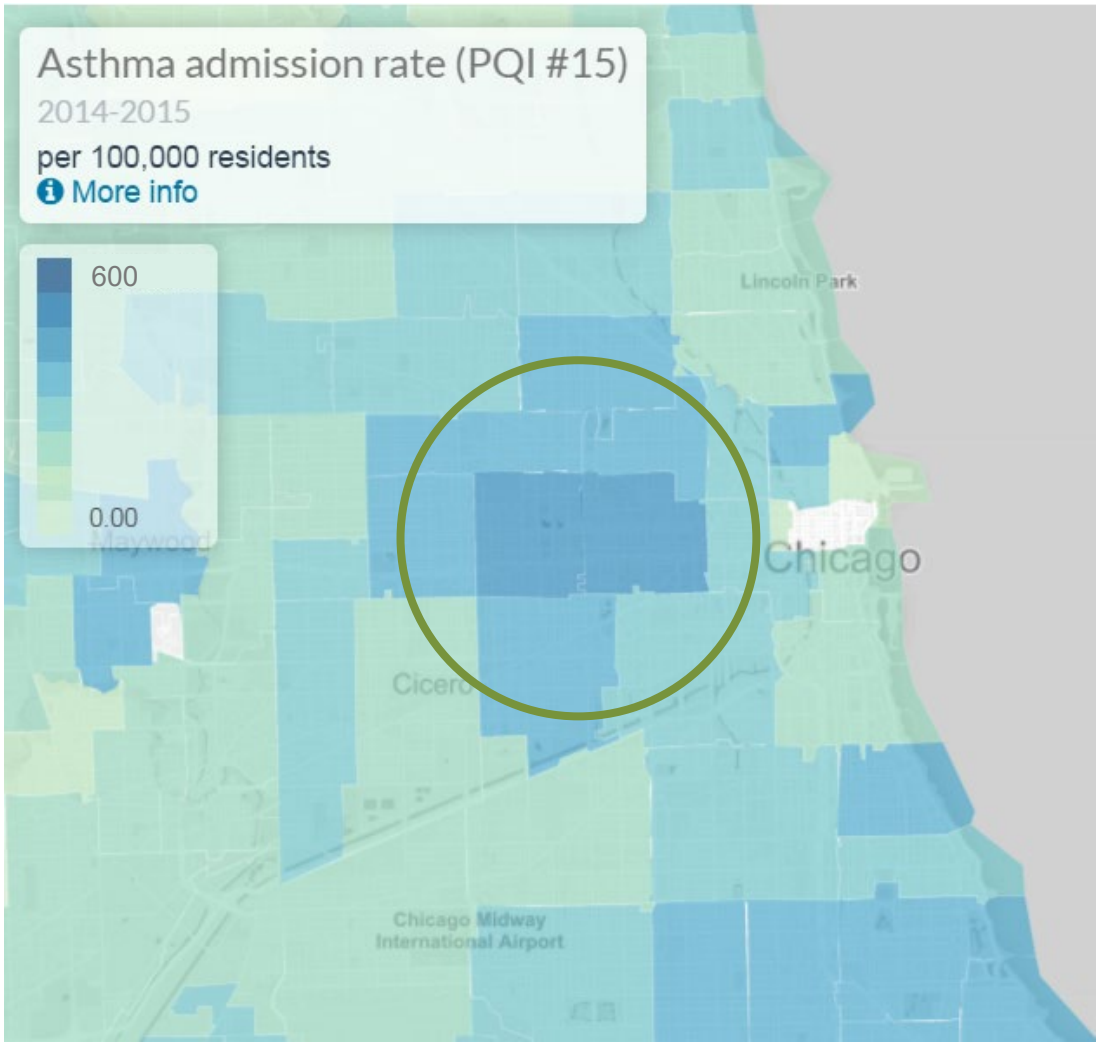
Provides comprehensive technical assistance modules, including stakeholder analysis, intervention planning, and sustainable funding options ranging from Pay For Success (PFS) financing to direct reimbursement.

Pilot Details

- **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/Medicaid, under 65 years old
- **Enrollment:** 20 patients, identified through Presence Health records
- **Intervention:** HEPA vacuum/air filter, green cleaning, mattress and pillow cover (Tier 1); minor construction (Tier 2)
- **Data:** Presence and Elevate are using Efforts to Outcomes (case management software) to track client cases

Hospital 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.



Source: Presence Health

Case #91740

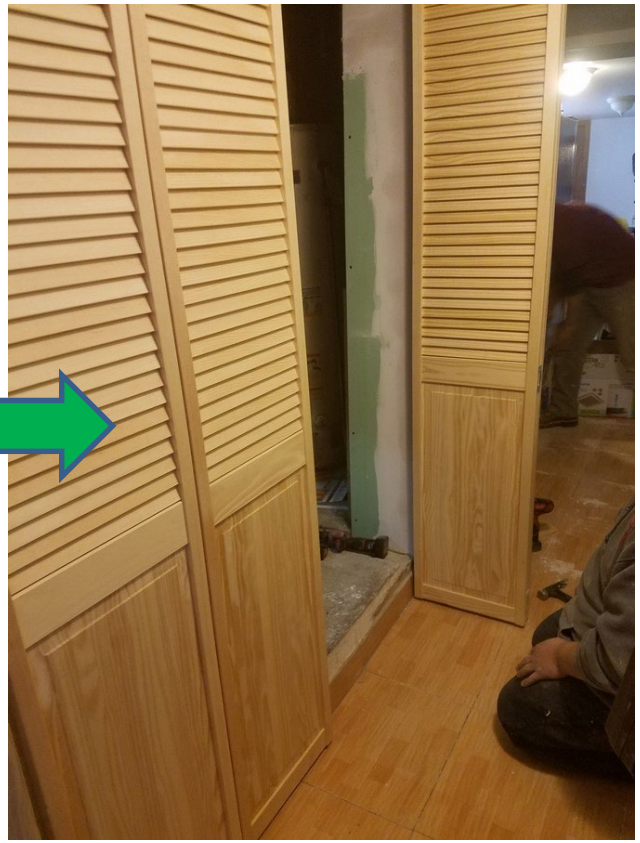
- 3 unit building
- Patient lives in basement unit
- Patient is 19 years old
- Lives with his father and his younger siblings
- Hospitalized for asthma within the past 12 months
- Unemployed

Issue: Point Source Moisture/Mold (before)

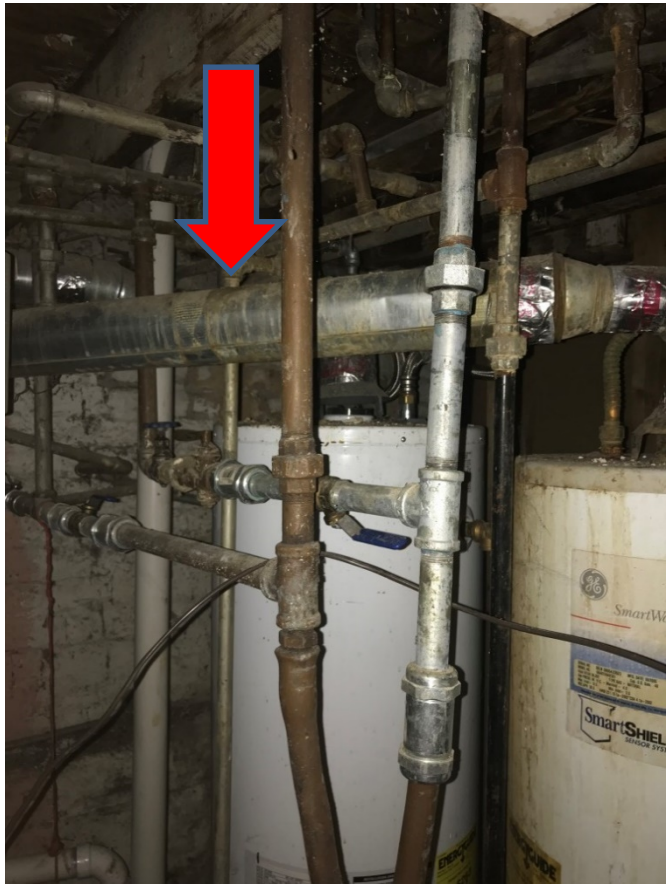
Moldy drywall by bathroom, kitchen, and hallway. Additionally, the Combustion Appliance Zone (CAZ) was not properly closed off.

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: Flue Pitch/High Carbon Monoxide



Domestic Water Heater is negatively pitched. Additionally, we found the flue pipe had material blocking the full use of the pipe.

Preliminary Results

- **19 out of 20** participants **improved their Asthma Control Test (ACT)** score (1 participant was lost to follow up)
- **18 out of 20** reached a **score of at least 19**. (19+ =participant has “controlled” asthma)
- The average improvement was 7.11 points—a **56% improvement over average baseline ACT score**
- **72%** of those who responded **experienced reduced interference with work and school** due to asthma and a **reduced reliance on their rescue inhaler**

Preliminary Results

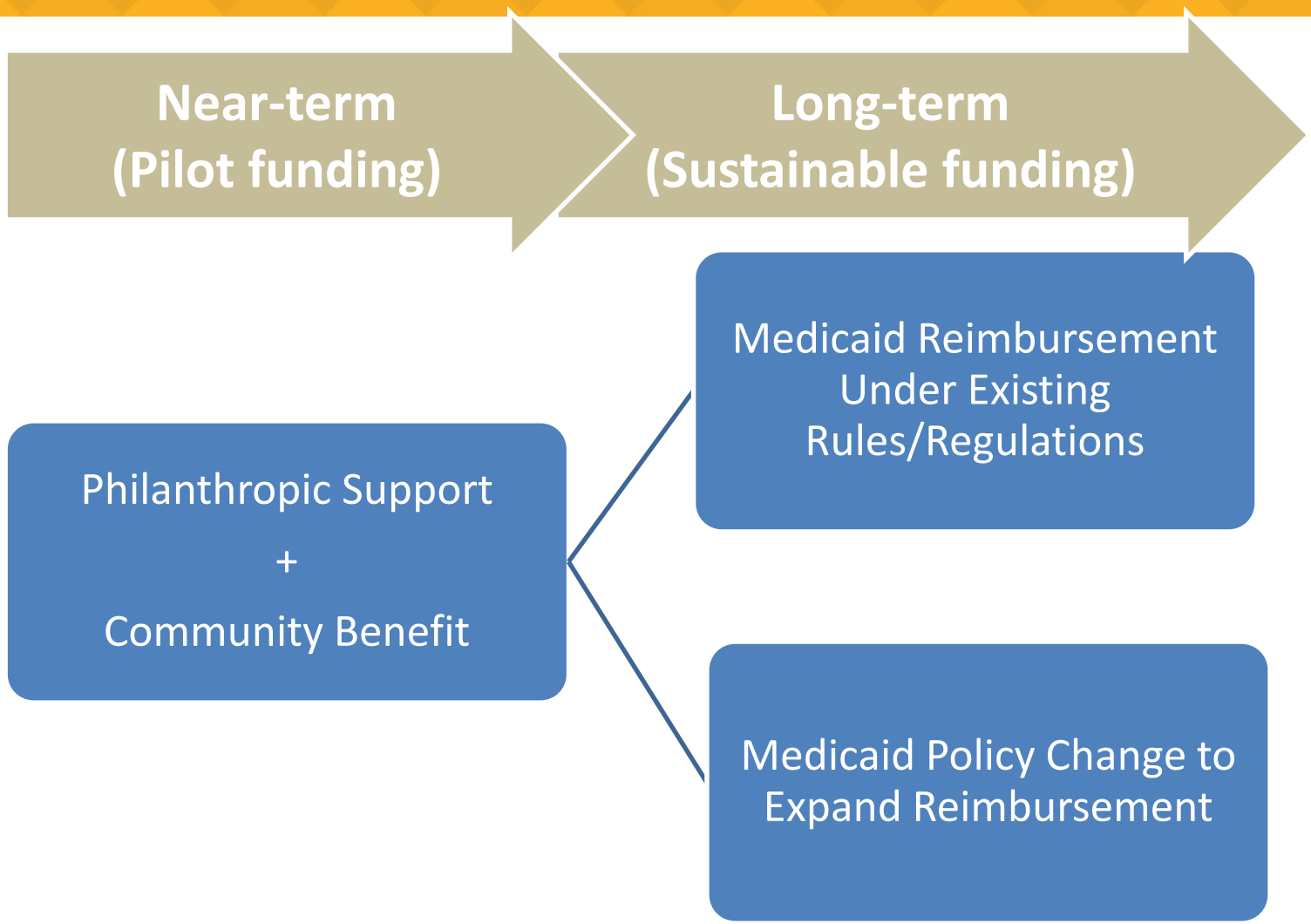
- Average Tier 1: $378.29
- Average Tier 2: $2,230.86
- Total cost $25,412.61 of the supplies

Return on Investment (ROI) for Asthma Interventions $5.30 to $14.00

Pilot ROI= $ 134,686 to $355,776

Source: Journal of public health management and practice

Program Sustainability: Healthcare



Thank you!

Amanda Escobar Gramigna

Manager, Environmental Health

Amanda.Gramigna@ElevateEnergy.org

773-269-4015

www.ElevateEnergy.org

@elevate_energy

Facebook/elevateenergy

LinkedIn