



A Home-based Approach to Treat Asthma

Presented at the 2018 Conference on Health, Environment and Energy

December 5, 2018



The Team



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



ELEVATE ENERGY
Smarter energy use for all

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.



ELEVATE ENERGY
Smarter energy use for all



Presence Health®

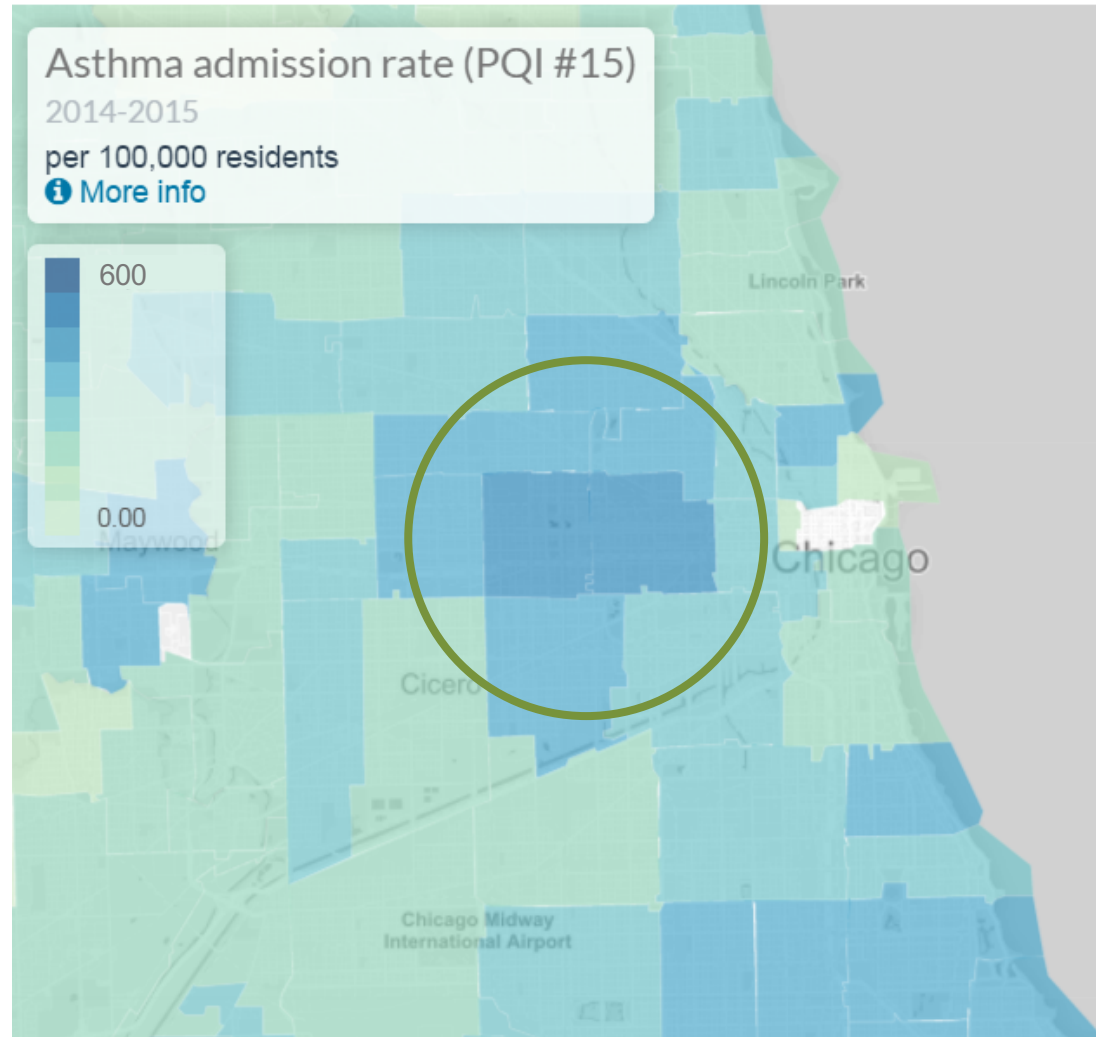
Pilot Details

- **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 or Medicaid, under 65 years old
- **Enrollment:** 20 patients, identified through Presence Health records
- **Intervention:** 2 visits; nurse educator and energy analyst. 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 the hospital suffered very high rates of hospitalization for asthma, especially among children.
- Illinois rate of hospitalization among children was 156 per 100,000
- West Side Chicago rates for children ranged from 145 to 487 per 100,000.



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: 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**
- **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 (supplies): \$378.29 per patient (20)
- Average Tier 2 (construction): \$2,230.86 per patient (8)
- Total cost \$25,412.61 of the supplies/construction

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

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

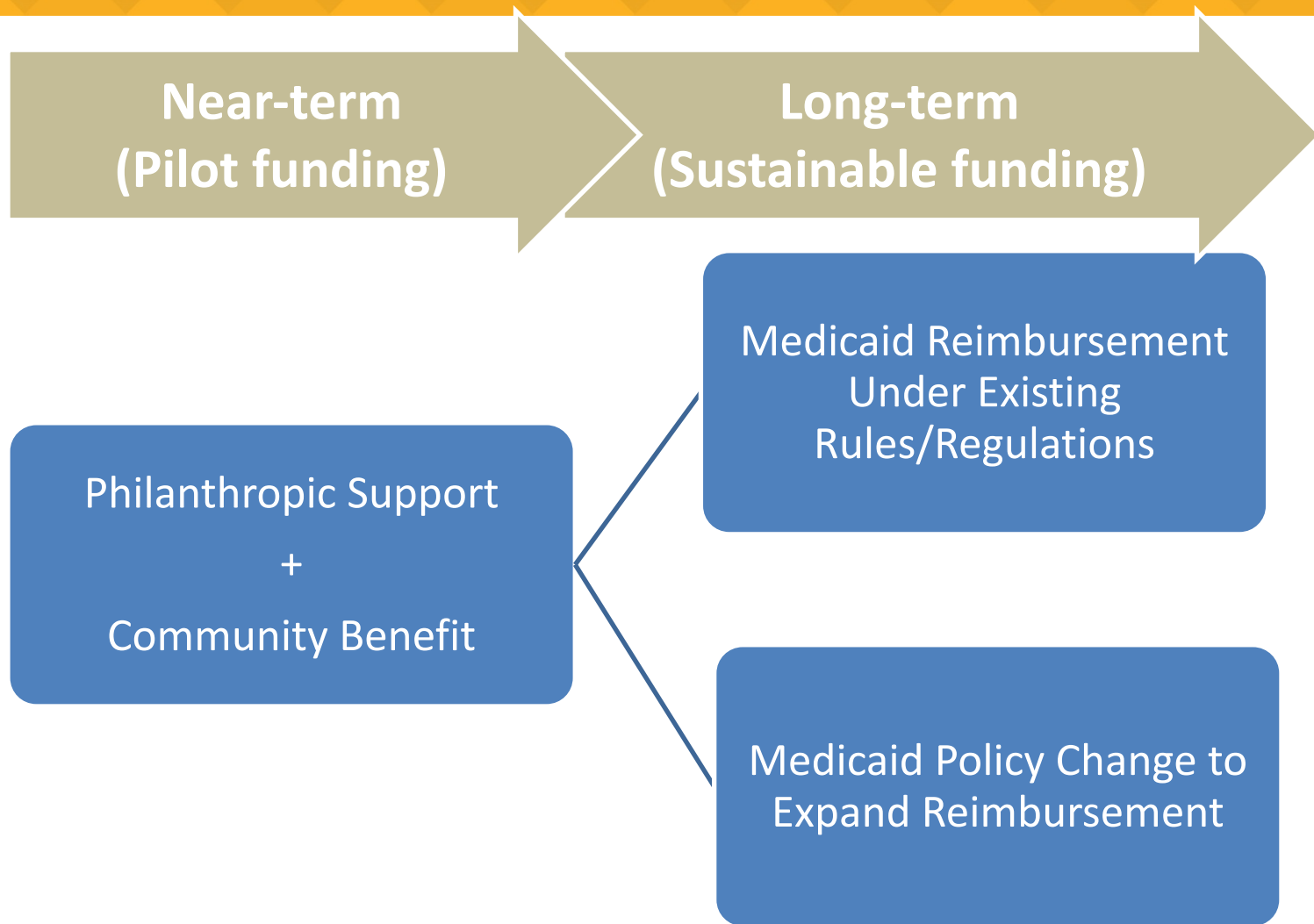
Source: Journal of public health management and practice

Tips for Partnering with Healthcare

- **Reach out to the Community Health team, or similar**
 - Ask if their community health assessments include social determinants of health like housing quality or chronic diseases like asthma.
- **Speak their language--\$\$**
 - Initially told areas of interest to reduce cost: asthma hospitalizations and ageing in place.
- **Combine Expertise**
 - Healthcare is not an expert in Housing
 - We used energy auditors to conduct asthma trigger assessments
- **Engage a national healthy housing expert**
 - We worked with the Green and Healthy Housing Initiative



How can we sustain programs like ours?



Thank you!

Amanda Escobar Gramigna

Manager, Environmental Health

Amanda.Gramigna@ElevateEnergy.org

773-269-4015

www.ElevateEnergy.org



@elevate_energy



Facebook/elevateenergy



LinkedIn

