



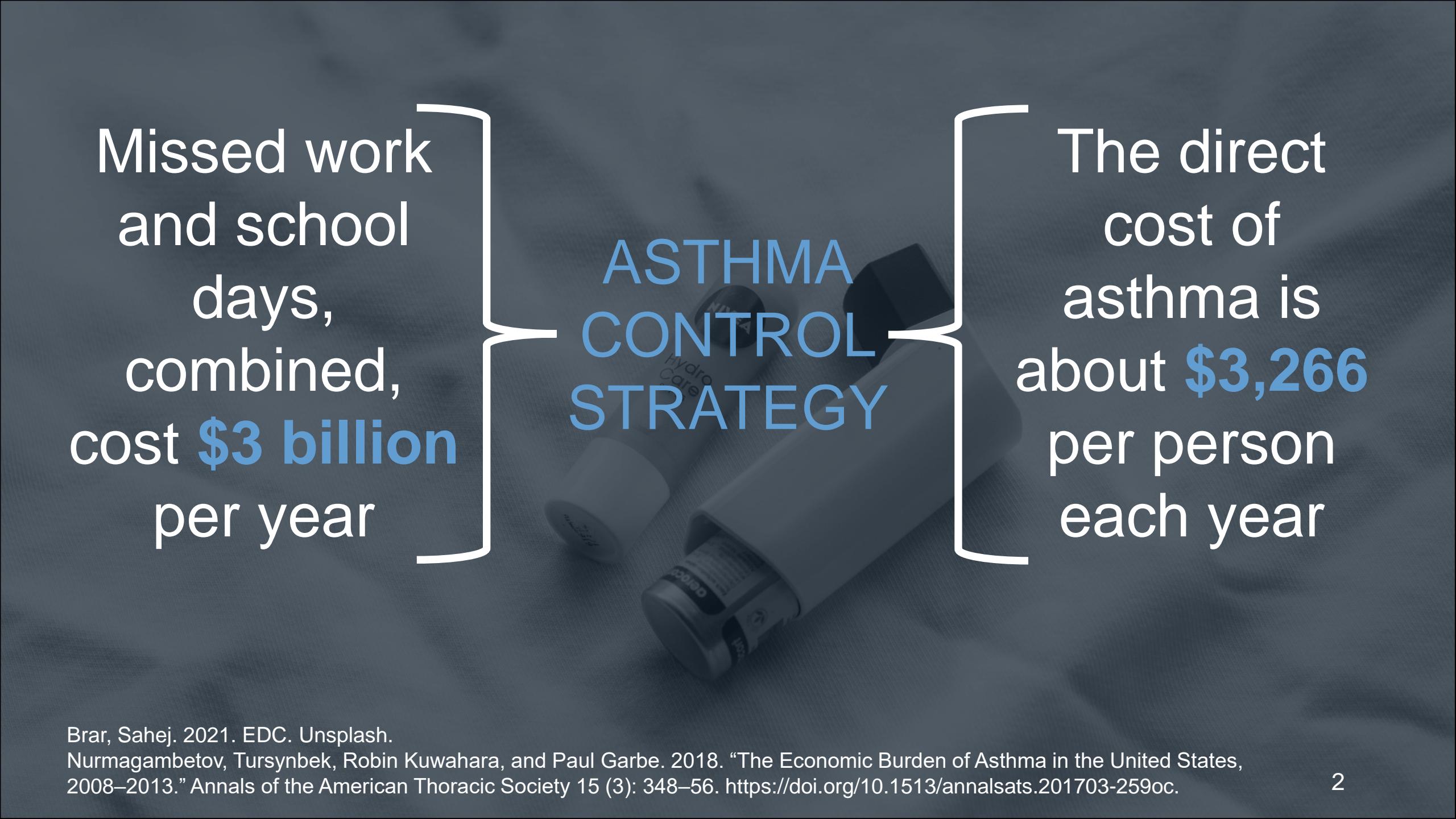
Better Health With Digital Health

A Program for Improving the Wellness
of Pittsburgh and Its Resident

Michael Rodriguez
Technology Fellow
U.S. Digital Corps
October 11th, 2022



Missed work
and school
days,
combined,
cost **\$3 billion**
per year



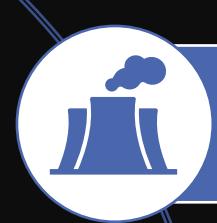
ASTHMA CONTROL STRATEGY

The direct
cost of
asthma is
about **\$3,266**
per person
each year

Brar, Sahej. 2021. EDC. Unsplash.

Nurmagambetov, Tursynbek, Robin Kuwahara, and Paul Garbe. 2018. "The Economic Burden of Asthma in the United States, 2008–2013." *Annals of the American Thoracic Society* 15 (3): 348–56. <https://doi.org/10.1513/annalsats.201703-259oc>.

Agenda



Recognize the Landscape of Asthma and Pollutants in Pittsburgh



Report How Digital Health Data Can Improve Lives



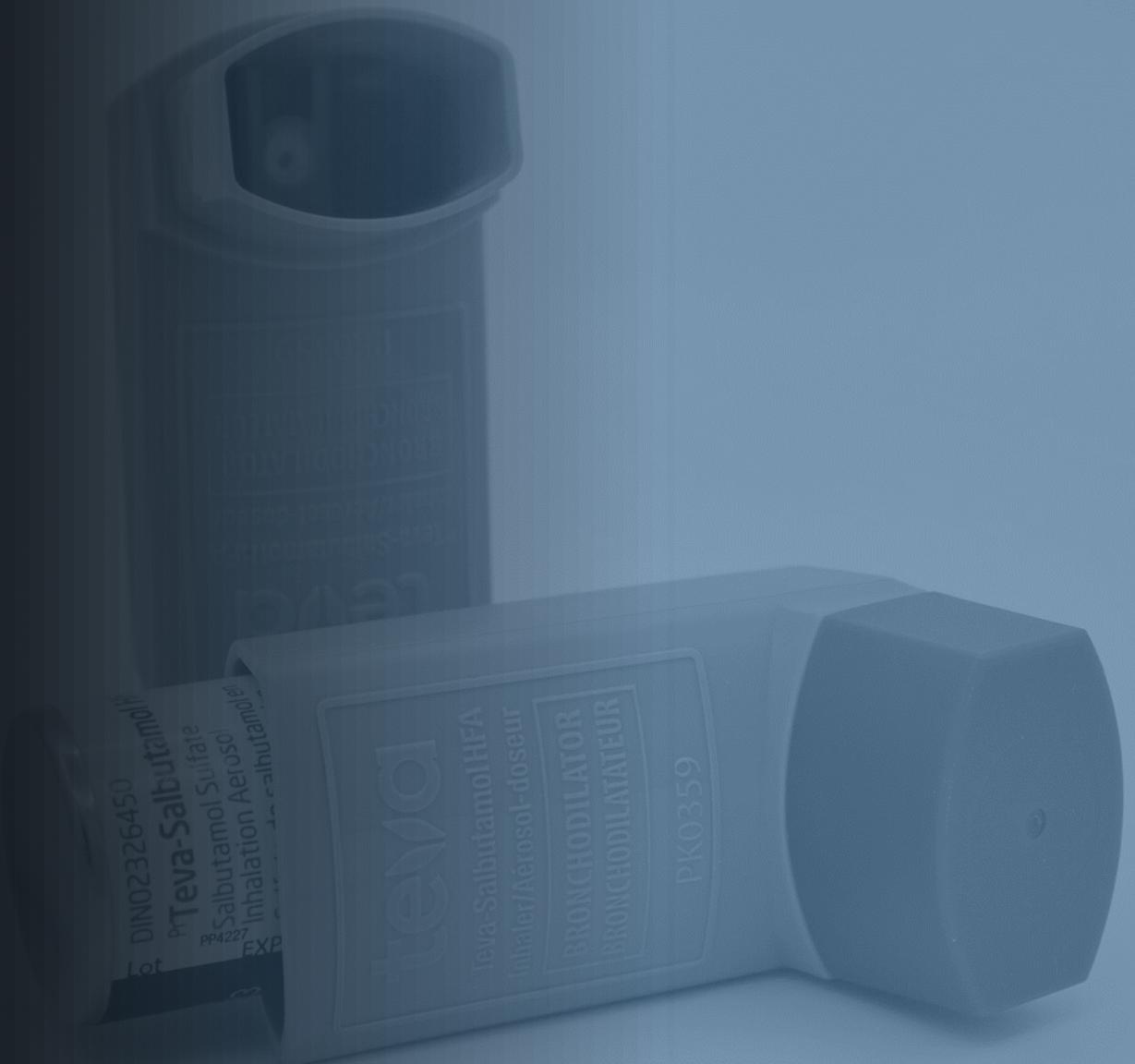
Identify the Requirements for Implementing a Program



Highlight Added Potential from a Digital Health Program

The Landscape

Asthma has a
Chokehold on
the City of
Pittsburgh

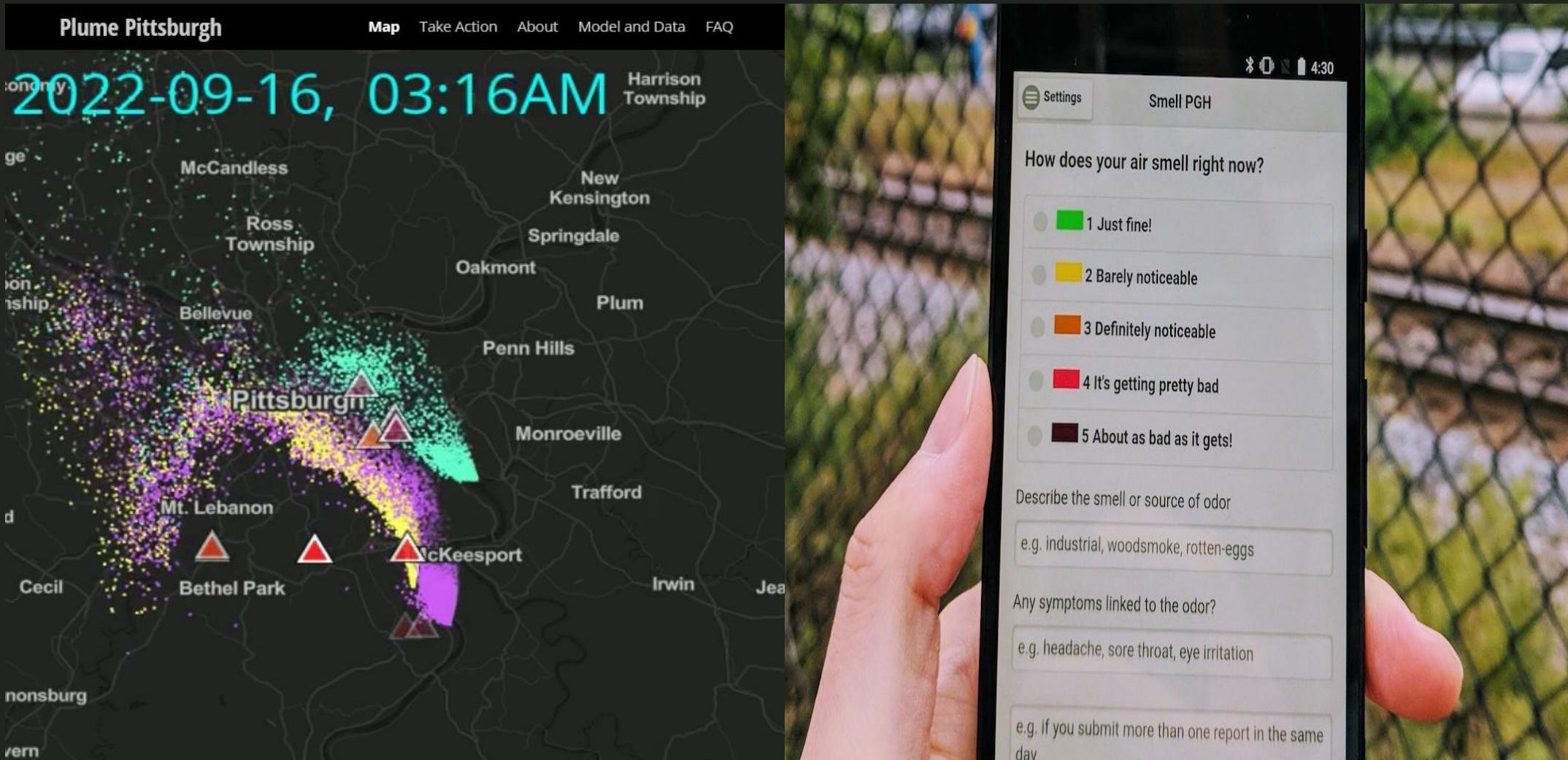




As of 2022, Pittsburgh ranks 50th among the most challenging places to live with Asthma

Droke, Rebecca. 2018. The U.S Steel Corp.'S Clairton Coke Works on the Monongahela River Is the Pittsburgh Region's Major Polluter. Pittsburgh Post-Gazette.

The City Recognizes the Problem...



...The Effects are Felt at Different Levels

Pennsylvania, **27%** of children have uncontrolled asthma

Pollution from **industrial** sources + **traffic** sources

Pittsburgh **25th** worst metro area

Bienkowski, Brian. 2018. "Coke Plant Linked to Asthma at Pittsburgh-Area Elementary School." EHN. February 27, 2018. <https://www.ehn.org/asthma-near-clairton-coke-plant-2539978896.html>.

Hurdle, John. 2022. "For Low-Income Pittsburgh, Clean Air Remains an Elusive Goal." Yale E360. January 27, 2022. <https://e360.yale.edu/features/for-low-income-pittsburgh-clean-air-remains-an-elusive-goal>.

The Report

Digital Health
Monitoring is a
Strategy for
Better Patient
Outcomes

Use Sensors to Help Residents Breathe Better

Inhaler sensors helps patients monitor medication

- When used
- How often used
- Where used





See Improvements for Residents

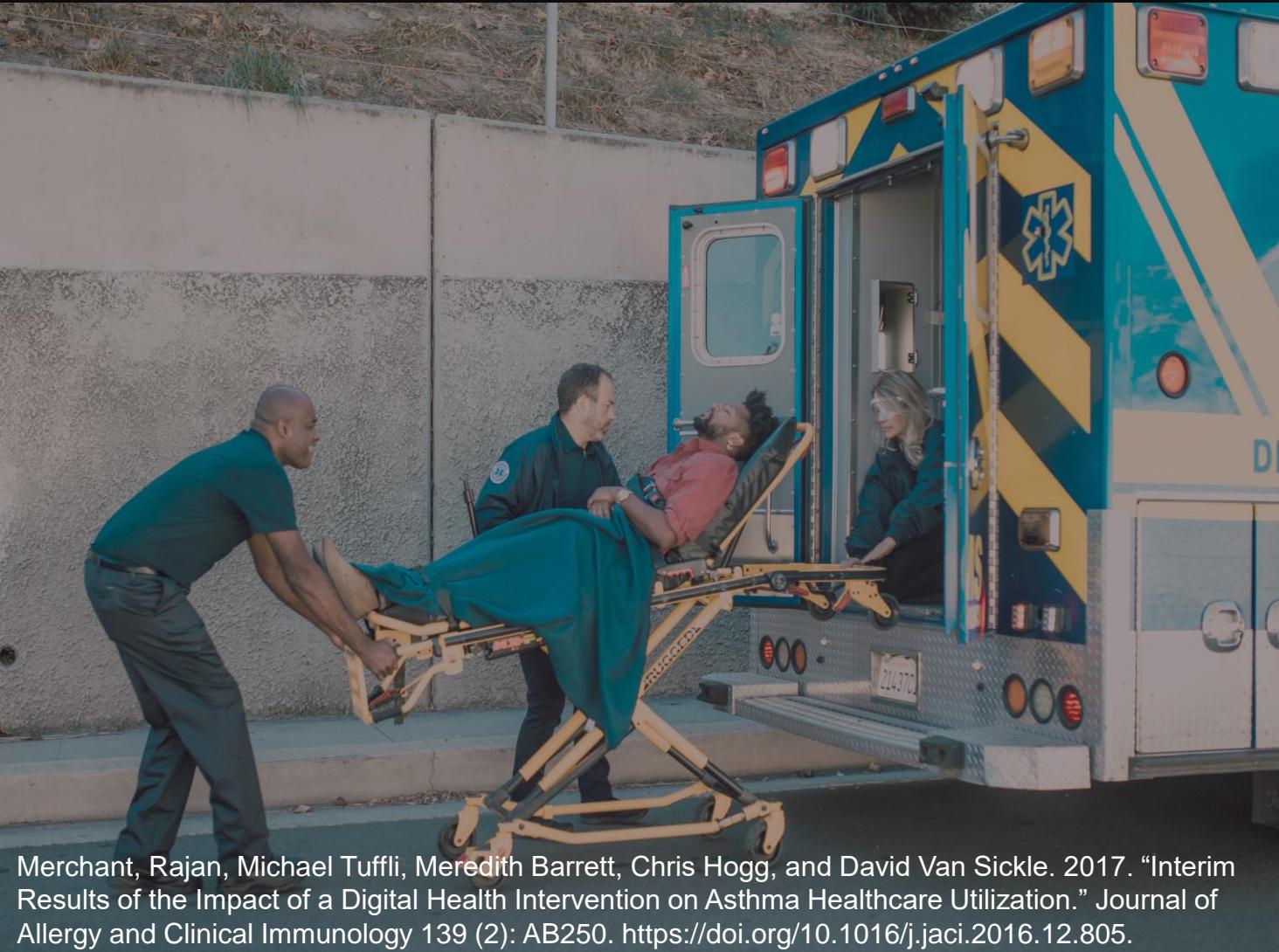
Reduction in
asthma rescue
inhaler use

Increase control
of asthma
symptoms

Increase in
symptom free
days

Better sleep +
symptom-less
nights.

See Improvements for the City



Less hospitalizations

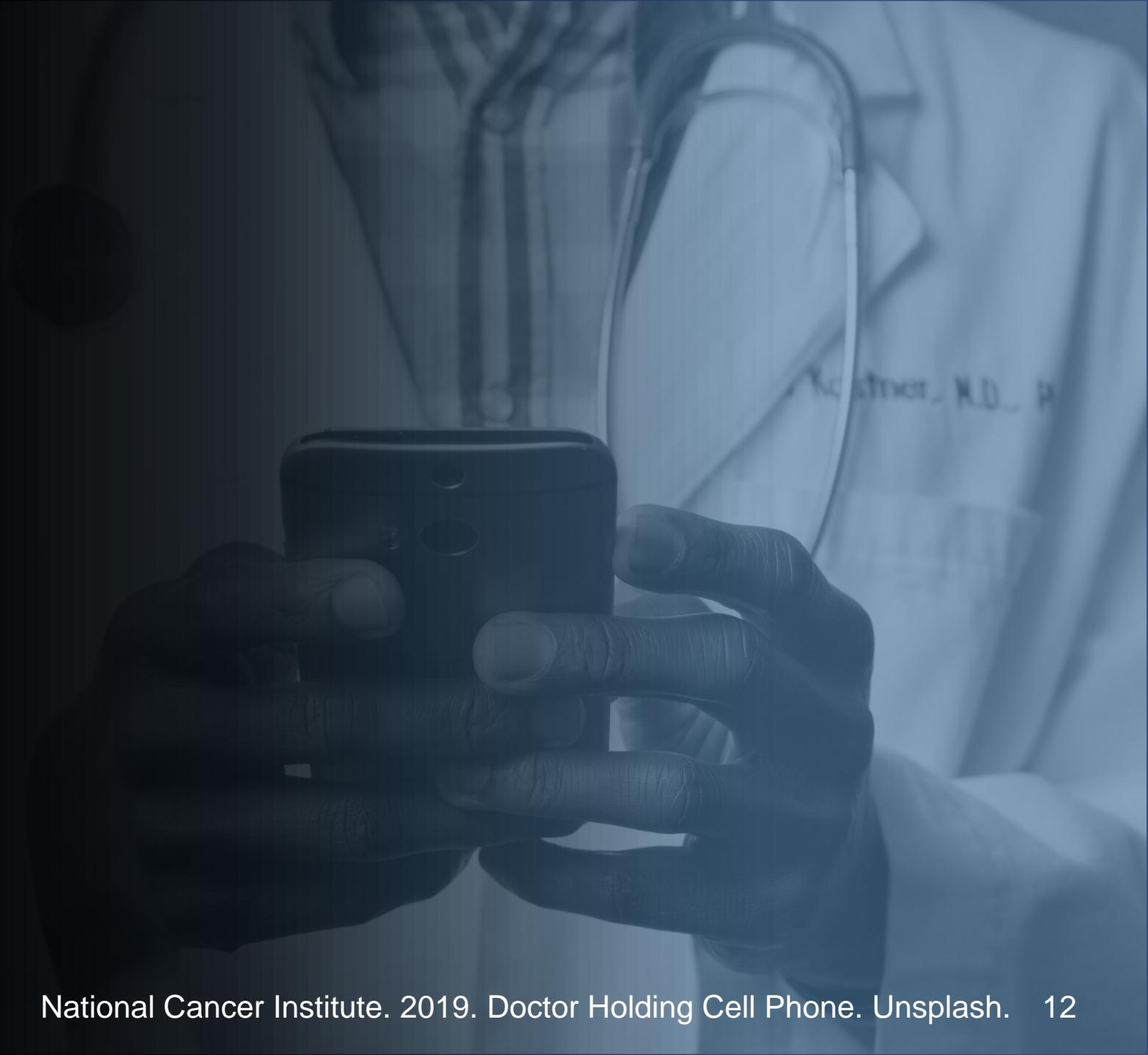
Less visits to an emergency room

Less missed workdays

Less days out of school for children

Implementation

The Resources
for a Program
Already Exist



Receive Support from Grant Providers

The Robert Wood Johnson Foundation supports projects that align with:

Creative solutions

Health impacts

Health Equity Improvement

Combine Resources with the Community

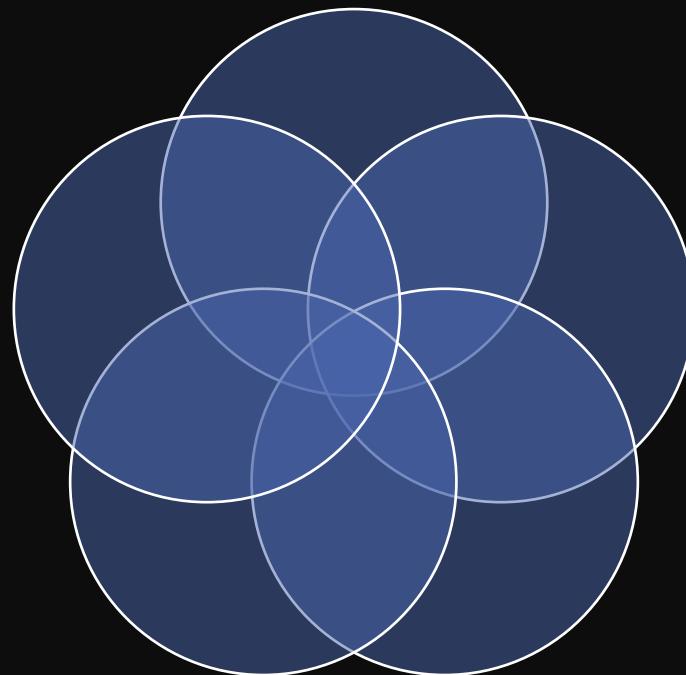
University of
Pittsburgh
Medical Center

Allegheny
County
Asthma Task
Force

American
Lung
Association

CMU's Center
for Air
Climate and
Energy
Solutions

Breathe
Project



Added Potential

What Digital Health Can Do for the Future of Pittsburgh



“When we have a lot of users in the same town...we start to see hot spots and trends over time.”

– Chris Hogg,
COO Propeller Health

NASA. 2015. United States Seen from Orbit. Unsplash.

Wagner, Andrew. 2017. “Asthma Patients Breathe Easier with New Bluetooth Inhalers.” PBS NewsHour. May 10, 2017.
<https://www.pbs.org/newshour/health/asthma-patients-breathe-easier-new-bluetooth-inhalers>.

Summary: Digital Health Leads to Better Health

More Productivity City Wide

Increased Asthma Control

Future Patients Receive
Data-Driven Guidance

Questions?



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**IMPROVING THE HEALTH OF PITTSBURGH
COMES FROM FIRST
IMPROVING THE BREATHING OF PITTSBURGH**