Philadelphia Regional Center for Children's Environmental Health

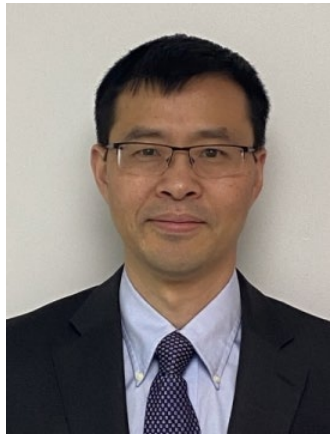
Working to Achieve Children's Environmental Health Equity in a Changing Climate

February 21, 2024
PEPH

A program of: Penn University of Pennsylvania | Children's Hospital of Philadelphia®

Center Leadership and Staff

Rebecca Simmons, MD, Co-Director



Aimin Chen, MD, PhD Co-Director

Marilyn Howarth, MD Deputy Director

Tyra Bryant-Stephens, MD Translation Core Co-Director

Jessica Jones Gupta Administrative Director

Isabella Andreozzi, Program Coordinator, Translation Core

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40 Research Members

Penn
University of Pennsylvania

Children's Hospital of Philadelphia®

Jefferson
Thomas Jefferson University
HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

Drexel
UNIVERSITY

University of Delaware

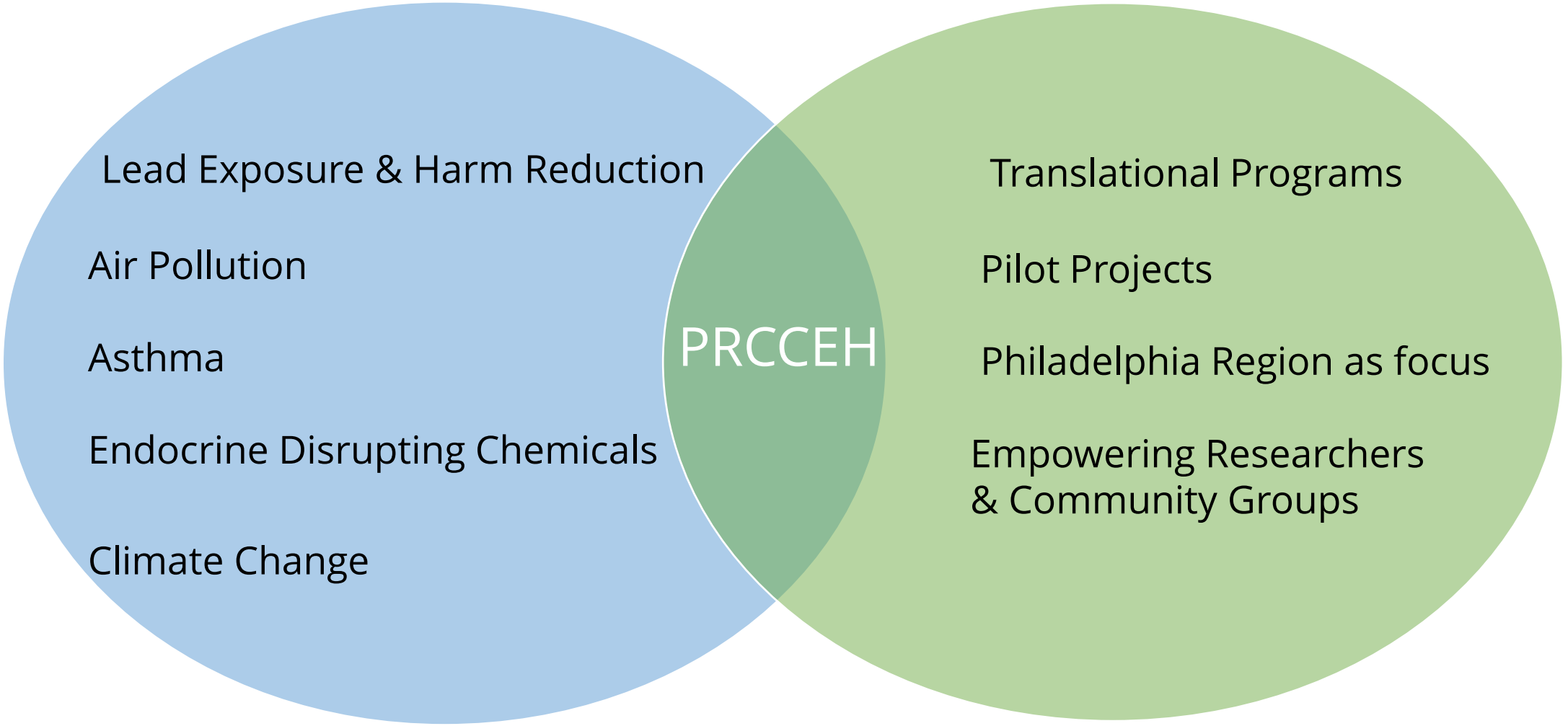
LEHIGH
UNIVERSITY
College of Health

Temple University

Lincoln University
LEARN. LIBERATE. LEAD.

VERITAS UNITAS CARITAS
1842
VILLANOVA
UNIVERSITY

Our Focus Areas and Mission



Translation Core

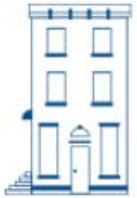
The Mission of the Translation Core is to identify and apply existing environmental health science and proven translational products and programs to improve children's environmental health while identifying and testing new methods of translation through pilot projects.

Chester Environmental Partnership

City of Philadelphia

THE FOUNDATION FOR DELAWARE COUNTY

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PACDC
PHILADELPHIA ASSOCIATION OF COMMUNITY DEVELOPMENT CORPORATIONS

children FIRST

CLEAN WATER ACTION

Perelman School of Medicine University of Pennsylvania

Children's Hospital of Philadelphia

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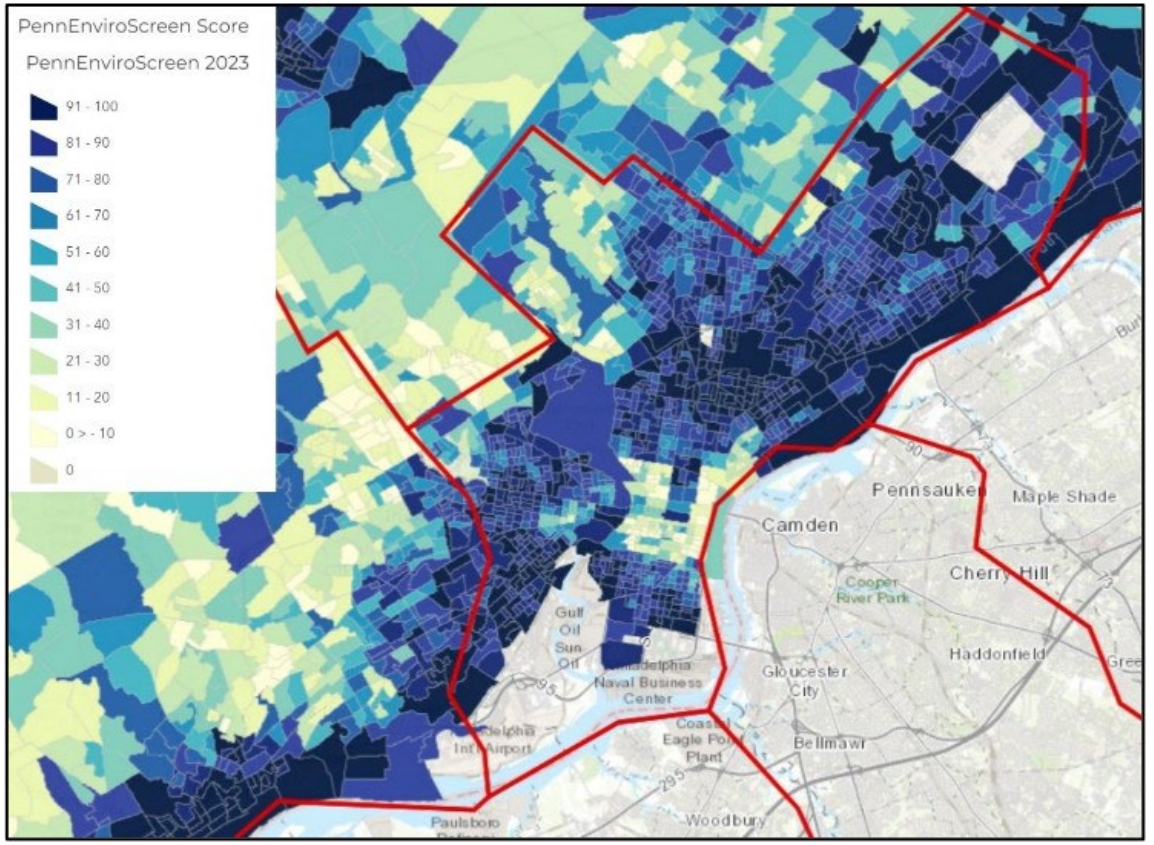
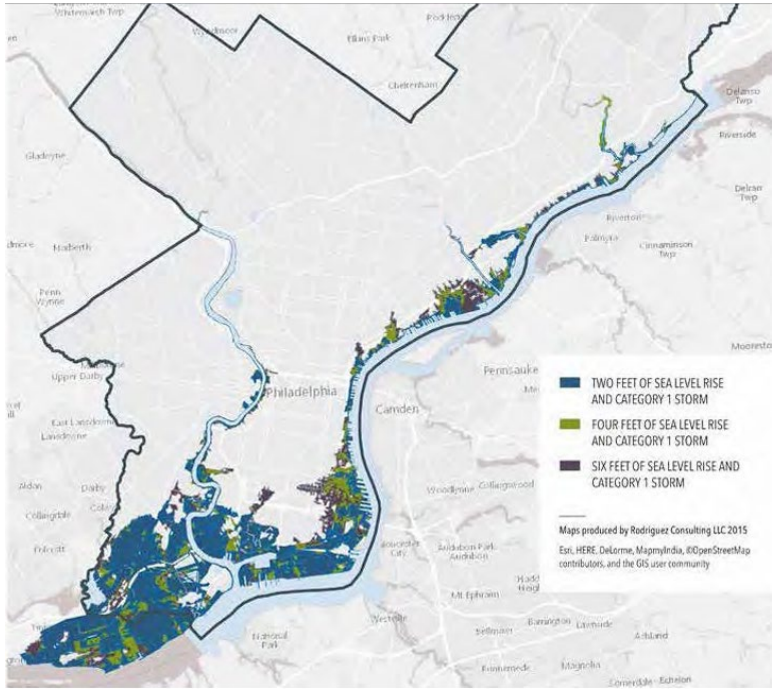
PHILADELPHIA REGIONAL CENTER FOR CHILDREN'S ENVIRONMENTAL HEALTH

Philadelphia Scores High in Environmental Inequity

- PennEnviroscreen Score Considers:
  - Pollution Burden
  - Environmental Exposures
  - Environmental Effects
  - Population Characteristics
  - Sensitive Populations
  - Socioeconomic Factors



Climate Change in Philadelphia Region



More frequent and intense rain events

Flooding

- Mental health impacts of cumulative trauma
- Mold exacerbating allergies and asthma
- Disparate impact: low income community of color

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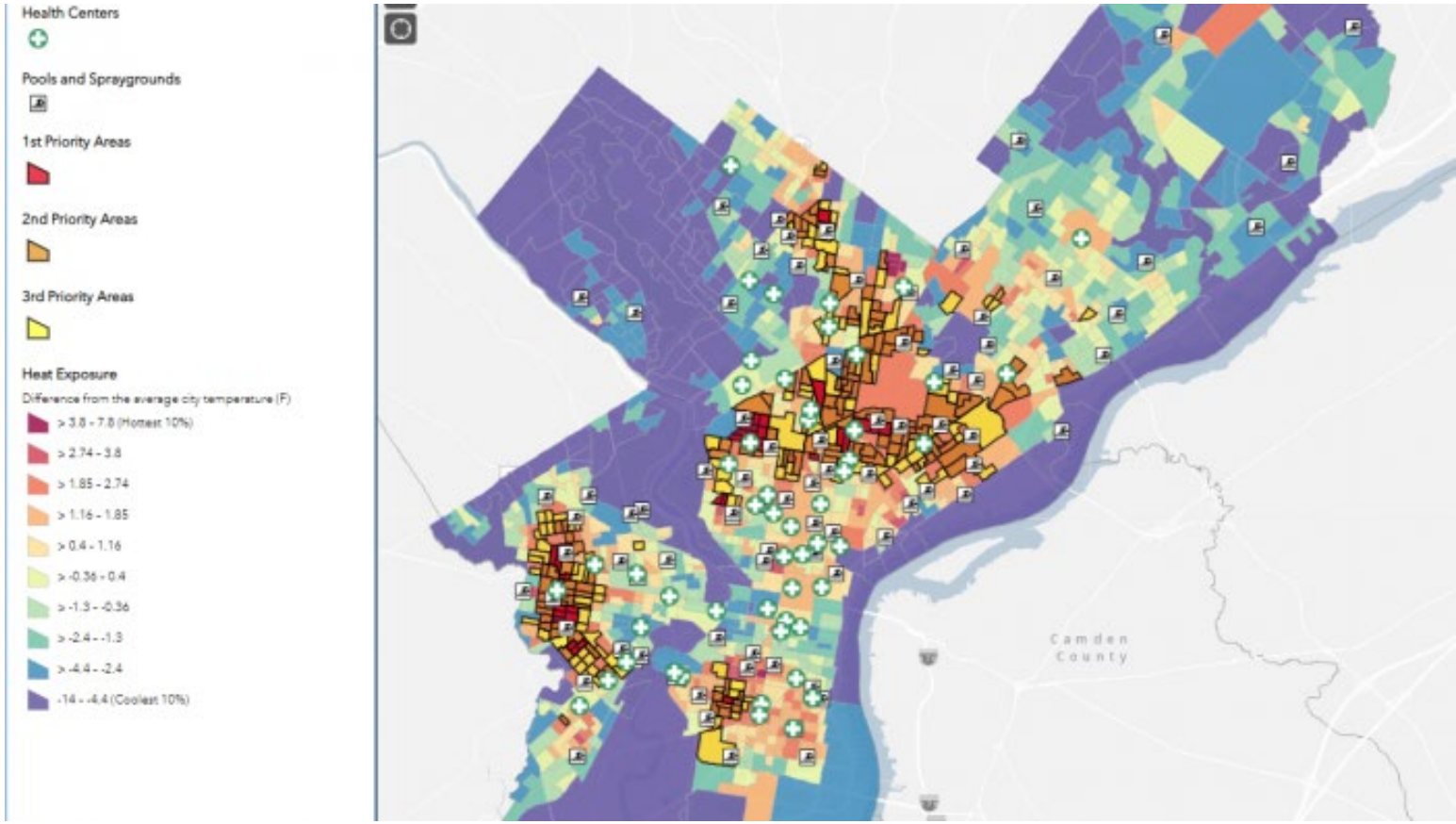
Climate Change in Philadelphia Region

More consecutive days >90 degrees



Heat Islands

- Neighborhoods lacking green space
- Can be 8 degrees hotter than other neighborhoods
- Disparate impact: low income communities of color

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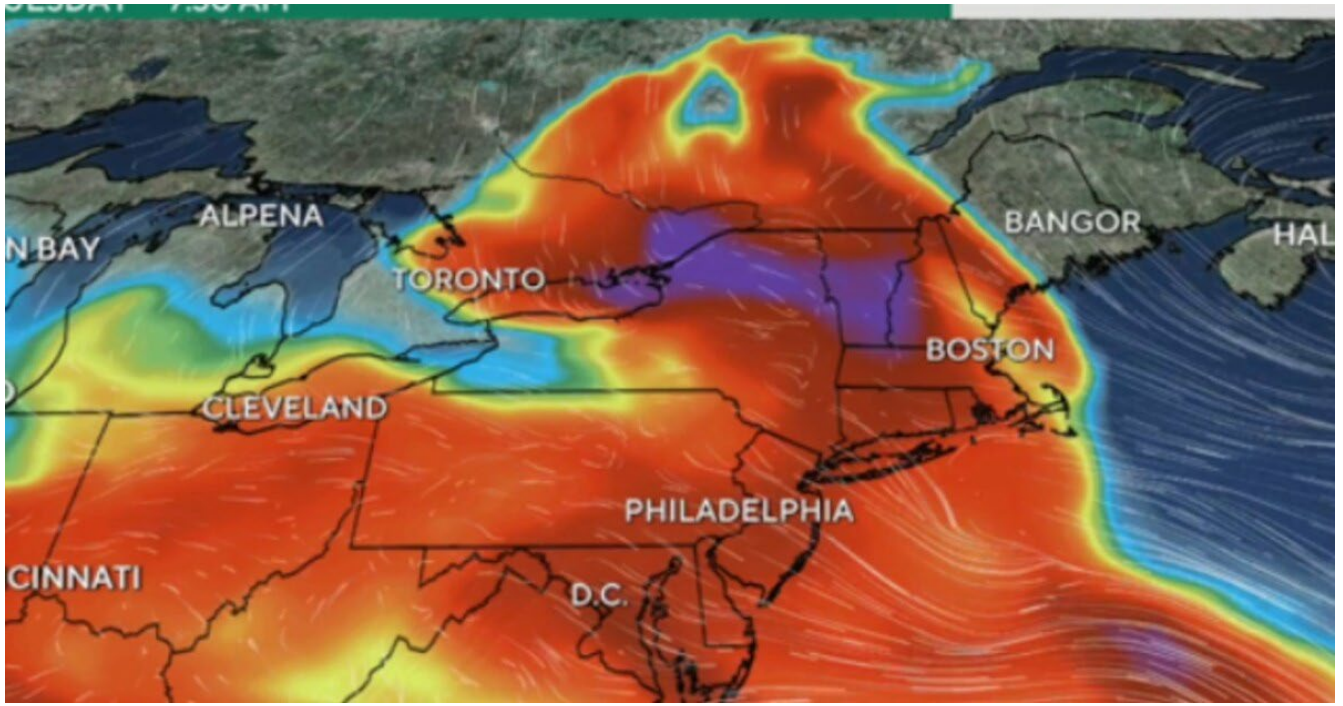
Climate Change in Philadelphia Region

Air pollution is expected to worsen



Wildfire smoke summer 2023

Air Pollution

- Philadelphia has never been in compliance with NAAQS for ozone
- Asthma rates in Philadelphia are 3x state rates in some neighborhoods
- Disparate impact: low income communities of color

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Chester Community Asthma Prevention Program

Prevalence Childhood Asthma in Chester >20%

Goals Community Asthma Prevention Program:

- Increase asthma knowledge and improve self management
- Equip participants to be neighborhood asthma experts
- Promote asthma-safe home and school/child care environments
- Reduce disparate burden of asthma in EJ community

Community Asthma Prevention Program

Partners:

- Horace Strand
- Katie Kenyon
- Rosetta Carter

Keystone First

THE FOUNDATION FOR DELAWARE COUNTY

CHESTER UPLAND SCHOOL DISTRICT

CHESTER HOUSING AUTHORITY
Building Community

CEP Solutions
Protecting People and the Environment

Chester Environmental Partnership

BOYS & GIRLS CLUB OF CHESTER

CROZER HEALTH
Be Well. Do Good.

CPHS
ChesPenn Health Services
Your Community Health Center

SAVE YOUR SOLES

Perelman School of Medicine University of Pennsylvania

Children's Hospital of Philadelphia

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Community Asthma Prevention Program

Community Health Worker Delivered:

- Education
- Environmental Intervention
- Community Resource Connections

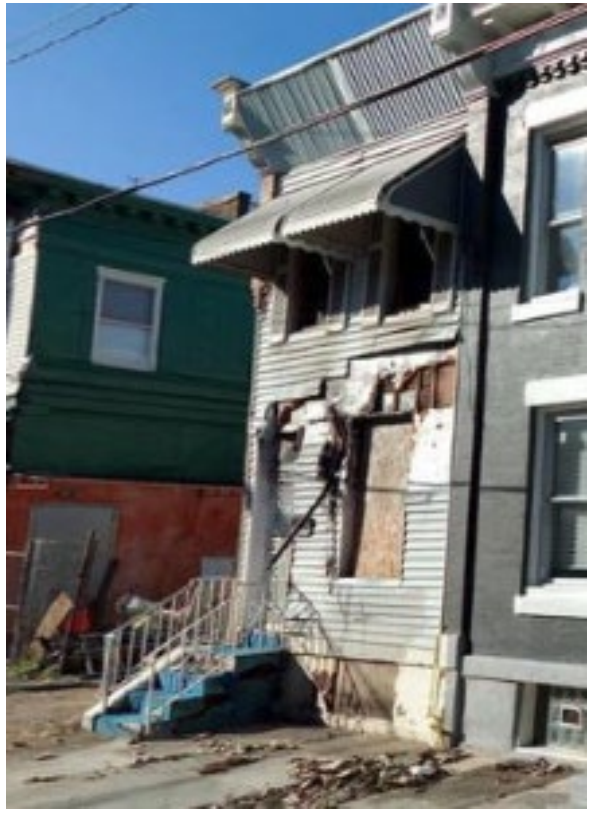
Home Visit	Education	Environmental Mitigation
First Visit	Enrollment/Pretest Social needs assessment	Consent form signed Environmental scan of child's bedroom and living area
Second Visit	Asthma as a chronic disease Signs and Symptoms Asthma indoor triggers/Avoidance techniques	Pest bait given Pillow and mattress covers Carpet removal instructions w/ tiles Electrostatic duster
Third visit	In-depth review of asthma medications and devices Review of asthma action plan	Observe placement of asthma trigger reduction supplies
Fourth Visit	Coaching for school/daycare/ care coordination issues	Environmental scan photo of child's bedroom
3mo, 6mo, 9mo	Review meds, review caregiver concerns, care coordination	NA
12 months	Final home visit	Environmental scan

Chester Community Asthma Prevention Program

- Keystone First funded a second CHW
- We have enrolled 58 Chester families so far
- 26 Presentations have been completed to community stakeholders
- Funded one pilot program to reduce clutter to support the success of CAPP

Philadelphia's Built to Last Program

- Created by Philadelphia Energy Authority
- Whole home repair + Energy efficiency + Healthy homes
- Available for low income home owners
- 100 homes completed since 2022
- Goal is 10,000 homes by 2033
- Many health hazards are present



Adding Environmental Health Consultation to the Built to Last Program

PHILADELPHIA ENERGY AUTHORITY

2021-2022 Homes Completed: 50

2023 Homes Projected: 50

2024 Homes Projected: 150

2025 Homes Projected: 250

About Us

The **Philadelphia Regional Center for Children's Environmental Health** is dedicated to communicating the latest children's environmental health research to health care providers, policy makers and community members.

Our primary focus areas are asthma, lead, toxic chemicals and air pollution.

The Center and its members create, test and implement programs and processes to reduce environmental exposures early in life.

NIH National Institute of Environmental Health Sciences

A Nationwide Effort

We're one of six centers across the country funded by the National Institute of Environmental Health Sciences (NIEHS) with the goal of improving children's environmental health and developing new research and programs.

Grant P2CES033428

Philadelphia Regional Center for Children's Environmental Health

Free Environmental Health Consultations

Contact Us

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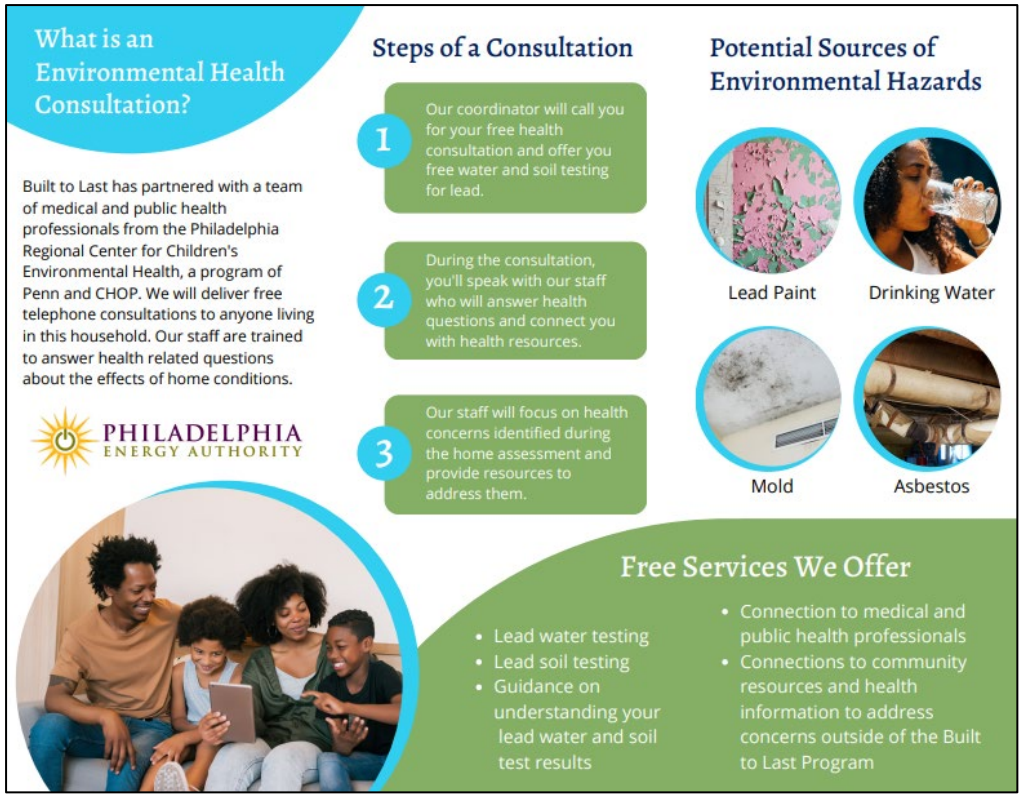
For Built to Last Participants

A service of the

Philadelphia Regional Center for Children's Environmental Health

A program of the University of Pennsylvania and the Children's Hospital of Philadelphia

50 Consultations completed



What is an Environmental Health Consultation?

Built to Last has partnered with a team of medical and public health professionals from the Philadelphia Regional Center for Children's Environmental Health, a program of Penn and CHOP. We will deliver free telephone consultations to anyone living in this household. Our staff are trained to answer health related questions about the effects of home conditions.

PHILADELPHIA ENERGY AUTHORITY

Steps of a Consultation

1. Our coordinator will call you for your free health consultation and offer you free water and soil testing for lead.
2. During the consultation, you'll speak with our staff who will answer health questions and connect you with health resources.
3. Our staff will focus on health concerns identified during the home assessment and provide resources to address them.

Potential Sources of Environmental Hazards

Lead Paint

Drinking Water

Mold

Asbestos

Free Services We Offer

- Lead water testing
- Lead soil testing
- Guidance on understanding your lead water and soil test results
- Connection to medical and public health professionals
- Connections to community resources and health information to address concerns outside of the Built to Last Program

Built to Last Program Health Script and Process

Hi, am I speaking with Mr. (Ms.) ___? My name is _____ and I am from the Philadelphia Regional Center for Children's Environmental Health, a program of the University of Pennsylvania and Children's Hospital. We have partnered with the Built to Last Program that is currently (or recently worked) working on your home to talk with you about health implications of the problems they have found in your home that they have been addressing. We can provide health information and other resources that might be helpful to you. I'd like to ask you a few questions so that we can better help you. Is now a good time to talk for a few minutes?

Great! We noticed from the Built to Last Assessment.....

If now is not a good time, when are you available to talk in the next couple of days?

Conditions found during the home assessment	☑ Leaking pipes ☐ Leaking roof ☐ Ceiling damage ☐ Asbestos on pipes ☐ Lead water service line ☐ Chipping lead paint ☐ Holes in walls ☐ Mold ☐ Other
Environmental health hazards identified by Built to Last:	☑ Asthma ☐ Intact Asbestos ☐ Damaged Asbestos ☐ Lead in water ☐ Lead in paint ☐ Mold ☐ Pests
Built to last has identified a leak in the _____ of the home. Have you identified any other leaks in your home?	○ Yes ◉ No reset
Have you noticed any mold growth around these leaks or other areas of your home?	○ Yes ◉ No reset
Built to Last has identified someone living in the home that has asthma. **Is this person younger than 16 years old?**	○ Yes ◉ No reset
Is this person seeing a specialist for their asthma (pulmonologist)?	○ Yes ○ No reset
Do you need to use your quick relief medicine (albuterol) more than 2 times a week? **Do you wake up in the middle of the night due to asthma more than 2 times a month?** **Do you refill your quick relief medicine (albuterol) more than 2**	○ Yes ○ No reset

Built to Last Program sends us a referral

↓

Program coordinator extracts information from the database:

Age of house

Number and age of children

Environmental hazards

↓

Program coordinator prepares the Redcap survey to call the resident

↓

During the call, issues identified are addressed and open-ended questions identify others

↓

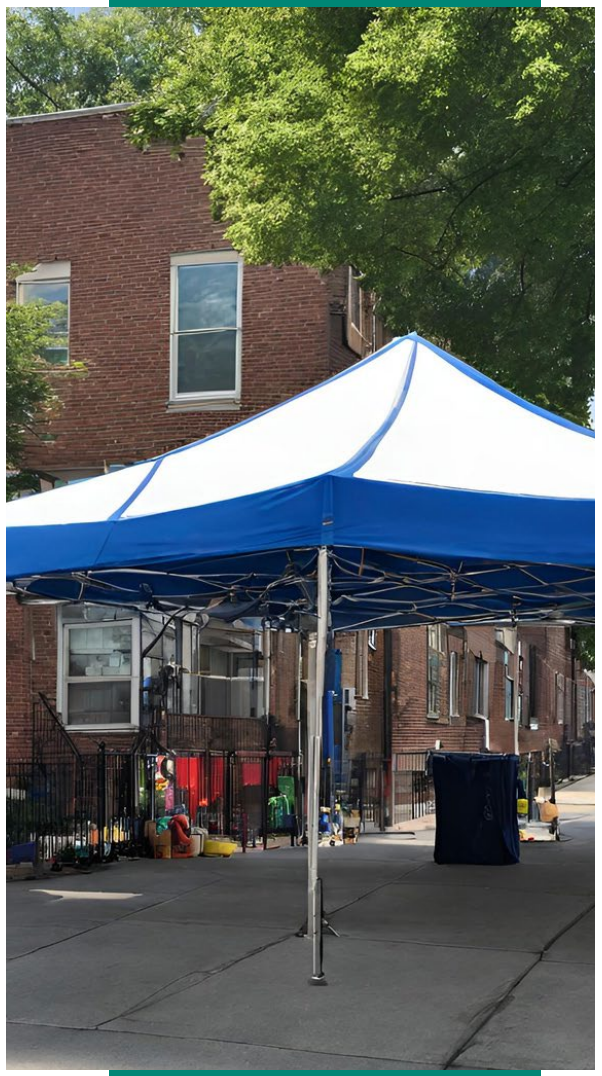
Appropriate materials, referrals and resources sent in mail/email

<u>Common issues we address:</u>

Asbestos
Lead in paint/water/soil
Mold
Safer Pest control
Safer cleaning techniques
Medical referrals
Climate change guidance

Translational Pilot Project

INVESTIGATION OF SHADE STRUCTURES IN ENCOURAGING MORE OUTDOOR PLAY IN THE SUMMER IN URBAN CHILDCARE



WOMEN *for a Healthy* ENVIRONMENT

Lorna Rosenberg, MS
Randy Persaud, MPHc
Chanel Palmer, BSNc

Context and Aims

Childcare facilities in heat island neighborhoods lacked shade for children to play

Aims:

Provide outdoor shade structures to enhance comfort and increase outdoor play

Provide training for staff on how to use the Air Quality Index to make decisions about when to play outdoors

Child Care Community Impact

8 Centers received shade structures

Outdoor play increased by 14 minutes/day

6 degree reduction in temperature under shade structure was measured

Qualitative Data Collection: Follow-up phone calls to all participants with a survey

"The shade structure was easy to set up and place."

“The children and staff stayed outside for a longer duration. The heat didn't bother them as much as before, allowing them to engage in outdoor activities on the patio instead of just the porch.”

“The structure made a difference for the kids. There were fewer complaints, and the children loved the canopy.”

“Outdoor playtime increased; before, it was in full sun, but now there is a way to cool off.”

Translation Core Pilot Project

Temple University
College of Public Health

NKCDC
NEW KENSINGTON COMMUNITY DEVELOPMENT CORPORATION

Heather Gardiner, PhD
Inkyu Han, PhD

Lizette Lewis
Gloria Caragena Hart
Anthony Miller
Lee Nentwig

Cool Wave: Strengthening Community Capacity to Mitigate Urban Heat Exposure and Protect Children's Health in Philadelphia

Hypothesis: Frequent and extended use of fans during summer significantly reduces indoor heat exposure among low-income households with children

2021- more than 20 days of nighttime temperature >80 degrees

Baseline survey
240 fans distributed for use in child's bedroom at night
Temperature/humidity sensor child's room and living room for 4 weeks
Periodic zoom or text assessment of comfort
$150 incentive at completion
Community engaged report back of data (individual and community)

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Philadelphia Regional Center for Children's Environmental Health

Thank You!

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