

## 2025 Webinar

## Asthma in Focus: Multisector Solutions in Prevention, Policy, and Practice



## Welcome



## **Kirstin Craciun**

Director of Stakeholder Engagement



## **Before we begin...**





## Welcome



## Robert Eick, MD, MPH

President & CEO

**Setter Health** Partnership



Collaborating for a healthy community

# Working together since 2007....





Collaborating for a healthy community

## Vision

Better Health Partnership, the region's most trusted health improvement collaborative, achieves exceptional health value and eradicates health disparities in Northeast Ohio.

## **Mission**

We bring health care, social services, and other sectors together to share best practices and accelerate data-informed improvements in equitable population and community health.





Collaborating for a healthy community



### SAVE THE DATE!

2025 Learning Collaborative

## October 24th

## **Featured Speakers**



#### Sarah Ronis, MD, PhD Director, UH Rainbow

Center for Child Health & Policy



#### Sarah Harris, C. CHW

Health Equity Specialist Health Equity Department Buckeye Health Plan



#### **Christina Yoka, M.A.** Chief, Air Pollution Outreach Cleveland Department of Public Health

## **Featured Speaker**



#### Sarah Ronis, MD, PhD

Director, UH Rainbow Center for Child Health & Policy



## Asthma in Context

Sarah D Ronis MD PhD 10 June 2025



Cleveland | Ohio



SCHOOL OF MEDICINE CASE WESTERN RESERVE

#### **Disclosures**

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#### Outline

- What is asthma?
- Who is impacted by asthma in our community?
- In what ways does asthma impact members of our community?

#### Asthma: a collection of airway diseases





#### **Asthma Triggers**





Cleveland, Ohio | 14

#### **Geography Matters**





#### Asthma Burden in Cuyahoga County





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#### Air Pollution in Cuyahoga County



Data Source: Climate and Economic Justice Screening Tool Version 1.0. Disesel Particulate Matter values derived from 2019 source data from EPA's Office of Air Quality Planning and Standards, Non-attainment areas.



#### Air Pollution in Cuyahoga County



Data Source: Climate and Economic Justice Screening Tool Version 1.0. Particulate Matter 2.5 values derived from 2019 source data from EPA's Office of Air Quality Planning and Standards,Non-attainment areas.



#### Asthma ED and Inpatient Admissions among Cuyahoga County Children



# School absenteeism is a marker for poor asthma control

• Definition: >10% eligible days missed





Cleveland, Ohio | 20



#### **BREATHE Study**

30-month mixed-methods sequence



**CASE WESTERN RESERVE** UNIVERSITY **Clinical and Translational** Science Collaborative

1:What factors are associated with absenteeism among children with asthma?

2: What is current state of asthma in schools?

3: What are feasible and acceptable opportunities for action?



Cleveland, Ohio 22

#### **BREATHE Study**

**Key personnel:** UH Rainbow Babies & Children's, MetroHealth, Better Health Partnership, CWRU Mandel School of Applied Social Sciences Center on Poverty (MSASS), CWRU SOM Center for Community Health Integration (CHI)

Technical consultants: American Lung Association

**Community advisors:** Cleveland Metropolitan School District Integrated Health Team, CH-UH School Health Team, Invest in Children (Cuyahoga County), Frances Payne Bolton School of Nursing, Parents



CHILD System Data Set



#### **BREATHE Study**

Inclusion criteria:

- Children ages 6-12
- 1+ visits with University Hospitals Health System 2018-2023
- Publicly-insured

Definitions:

- Asthma = ICD10 code J45 AND prescription for one or more asthma medications (controller/inhaled corticosteroid and/or reliever/short-acting or long-acting beta agonist)
- No asthma = no encounters with ICD10 code J45 AND no receipt of asthma medication





## Percentage of Medicaid-insured UH patients with >=10% days missed, by academic year and asthma status







#### **Parent/Household Stress and Absenteeism**

"I get a lot of calls from the school and will have to leave work. I did lose a few part-time jobs because I couldn't stay, or had unexcused absences due to my child, either doctors' appointments or Emergency visits. It has been very challenging over the years" – *ID 47* 





#### Legal Concerns, Truancy, and Absenteeism

He has a sickness, and sometimes I feel like I'm forced to send him to school because I don't want him missing so many days because then they'll threaten he could be held back, or make it up during the summer – ID 3



#### **Reflections on the synthesized causal map**







**University Hospitals** Rainbow Babies & Children's









## **Featured Speaker**



#### Sarah Harris, C.CHW

Health Equity Specialist Health Equity Department Buckeye Health Plan



# Buckeye HealthyHomes

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#### **Buckeye Healthy Homes Overview**

Buckeye Health Plan is partnering with Summit County Public Health (SCPH) and Pathway Hub Community Action (PHCA) to deliver a comprehensive intervention aimed at improving asthma outcomes for children in Summit, Portage, and Medina Counties.

Through the Healthy Homes Program, Buckeye members receive coaching, home products, and education designed to create safer home environments and reduce asthma triggers.

The program's primary goals are to:

- > Enroll 200 Families
- > Reduce emergency department (ED) utilization
- > Increase the Asthma Medication Ratio (AMR)
- > Enhance asthma management through coaching and education
- Address health disparities, with a focus on African American children in summit county.

This collaborative effort aims to not only improve health outcomes but also promote health equity across vulnerable populations.






## **Enrollment and Outreach**

Buckeye utilizes a platform called Buckeye Care Compass (MeU) to streamline communication between the health plan and our members. This tool enhances outreach and engagement through multiple communication channels.

- > Enables mass communication via text, email, video, or survey.
- Members are initially contacted via text message and phone call to encourage engagement in the program.
- > Each member receives a direct referral link to self enroll into the program.
- Members also receive a follow-up phone call from the Pathway HUB's Community Action team to support enrollment and answer questions.

All referrals will be completed via Buckeye Community Connect. A short screener will be completed on the referral.

Healthy Homes - Summit County Public Health (SCPH) serving Akron, OH | Buckeye CommunityConnect (buckeyehealthplan.com)

Referrals go directly to Summit County Public Health; staff will outreach member to schedule first home visit.



### **Program Criteria and Requirement**







## **Progress towards goal**

buckeye health plan.





## **Preliminary Cost Savings**

Since Healthy Homes launched in March 2024 in Akron, we have enrolled 71 members, with 38 completing their first home visit and 26 successfully completing the program between October 2024 to May 2025.

One-Year Look Back Summary:

### Among the 38 members who completed their first home visit since April 2024:

- > Asthma-related emergency room visits decreased from 40 to 9, an 77.5% reduction.
- The total cost of ED visits 12 months prior to enrollment was \$28,884.20, which has now decreased to \$3,227.21, resulting in an 88.82% cost savings.

### Among the 26 members who completed the full program:

- > Asthma-related ER visits decreased from 25 to 7, representing a 72% reduction.
- > The total cost of ED visits dropped from \$12,266.38 to \$2,610.26, an overall 78.71% cost savings.





## **Asthma Control Test Results**

Individual Member Count

Percentage of Member Count



- 0-12: Very poorly controlled Asthma
- 13-20: Poorly controlled Asthma
- 21-28: Well-controlled Asthma





## Key Drivers: Asthma Control Test 2024 Results

		Pre	Post	
Bundle A: No Mold and No Moisture	ACT Results Average	18.4	19.9	7.5%
With	Pest Control	17.7	21.3	16.9%
Without	Pest Control	18.5	19.5	5.1%
With	Carpet Cleaning	18.5	19.5	5.1%
Without	Carpet Cleaning	18.3	20.0	8.5%

All members engaged in Healthy Homes received Asthma Education as part of sessions 2 and 3.

Package A identifies members whose homes have no mold or moisture and highlights that **pest control** had a significant impact on improving asthma control results.

Package B identifies members with mold or moisture present in their homes. Unlike Package A, neither pest control nor carpet cleaning showed a significant impact on asthma control results.

However, the main distinction is that members in Package B received a **dehumidifier**, which may have contributed to the outcomes.





		Pre	Post	
Bundle B: Mold and Moisture	ACT Results Average	16.8	19.6	14.3%
With	Pest Control	16.8	19.6	14.3%
Without (only 2 members)	Pest Control	15.8	19.3	18.1%
With	Carpet Cleaning	16.8	19.6	14.3%
Without (only 1 member)	Carpet Cleaning	15.0	24.0	37.5%

## **Interventions and Home Bundles**

#### **Supplies Provided**

All members receive:

- Hypoallergenic Laundry Detergent
- Dryer Sheets (Free and Gentle)
- Hypoallergenic All-Purpose Cleaner
- Hypoallergenic Disinfectant Spray (2-pack)
- Fitted Pillowcases
- HEPA Vacuum
- Air Purifier

Additional supplies based on needs Identified:

- Dehumidifier (if mold and moisture are identified)
- Carpet Cleaning
- Pest Control

#### Incentive:

\$25 on myhealthypays debit card





Pest Control









# Buckeye HealthyHomes

Thank you! Sarah Harris, Health Equity Specialist sarharris@centene.com





## **Featured Speaker**



### Christina Yoka, M.A.

Chief, Air Pollution Outreach Cleveland Department of Public Health





## Cleveland Air Code Proposal: Using Asthma and Health Data to Craft Policy

Christina Yoka, Chief of Air Pollution Outreach (216) 664- 2129 | cyoka@clevelandohio.gov



### **Cleveland Division of Air Quality**

- Local air agency serving City of Cleveland and Cuyahoga County
- Comprised of 4 Sections including Monitoring, Enforcement, Permitting and Outreach



### Types of industry that may produce air pollution and may be regulated

- Asphalt plants
- Auto body shops
- Crematories
- Dry cleaners
- Foundries
- Gas stations
- Grain elevators
- Furniture manufacturing
- Metal finishing/plating
- Plastics manufacturing
- Printing/graphic arts
- Sand and gravel plants











### **Air Quality Complaints**

- Asbestos
- Fugitive Dust
- Indoor Air Quality (Cleveland only)
- Odors
- Open Burning
- Smoke
- Other air related issues









### **Pediatric Asthma in Cleveland**





National average: 8% Cleveland Range: 5% - 25%

Cleveland was ranked 6th in the 2024 "Asthma Capitals" Report

Cleveland Received an "F" in the 2024 Annual Air Quality Report

0 1 2 4 Miles

### **Cumulative Impacts: Air Quality and Health**

"Cumulative Impact" means the adverse health impact or effect, risk, or nuisance from multiple pathways and multiple sources and also refers to the totality of exposures from combinations of pollutant source stressors from air pollution and non-pollutant source stressors that affect human health..."

#### What this means:

We are looking at how multiple sources and stressors in an environment impact human health

#### How will this information be used:

Industries located in high cumulative impact areas may have additional requirements







# How has CDAQ Approached Cumulative Impacts?

Data obtained from
the EPA
Environmental Justice
Screening Tool
and Asthma
prevalence data were
obtained from BHP

Population Variables	Environmental Variables
Total Population	Particulate Matter 2.5
<ul> <li>Percent Minority</li> </ul>	• Ozone
Percent Low Income	Diesel Particulate Matter
<ul> <li>Percent Unemployment</li> </ul>	Air Toxics Cancer Risk
• Percent of the population with less	Air Toxics Respiratory Risk
than a high school education	Traffic Proximity
<ul> <li>Percent Under 5 years old</li> </ul>	<ul> <li>Percent of Housing with Pre-1950</li> </ul>
<ul> <li>Percent Over 64 years old</li> </ul>	Construction
	<ul> <li>Proximity to Superfund</li> </ul>
	<ul> <li>Proximity to a facility with a Risk</li> </ul>
	Management Plan
	Number of facilities with hazardous waste
	Number of facilities with Underground
	Storage Tanks
	<ul> <li>Wastewater Discharge sites</li> </ul>

### **Cumulative Impacts Areas of Concern**



1 2 4 Miles

## Asthma Data and Key Programming

CLEANinCLE Air Monitoring Project

**Cleveland Air Code Proposal** 

### B.E.E. Project – Indoor Air Quality

### **CLEAN**inCLE Air Sensor Dashboard



https://data.clevelandohio.gov/apps/7aa630d69e694fc69fe9f5cec709d8b7/explore

### Cleveland Air Code Proposal: A Revision to our Air Quality Regulations driven by Health Data

This presentation is not inclusive of all the proposed changes. This is a high-level overview. The full proposal is available on our website at <u>www.clevelandhealth.org</u>.



- 1. Cumulative Impacts and Installation Permits
- **\*** 2. Installation and Modification Permits
- ★ 3. Health Impact Assessments
  - 4. Installation and Operation Fees

5. Emission Reduction and Mitigation Activities
 6. Formally establish Indoor Air Quality program
 7. Vehicle Idling
 8. Emergency Episodes

<u>A proposal was submitted to Cleveland City Council in March with these recommendations.</u> <u>It is still under discussions and has not yet been passed.</u>

### **Cumulative Impacts and Installation Permits**

#### **Proposed Rule (New)**

- Every 5-years CDAQ will produce a **health impact report** documenting areas in Cleveland with the highest cumulative impact scores and relative health information
- The cumulative impact score will be a relative system from 1 to 10 (10 has the heaviest impacts)

#### Why it matters

- Increased reporting requirement of CDAQ
- Documents where there are health concerns in the City of Cleveland
- Documents change in health throughout neighborhoods
- Identifies census tracts that have additional requirements for facilities



### **Installation and Modification Permits**

### **Proposed Rule (New)**

- Facilities located in neighborhoods with CI scores of 8-10 will be required to submit additional information with their permit applications. The additional information will include vehicle traffic.
- These forms will be publicly available.

#### Why it matters

- This provides a more detailed understanding of neighborhood air pollution in vulnerable communities
- This information helps to craft neighborhood specific pollution reduction strategies
- Greater transparency on industry operations with community members



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### **Health Impact Assessments**

#### **Proposed Rule (New)**

- Facilities located in neighborhoods with CI scores of 10 AND that meet the criteria for synthetic minor, FEPTIO, and Title V status will be required to submit a Health Impact Assessment for all new and modified sources.
- The Health Impact Assessment must include a comprehensive community engagement plan and appropriate air modeling of pollutants



#### Why it matters

- Synthetic minors, FEPTIOs, and Title V facilities are the larger emitting facilities. Community members will be engaged in any potential changes and the health impact assessment will identify where they may be adverse affects on the community.
- Community members will be engaged in the process and a part of strategies to reduce the impact



### **4. Installation and Operation Fees**

#### Proposed Rule (New)

- Installation Fees: CDAQ is currently authorized to invoice for double the operation fee. We are finalizing the installation fee changes and welcome input on how this fee should be assessed.
- Operation Fees: Operational fees are increasing. They have not been revised 2003.
- Collected Fees will fund emission reduction and air pollution mitigation activities

#### Why it matters

- Facilities will be impacted by the revised fee structures.
- The collected fees will be used for projects that reduce the impact on air pollution in communities (more information on a later slide)

#### **Draft Code Section: §257.01 Installation and Modification Permits**





### **Preliminary Comparison of Revised Fee Structure**



Ward	Current_Fee	New_Fee
0	1137.5	2950.0
1	4887.5	9600.0
2	4100.0	8450.0
3	20900.0	42325.0
4	2025.0	4625.0
5	10385.0	22520.0
6	19405.0	41550.0
7	4430.0	8787.5
8	4137.5	8075.0
9	1825.0	5150.0
10	13307.5	28287.5
11	10915.0	21355.0
12	21410.0	45225.0
13	2577.5	5105.0
14	2912.5	5825.0
15	4110.0	8325.0
16	13087.5	27125.0
17	6175.0	12912.5

### **5. Emission Reduction and Mitigation Activities**

#### **Proposed Rule (New)**

- Collected fees may be used for grants to facilities to upgrade their equipment
- Collected fees may be used as grants for local businesses and community groups demonstrating a project that reduces emissions and/or mitigate the impact of air pollution

#### Why it matters

- Will assist facilities managing the financial cost in upgrading their equipment
- Funds communities that are impacted by air pollution and provides an opportunity for community members to identify solutions that are unique to their neighborhoods



Draft Code Section: §263.01 Fees for Permits, Notifications and Variances

### 6. Formally establish an Indoor Air Quality Program

#### Proposed Rule (New)

- Formally authorizes CDAQ's ability to enter a home with invitations by resident and provides recommendations on how to improve indoor air quality conditions
- Establishes an in-home assessment process to provide recommendations to residents

#### Why it matters

- The indoor environment can have 2-5x more pollutants than outdoor air
- Indoor air quality complaints are among the top concerns expressed by residents
- Expands CDAQ's ability to provide resources for community members



Draft Code Section: §268 Indoor Air Quality Program

### 7. Vehicle Idling

### **Proposed Rule (New)**

 Industry and businesses must ensure vehicles on their property follow the existing City of Cleveland Anti-Idling Ordinance



#### Why it matters

- Vehicle emissions are harmful to health, impact quality of life, and contribution to Cleveland-Cuyahoga County not meeting federal rules.
- Common concern/complaint submitted by residents

Draft Code Section: §277.05 Vehicle Emissions



### 8. Emergency Episodes

#### **Proposed Rule (New)**

- Requires all City Departments to develop action plans for when air quality levels exceed certain thresholds
- Plans will include employee training and communication plans

#### Why it matters

• Ensures that City operations do their part in reducing impact during poor air quality days



**Draft Code Section: §283 Emergency Episodes** 







### **Thank you!**

### Christina Yoka, Chief of Air Pollution Outreach

(216) 664- 2129 | cyoka@clevelandohio.gov

## **Thank You!**



#### Sarah Ronis, MD, PhD Director, UH Rainbow

Center for Child Health & Policy



### Sarah Harris, C. CHW

Health Equity Specialist Health Equity Department Buckeye Health Plan



#### **Christina Yoka, M.A.** Chief, Air Pollution Outreach Cleveland Department of Public Health

### Submit Questions in the Zoom chat





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## Thank you for attending!



www.betterhealthpartnership.org

Survey for Asthma in Focus: Multisector Solutions in Prevention, Policy, and Practice



### **Post-Event Survey**