



# Water quality and health

**Advisory group meeting**

Dec. 13, 2023

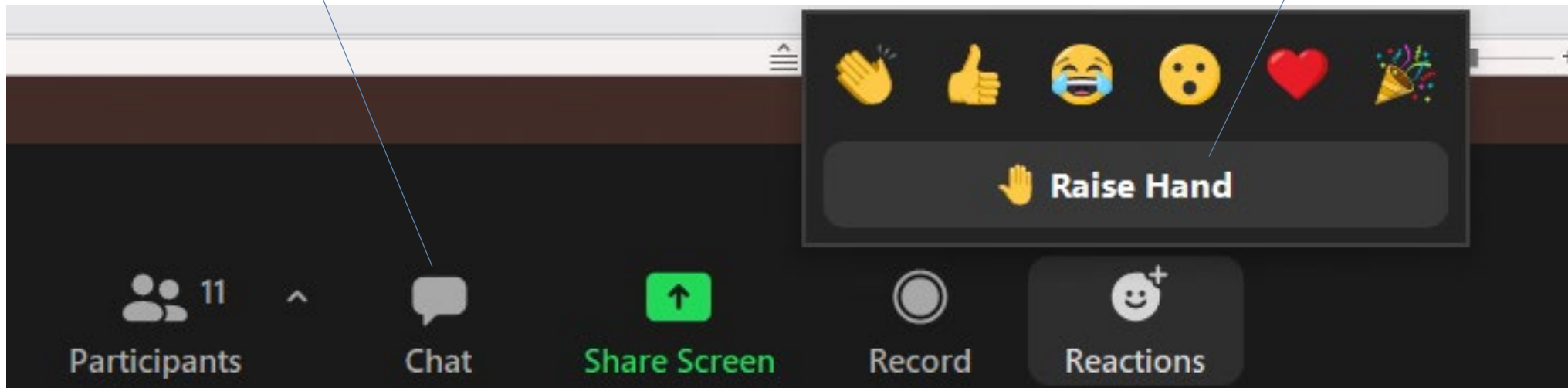
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health policy institute of ohio 

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## Water Quality Advisory Group

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### Water Quality Advisory Group

Clean air and water, safe places to walk outside and access to healthy food are conditions of the physical environment that affect the health and well-being of Ohioans. Poor water quality, including pollution and outdated infrastructure, contribute to poor health outcomes throughout one's life, such as increased risk and spread of waterborne illnesses and increased exposure to lead. Harmful algal blooms and damage to infrastructure, including flooding, will also worsen as the climate changes, causing significant harm to the environment and putting the health of Ohioans at risk.

This advisory group will inform a brief on the connections between water quality and health, a companion to a fact sheet released in January 2023, [A Closer Look at Air Pollution and Health](#).

If you have questions about this project or feedback to share, please contact Lexi Chirakos ([lchirakos@hpio.net](mailto:lchirakos@hpio.net)) or Jacob Santiago ([jsantiago@hpio.net](mailto:jsantiago@hpio.net)).

### Meeting information



# Mission

HPIO is an independent and nonpartisan organization. Our mission is to advance evidence-informed policies that improve health, achieve equity, and lead to sustainable healthcare spending in Ohio.

# Vision

Ohio is a model of health, well-being and economic vitality

# HPIO CORE FUNDERS



# Today's agenda

- **Project update**
- **Discussion:** Brief priorities and data
- **Discussion:** Policy landscape and recommendations
- **Next steps**

# Today's objectives

As a result of this meeting, **HPIO will:**

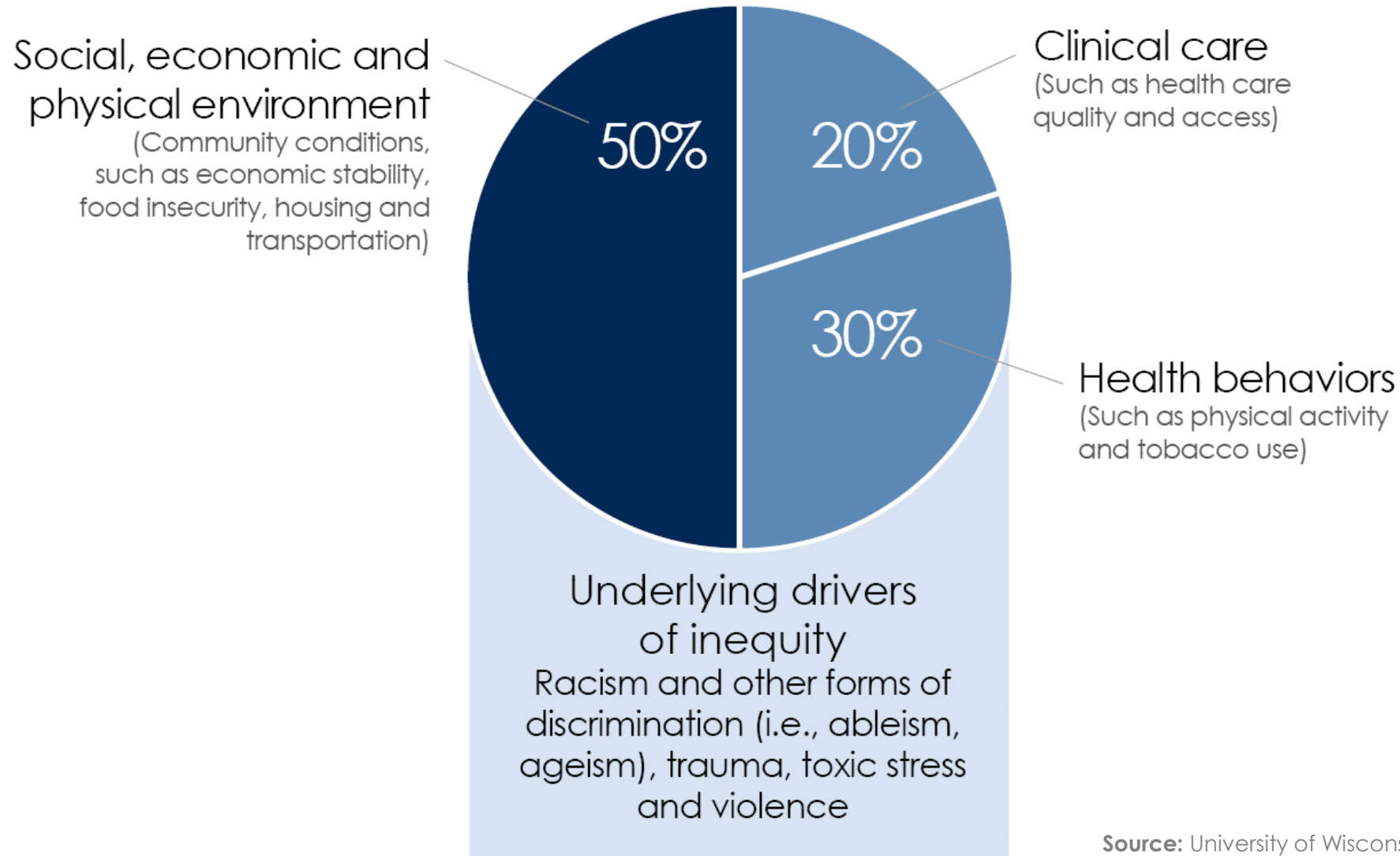
- Have guidance from the advisory group on:
  - Water quality priorities around the state
  - Sources of disaggregated water quality data
  - Policy recommendations for the water quality and health brief

# Introductions



# Project update

# Modifiable factors that influence health



Source: University of Wisconsin Population Health Institute

# HEALTH VALUE DASHBOARD™

## A closer look at outdoor air pollution and health

Clean air and water, safe places to walk outside and access to healthy food are examples of physical environment conditions that affect the health and well-being of Ohioans. This policy brief focuses on the importance of clean air and the many effects that air quality has on health throughout a person's life. State and local leaders in Ohio can do more to improve air quality through policy change.

Outdoor air quality is included in the Health Policy Institute of Ohio's (HPIO) **Health Value Dashboard™**. In the *Dashboard*, Ohio ranked 46<sup>th</sup> on this metric, meaning that most other states have cleaner outdoor air.

This policy brief provides additional information on the outdoor air quality metric in the *Dashboard*, including how:

- Air pollution affects health outcomes
- Recent policy changes may affect air pollution
- Outdoor air quality can be improved in Ohio

### How does outdoor air quality affect health?

Analysis of *Dashboard* data finds that the physical environment, which includes outdoor air quality, has a much stronger correlation with the overall health of a state than access to care or healthcare system performance. Figure 1 shows the strength of the relationship between domains in the *Dashboard* and population health, indicating that the physical environment (including outdoor air quality) is strongly connected to a state's overall health, only surpassed by public health and prevention.

### 3 key findings for policymakers

1. **Improving outdoor air quality** will lead to better maternal and infant health, less chronic disease and other improved outcomes for Ohioans.
2. **Ohio has implemented policies** that both advance and harm efforts to reduce pollution and improve air quality.
3. **Policymakers have opportunities** to improve air quality through policy changes in the transportation, energy and regional planning sectors.

Figure 1. **The effect of the physical environment on population health**

Strength of relationship between state performance on 2021 *Health Value Dashboard* domains and population health



Source: HPIO 2021 *Health Value Dashboard* analysis

# 3 key findings for policymakers

- **Improving outdoor air quality** will lead to better maternal and infant health, less chronic disease and other improved outcomes from Ohioans.
- **Ohio has implemented policies** that both advance and harm efforts to reduce pollution and improve air quality.
- **Policymakers have opportunities** to improve air quality through policy changes in the transportation, energy and regional planning sectors.

# Water quality and health

# Brief outline

- Overview and key findings for policymakers
- What impacts water quality? How does it impact human health?
- Who is most affected by poor water quality?
- What is the current water policy landscape?
- What can Ohio policymakers do to improve water quality?



**Section:**

What impacts water quality? How does poor water quality impact human health?

**Agricultural runoff**  
Harmful algal blooms

**Poor infrastructure**  
Lead exposure  
Waterborne diseases

**Industrial contaminants and pollution**  
PFAs  
Heavy metals  
Other?

## Data sources:

# Water pollution sources and health impacts

- Lead service line replacements and mapping ([H2Ohio](#))
- Annual algal blooms history ([Ohio Dept. of Health](#))
- Drinking water violations by county in Ohio ([County Health Rankings](#))
- Drinking water advisories ([OhioEPA](#))
- PFAS in drinking water ([OhioEPA](#))
- Childhood lead poisoning ([Ohio Dept. of Health](#))
- E. coli/waterborne illnesses in Ohio per year ([Ohio Dept. of Health](#))



# Discussion questions

1. What, if any, information is missing?
2. What is most important to emphasize in the brief as it relates to water and health?
3. What data would be most helpful in framing water quality strengths and challenges in Ohio? What data sources exist that we should look to?



**Section:**

Who is most affected by poor water quality?

**Geography**

Rural/  
Appalachian  
Urban

**Ohioans of  
color**

**Other groups?**

Children/  
pregnant  
women  
Older adults  
Immune-  
compromised  
people

## Data sources:

# Disaggregated data

- Plumbing for all housing units, by county ([American Community Survey](#))

# Discussion questions

1. In your work, what groups do you see that are most impacted by poor water quality? Are those groups reflected here?
2. What data or other information exists that can provide insights on disparities by race/ethnicity or other category?



**Section:**

What is the current water policy landscape?

**Ohio general  
assembly**

**Ohio governor  
and state  
agencies**

**Federal and  
local  
governments**



**Section:**

What can Ohio policymakers do to improve water quality?

**State policy  
options**

**Local policy  
options**

# Discussion questions

1. What reports, plans, state/local initiatives or other information, particularly from non-governmental organizations, should we review for recommendations?
2. What would be helpful to keep in mind as we craft policy options? What types of strategies should be elevated?

# Next steps



# Next steps

- **Next meeting: February 15<sup>th</sup>, 11am-12p**
- Draft review: early February



# Contact information

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Thank you