



Asthma and Air Pollution in Detroit:

The Issue and Action Steps for Decision Makers

The M-LEEd Center's Community Engagement Core (CEC) increases awareness and understanding of environmental health research.

Stakeholder Advocacy Board members include:

- Community Health and Social Services
- The Detroit Health Department
- Detroit Hispanic Development Corporation
- Detroiters Working for Environmental Justice
- Eastside Community Network
- Ecology Center
- Green Door Initiative
- MDHHS
- Sierra Club
- We the People of Detroit

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What is air pollution?

Air pollution occurs when gasses, dust, and smoke change the atmosphere, making the air harmful for humans and animals to breathe¹. Many air pollutants come from industrial sources, diesel trucks, and other vehicles that use fossil fuels.

Detroit has a lot of industry next to residential areas: People living in those areas can be exposed to high levels of air pollutants.² These include:

- Particulate matter: microscopic solids or liquids found in air;³
- Diesel exhaust: pollutants caused by burning fossil fuels;
- Ozone: a gas created from other pollutants;⁴
- Nitrogen oxides: a group of gases produced from burning fossil fuels;⁵
- Sulfur dioxide: acidic gas produced from burning fossil fuels;⁴

How is air pollution related to asthma in Detroit?

Exposure to air pollution can increase the risk of developing asthma or worsen asthma symptoms. Due to high levels of air pollution, Detroit residents experience:

- More healthcare and emergency department visits;¹¹
- Frequent absences from work and school;⁹
- Higher healthcare costs due to the higher prevalence of asthma and worse asthma symptoms.⁶

In 2024, Detroit was ranked 3rd in the country for most challenging places to live with asthma.⁷

From 2017-2019, about **16%** of **Detroit** adults had asthma.

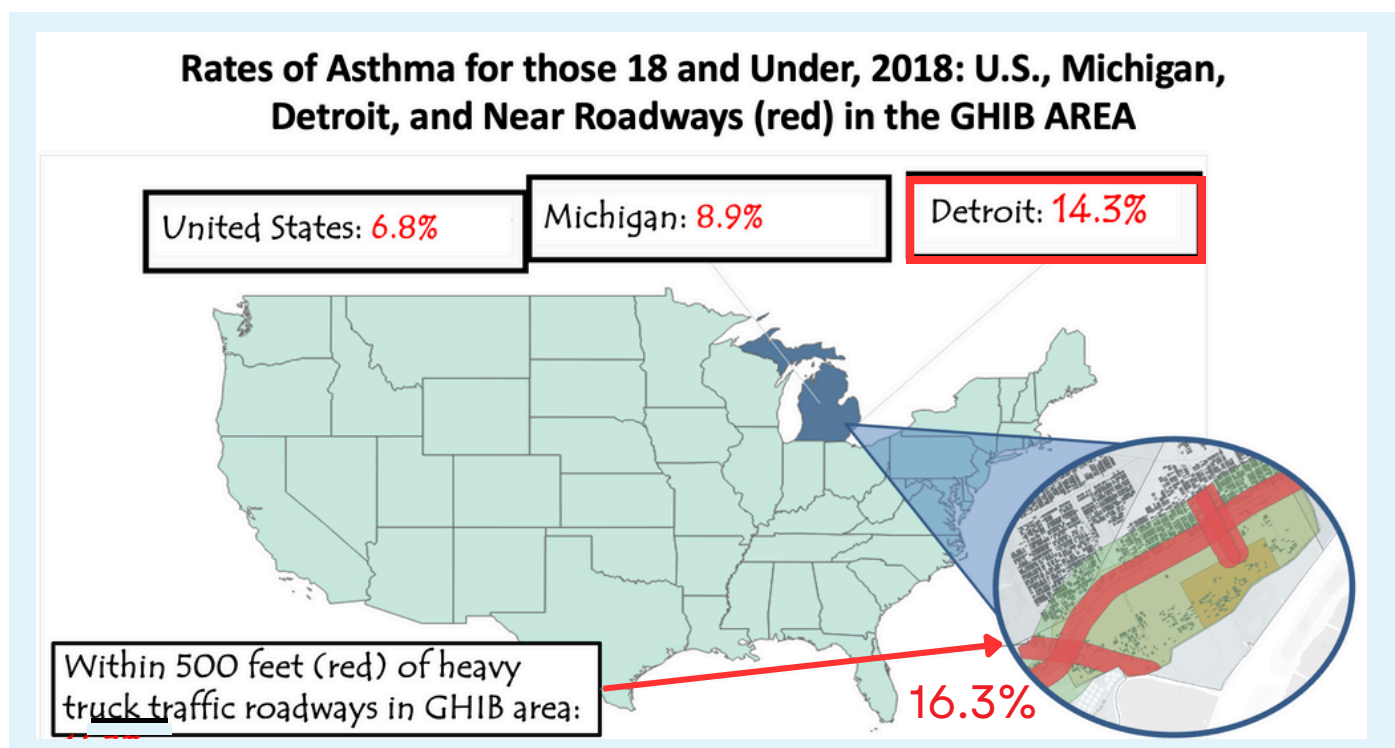
For adults in the state of Michigan, this number is about 11%.⁸



How does air pollution impact children in Detroit?

The map below shows two things:

- 14.3% of young people under 18 in Detroit have asthma. This is much higher than young people in Michigan (8.9%) or the United States (6.8%).
- Asthma is more common for those living near heavy truck traffic. For instance, 16.3% of children living within 500 feet of roads with heavy truck traffic near the Gordie Howe International Bridge experience asthma. ¹⁹



Does asthma affect everyone equally?

No. Communities with high numbers of low income and Black, Indigenous or People of color (BIPOC) individuals are more likely to be exposed to higher levels of air pollution and experience harmful health impacts. This is because individuals who identify as (BIPOC) or who are low income are more likely to live in areas with high levels of air pollution. ¹²



Additionally, infants, young children, people over the age of 65, and those with pre-existing conditions (e.g. heart and lung disease) experience more severe harmful health outcomes than healthy younger adults when they are exposed to air pollution. ¹²

How can we use policies to mitigate air pollution?

Federal, state, and local policies define the amount of pollutants that are allowed to be released into the air. The federal Clean Air Act has significantly reduced overall air pollution since it was passed in 1970. Emissions of common air pollutants have dropped by 77% since 1970.²⁰



Michigan decision makers must continue to create and enforce policies that address cumulative (the sum total) exposure to pollutants and improve quality of life for vulnerable populations.

Action steps for *state and local* decision makers

1. Strongly enforce regulations related to air pollution.
2. Require monitoring information to be widely shared with residents and environmental advocates.
3. Before policies, plans, and programs are implemented...
 - ✓ Require health impact assessments (HIAs) to examine health impacts of proposed policies and plans. HIAs can direct attention to underserved groups.
 - ✓ Require cumulative impact assessments (CIAs) that mandate the state of Michigan to deny air quality permits or set permit conditions for facilities that disproportionately impact vulnerable communities.
 - ✓ Require evaluation of policies and planning decisions to assess their effectiveness in moving toward more equitable health outcomes.



Action steps for *state* decision makers:

1. Require heavy duty vehicles under contract in Michigan to replace engines and install pollution control devices. Make state and federal funds available for this.
2. Create a permanent resolution, like House Resolution 250, declaring May Asthma and Allergy Awareness Month in the state of Michigan. Nationally, September is Asthma Peak Month. This is because of the number of asthma triggers that cause more asthma attacks, ED visits, and hospital stays in this month than any other during the year.





6 Action Steps for *Municipal* Decision Makers:



1. Continue to expand monitoring for polluters like point sources (i.e., factories) and mobile sources (i.e., cars and trucks). Monitoring allows the public to access information about pollution levels and track changes over time.⁶



2. Prevent diesel truck traffic in residential communities. For example, designate specific truck routes that avoid residential areas and areas with sensitive populations, such as schools and health care facilities.



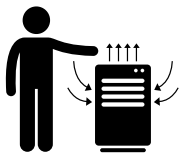
3. Enforce the “Ordinance to Regulate Fugitive Dust Emissions,” adopted by the Detroit City Council in February of 2023. “Fugitive dust” is a collection of very small particles that don’t pass through a stack or duct needed to control the flow of pollution.



4. Create city-wide renewable energy goals and remove obstacles to make renewable energy more affordable and accessible. For example, consider a Mandatory Green Building Ordinance¹³. This requires all city-owned facilities to have a Leadership in Energy and Environmental Design (LEED) certification.



5. Start a “green building points system,” which provides incentives for companies to use sustainable materials in new residential and commercial construction projects. See Boston, Massachusetts's “E+ Green Building Program”: <https://tinyurl.com/4ycxtabp>¹⁴



6. Require school programs to monitor indoor air quality, install filters, and do preventive HVAC maintenance. Using filters in all Detroit schools could prevent worsening symptoms of asthma for more than 14,000 students.⁶

Where can I learn more?

1. Visit:



linktr.ee/airpollutionresources

Or

2. Scan:

Scan the QR code here:



Please see http://mleead.umich.edu/Coec_Fact_Sheets.php for the citations included in this factsheet.

The University of Michigan Lifestage Environmental Exposures and Disease Center (M-LEED) Community Engagement Core (CEC) promotes collaboration among UM environmental health researchers and communities to advance knowledge of environmental health issues that affect community members in Detroit and Southeast Michigan. Support for this collaboration was provided by R01ES022616 from the National Institute of Environmental Health Sciences, National Institutes of Health, and the Fred A. and Barbara M. Erb Family Foundation. Additional support was provided by grant P30ES017885.