SCHOOL OF PUBLIC HEALTH
LIFESTAGE ENVIRONMENTAL EXPOSURES AND DISEASE CENTER
UNIVERSITY OF MICHIGAN
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Air Pollution and Early Development:
Action Items for Michigan Decision Makers

How is air pollution linked to health early in life?

People are especially vulnerable to environmental exposures in the womb and during early childhood.

Air pollution exposures during this developmental period can increase risk of harmful health effects before birth, after birth, during childhood, and even into adulthood.

Before Birth:

- Small fetal size
- Increased risk of birth defects, such as heart deformities
- Increased risk of high blood pressure during pregnancy (pre-eclampsia), which can make the pregnancy more dangerous for both the pregnant person and child

At Birth:

- Preterm birth (the infant is born at least three weeks early) which increases risk of infant death and health challenges later in life
- Increased risk of low birth weight and smaller head size, which has been linked to developmental conditions

Discriminatory Health Outcomes Persist

Michigan continues to have high rates of preterm birth and low birthweight (10.4% and 9.2% respectively). March of Dimes rates Michigan a D+ for preterm births due to these statistics.

Some areas in Michigan have rates of poor birth outcomes, significantly higher than the state and national average. Babies born in Detroit are more likely to die in their first year of life compared to babies in Michigan and nationwide. Non-Hispanic Black babies have some of the lowest rates of survival.

We would like to acknowledge the Stakeholder Action Board for their contributions and expertise.

Environmental protections can play a critical role in improving birth outcomes in Michigan. *What can we do to ensure a healthy start for all of Michigan's youngest residents?*

Support healthy community design with greener infrastructure

- Build new houses, hospitals, and schools away from major sources of air pollution.
- Build new highways or other new pollution sources away from people's homes, hospitals, and schools.
- Improve bicycling and pedestrian infrastructure and public transit.
- Support planning and policies that reduce traffic congestion and idling.
- Create green spaces to remove pollution from the air. Vegetative buffers are areas with select trees, shrubs, and other plants that can act as barriers between air pollution sources and local communities.

Promote funded programs and enforceable policies that promote clean air statewide and nationwide

- Support statewide transition to less polluting energy sources like wind and solar rather than fossil fuels.
- Create an action plan to transition Michigan freight systems to zero emissions technologies.
- Increase funding to install air filtration systems in areas with high levels of air pollution throughout Michigan.
- Review air pollution standards to determine whether they protect fetuses, infants, children and pregnant adults. If not, work to implement standards that are protective of the health of these and other vulnerable populations.

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

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