



# ECHO

Environmental influences  
on Child Health Outcomes

A program supported by the NIH

## Study Summary

### ***Understanding characteristics associated with opioid use during pregnancy***

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#### Who sponsored this study?

This research was supported by the Environmental influences on Child Health Outcomes (ECHO) Program, Office of The Director, National Institutes of Health.

#### Why was this study needed?

Opioids are a class of drugs used as prescription pain relievers that can cause dependence or addiction. The opioid crisis has disproportionately affected women, and use of these drugs can have detrimental effects on women of reproductive ages and on developing fetuses. Previous studies of opioid use during pregnancy have been limited to individuals in specific geographic locations or those with specific types of insurance. The stigmatization of this population has also complicated the collection of data on maternal opioid use during pregnancy. Using a large sample size, this study examined opioid use in a diverse population of pregnant people across the United States to investigate rare exposures – such as polysubstance use - and characteristics associated with opioid use during pregnancy.

#### Who was involved?

This study included over 20,000 pregnant people from 32 ECHO cohorts across the U.S., creating a large and geographically diverse sample.

#### What happened during the study?

The researchers gathered data from pregnant people who were already participants in ECHO cohorts between 1991 and 2021. Medical records, laboratory tests, and self-reports were used to assess opioid use and potentially related factors, such as demographics, use of other substances, and history of anxiety or depression.

#### What were the study results?

Most of the participants who used opioids were non-Hispanic White and had at least some college education. Opioid use was more common among people who used tobacco or illegal drugs, and those with a history of depression or anxiety. Additionally, opioid use during pregnancy in this study was rare—only 2.8% of participants used opioids during pregnancy, and the majority of opioid use originated from a prescription.

Footnote: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.

## Impact

This is among the largest observational studies of opioid use during pregnancy thus far, and the diverse sample of pregnant people is more representative of the U.S. population than previous studies. Results from this study strengthened evidence about the co-occurrence of opioid use in pregnancy with depression and use of multiple substances (such as tobacco and illegal drugs). These findings will help to inform further research on screening tools for opioid use during pregnancy. Additionally, the finding that most opioid use originated from prescriptions reinforces the need to reduce the amount of circulating prescription drugs and to better monitor over-prescription of opioids to pregnant people and provide them with alternative treatment solutions for pain management and opioid dependency.

## What happens next?

This study shows that further research is needed on the factors that may lead to use of multiple substances during pregnancy and the association between substance use and depression. This research can help inform the development of screening tools and procedures for identifying individuals who are potentially at risk for opioid use during pregnancy.

## Where can I learn more?

Access the full journal article, titled “Characteristics of Individuals in the U.S. who Used Opioids during Pregnancy,” in the [Journal of Women’s Health](#).

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