



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH

Study Summary

Were children born preterm more likely to use healthcare during the COVID-19 pandemic?

Authors: Elisabeth C. McGowan, Monica McGrath, Andrew Law, Barry Lester, et al.

Who sponsored this study?

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

Why was this study needed?

This is one of the first studies to look at healthcare use during the COVID-19 pandemic by a high-risk population—children and adolescents who were born preterm (37 or fewer weeks after gestation). By looking for possible patterns of healthcare utilization, this study can help healthcare providers to improve care for patients in future pandemics or other public health care crises.

What were the study results?

In this study, the researchers found that individuals born at 37 or fewer weeks after gestation were more likely to use healthcare services related to COVID-19 symptoms; those born extremely preterm (28 or fewer weeks) were even more likely to do so. For example, children and adolescents born extremely preterm were twice as likely to ask for an in-person appointment or a telehealth evaluation compared to individuals who were born after 37 weeks. Researchers saw that these differences were probably not caused by known risks for breathing problems such as asthma or chronic lung disease. Additionally, preterm children were no more likely to miss healthcare appointments overall than were individuals born at term.

What was the study's impact?

This study suggests that children and adolescents who were born preterm may be more likely to use healthcare during the COVID-19 pandemic than are children and adolescents who were born at full-term. Understanding the factors associated with both overall healthcare use and symptom-specific use may help healthcare providers identify the best strategies to provide targeted care. Understanding the different needs and patterns of healthcare use among children born preterm and their families during the first year of the pandemic, and why those patterns exist, are important first steps on the path to make healthcare more effective and efficient.

Who was involved?

This study included data from 42 ECHO research sites that together included 1,691 individuals ages 1–18 years. Of these individuals, 270 were born at less than 37 weeks of gestation. The study collected data

from participants who were on average between 8 and 9 years of age. Approximately 40% of participants born preterm had reports of asthma-like symptoms within 1 year of healthcare use, compared to 20% of those born at term.

What happened during the study?

In this study, the researchers investigated whether children born preterm used healthcare during the COVID-19 pandemic differently than those born at term. Between April 2020 and August 2021, children's caregivers and adolescents answered questionnaires regarding COVID-19 and healthcare use. The researchers studied healthcare use related to concerns about COVID-19 symptoms (like trouble breathing, fever, headache, muscle pain, fatigue, itchy eyes, nausea, diarrhea, vomiting, and loss of smell or taste) that resulted in overnight stays in hospitals, visits to urgent care centers or primary care offices, or virtual visits such as telehealth. They also explored changes in overall healthcare use during the pandemic, including missed healthcare appointments caused by parental concerns about going into a medical office or cancellation of an appointment by the provider.

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.

What happens next?

Further studies may evaluate the role socioeconomic factors may play in healthcare utilization.

Where can I learn more?

Access the full journal article, titled "Healthcare Utilization During the COVID-19 Pandemic Among Individuals Born Preterm," in [JAMA Network Open](#).

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