

Study finds healthy newborns had shorter hospital stays during COVID-19 pandemic with no change in readmissions

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Healthy full-term infants born during the COVID-19 pandemic had substantially shorter hospital stays than those born before the pandemic, with no change in hospital readmissions after discharge, according to a new study led by researchers at Children's Hospital of Philadelphia (CHOP), in collaboration with colleagues at the Yale School of Medicine, Nemours duPont, and Epic Systems Corporation. The findings, published today in *Pediatrics*, suggest shorter hospital stays for healthy term infants might be safe outside of a pandemic scenario, with implications for health care costs and best practices.

"The COVID-19 [pandemic](#) forced hospitals to change policies and procedures around childbirth, including expediting discharges for healthy term [infants](#), which provided a natural experiment that allowed us to compare outcomes before and during the pandemic," said Sara Handley, MD, MSCE, an attending neonatologist with the Division of Neonatology at Children's Hospital of

Philadelphia and first author of the study. "These findings suggest that shorter hospital stays after birth among healthy term infants may be safe with respect to infant rehospitalization, though examination of additional outcomes is needed."

To compare hospital stays and rehospitalizations before and during the pandemic, the researchers analyzed data using Epic Systems Corporation's Cosmos research platform, an application that aggregates electronic health record (EHR) data submitted voluntarily by health systems for research. The researchers pulled data from 35 [health systems](#) and compared short hospital length of stay following birth (defined as two nights or less following a [vaginal birth](#) and three nights or less following a cesarean birth) and infant rehospitalization within a week of discharge from the hospital between the COVID-19 era (March 1 to August 31, 2020) and the pre-pandemic era (defined as March 1 to August 31 in 2017, 2018, and 2019).

Evaluating a total of 202,385 infants during the pre-pandemic and pandemic periods, the researchers found that short hospital stays were 51% more common during the COVID-19 era. The proportion of infants with a short hospital stay increased from 28.5% to 43.0% for all births during the pandemic (vaginal: 25.6% to 39.3%, cesarean: 40.1% to 61.0%). For vaginal births, there was an increase in those discharged after one night during the pandemic and a decline in those staying for two nights. Similarly, there was an increase in two-night stays for cesarean deliveries and reductions of three- and four-night stays during the pandemic.

Despite [shorter hospital stays](#), infant rehospitalizations within a week of discharge from the [hospital](#) decreased slightly during the pandemic (1.2% to 1.1%). The association between short

birth hospitalization length of stay and infant rehospitalization did not differ significantly between eras.

"These findings suggest that shared decision making between families and clinicians, as was likely the case during COVID-19, resulted in safe earlier discharge with respect to infant hospitalization," said Heather H. Burris, MD, MPH, an attending neonatologist with the Division of Neonatology at Children's Hospital of Philadelphia and senior author of the study. "Further study of mitigating factors such as home services, telemedicine visits, and other supports that may have changed during the pandemic are warranted. Additionally, investigation of the pandemic's impacts on other infant and maternal outcomes are critical before changing birth hospitalization policy."

More information: Handley et al. Birth hospital length of stay and rehospitalization during COVID-19, *Pediatrics* (2021). [DOI: 10.1542/peds.2021-053498](https://doi.org/10.1542/peds.2021-053498)

Provided by Children's Hospital of Philadelphia

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