



# Changes in Delivery Outcomes During the COVID-19 Pandemic as Reported in a Pregnancy Mobile App

## A PEER-REVIEWED STUDY

Presented at the **American College of Obstetricians & Gynecologists (ACOG)**  
2021 Annual Clinical and Scientific Meeting

### Why this matters

Women who delivered during the pandemic were significantly more likely to have a C-Section, have a shorter hospital stay, less likely to have a pre-term birth, and much more likely to have a home birth.

# Background

Over the last year, COVID-19 changed everything, including the experience of pregnancy, birth, and early parenthood. New mothers faced unprecedented challenges, from restrictions on visitors and support persons during hospital births, to the isolation of caring for an infant during quarantine, and the struggle of managing childcare and work in a world turned upside down. In order to better understand the scope of COVID-19's impact on delivery and maternal outcomes, and to illuminate these impacts for our community and the scientific community, we took a look at Ovia Health's data.

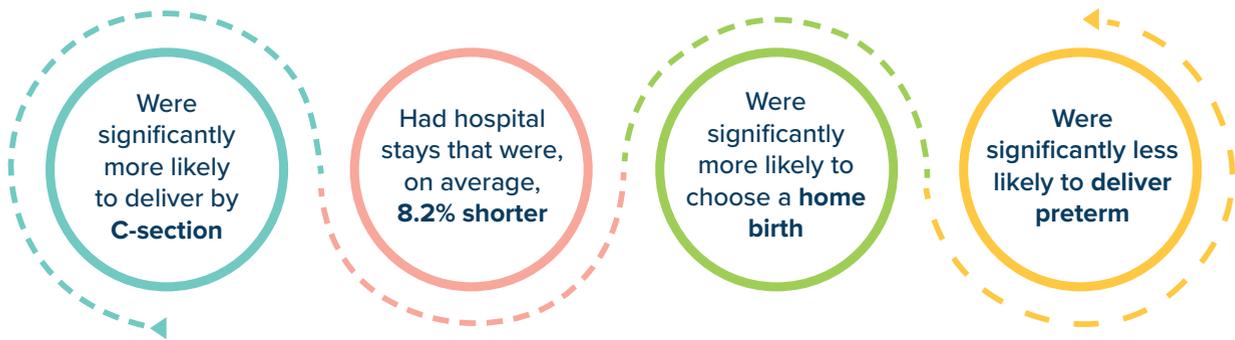
## Study design

Using anonymous data from 415,125 births in 2019 and 2020, we created two cohorts for comparison: pre-COVID (for births between October 2019 and March 2020) and during-COVID (for births between April 2020 and September 2020).

**Our research study uncovered trends in birth outcomes that everyone in the healthcare community and beyond had been wondering throughout the pandemic.**

## Key findings

Most notably, compared to mothers who delivered pre-COVID, mothers who delivered during COVID:



## A more detailed study is needed, but these trends should be monitored

Our study offers insight into the stresses and strains the pandemic has put on pregnant mothers, new parents, and babies—as well as our healthcare system. We found a significant rise in c-sections, which can raise health risks for mothers, as well as healthcare costs. And, at the same time that mothers experienced more medical interventions, their hospital stays grew shorter. As such, it'll be important to track if hospital length of stay bounces back to pre-COVID lengths, and if there are any lasting impacts on women who didn't receive the typical length of post-birth care in the hospital.

## The good news

We were interested to see a decrease in preterm births during COVID-19. We'll look more deeply into why preterm numbers went down—with the hopes that we can learn how to add strategies to Ovia's existing preterm prevention programs once the pandemic is behind us.



## The impact and risks of home births

The rise in women choosing home births is another change worth following. Mothers may have felt that staying home was safer during COVID-19, but the risks of home birth are substantial—including a two-fold increase in the perinatal death rate. Ovia will continue to track this trend as well, and provide guidance to our community about how to decide where to deliver, keeping health risk and safety top of mind.

## Learnings:

### More study is needed, but there are things we can do

Ovia's findings on delivery, maternal outcomes, and postnatal depression during COVID-19 are early indicators of how deeply the **pandemic has changed parenthood**. Each of these changes is likely to have long-term impacts on parents, children, and the workforce. Overall, it was concluded that more study is needed on a longitudinal basis to fully understand the impact COVID-19 had on delivery and birthing trends. Early findings shed light on some interesting early trends to watch, and ways we can **support and improve maternal outcomes**.

**Ovia's digital family health platform offers virtual coaching and personalized care** to reduce costly adverse outcomes, including unnecessary fertility treatments, preterm deliveries and NICU stays, and c-section rates. Ovia also increases employee retention, breastfeeding initiation, and vaccine adherence for infants.

Ovia is also here to **see parents through the uncertainties of COVID-19**, whether we're helping with everyday concerns about prenatal care, mental health, and childcare, or addressing urgent issues, such as the safety of the COVID-19 vaccine during pregnancy.