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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Rates of premature births in Tennessee during the stay-at-home period. New data contradicts other studies.

Preterm birth is defined as giving birth before 37 weeks of pregnancy. The stay-at-home period in March and April 2020 brought with it a renewed fascination about what causes prematurity when word went out, anecdotes really, that rates of premature births had gone down in some covid-19 hotspots.

In a [past article](#) in *Brief19* we discussed how some European countries reported less incidence of preterm birth during the covid-19 lockdown, though larger and better studies found [no change at all](#). Here in the US, Philadelphia also had no dip in rates.

A new research letter out of [JAMA Pediatrics](#) offers different data from a very different part of the US: Tennessee. From March 22 to April 30, 2020 stay-at-home orders were effective throughout the state to slow the spread of SARS-CoV-2. Researchers looked at preterm birth rates during that time, and compared them to preterm birth rates during the preceding 5 years from 2015 to 2019. The results go against other studies we have previously covered.

During the study period there were almost 50,000 recorded births in Tennessee, most of them being to non-Hispanic white families (67 percent). The researchers noted a significant decrease in premature birth from 11.3 percent of births in previous years, to 10.2 percent in 2020. Of note, preterm births decreased numerically among White, Black, and Asian persons, and numerically increased among Hispanic persons.

While the over effect was small, it was statistically significant. The researchers propose that the reason for this may be a result of unusual restrictions in movement outside of the home. The thought is that there are various environmental triggers for premature births, triggers which were effectively avoided by staying at home during the early pandemic period. However, the authors also pointed to the fact that the change could be related to deviations from standard obstetric practices. Many medical professions saw shifts in their [care delivery](#) in the wake of covid-19. Data such as these are by their nature designed to detect associations, rather than cause-and-effect. More data nationwide will help, as these data require further replication.

National data will eventually be available. It could be that what we learn about the pandemic period may help us better understand premature birth more generally. Those lessons could be applied for years to come, and help pregnancies be even safer. [Premature birth](#), especially at early stages of pregnancy, is associated with more morbidity and mortality for infants. This means higher risks of pregnancy-related complications and even mortality stemming from extreme prematurity. The more we can learn about what causes prematurity, pandemic or not, the more we can help to prevent it.

—Joanna Parga-Belinkie, MD

POLICY BRIEFING

Mass vaccination sites are working. But they require mass coordination.

The need to vaccinate an entire country—an entire planet—in a short period of time has never been so urgent. As a result, mass vaccination sites have popped up in places like Dodger Stadium in Los Angeles and Gillette Stadium in Boston. These sites have certain advantages. Everyone knows where they are and they are built for high volumes of traffic.

But as my colleagues wrote last week in the [New England Journal of Medicine](#), the logistics around mass vaccination sites are complicated. For covid-19, municipalities have been learning on the fly. The lessons learned can help other jurisdictions ramp up now, and all locales in future pandemics.

The main challenge is coordinating the various actions that lead up to the moment of injection and the ones that follow. (Getting volunteers and a place to give the shots is not quite enough). You need language interpreters. You need to make sure people know how to schedule their booster shots. You need to troubleshoot in real time. Even the flow of movement needs to be anticipated and adjusted as needed. To address problems, managers improvising solutions are needed; one satisfying solution offered to a bottleneck was simply to rotate the registration desks, so as to allow better views for the workers. This was reminiscent of the Homeland Security finding that the single best way to make airport security lines move more quickly was not to add more helpers, or make changes in the flow of movement, but simply to add more tables for people to pile their stuff on to, while awaiting the x-ray machine.

Mass vaccination sites can jumpstart a region's inoculation program. But they are not meant to be the only way to reach people. Bringing vaccines directly to communities that are less able to reach municipal stadiums is equally important. But the message is clear: if 2021 is going to be mark a return to normalcy, ironing out the logistics of vaccinations for all must be a top priority.

—*Jeremy Samuel Faust, MD MS*

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