How the pandemic sent childhood immunization rates plummeting

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It is vital that administration of routine vaccines occur on time to prevent certain communicable diseases. These routine vaccinations induce long-term immunity for many infectious diseases while also preventing cervical, oropharyngeal and other cancers. Vaccination also reduces the transmission of infections within communities. But recently published research sheds new light on how the COVID-19 pandemic has disrupted some of those routine vaccinations, as parents and their children didn’t just stay home—they stayed away from the doctor.

The *JAMA Pediatrics* study, “Association of the COVID-19 Pandemic With Routine Childhood Vaccination Rates and Proportion Up to Date With Vaccinations Across 8 US Health Systems in the Vaccine Safety Datalink,” found that vaccine-administration rates were significantly lower across all pediatric age groups as the pandemic first surged in the U.S. The proportion of those who were up to date on their routine vaccinations was lower for most age groups evaluated in September 2020 compared to September 2019. Coverage also varied by race and ethnicity.

Using a pre-pandemic and post-pandemic control design, this surveillance study looked at data from eight health systems in California, Oregon, Washington, Colorado, Minnesota and Wisconsin that are in the Vaccine Safety Datalink. Data about vaccine administrations from kids under 2 years old, those 4–6 years old, 11–13 and 16–18 years old was included if they had at least one week of health-system enrollment between January and October 2020. This information was compared with those in 2019.

The study found there were declines in vaccinations at the onset of the pandemic through May 2020 as people were encouraged to stay home and delay nonurgent medical care. But lower vaccination rates persisted in most age groups through September 2020.

The authors also evaluated the percent of children up to date for routine immunizations by specific
ages, again comparing 2020 data to 2019 data. For example, only 74% of infants turning 7 months old in September 2020 were up to date on their vaccinations, a drop from 81% in September 2019. And just 57% of infants who hit the 18-month mark in September 2020 were up to date, down from 61% the year before. The proportion of children up to date for routine vaccinations was lowest among Black children, with inequities more pronounced in the 18-month-old group.

**Barriers to vaccination persist**

Even after measures discouraging routine outpatient care were relaxed, playing catch-up on routine vaccinations missed the mark.

“Disruptions to the timing of vaccine appointments in early infancy can lead to substantial delays in completion of vaccine series because of the required minimum intervals between vaccine doses and the need for additional health care visits to receive missed vaccines,” the study notes.

With many still needing to make up for missed doses, the study’s authors suggested that barriers to vaccination remained after preventive care was reopened for all groups. This might have to do with fears of acquiring SARS-CoV-2, staffing shortages or financial constraints.

Read about how COVID-19 not the only condition for which many go unvaccinated.

**Interventions are needed**

Vaccine coverage among Black infants was lower than in other racial and ethnic groups. There could be many reasons for these inequities, which have structural, logistical, cultural and other variables contributing to low vaccination rates, says the study.

Health system- and community-level interventions are needed to address these inequities. These interventions should be used to support on-time vaccination for children, especially those in communities that have experience disinvestment.

It is also important to have vaccine mandates prior to school entry, wrote the study’s authors. This is key for increasing vaccine uptake across populations while also reducing vaccine inequities.

Discover how to boost vaccination rates during the COVID-19 pandemic.

In a separate study, the Centers for Disease Control and Prevention (CDC) also found that there was a 14% drop in 2020–2021 compared with 2019, while measles vaccine ordering was down more than 20% compared with 2019. The CDC offers steps health systems and physicians can take to encourage routine childhood vaccination.
to protect children’s health.