

# Researchers find dramatic drop in vaccinations across the lifespan during early pandemic

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Stringent lockdown measures imposed in the spring of 2020 led to a dramatic drop in vaccinations among both children and adults, according

to a new study led by Children's Hospital of Philadelphia (CHOP). The study, which focused on data from Michigan, also found a decrease in sites providing pediatric vaccinations, particularly those dedicated to caring for more vulnerable populations, like Medicaid-insured children. The results, which were published today in the *American Journal of Public Health*, underscore that there is a cost to COVID-19 beyond the direct effects of the disease, impacting primary care and prevention services.

"As we strive to achieve pre-pandemic levels of routine vaccines, it is vital to ensure catch-up vaccination of doses missed throughout the pandemic to stem outbreaks of vaccine-preventable diseases like measles," said first author Angela K. Shen, ScD, MPH, Visiting Research Scientist at the Vaccine Education Center at Children's Hospital of Philadelphia. "Both adult and pediatric providers must identify which patients need catch-up doses and make sure those individuals get vaccinated, so that we don't see a resurgence of viruses that we have the tools to prevent."

The researchers analyzed data from the Michigan Care Improvement Registry (MCIR), the state's immunization information system (IIS), from 2018 to September 2020. They compared monthly dose administrations from January to September 2020 with an average of the doses administered from January to September in 2018 and 2019 to account for seasonal fluctuations. The research team also compared vaccinations among children aged 19 to 35 months on September 30, 2020 and September 30, 2019, as point estimates.

Overall, the researchers found dramatic decreases in doses administered across the [life course](#) and declines in [vaccination coverage](#) for the complete doses of the combined 7-[vaccine](#) series (which prevents 13 diseases) in children aged 19 to 35 months in 2020 compared with 2019. When looking at where adults receive their shots, the greatest decreases

were observed in local health departments with increases reported in OB/GYN provider sites and pharmacies.

In all age groups, the greatest decreases occurred in April 2020. Adolescents saw the greatest drop, with an 85.6% decrease in vaccinations, followed by an 82.7% decrease in children ages 2 through 8. Adults also saw an 82.2% decrease in vaccination that month, while children younger than 2 years of age saw the smallest change, with a 34.9% decrease.

The number of sites reporting vaccinations in children ages 0 to 18 decreased in the early months of the pandemic and remained below 2018 levels by the end of the study period. The number of patients vaccinated through the Vaccines for Children (VFC) program, a federal safety net that seeks to ensure all children have access to vaccines without financial barriers, also decreased.

The study authors provide several recommendations for getting patients up to date on their vaccinations:

- Using statewide vaccination information systems as a supplement to [electronic health records](#) to identify those due for vaccination and contact them to schedule appointments;
- Expanding clinic hours and appointment times to support vaccination efforts; and
- Having providers ask every patient about their immunization status and providing a vaccination or referral for vaccination to those who are due.

"As society shifts to a new normal, recalibrating to a world where SARS-CoV-2 is endemic, COVID-19 vaccines will certainly transition onto the routine immunization schedule in some form," Shen said. "It is critical to ensure the immunization delivery system supports timely, accessible, and

reliable access to routinely recommended vaccines across the nation, sustaining historical high coverage in [children](#) and strengthening increasing coverage for adolescents and adults."

**More information:** Shen et al. "Vaccine Coverage Across the Life Course in Michigan During the COVID-19 Pandemic: Michigan, January–September 2020," *American Journal of Public Health*, October 7, 2021, [DOI: 10.2105/AJPH.2021.306474](https://doi.org/10.2105/AJPH.2021.306474)

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