

California law led to an increase in childhood vaccination rates

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A first of its kind analysis published today by researchers at the George Washington University (GW) found that a 2016 California vaccine law boosted protective coverage against measles and other serious childhood diseases compared to states that acted as statistical controls. At the same time, the data also revealed a sharp increase in medical exemptions to the vaccine mandate, concentrated in a few California counties.

"The rise in medical exemptions strongly suggests parents who are reluctant to vaccinate their children are shopping for doctors," said Avi Dor, Ph.D., professor of health policy and management at the GW Milken Institute School of Public Health (Milken Institute SPH), principal investigator and the senior author of the study. "These hotspots might give rise to deadly outbreaks in the future."

The study, which was published as a working paper by the National Bureau of Economic Research (NBER), analyzed the impact of the 2016 California law that banned nonmedical or personal belief and religious exemptions to the vaccine mandate. California lawmakers passed that law after a 2014 measles outbreak that swept through Orange County.

In this study, Dor and his colleagues tracked vaccination rates in California both before the 2016 law and after it had passed. They looked at a unique dataset of county-level [vaccination rates](#), comparing California to 15 states that served as controls because they still allowed nonmedical exemptions such as a waiver for religious or personal beliefs.

Compared to control states, they found that California vaccine [coverage](#) rates increased for all required vaccines following the passage of the 2016 law, ranging from a 2.5 percent increase in measles-mumps-rubella coverage to a 5 percent increase in polio coverage.

At the same time, the analysis found that the change in the California policy brought about an unintended consequence in that the medical vaccine exemptions rose seven-fold, but still remained relatively uncommon at about 2 percent of children.

Although other research had observed a similar increase in medical [vaccine](#) exemptions after the 2016 law, this study's unique case-control design suggests the 2016 California policy change caused the rise in medical waivers, Dor said.

This study does not explain the reason behind the jump in medical exemptions but Dor speculates that because those rates rose dramatically in counties with known antipathy toward the vaccines it is likely that parents who would have gotten a personal belief waiver in the past switched to a medical [exemption](#).

The United States had all but eliminated measles in the year 2000 due to robust vaccination coverage. Since then, however, small but growing groups of parents are seeking waivers to the vaccines—leading to dangerous pockets of unvaccinated people.

"People forget that measles was and still is a deadly disease, one that could surge again if we do not maintain high vaccination coverage," said Dor, who also serves as a research associate at NBER. "State lawmakers who want to protect the public should take a hard look at lessons learned from California's experience, and tighten educational and certification requirements so that [medical exemptions](#) are granted only when appropriate."

The study, "[Do Stricter Immunization Laws Improve Coverage? Evidence from the Repeal of Non-medical Exemptions for School Mandated Vaccines.](#)" was published as a working paper on May 20 on the NBER website.

Provided by George Washington University

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