Measles a Growing Global Threat as COVID-19 Disrupts Childhood Vaccinations

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Millions of infants worldwide missed their first dose of measles vaccine last year amid disruptions caused by the COVID-19 pandemic, threatening the global progress against the disease and increasing the risk of outbreaks in vulnerable communities, according to a new report in the *Morbidity and Mortality Weekly Report*.

In addition, the report says that critical gaps in measles surveillance efforts during the pandemic add to the growing risk of outbreaks.

The study found that more than 22 million infants missed their first dose of measles vaccine in 2020, 3 million more than in 2019. The increase in missed measles vaccinations was the largest in 2 decades, "creating dangerous conditions for outbreaks to occur," noted the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) in a joint statement.

"Large numbers of unvaccinated children, outbreaks of measles, and disease detection and diagnostics diverted to support COVID-19 responses are factors that increase the likelihood of measles-related deaths and serious complications in children," said Kevin Cain, MD, CDC's Global Immunization Director, in the joint CDC-WHO statement. "We must act now to strengthen disease surveillance systems and close immunity gaps, before travel and trade return to pre-pandemic levels, to prevent deadly measles outbreaks and mitigate the risk of other vaccine-preventable diseases."

Before the pandemic, global efforts against measles showed considerable progress, with estimated coverage with the first dose of measles vaccine increasing from 72% to 84% during 2000 to 2010 and peaking in 2019 at 86%. In the last 2 decades, the report says, the estimated number of measles deaths decreased from about 1 million deaths in 2000 to fewer than 61 000 in 2020, and more than 30 million deaths were averted by measles vaccination during that period.

Coverage of at least 95% with 2 doses of measles vaccine is needed to ensure and maintain a high level of population immunity against measles, one of the most contagious diseases. The report notes that first-dose coverage declined to 84% in 2020 during the pandemic, and just 70% of children received their second dose. A total of 62 countries had at least 90% coverage with the first dose in 2019; that dropped to 39 countries in 2020.

The reported number of measles cases declined by 80% compared with 2019, from 873 022 cases in 2019 to 149 796 in 2020—but the CDC and WHO cautioned that the lower number of reported measles cases in 2020 “must not mask the growing risk of measles to children worldwide.”

The true extent to which measles transmission occurred in 2020 is unclear for several reasons, the report's authors note. For example, the lower number of reported cases might be a result of increased immunity from outbreaks during 2017 to 2019, use of mitigation measures to reduce COVID-19 transmission (such as social distancing, masking, and handwashing), or both.

“Conversely, measles cases might have been underreported in 2020 because of reductions in health care-seeking behavior from patients, health facility availability and reporting, or overall pandemic-related health system disruptions,” the authors said.

They added that the occurrence of large and disruptive outbreaks reported in 26 countries across 5 WHO regions in 2020 suggests the possibility that measles transmission was underreported. In addition, 24 supplemental measles vaccination campaigns in 23 countries that had been planned for 2020—efforts that are needed for people who missed measles vaccines through routine immunization programs—were postponed because of the pandemic, leaving at least 93 million people at risk for the illness.
“While reported measles cases dropped in 2020, evidence suggests we are likely seeing the calm before the storm as the risk of outbreaks continues to grow around the world,” said Kate O’Brien, MD, MPH, director of WHO’s Department of Immunization, Vaccines and Biologicals, in the joint CDC-WHO statement.

Measles surveillance, which was already suboptimal, declined in 2020. The WHO Global Measles and Rubella Laboratory Network received 122,517 specimens for measles testing in 2020—the smallest number of specimens sent for testing since 2010. Furthermore, even though all countries conducted measles surveillance, fewer than one-third of them achieved a measure of how well their efforts detected cases, indicating that many cases of the disease were missed.

The report says that enhanced efforts are needed to immunize all children with 2 doses of vaccine; implement robust surveillance; and identify and fill "immunity gaps" among persons lacking access to routine medical services, including older children and adults.

"It's critical that countries vaccinate as quickly as possible against COVID-19, but this requires new resources so that it does not come at the cost of essential immunization programs," said O'Brien. "Routine immunization must be protected and strengthened; otherwise, we risk trading one deadly disease for another."

**ARTICLE INFORMATION**


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