

MMR vaccine-eligible children traveling abroad fail to get vaccinated

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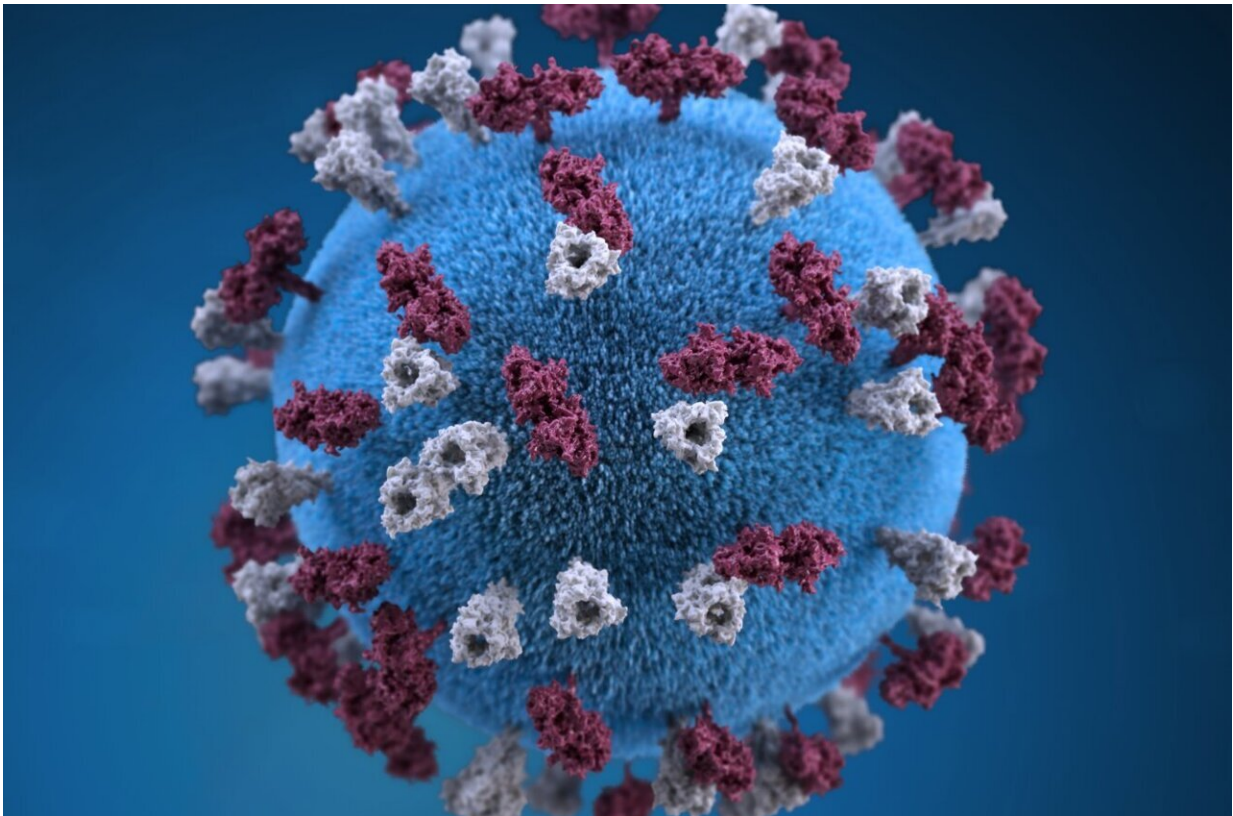


Illustration of the virus which causes measles. Credit: CDC/ Allison M. Maiuri, MPH, CHES

While most U.S. infant and preschool-aged international travelers are eligible for measles-mumps-rubella (MMR) vaccination prior to

departure, almost 60 percent of eligible young travelers were not vaccinated during pretravel consultation, researchers at Massachusetts General Hospital (MGH) have found. In a study published in *JAMA Pediatrics*, the team reported that most eligible pediatric international travelers were not vaccinated due to clinician decision or guardian refusal, despite recommendations from the Advisory Committee on Immunization Practices (ACIP).

"At a time when the global resurgence of [measles](#) is evident in the U.S., our results show that clinicians too frequently miss opportunities to vaccinate eligible pediatric travelers with MMR," says Emily Hyle, MD, investigator in the Division of Infectious Diseases at MGH, and lead author of the study. "Children represent less than 10 percent of U.S. international travelers but account for nearly half of known measles importations that trigger additional measles infections and outbreaks in the U.S." Even young travelers to places not considered high risk for disease should be vaccinated, she adds, noting that Europe accounted for 30 percent of imported measles cases to the U.S. from 2001 to 2016.

ACIP recommends that children in the U.S. receive two lifetime MMR vaccine doses as part of routine vaccination. The first is given between 12 and 15 months and the second between 4 and 6 years of age. However, due to the increased risk of measles exposure for international pediatric travelers, ACIP recommends that infants (6 to 12 months) receive one MMR vaccination prior to departure (which does not count toward the two lifetime doses), and that preschool-aged travelers (1 to 6 years) should receive both lifetime vaccine doses before departure.

To assess how well ACIP recommendations were achieved, the research team evaluated consultations of pediatric travelers at the Global TravEpiNet (GTEN) sites, a multisite consortium around the country supported by the Centers for Disease Control and Prevention (CDC). Among more than 14,000 pediatric international travelers who sought

pretravel health consultations from 2009-2018, 92 percent of infants and 60 percent of preschool-aged children were eligible for pretravel MMR vaccinations, yet 44 percent of those infants and 57 percent of preschool children were not vaccinated, often because clinicians failed to recognize the child's eligibility. "This underscores the knowledge gaps that exist about MMR vaccination, even among clinicians with expertise in travel medicine," says Regina LaRocque, MD, MPH, investigator in the MGH Division of Infectious Diseases, and senior author of the study.

Measles is a viral illness associated with fever, cough, coryza and conjunctivitis followed by a rash that can result in hospitalization, severe neurologic disease and death. Although measles continues to circulate widely internationally, a safe and effective MMR [vaccine](#) as part of routine childhood vaccinations has led to control of measles in the U.S. For the past 20 years, importations of measles from U.S. travelers or foreign visitors have been responsible for most measles outbreaks in the U.S., though they have been rare. However, measles is on the rise again in the U.S. due to under-vaccination. More than 1,200 measles cases were reported in the U.S. in 2019, which was the greatest number since 2000.

"Children who are most likely to need MMR vaccination before international travel are aged 6 months to school-age because they won't have yet received their complete MMR vaccinations routinely," explains Hyle. "Measles poses serious health risks to people who are infected while abroad, as well as to those in communities to which they return. These risks can be greatly reduced or even eliminated via MMR vaccination prior to departure. Our study suggests the urgent need for greater awareness of the benefits of MMR vaccination for international travelers by pediatricians, as well as by guardians who may fail to recognize measles as a serious illness."

More information: *JAMA Pediatrics* (2019). [DOI:](#)

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