## Arriving now at gate 42: measles

December 182014


CDC report of transmission in U.S. air terminal shows how easily the virus can spread.
(HealthDay)—Traveling through the same U.S. airport gate, one infected passenger transmitted the measles virus to three others within a fourhour time span, illustrating just how easily the virus can spread, a new report shows.
"The exposures in this report were not prolonged and occurred in a domestic rather than an international terminal, highlighting the fact that measles is highly contagious," wrote a team led by Jared Vega, an infectious disease specialist at the U.S. Centers for Disease Control and Prevention.

The researchers stressed that measles "continues to pose a risk for infection among unvaccinated persons in the United States." None of the four people infected had been vaccinated.

The measles "cluster" of cases originated at one gate at an unnamed U.S.
international airport, according to the study. Transmission likely occurred on Jan 17. The gate in question was located in a terminal that only serviced domestic flights.

The first patient outlined in the report was a 21 -year-old man. He developed a measles rash on Feb. 1. He had traveled on two domestic flights that connected at the airport about two weeks beforehand-on January 17 and 18 , the study reported.

Patient 2 was a 49-year-old man who also developed a measles rash on Feb. 1. He had reported traveling from the airport on Jan 17. A third patient, age 19, came down with the measles rash on Jan 30. He said he had spent four hours on a layover in the airport on Jan. 17 as well.

Finally, patient 4, a 63-year-old man, developed a measles rash on Feb. 5. He had also traveled through the airport on Jan. 17.

Proximity was key: Patients 1 and 2 were on the same flight, seated a row apart. And, "both spent time at the departure gate before the flight," the report noted. Patients 3 and 4 also spent time at the same gate "during the time that patients 1 and 2 were present," the study said.

In fact, "patient 4 passed through the same domestic gate around the time the other three patients were waiting to depart," Vega's team noted.

It's still not clear which of the four patients was the primary source of the infections. But, laboratory tests confirmed that all four patients were infected with the same strain of measles.

[^0]Two experts in infectious illness weren't surprised by quick spread of the mini-outbreak.
"Measles is one of the most contagious infectious diseases known, and up to nine out of 10 susceptible individuals exposed to an infected person will develop the disease," explained Dr. Leonard Krilov, chief of pediatric infectious disease at Winthrop-University Hospital in Mineola, N.Y.
"The virus is transmitted by the respiratory route-infectious droplets generated by coughing, sneezing or talking-from infected individuals," he added. "The virus can survive in these airborne droplets or on contaminated surfaces for two hours, contributing to its contagiousness."

Getting the measles shot remains everyone's best defense against this often serious ailment, stressed Dr. Ambreen Khalil, an infectious disease specialist at Staten Island University Hospital in New York City.
"Unvaccinated people, who come in contact with these secretions, are susceptible," Khalil said. "As clearly shown [in this cluster] only unvaccinated individuals were affected."

And while most people think of measles as a transient childhood illness involving rash, Krilov said the public needs reminding just how serious the illness can be.
"Up to 30 percent of people who get measles develop complications that include pneumonia, ear infections and diarrhea," he said. "The severity of measles is underscored by the observation that two out of every 1,000 infected people die from the disease, most from secondary severe pneumonia. Encephalitis is a less common but severe complication as well."

However, widespread vaccination has greatly reduced the burden of measles-linked illness and death.

Prior to the vaccine's introduction, over 500,000 cases occurred [in the United States]," Krilov said. "As a tribute to the success of the vaccine, in 2014 just over 600 cases have been reported."

The findings were published online Dec. 18 in the CDC journal Morbidity and Mortality Weekly Report.

More information: There's more on measles at the American Academy of Pediatrics.

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Citation: Arriving now at gate 42: measles (2014, December 18) retrieved 20 March 2024 from https://medicalxpress.com/news/2014-12-gate-measles.html

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[^0]:    "Based on the available information, it is likely that transmission occurred in the airport at the domestic gate," the researchers said. "The source case of this presumed cluster was not identified, and no other cases were identified beyond this cluster of four cases."

