



Building a Healthy Boston

Public Health Advisory – Measles Vaccination

TO: Boston Healthcare Providers, Boston Public Schools
FROM: Jenifer Leaf Jaeger, MD, MPH, Director, Infectious Disease Bureau
DATE: May 10, 2019
RE: Increase in measles cases nationwide among unvaccinated persons

The Boston Public Health Commission (BPHC) is monitoring the continued increase in cases of measles virus among persons nationwide, including outbreaks in unvaccinated communities. According to the Centers for Disease Control and Prevention (CDC), a total of 764 cases of measles have been confirmed in 23 states between January 1 – May 3, 2019; this is the greatest number of cases reported in the United States since 1994 and case counts continue to increase weekly. There is no outbreak of measles in Boston.

There have been **no** cases of measles in any Boston residents for over five years. There have been four cases of confirmed measles among travelers visiting the City of Boston since January 1, 2018. No secondary cases among exposed Boston residents were reported. There has been one case of measles in a Massachusetts resident reported in 2019.

Measles was declared eliminated in the United States in 2000. Yet isolated measles outbreaks (defined by CDC as three or more linked cases) continue to occur. Several outbreaks have been identified recently in New York, Michigan, New Jersey, California, Georgia, and Maryland. Measles cases driving those outbreaks have been associated with foreign travel. On-going transmission, however, develops within pockets of unvaccinated populations which could result in measles being re-established in the United States. This is being seen now in New York City, where over 450 cases of confirmed measles have been reported this year among communities with religious exemptions. In response, the New York City Health Department ordered individuals within these communities who have not received a measles containing vaccine and do not have a medical exemption, to receive a mumps, measles, rubella (MMR) vaccine.

The key challenge to maintaining the elimination of measles in Boston is ensuring adequate (>95%) vaccination rates among residents. Vaccination coverage of only 80% is sufficient to allow a measles outbreak to establish. According to CDC, Massachusetts has one of the highest vaccination rates in the country at 98%. Boston Public Schools (BPS) confirms that 94% of students without a medical or religious exemption have submitted documentation showing appropriate measles vaccination.

Measles is one of the most contagious infectious diseases and spreads through the air through coughing and sneezing. The virus remains viable in the air and on surfaces for up to two hours after the infectious person has left the area, meaning it is still possible to be exposed to the virus without direct physical contact with an infected individual.

Persons who have had measles or have received two (2) doses of a measles containing vaccine are considered immune and are unlikely to develop measles even if exposed. The measles vaccine is highly effective; one dose of measles vaccine is 93% effective at preventing infection, two doses are 97% effective and normally provide life-long protection. Conversely, 90% of individuals who are not immune will become infected if exposed.

The measles vaccine is safe for most individuals. Individuals who are severely immunocompromised or are pregnant should not receive a measles vaccine. Individuals are encouraged to speak with their healthcare provider for questions regarding vaccination. There is no link between MMR vaccine and autism.

Recommendations for Boston Healthcare Providers and BPS:

1. BPHC asks clinical care providers to increase vigilance for un- and under-vaccinated patients and to provide the MMR vaccine at point of care to all eligible non-immune individuals.
2. BPHC asks BPS to ensure that all students have completed vaccination records and are fully compliant with Massachusetts vaccination regulations.

Reminder: All exposures or known active cases of measles among Boston residents must be reported to the BPHC Infectious Disease Bureau/Communicable Disease Division at 617-534-5611.

Recommended Notes for the General Public:

1. Being vaccinated against the measles is the most effective preventive measure a person can take.
2. Persons unaware of their measles immunity status should contact their healthcare provider to determine if they or their family members should receive the MMR vaccine.
3. Individuals concerned they may have been exposed to measles, or have symptoms consistent with measles, should contact their healthcare provider by phone immediately to determine their immunity status and any necessary next steps. If an individual is not vaccinated, getting the vaccine within 72 hours after exposure may prevent illness or make it less severe. People with underlying illnesses who cannot be vaccinated against measles may require immune globulin given within six days of exposure to help prevent severe illness.

Symptoms

Symptoms of measles typically begin 7-14 days after exposure. Early symptoms include a high fever (up to 105°F), runny nose, cough, and red eyes. A skin rash usually develops three-to-five days later and begins as flat, red spots on the face and then spreads to the rest of the body.

Complications

Measles is most dangerous for children under 5 years of age, adults over 20 years of age, pregnant women, and people with weakened immune systems. Common complications include diarrhea and ear infections. Serious problems include pneumonia, seizures, and brain infections. Pregnant women need to take special care to avoid measles as infection may cause miscarriage, premature labor or low birth weight in the fetus. One out of every 1,000 people who develop measles will develop permanent brain damage. One or two out of every 1,000 children will die from respiratory and neurologic complications from measles infection. A rare but fatal degenerative disease of the central nervous system may also occur 7 to 10 years after measles infection.

The Boston Public Health Commission provides facts sheets about measles in [English](#), [Spanish](#), [Arabic](#), [Haitian Creole](#), [Chinese](#), [Portuguese](#) and [Vietnamese](#), accessible online here: <http://www.bphc.org/az>.

If you have questions, please contact the BPHC Infectious Disease Bureau/Communicable Disease Division at 617-534-5611.