

February 21, 2022

## Clinician Alert

### Imported Measles in Snohomish County

### Maintain Vigilance for Secondary Cases

#### Requested actions:

- Maintain vigilance for secondary measles cases that may have been exposed to an imported case diagnosed in a Snohomish County resident who was contagious and present locally on February 19. The maximum surveillance incubation period of 21 days would end March 12.
- Recognize the clinical features of measles and initiate appropriate testing. See below for details.
- If you see a suspected case in your setting, institute airborne and droplet precautions and notify the Health District immediately (24/7) at 425-339-3503 for further guidance on specimen collection-and-handling and infection control measures.
- Counsel patients to ensure immunity to measles and other vaccine preventable diseases *prior* to embarking on international travel.

#### Background:

- An unvaccinated infant >6 months of age who recently returned from travel to a country affected by ongoing measles transmission was hospitalized with a compatible clinical illness that started February 15. Laboratory testing revealed anti-measles IgM in serum and viral RNA in respiratory and urine specimens, thus confirming the diagnosis.
- The infant's contagious period extended from February 11-19 (four days before rash onset until four days after rash onset), but the infant was present in Washington State only on February 19. Follow-up of contacts and public exposure settings is underway.
- Sites where exposure to the public may have occurred at the following places and times:

Place	Location	Date	Time of day
Sea-Tac Airport		February 19	11:45 a.m. – 2:45 p.m.
Seattle Children's Hospital Emergency Room Lobby	4800 Sand Point Way NE, Seattle, WA	February 20	12:34 a.m. – 2:49 a.m.

#### Key Measles Facts and Recommendations:

- The clinical presentation of measles is characterized by a febrile prodromal illness of coryza, cough, and/or conjunctivitis ("3Cs") followed in a few days by a maculopapular rash that spreads from the face to the torso and extremities. Note that (1) mild illness is uncommon and also that (2) in immunosuppressed patients the rash sometimes does not occur. White (Koplik's) spots *may* be visible on the buccal mucosa, but their absence doesn't exclude the presence of measles.
- The differential diagnosis primarily includes other viral respiratory infections and exanthems (e.g., rubella, varicella, roseola, parvovirus B19, enterovirus, adenovirus)
- Laboratory diagnosis is via detection of anti-measles IgM in serum and detection of virus by PCR and/or culture of a nasopharyngeal swab and urine. Contact the Health District at 425-339-3503 for coordination of testing among suspected cases through the Washington State Public Health Laboratory.
- Common complications from measles include otitis media, bronchopneumonia, laryngotracheobronchitis, and diarrhea. [Acute encephalitis](#), which often results in permanent brain damage, occurs in approximately 1 of every 1000 cases. The following groups are at higher risk of complications:
  - Infants and children aged <5 years
  - Adults aged >20 years
  - Pregnant women

- People with compromised immune systems, such as from leukemia and HIV infection
- The following table shows the frequency of measles case reports locally:

<b>Year</b>	<b>Snohomish County</b>	<b>Washington State</b>
2017	0	3
2018	6	8
2019	1	90
2020	0	1
2021	0	--

- Measles is highly contagious and easily transmitted by airborne and droplet routes to non-immune individuals. Approximately 90% of exposed susceptible close contacts become infected. High levels of immunity (i.e., >95%) are required to prevent sustained transmission.
- The incubation period from exposure to onset of the rash is typically 8-12 days (range: 7-21 days).
- Close contacts to measles who cannot readily show that they have evidence of immunity against measles should be offered post-exposure prophylaxis (PEP). To potentially provide protection or modify the clinical course of disease among exposed susceptible persons, either administer MMR vaccine within 72 hours of initial measles exposure, or immunoglobulin (IGIM, 0.50mL/kg, max dose 15mL; or IGIV 400mg/kg) within six days of exposure. Do not administer MMR vaccine and IG simultaneously, as this practice invalidates the vaccine. IG is generally reserved for immunosuppressed individuals, susceptible infants, and susceptible pregnant women. See detailed clinical guidance at the sites linked below. Do not administer MMR after 72 hours or IG after 6 days because benefit has not been demonstrated and doing so may confound the diagnosis of measles in the days or weeks following administration.
- Non-immune exposed individuals should be quarantined during days 7-21 after exposure and all contacts, vaccinated or not, should monitor for symptoms. Rare breakthrough cases can occur in fully vaccinated individuals.
- Measles immunity is defined by any of the following criteria:
  - written documentation of adequate vaccination, or
  - one or more doses of a measles-containing vaccine administered on or after the first birthday for preschool-age children and adults not at high risk, or
  - two doses of measles-containing vaccine for school-age children and adults at high risk, including college students, healthcare personnel, and international travelers, or
  - laboratory evidence of immunity (anti-measles IgG positive), or
  - laboratory confirmation of prior measles (anti-measles IgM, PCR, or culture), or
  - birth before 1957 (non-high risk settings only—excludes healthcare providers)
- Healthcare providers should not accept verbal reports of vaccination as presumptive evidence of immunity without seeing supporting written or medical record documentation.
- People 6 months of age or older who will be traveling internationally should be protected against measles. Before traveling internationally,
  - infants 6 through 11 months of age should receive one dose of MMR vaccine;
  - children 12 months of age or older should have documentation of two doses of MMR vaccine (the first dose of MMR vaccine should be administered at age 12 months or older; the second dose no earlier than 28 days after the first dose); and
  - teenagers and adults born during or after 1957 without evidence of immunity against measles should have documentation of two doses of MMR vaccine, with the second dose administered no earlier than 28 days after the first dose.

**Additional Information:**

- Centers for Disease Control & Prevention. Measles. <https://www.cdc.gov/measles/hcp/index.html>
- American Academy of Pediatrics. “Measles” in *Red Book 2021-2024* (Report of the Committee on Infectious Diseases; 32<sup>nd</sup> ed.). AAP Publications 2021 (<https://publications.aap.org/redbook>).