Department of Public Health
CITY OF PHILADELPHIA

Philadelphia Department of Public Health
Division of Disease Control

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Health Update

Measles Outbreak and Identification

December 19, 2022

SUMMARY POINTS

- There is currently an outbreak of measles in Ohio.
- Ensure all staff has confirmed immunity to or is vaccinated against measles.
- Consider measles in individuals presenting with rash and fever and call PDPH for any suspect case.
- Ensure on time administration of MMR vaccine to children and make efforts to catch up on missed vaccination doses in patients who have missed due to the pandemic. The first dose is ideally given at 12-15 months and the second at 4-6 years. Children should be given their doses as soon as they are eligible.

Current outbreak:

There is currently a measles outbreak in Columbus, Ohio. The first case was identified October 22, 2022, and there are currently 77 cases. All cases are in children aged 0-17 and only 4 are partially vaccinated. The rest of the cases are unvaccinated. The outbreak started in a childcare facility and has spread to multiple public locations. 38% of cases have required hospitalization. There have been no deaths.

Most people are not at risk for contracting measles. Full vaccination with two doses of the measles vaccine is 97% effective at preventing measles. Anyone born prior to 1957 is presumed immune as well due to the prevalence of natural infection at that time. However, healthcare workers born prior to 1957 should have documentation of a positive measles IgG titer as well in order to ensure immune status. Individuals at risk include infants too young to have been immunized. Young children who have received their first dose but are not yet due for their second dose are protected, but still have some risk. Individuals who received inactivated vaccine, which was used from 1963-1967 and those who have not been vaccinated, as well as those who are immune compromised, are at risk of infection.

Symptoms:

Measles initially presents with a prodrome that typically lasts two to four days. During that time symptoms include fever, malaise, and anorexia, followed by conjunctivitis, coryza and cough. Approximately 48 hours before the rash appears, patients may develop Koplik spots seen in the photo at right. The measles rash consists of an erythematous, maculopapular, blanching rash that classically begins on the face and spreads to involve the neck, then upper trunk, lower trunk, and extremities. The rash is initially blanching but later does not blanch and may include petechiae. Palms and soles are usually spared. Lymphadenopathy, high fever, and pharyngitis are other characteristic findings along with the exanthem. Rash usually lasts six to seven days.

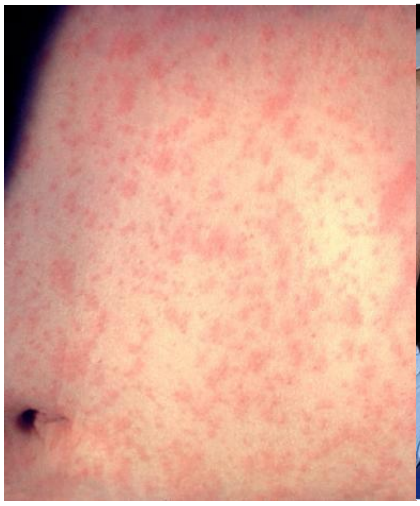
The incubation period is 6-21 days with the typical incubation period being about 14 days. Individuals are infectious from 4 days before the onset of rash until 4 days after.

Testing:

If measles is suspected, the illness should be immediately reported to the Philadelphia Department of Public Health (PDPH), Division of Disease Control (DDC) at 215-685-6741 (business hours) or 215-686-4514 (after

hours, ask for DDC on-call staff). The following specimens should be obtained for testing at the Pennsylvania Department of Health Bureau of Laboratories (PADOH BOL):

- Throat or nasopharyngeal swab for rRT-PCRT testing
  - Collect specimen in viral or universal transport media (VTM/UTM)
  - Ship on cold packs
- Urine for rRT-PCR testing
  - Collect minimum of 50 mL in sterile container
  - Ship on cold packs in leak-proof container
- Serum for measles IgM and IgG testing
  - Acute phase serum as soon as possible and convalescent serum 2-3 weeks later
  - Collect minimum of 5 mL of blood in a red-top or serum-separator tube (SST)



For each specimen: Complete the PADOH BOL Specimen Submission Form: BOL Micro Specimen Submission Form.pdf (pa.gov).

Infection Control:
Measles is spread by airborne transmission, therefore, individuals with suspected measles should be placed in a private room with door closed, ideally at negative pressure immediately. Patients should wear masks and staff should wear N95 fit tested respirators. A room occupied by a suspect case should not be used for two hours after the patient leaves. If measles is suspected, try to bring the patient in at the end of a clinic session or through a route that does not pass through a waiting room with other patients in it.

Post Exposure Prophylaxis:
People exposed to measles who cannot readily show that they have immunity or are partially immunized should be offered post exposure prophylaxis. PEP consists of either: measles, mumps, and rubella (MMR) vaccine (if eligible) within 72 hours of exposure or immunoglobulin within 6 days of exposure. Do NOT administer both together as this invalidates the vaccine.

Resources:
- CDC Epidemiology and Prevention of Vaccine-Preventable Diseases – Measles: Pinkbook: Measles | CDC