Increasing Measles Nationally

Key Points and Recommendations:

1. The Centers for Disease Control and Prevention (CDC) is reporting 704 cases of measles so far in 2019, which is the highest yearly number since measles transmission was eliminated in the U.S. in 2000; infections are primarily in unvaccinated individuals.


3. Given national and global outbreaks, all providers should make sure their patients are up-to-date with MMR vaccination or have presumptive evidence of immunity (see below).

4. Measles typically presents with symptoms of high fever, cough, coryza (runny nose), and conjunctivitis followed 3-5 days later by development of a maculopapular rash.

5. Providers should ask any patient presenting with compatible illness about epidemiologic risk factors for measles exposure, including:
   - Travel to other states or internationally to areas with measles transmission
   - Contact to a person with measles or a person with a febrile rash illness

6. Providers who identify a patient with a compatible illness and possible exposure should test for measles and send both the following specimens to the NH Public Health Laboratories:
   - Oropharyngeal or nasopharyngeal swab for polymerase chain reaction (PCR) testing (see section below for more information on specimen collection)
   - Serum for measles virus IgM antibody

7. Suspect measles cases should be managed under airborne infection isolation and immediately reported to NH DPHS.
   - Reporting during normal business hours: call (603) 271-4496
   - Reporting at night or on the weekend: call (603) 271-5300 and request the Public Health Nurse on-call

Situation:
From January 1 to April 26, 2019, 704 individual cases of measles have been confirmed in 22 states. This is the greatest number of cases reported in the U.S. since 1994 and since measles was declared eliminated in 2000. The high numbers in 2019 are largely due to outbreaks in Washington and New York States (including New York City). Most of the outbreaks that have occurred this year are due to importation of measles into unvaccinated populations from other areas of the world currently experiencing measles outbreaks (including Philippines, Ukraine, and Israel). The Washington State outbreak is now declared over; however, the outbreaks in New York are ongoing and are the longest lasting since measles was eliminated in 2000. The outbreaks in New York have occurred primarily in unvaccinated individuals in Orthodox Jewish communities. Due to the Passover holiday travel (Passover began Friday April 19 and ended Saturday April 27), there may be more opportunities for measles to spread, and providers should inquire about epidemiologic risk factors in any patients presenting with compatible signs and symptoms of measles.
Presumptive Evidence of Measles Immunity:
Persons can be presumed to have immunity to measles if any of the following criteria apply:

- written documentation of adequate vaccination:
  - 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
  - two doses of measles-containing vaccine for school-age children and adults at high risk, including college students, healthcare personnel, and international travelers
- laboratory evidence of immunity
- laboratory confirmation of measles
- birth before 1957 (note: this criteria does not apply to healthcare workers)

Diagnosis and Laboratory Testing for Measles:
Measles cannot be diagnosed based on symptoms alone, which are non-specific. A maculopapular rash, for example, can be caused by a number of other medical conditions (e.g. allergic reaction and other viral and bacterial infections). Therefore, laboratory testing should be performed on any individual presenting with a measles compatible illness and potential exposure, including collection of serum for measles virus IgM antibody testing AND collection of oropharyngeal or nasopharyngeal swab for polymerase chain reaction (PCR) testing.

Collection of oropharyngeal or nasopharyngeal swab samples for PCR testing should be performed as soon as measles is suspected; PCR has the greatest diagnostic sensitivity when samples are collected at first contact with a suspected case. Detection of measles RNA is most successful when samples are collected on the first day of rash through the 3 days following onset of rash. Detection of measles RNA by PCR, however, may be successful as late as 10-14 days post rash onset.

For oropharyngeal or nasopharyngeal sample collection, a commercial product designed for the collection of throat specimens or a flocked polyester fiber swab can be used. Synthetic swabs are preferred over cotton swabs, which may contain substances that are inhibitory to enzymes used in PCR. Swabs should be placed in 2 ml of standard viral transport medium (VTM) and submitted to the NH Public Health Laboratories (NH PHL) with the appropriate laboratory testing form filled out.

Instructions for specimen collection may be accessed on the NH PHL website here:

The NH PHL laboratory test ordering form may be accessed online here:

For additional information, please review the following:
Recent MMWR publication about increase in measles cases in U.S.:
https://www.cdc.gov/mmwr/volumes/68/wr/mm6817e1.htm?s_cid=mm6817e1_e

ACIP recommendations:
https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm

CDC website:
https://www.cdc.gov/measles/hcp/index.html

NH DHHS HAN (March 2019) on measles:
For any questions regarding this notification, please call the NH DHHS, DPHS, Bureau of Infectious Disease Control at (603) 271-4496 during business hours (8:00 a.m. – 4:30 p.m.).

If you are calling after hours or on the weekend, please call the New Hampshire Hospital switchboard at (603) 271-5300 and request the Public Health Professional on-call.

To change your contact information in the NH Health Alert Network, contact Adnela Alic at (603) 271-7499 or email Adnela.Alic@dhhs.nh.gov.