



Measles Health Advisory December 28, 2022

Situation Overview

The Texas Department of State Health Services (DSHS) is monitoring an outbreak of measles in Ohio that began in November 2022. At publication, the outbreak was composed of 82 confirmed cases, of which 74 (90%) were unvaccinated, and 32 (39%) had been hospitalized. Most cases (66%) were aged 1-5 years, and 51% of cases were male. There have been no reported deaths. While no confirmed cases of measles have been reported in Texas since 2019, DSHS suggests that providers consider a patient's symptoms, vaccination status, and travel history when including measles in their differential diagnosis. Due to the highly communicable nature of this disease, we advise clinicians to follow the guidance below.

Guidance for Health Care Professionals

Signs and symptoms of clinical illness:

- Fever $\geq 101^{\circ}\text{F}$ (38.3°C) **AND**
- Generalized maculopapular rash* lasting >3 days **AND**
- Cough, runny nose, or conjunctivitis

*Rash often begins at the hairline/scalp and progresses down the body

Vaccination history considerations:

- Patients with a recent Measles, Mumps, and Rubella (MMR) vaccination (6-45 days) may show mild symptoms and will test positive by PCR but are not considered a case and do not require control and prevention measures. These positive PCR specimens should be sent to the DSHS Lab for additional testing to see if the virus is vaccine related.
- 1 dose of MMR is 93% effective at preventing clinical disease
- 2 doses of MMR are 97% effective at preventing clinical disease

Travel history within 21 days of onset of symptoms that increases level of suspicion:

- Domestic travel to an area experiencing an outbreak
- International travel to an area experiencing widespread measles transmission (e.g., India, Yemen, Somalia, Zimbabwe, Pakistan, Ethiopia, Liberia, Indonesia, Nigeria, Angola).
- Airport exposure where travelers from domestic or international flights congregate

If you suspect a patient has measles:



- In Texas, measles (suspected **or** confirmed) is required to be reported **immediately** to your local health department or your DSHS regional office, (contact information for each county can be found at: <https://www.dshs.texas.gov/idcu/investigation/conditions/contacts/>). It is preferred that contact be made while the patient is present in the clinical setting in order to facilitate testing and initiate the public health investigation, including follow-up of potential exposures.

Infection Control Precautions

- Measles is highly contagious and is transmitted primarily from person to person by respiratory droplets and airborne spread. The incubation period is about 2 weeks (range of 7 - 21 days) from exposure to onset of illness. Persons are contagious from 4 days before onset of rash to 4 days after appearance of rash.
- In urgent/emergency healthcare settings, suspected cases should be masked with a surgical mask and triaged quickly from waiting areas into a room with a closed door, with airborne isolation precautions where possible. In other outpatient settings, suspected cases should be scheduled at the end of the day, if feasible. Healthcare workers caring for patients suspected of having measles should use airborne infection control precautions (www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html).
- Persons with measles will commonly present in physician's offices or emergency rooms and pose a risk of transmission in these settings. All healthcare personnel should have documented evidence of measles immunity on file at their work location (www.immunize.org/catg.d/p2017.pdf). Healthcare facilities are reminded to review the immune status of all employees.

Diagnostic Testing

- People with signs and symptoms of clinical illness (see above) should be tested.
 - Testing should also be considered in persons who have been exposed or travelled to an area where measles is endemic and who have a rash-fever illness.
- The Texas DSHS Laboratory in Austin can perform measles serology (IgM and IgG) on serum specimens and PCR testing on throat swabs placed in viral transport media. Genotyping will be performed on positive PCR specimens, which can be helpful during outbreaks. Local health departments or DSHS regional offices can help providers coordinate testing at the DSHS laboratory. Serology and PCR testing for measles is available by commercial laboratories; however, DSHS strongly encourages providers to submit PCR



specimens to the DSHS Laboratory because of the additional molecular analysis provided for positive specimens.

Control and Prevention Measures

- Control measures should be implemented as early as possible.
 - Measles vaccination may prevent disease if given within 72 hours of exposure to susceptible persons 6 months of age or older (i.e., those who may have potentially been exposed and have not been fully vaccinated with 2 measles vaccines). Measles vaccination following exposure may also provide some long-term protection, but generally should be followed with a second vaccination at least 28 days later for the best protection. Any children vaccinated prior to their first birthday will require two additional doses of MMR vaccine, once when they are 12 to 15 months of age and again when they are 4 to 6 years of age, in order to be fully immunized against measles.
 - Immunoglobulin (IG) may be indicated for some persons, especially infants under the age of one year, pregnant women without evidence of immunity, and severely immunocompromised individuals, if within 6 days of measles exposure. Intravenous IG (IGIV) is recommended for susceptible pregnant women and severely immunocompromised individuals who have had a measles exposure within the last 6 days. Intramuscular IG (IGIM) is recommended for infants under the age of one year who are within 6 days of exposure. IGIM can be obtained by healthcare providers from the manufacturer. It can also be obtained through your local health department or by contacting your regional DSHS office.
- Contraindications to measles vaccination include previous anaphylactic reaction to a vaccine component and severe immunosuppression. Measles vaccination is also contraindicated during pregnancy, and pregnancy should be avoided for at least a month following vaccination. Close contact with a pregnant woman is NOT a contraindication for measles vaccination. Breastfeeding is NOT a contraindication to either the woman or the breastfeeding child.
- Measles is best prevented by keeping patients up to date on routine immunizations, including MMR. The Advisory Committee on Immunization Practices and CDC recommend two doses of MMR vaccine routinely for children, starting with the first dose at age 12 to 15 months and the second dose at age 4 to 6 years, preferably before beginning school. Children can receive the second dose earlier as long as it is at least 28 days after the first dose. Find printable versions in various formats and recommendations for all ages at <http://www.cdc.gov/vaccines/schedules/>.



Exclusionary Criteria

In those with measles, rash onset typically occurs between the 3rd and 7th day of illness. Persons should be excluded from school/work and other group settings until after the fourth day of rash onset. During an outbreak, susceptible persons (i.e., those without documented immunization or previous measles infection) should be isolated from those who have measles to prevent further propagation of the disease. In schools or other group settings, children who have not been immunized should be excluded from the setting for at least 21 days after the last date the unimmunized child was exposed and observed for signs and symptoms. Additional information on exclusion and readmission can be found at http://www.dshs.texas.gov/DCU/health/schools_childcare/SchoolHealth/.

If you have further questions regarding measles or would like to report suspected measles cases, please contact your local health department or DSHS regional office (contact information for each local health department and DSHS regional office can be found at: <https://www.dshs.texas.gov/idcu/investigation/conditions/contacts/>).