Kentucky Public Health
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KENTUCKY HEALTH ALERT

Four New Measles Cases in Kentucky: Recommendations for Identification and Prevention

June 27, 2025

The Kentucky Department for Public Health (KDPH) is reporting four new cases of measles in Kentucky this week. Three of the cases reside in the same household in Woodford County. The fourth is from Todd County and was exposed to measles during international travel and is thought to be unrelated to the other cases. All four cases were unvaccinated against measles. This marks six total cases of measles in Kentucky this year. KDPH is working with local health departments to identify and contact individuals who may have been exposed. These cases occur amidst a rise in cases of measles in the U.S. that has resulted in more than 1,200 cases, 148 hospitalizations and 3 deaths this year.

Summary and Action Items

- **Be alert for signs and symptoms of measles**, particularly among people who have not received two doses of measles-containing vaccine and people who reside in close-knit communities that are commonly under-vaccinated. Healthcare providers should also consider outreach to patients who are eligible for measles, mumps and rubella (MMR) vaccination to encourage routine immunization.
- **Collect detailed travel history for patients with febrile rash illness and consider measles in patients who report *any* international travel**, travel to areas in the U.S with ongoing outbreaks, or other contact with large numbers of people who have traveled internationally (e.g., being in an airport that receives international flights).
- **Measles is a reportable disease requiring urgent notification**. **Do not wait for a positive result to initiate contact with public health.** If measles is suspected, healthcare facilities should implement appropriate infection prevention and control measures and report any case, suspected case, or positive laboratory result via telephone to the local public health department jurisdiction in which the patient resides within 24 hours. If the local health department cannot be reached, contact 888-9-REPORT to reach the Epidemiologist On-Call at KDPH.
- **Measles virus testing is available at the KDPH Division of Laboratory Services (DLS)** for eligible clinical specimens upon approval. KDPH requests that providers send specimens for PCR testing of **all** suspect measles cases to DLS rather than to commercial labs, to avoid significant delays in public health response measures.
- **Routinely assess all patients for MMR vaccination needs.**
- **Measles resources for healthcare providers and the public** can be found on the KDPH measles website.

Background

Measles is a highly contagious viral respiratory illness. The virus is transmitted through airborne spread of droplet nuclei or direct contact with nasal or throat secretions of infected persons; infectious droplets can remain suspended in the air for up to two hours. The average incubation period for measles is 14

days, with a range of 7 to 21 days.

Cases and outbreaks of measles continue to be identified domestically and globally. There have been more than 1,200 cases of measles reported in the U.S. this year, including several large ongoing measles outbreaks in Texas, New Mexico, Kansas, and Oklahoma. CDC recently issued a Level 1 travel advisory to recommend two doses of the MMR vaccine for all international travelers who have not had measles in the past.

Two doses of MMR vaccine are required for kindergarten entry in Kentucky, however recent estimates indicate that MMR vaccine uptake among kindergarten children in Kentucky has declined to only 86.9%. Under-vaccinated populations are often grouped geographically or socially, which can facilitate rapid spread through frequent contact with other under-vaccinated individuals.

Clinical Recognition

Measles is characterized by an initial prodrome that typically includes high fever, cough, coryza, and conjunctivitis, followed by the appearance of a maculopapular rash 3 to 5 days after symptoms begin. Communicability is greatest from four days *before* the onset of rash until four days *after* the onset of rash. The day of rash onset is considered day 0 when determining the infectious period.

Given known community exposures, suspicion for measles should be heightened among patients with clinically compatible measles symptoms who have not yet received measles-containing vaccine, including those who may have postponed or missed doses. For additional clinical information for healthcare providers, please visit the CDC website.

Diagnostic Testing

The preferred confirmatory testing for measles is detection of RNA by real-time PCR (RT-PCR) in a respiratory specimen (throat or nasopharyngeal swabs). Clinical specimens for RT-PCR and virus isolation should be collected at the same time as samples for serologic testing. Detection of measles RNA by RT-PCR is most successful when samples are collected on the first day of rash through the 3 days following onset of rash but may be successful as late as 10 to14 days post rash onset. If a patient is suspicious for measles, contact the local health department or KDPH to submit specimens to KDPH DLS for testing.

Serologic testing for presence of measles IgM antibodies is available at many commercial laboratories and is also an acceptable mode of testing. However, turnaround times for results may be delayed. Measles IgM tests are often positive on the day of rash onset. However, up to 20% of tests for IgM may give false-negative results in the first 72 hours of rash onset. Therefore, IgM tests that are negative in the first 72 hours after rash onset should be repeated when there is a high clinical index of suspicion for measles. IgM is detectable for at least 28 days after rash onset. Measles IgM testing should not be performed in persons who do not have clinical suspicion for measles due to the possibility of a false-positive result. **Healthcare providers should report suspected cases of measles to their local health department at the time of seeing the patient.**

Infection Prevention and Control

Measles is a vaccine preventable disease. The measles vaccine is highly protective; one dose of MMR vaccine provides 93% protection against measles and two doses provide 97% protection. Children are

eligible for routine MMR vaccination beginning at 12 months of age or as early as 6 months of age if earlier protection is desired (i.e., during a community-wide outbreak or if traveling internationally). A second dose of MMR is recommended at least 28 days after the first dose (or 90 days for MMRV) and usually is administered at 4 to6 years of age.

Persons with suspected or confirmed measles infection should be isolated for four days following the day of rash onset. Contacts who might be susceptible should be immunized with measles vaccine as soon as possible after exposure. Measles vaccine given within 72 hours after exposure may prevent or reduce the severity of disease. Immune globulin administered intramuscularly (IGIM) or intravenously (IGIV) can prevent or modify measles in a susceptible person if given within six days of exposure. IG may be especially indicated for susceptible household contacts <1 year of age, pregnant women, or immunocompromised persons, for whom the risk of complications is increased. The most common complications of measles include vomiting and diarrhea that lead to dehydration and sometimes necessitate hospitalization. The most serious complications include pneumonia, encephalitis/brain disfunction and pregnancy complications. Some serious complications of measles can occur over 10 years after recovery from acute illness.

Transmission prevention in healthcare settings guidance

To minimize the risk of measles transmission, healthcare personnel should do the following:

1. **Query patients with a febrile rash illness** about vaccination status, international travel, contact with foreign visitors, transit through an airport that receives international flights, or possible exposure to a person with measles or a similar rash illness in the 3 weeks prior to symptom onset. Possibility of measles should be considered for patients with such a history and symptoms consistent with measles, particularly in un- or under-immunized persons.
2. **Immediately isolate and provide a mask to patients with suspected measles.** Do not allow patients with suspected measles to remain in the waiting room or other common areas; isolate patients with suspected measles immediately in an airborne infection isolation room if one is available. If such a room is not available, place the patient in a private room with the door closed. Follow CDC recommendations for infection control measures for measles. If possible, allow only healthcare personnel with documentation of two MMR vaccines or laboratory evidence of immunity to measles (i.e., measles IgG positive) to enter the patient's room.
3. **Wear an N95** or higher-level respirator regardless of presumptive evidence of immunity. (A user seal check should be performed each time the respirator is donned.)
4. **Do not use the examination room for at least two hours** after the infectious patient leaves.
5. If possible, **schedule patients with suspected measles at the end of the day**.
6. **Notify the local health department** in the jurisdiction the patient resides immediately by telephone about any patients with suspected measles. If the local health department cannot be reached, contact 888-9-REPORT to reach the Epidemiologist On-Call at KDPH.
7. **Notify any location where the patient is being referred** for additional clinical evaluation or laboratory testing about the patient's suspected measles status, and do not refer patients with suspected measles to other locations unless appropriate infection control measures can be implemented at those locations. The patient must wear a mask, if feasible.
8. **Instruct patients with suspected measles to inform all healthcare providers of the possibility of measles** prior to entering a healthcare facility so appropriate infection control precautions

can be implemented.

9. **Make note of the staff and other patients who were in the area during the time the patient with suspected measles was in the facility** and for two hours after they left. If measles is confirmed, exposed people will need to be assessed for measles immunity.

MMR Vaccine Recommendations

Children are recommended to receive the first dose of measles vaccine at age 12 months through 15 months. A second MMR dose is routinely administered at age 4 through 6 years but may be given sooner as long as at least 28 days have passed since the prior dose of MMR. Children 6 through 11 months of age that are traveling internationally are recommended to receive a dose of MMR ideally at least two weeks prior to travel. Note: this dose is not considered a valid dose and should be repeated to ensure child receives two total doses on or after the first birthday.

People are presumed to be protected from measles if they have written documentation of at least **one** of the following:

- 2 doses of measles-containing vaccine in school-aged child (grades K-12), college or university student, healthcare personnel, international traveler, or in a setting that poses a high risk for measles transmission
- 1 dose of measles-containing vaccine administered in 1968 or later in a preschool-aged child or adult not in a high-risk settings for measles transmission
- Laboratory-confirmed measles infection
- Laboratory-confirmed immunity to measles (IgG serologic test)
- Born before 1957

Certain adults may need two doses. Adults who are going to be in a setting that poses a high risk for measles transmission should make sure they have had two doses separated by at least 28 days. These adults include:

- Anyone who is traveling internationally
- Healthcare personnel
- Students at post-high school education institutions
- People who public health authorities determine are at increased risk for getting measles during a measles outbreak

In addition, adults who were vaccinated between 1963 and 1967 with an older, less-effective measles vaccine need to be revaccinated with at least one MMR dose to ensure they are protected. A new MMR vaccine decision tree for adults has been published by CDC to assist with assessment.