

Two persons with locally-acquired measles infection have been confirmed in Shelby County. The persons have no connection, but molecular testing indicates the same unknown source. Rash onset was April 9 for both; both patients were briefly hospitalized and have recovered.

Additional cases are expected to be confirmed. Shelby County Health Department is working directly with involved healthcare facilities and known contacts; however, susceptible persons may develop (or have developed) measles illness following an unrecognized exposure to these cases or to an unknown case in the community. Susceptible contacts of the two known cases may develop rash up to about May 4.

Epidemiology: Cases are infectious 4 days before rash onset through 4 days after rash onset. Average incubation period 14 days (range 7-21 days) between exposure and rash onset. Measles is highly infectious and may linger in the air of a room for up to 2 hours after the patient has left.

Clinical Symptoms: Begins with a prodrome of fever (up to 105°F) and malaise, cough conjunctivitis, runny nose (coryza). Small bluish-white spots with red bases may be seen on the buccal mucosa (Koplik's spots). Rash onset is 3-7 days later, beginning on the face and spreading downward. Complications can include bacterial superinfections or encephalitis. **Consider the possibility of measles when evaluating susceptible patients with an acute febrile rash illness, especially if the person has been in Shelby County in the past 3 weeks.**

Advice about areas where exposure could occur will be updated as new information becomes available.

Triage: When possible, advise patients with a febrile rash illness or fever and cough to call the clinic for telephone triage so they can enter and be evaluated without exposing other patients. Any patient with febrile rash illness or known to have been exposed to a confirmed case should be isolated immediately in a room with a closed door: implement airborne precautions, if possible. State regulation requires that local public health be notified immediately of *clinically* suspected measles. Do not wait for laboratory testing to report.

Laboratory Testing: After consultation with public health, a throat swab should be collected and placed on viral transport media and, if rash is present, serum should be drawn for serology. As directed by public health, these will be sent to the state public health laboratory and routed to the appropriate laboratory for testing. Commercial testing is reliable for IgG testing for *immunity* to measles; in actual cases, IgM testing may be negative up to 3 days after rash onset. Throat swabs for PCR testing are preferred.

Prevention: Vaccination is extremely effective. Ensure all patients aged 1 year and older are appropriately immunized and administer measles-mumps-rubella vaccine to anyone who has not been.

Actions for all healthcare facilities:

- 1) Low index of suspicion for measles, especially in Memphis area. Ensure triage and patient registration and ED staff are aware of the situation.
- 2) If you have airborne infection isolation rooms (AIIR) or negative pressure rooms, ensure they are in working order.
- 3) Identify the best route to transfer patients from point of entry or ED to AIIR to minimize exposure to other persons (staff, patients, visitors).
- 4) Review documentation of presumptive evidence immunity for all healthcare personnel. HCP includes *anyone* who has contact with patients in a healthcare setting (includes physicians, volunteers, students, contractors)

Presumptive evidence of immunity to measles for health care personnel includes any of the following:

- Written documentation of vaccination with 2 doses of live measles or MMR vaccine administered at least 28 days apart
- Laboratory evidence of immunity: serum measles IgG positive; equivocal results considered negative
- Laboratory confirmation of disease
- Birth before 1957 DOES NOT qualify for presumptive evidence of immunity in an community with an ongoing outbreak; such employees should have IgG+ confirmation or two doses of MMR.

Do not check IgG titers for any employees with two documented doses of MMR.

- 5) HCP without presumptive evidence of immunity should be offered the first dose of MMR vaccine

Contact your local health department or the Tennessee Department of Health 615-741-7247(24/7) for assistance. For general information, visit the CDC website at <http://www.cdc.gov/measles/> For specific information about measles outbreaks or healthcare facilities: <http://www.cdc.gov/vaccines/pubs/surv-manual/chpt07-measles.pdf>