

## MEASLES 2019, OUTBREAK CONTROL MEASURES

From MDHHS, MiHAN 4/12/19

- If Clinical Case Definition is met (which is: an acute illness characterized by: generalized, maculopapular rash lasting  $\geq 3$  days; and temperature  $\geq 101^\circ\text{F}$  or  $38.3^\circ\text{C}$ ; and cough, coryza (runny nose), or conjunctivitis (red eyes), regard the case as true measles; do not wait for lab testing to implement control actions unless measles is ruled out by other information.
- Cases should be excluded and isolated from group activity settings (e.g. schools, day-care centers, work place, camps, etc.) immediately and through the 4th day after the onset of rash to limit further exposures. In health care settings, use of Airborne Precautions is recommended.
- Identify exposed contacts.

Why 4 days? Measles is contagious from 4 days before the rash starts until 4 days after the rash started.

A **contact** has had direct contact with nasal or throat secretions of infected persons or has shared airspace with an infected person.

- When assessing this, keep in mind that infectious virus particles can remain in room air for at least 2 hours after the infectious person leaves the room.

Measles is highly communicable. Measles cases are communicable (contagious) starting 3-5 days before rash onset through the 4th day after rash onset; exposure includes household contact and same-room contact.

- Assess susceptibility of contacts. Measles vaccine is universally recommended as part of the routine childhood immunization schedule, thus persons 4 years of age and older and born after 1956 should have a history of 2 doses of MMR vaccine, and persons 1 year of age and older and less than 4 years of age should have a history of at least 1 dose of MMR vaccine.
- Susceptible contacts should be recommended to receive post-exposure prophylaxis (SEE PEP DOCUMENT)
- Exclusion of exposed, susceptible contacts: Exposed persons attending group-activity settings (e.g. schools, day-care centers, work place, camps) and identified persons with a known exposure history who cannot provide documentation of measles immunity (including those with medical, religious and philosophical exemptions) should be vaccinated as soon as possible.
  - Those who are receiving their 1st dose of measles vaccine (MMR or MMRV) and are receiving it within 72 hours of exposure to measles may in general be re-admitted to the activity setting (\*however the local health officer may opt not to grant readmission until 21 days after the last known case onset, depending on the situation). The 2nd dose of measles vaccine should be scheduled for 28 days after the first dose.
    - *\*The immune status of the individual being vaccinated, the intensity or prolonged contact they had to the measles case, and the risk of the population the individual will be returning to all need to be considered before granting readmission*
  - Those who had received one dose of measles-containing vaccine prior to the exposure and who now receive a 2nd dose following the exposure do not need to be excluded from public settings (e.g., retail/grocery stores, restaurants) or group activities.
  - Those who refuse vaccination, and those who have not received vaccine within 72 hours after exposure, should be excluded from all

A **susceptible** Individual is a person who has none of the following evidence of immunity to measles:

- 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
- history of laboratory confirmed measles disease
- birth before 1957

Why 21 days? Because it can take 21 days for someone exposed to measles to get sick with measles. Since they can be contagious for 4 days before showing signs of measles, they must stay out of public until we are sure they did not get infected.

Why not let everyone go back? There is not great data about this but what is available shows that giving the first dose of MMR within 72 hrs. after exposure has been around 83% to 90% effective at preventing measles. It is least effective in individuals with the longest and closest contact to the infected person. Since one person with measles can infect up to 90% of the unvaccinated people around them, this really does need to be decided on a case by case basis.

congregate settings for 21 days after the last known exposure. Exposed, susceptible contacts should also refrain from going to indoor public settings (e.g. retail/grocery stores, restaurants) until 21 days after the last exposure.

- Although the 2nd dose of measles, mumps, rubella vaccines is not routinely given until 4 – 6 years of age, in outbreak situations involving day care, pre-school, and other settings with children under 4 years of age, consideration should be given to requiring the 2nd dose as a control measure, following appropriate minimum intervals between doses.