

January 21, 2015

MEASLES ALERT

To: Health Care Providers, Emergency Care Providers, Infection Preventionists, Labs

From: Douglas County Health Department, Adi M. Pour, PhD, Director

Re: Laboratory-confirmed measles case with exposures in public locations in Omaha and Blair

A laboratory-confirmed case of measles has been reported to public health. A joint public health investigation by Three Rivers Public Health Department and Douglas County Health Department has identified several public exposures to measles in Douglas and Washington Counties. Exposures included:

Country Bible Church, Blair	January 11, 2015 (11:00pm – 2:00pm)
Costco, 12300 W. Dodge Rd., Omaha	January 12, 2015 (6:30pm – 9:30pm)
Omaha Children's Museum	January 15, 2015 (12:15pm – 5:30pm)
Blair Dance Center, Blair	January 15, 2015 (4:15pm – 7:05pm)

Health care providers should report rash/fever illness in patients with exposures to the above venues immediately to the Douglas County Health Department, (402) 444-7214 8:00-4:30, (402) 444-7000 after hours.

- **Consider measles** in patients of any age who have a **fever AND a rash**. Fever can spike as high as 105°F. Measles rashes are red, blotchy and maculopapular and typically start on the hairline and face and then spread downwards to the rest of the body.
- **Obtain a thorough history** on such patients, including: the above exposures or travel outside of North America or contact with international travelers in the prior three weeks; and prior vaccinations for measles. Measles exposures have also occurred at Disneyland in California from December 17-20, 2014. Exposure to measles is defined as sharing the same air space with a person with measles (and up to 2 hours after the infected person left) during their contagious period (4 days before to 4 days after rash onset) for any period of time.
- **Non-immune individuals who were exposed:** Healthy adults and children with only 1 documented MMR should be given MMR #2. Infants 6-11 months can be given a dose of MMR if exposed to measles. See information on the table below for more information for infants under 6 months.
- **If you suspect** your patient has measles, isolate (see next page) the patient immediately and alert your local health department (in Douglas County, (402) 444-7214 8:00-4:30, (402) 444-7000 after hours) as soon as possible. The risk of measles transmission to others can be reduced if control measures are implemented quickly.
- **Laboratory Testing:** Measles IgM (may need to be repeated 72 hours after rash onset if negative); nasopharyngeal and throat swab for RT-PCR and viral culture. **Consult your laboratory or the health department for more information if you are ordering a measles test.**
- **Incubation period** is 8-12 days (range 7-18 days) to onset of illness, and 14 days (maximum 21 days) to onset of rash. Communicability is 4 days before to 4 days after onset of rash.
- **Establishing immunity:** Information on determining if someone is immune to measles is on the following page.

Public health authorities established a 2-dose MMR vaccine schedule (at 12-15 mos and 4-6 years) in 1990, and schools established documentation of 2 doses of MMR as a criteria for school entry around that time. Most persons under 40 years of age who were compliant with school entry requirements have had two doses of MMR and have a very low risk of developing measles if exposed. Persons who were non-compliant with that requirement are at high risk if exposed to a person shedding the measles virus. All persons who have not received two doses of MMR are urged to consider vaccination at this time, especially if they were present at the times and locations specified. Exposed persons who are not immune and who refuse immunization should not attend school/work for 21 days after last exposure.

Preventing measles transmission in healthcare settings

To prevent transmission of measles in healthcare settings, airborne infection control precautions (available at http://www.cdc.gov/hicpac/2007ip/2007ip_part3.html) should be followed stringently. **Suspected measles patients (i.e., persons with febrile rash illness) should be removed from emergency department and clinic waiting areas as soon as they are identified, placed in a private room with the door closed, and asked to wear a surgical mask, if tolerated. In hospital settings, patients with suspected measles should be placed immediately in an airborne infection (negative-pressure) isolation room if one is available and, if possible, should not be sent to other parts of the hospital for examination or testing purposes.**

The following chart was adapted from the California Department of Public Health

Recommendations for follow-up of persons exposed to measles Category	IgG test	Vaccinate	*Home quarantine	*Active symptom monitoring	Passive symptom watch
Born before 1957‡ (~5% will be susceptible)	No‡	No	No	No	Yes
Born during or after 1957:					
2 documented doses MMR prior to measles exposure (~1% will be susceptible)	No	No	No	No	Yes
IgG positive (<1% will be susceptible)	No	No	No	No	Yes
1 documented dose MMR prior to measles exposure in children aged 1-4 years and adults who are <u>not</u> healthcare personnel, school or college students, or international travelers (~5% will be susceptible)	No	Vaccinate (within 72 hours of exposure is most effective)	No	Yes	N/A
1 documented dose MMR prior to measles exposure in adults for whom 2 doses are recommended, i.e., healthcare personnel, school and college students, and international travelers (~5% will be susceptible)	Yes	Yes§	No	Yes	N/A
First MMR dose given <72 hours of exposure	No	-	No	Yes	N/A
IG given <6 days of exposure	No	No	No	Yes	N/A
Unknown status	Yes	Yes§	Yes	Yes	N/A
Unvaccinated/nonimmune/not given IG	Yes	Yes§	Yes	Yes	N/A

<http://www.cdph.ca.gov/HealthInfo/discond/Documents/MeaslesInvestigationQuicksheet.pdf>

‡ Confirm immunity (IgG+ or 2 documented doses MMR) in all exposed healthcare personnel, including those born <1957.

§ Vaccinate at the same time blood is drawn for serology.

|| Immune globulin (IG) recommended for exposed infants <1 year of age, susceptible household members who did not receive MMR <72 hours of exposure, immunocompromised persons, and susceptible pregnant women.

* Daily calls to exposed person to monitor for development of measles symptoms (1st exposure + 5 days through last exposure +21 days). If symptoms develop, immediately isolate through day 4 after rash onset (day of rash onset is day 0).

‡ Confirm immunity (IgG+ or 2 documented doses MMR) in all exposed healthcare personnel, including those born <1957.

§ Vaccinate at the same time blood is drawn for serology.

|| Immune globulin (IG) recommended for exposed infants <1 year of age. susceptible household members who did not receive MMR <72 hours of exposure, immunocompromised persons, and susceptible pregnant women. Give priority to people who were exposed to measles in settings where they have intense, prolonged close contact (such as household, child care, classroom, etc.) Alternatively, MMR vaccine can be given instead of IGIM to infants age 6 through 11 months, if it can be given within 72 hours of exposure.

- Selected useful resources for health care professionals
 - Centers for Disease Control and Prevention (CDC)/ Immunization Action Coalition
 - http://www.immunize.org/askexperts/experts_mmr.asp
 - <http://www.cdc.gov/measles/index.html>
 - California Department of Public Health
 - <http://www.cdph.ca.gov/HealthInfo/discond/Pages/Measles.aspx>