



# COUNTY OF ORANGE HEALTH CARE AGENCY

## PUBLIC HEALTH SERVICES DISEASE CONTROL & EPIDEMIOLOGY



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### Measles (Rubeola) Advisory

**Recent outbreaks of measles in the United States, including cases in neighboring counties and states, highlight the ongoing risk of measles in the U.S. due to measles importations and rapid spread within susceptible populations.**

**Orange County Public Health urges clinicians to:**

- 1. Consider measles in patients with febrile rash illness;**
- 2. Use appropriate infection control practices to prevent transmission in health-care settings; and**
- 3. Assure that patients, their families, and your staff members are fully vaccinated.**

Although measles is not endemic in the U.S., it is endemic in most countries in the world including Europe, and large outbreaks are currently occurring in Switzerland and Israel. Between January 1 and March 28, 2008, 24 confirmed U.S. cases of measles were reported to the Centers for Disease Control and Prevention (CDC).

- 12 measles cases were reported in conjunction with an outbreak in San Diego in January-February 2008; the index case was an unvaccinated child who had recently traveled to Switzerland. Four of the cases were exposed on the same day at a pediatrician's office.
- At least 10 measles cases (as of 4/9/08) were reported in conjunction with an ongoing outbreak in Arizona since February 2008; the index case was a visitor from Switzerland. Eight of the cases were infected in a healthcare setting and one is a healthcare worker.
- One case of measles has been reported in Los Angeles County this month. The source of the infection is still under investigation.
- Additional cases have been reported from Wisconsin, New York, and Virginia in 2008.

**All suspect cases of measles should be isolated immediately and reported to Orange County Public Health Epidemiology at 714-834-8180.** Airborne and standard precautions should be instituted. Only immune healthcare workers (HCW) should care for these patients. Definition of immunity for a healthcare worker:

1. Positive serum IgG to measles, OR
2. History of measles based on health care provider diagnosis, OR
3. Birth before 1957, OR
4. Two doses of measles-containing vaccine (usually given as MMR) since HCW are at higher risk of measles exposure.

NOTE: During an outbreak, unvaccinated HCW born before 1957 who do not have serologic evidence of immunity or physician documentation of measles disease should receive one dose of MMR vaccine.

For more information on measles, see *Measles (Rubeola) Information for Health Care Providers*, available at <http://www.ochealthinfo.com/epi/measles/index.htm> or the CDC website at <http://www.cdc.gov/vaccines/vpd-vac/measles/default.htm>.

A fact sheet for patients is available at <http://www.ochealthinfo.com/epi/measles/index.htm>.

## Measles (Rubeola) Information for Health Care Providers

Measles is a highly contagious disease transmitted by respiratory droplets and through the airborne route. The illness can be very serious and result in hospitalization and complications including diarrhea, otitis media, pneumonia, encephalitis, hearing loss, seizures and death. The incubation period is usually 8-12 days from exposure to onset of symptoms (prodrome).

### 1. Consider measles in patients with febrile rash illness.

**Prodrome:** fever, cough, coryza, or conjunctivitis; lasts 2-4 days. Koplik's spots may be present.

**Rash:** generalized, maculopapular, sometimes confluent, rash starting on the face and head and spreading to the trunk and rest of the body; it fades in the same order of appearance. The rash usually lasts at least 3 days but may be absent or atypical in immunocompromised persons.

**Notify Orange County Public Health Epidemiology at 714-834-8180 about any suspect cases.**

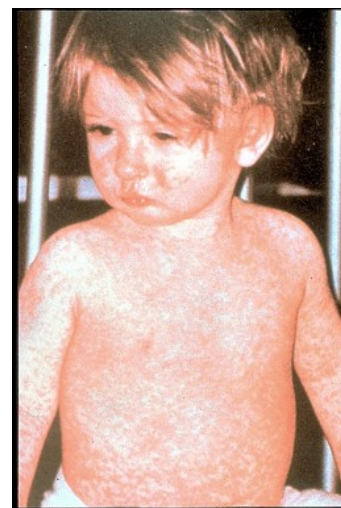


Photos courtesy of the Centers for Disease Control and Prevention:

<http://www.vaccineinformation.org/photos/measiac004.jpg>

<http://www.vaccineinformation.org/photos/measiac005.jpg>

Koplik's spots



**Diagnosis:** Send serum for measles IgM and IgG and nasopharyngeal, throat, or urine specimens for measles virus culture. Early in illness, throat specimens have higher yield; later in illness, urine specimens are better. If the IgM is negative and the specimen was collected within 72 hours after rash onset, repeat serum testing is indicated if the patient has a generalized rash lasting more than 72 hours. Orange County Public Health can assist with testing on suspect cases.

### 2. Use appropriate infection control practices to prevent transmission in healthcare settings. Persons with measles are infectious from four (4) days before until four (4) days after the rash; immunocompromised persons are infectious for the entire duration of the illness. **For any suspect measles case:**

- **Outpatient:** Immediately remove patient from waiting area and place in private room with door closed. Ask patient to wear a surgical mask, if tolerated.
  - **Hospital setting:** Immediately place patient in airborne infection (negative pressure) isolation room. Notify your hospital infection control professional (ICP).
  - Utilize airborne and standard precautions.
  - Notify Orange County Public Health Epidemiology at 714-834-8180.
  - Restrict care for patients with suspect or confirmed measles to immune\* healthcare workers (HCW).
  - Exclude exposed susceptible HCW from direct patient contact from the 5<sup>th</sup> to 21<sup>st</sup> days after exposure.
- For more information on isolation precautions: [http://www.cdc.gov/ncidod/dhqp/gl\\_isolation.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation.html).

### 3. Assure that patients, their families, and your staff members are fully vaccinated.

Measles vaccine is usually given as MMR (measles, mumps, rubella) and is routinely recommended for all children at 12-15 months with a second dose at 4-6 years of age. At least one dose of MMR is recommended for all adults without evidence of immunity to measles.\* Two doses are recommended for all HCW without evidence of immunity to measles; for those HCW born before 1957 without additional evidence of immunity, one dose of MMR is recommended during a measles outbreak.

#### \*Definition of immunity to measles:

1. Positive serum IgG to measles, OR
2. History of measles based on health care provider diagnosis, OR
3. Birth before 1957, OR
4. At least one dose of measles-containing vaccine (usually given as MMR).\*\*

\*\*Adults who should receive two doses of measles vaccine if no other evidence of immunity include students in postsecondary educational institutions, healthcare personnel, and international travelers.