

ACEP FACT SHEET: MEASLES (RUBEOLA)

BRIEF DESCRIPTION:

Measles (Rubeola - “Red Measles”) is a very contagious, potentially severe and deadly viral infectious disease:

- Measles is spread via the **airborne** route.
- Patients are infectious up to 4 days before the typical measles rash.
- Measles virus remains infectious on surfaces and in the air for up to 2 hours after an infectious person leaves the area.

PRESENTATION:

Measles is characterized by a

- Prodrome of fever (as high as 105°F) and
 - Malaise
 - Cough, coryza (runny nose), and conjunctivitis – “the three “C”s”
 - A pathognomonic enanthem (Koplik spots) in the oral cavity followed by a maculopapular rash, usually beginning on the face.
 - The rash usually appears about 14 days after a person is exposed; however, the incubation period ranges from 7 to 21 days.
 - The rash spreads from the head to the trunk to the lower extremities and will often involve the palms of the hands and soles of the feet. (Pictures below).
- Patients are considered to be contagious from 4 days **before** to 4 days after the rash appears.
 - Immunocompromised patients do not always develop a rash.
- Early identification of suspected cases is important so the patients can be isolated for 4 days following appearance of the rash to minimize further spread.
- Measles is a reportable disease and should be reported to the local health department.

CLINICAL COURSE:

- Up to 3 in 10 measles patients may develop complications such as otitis media or diarrhea.
- More serious complications include pneumonia and encephalitis.

THOSE MOST AT RISK:

- Infants younger than 12 months (too young to be vaccinated)
- Children older than 12 months who have not had at least one MMR vaccination
- Children over four years who have not had a second MMR vaccination.

IMPLICATIONS FOR YOUR ED:

Due to the high infectivity of this virus, potential measles patients must be immediately isolated and should not spend time in a general waiting area.

- Rapid triage and movement of a suspected measles case to a designated isolation room or isolation area is essential.
- Healthcare providers should have proof of measles immunity (see CDC guidelines for “proof” criteria) or should be re-immunized;
 - If unimmunized, receive two doses of MMR not less than 28 days apart.

BOTTOM LINE:

A very high index of suspicion for Rubeola is necessary especially among patients with an exposure history, travel to foreign or domestic areas where disease is present, and those without adequate immunization. Immediate isolation of these patients should be considered in the ED or other outpatient healthcare setting.

ADDITIONAL INFORMATION

Background:

The toll and major sequelae of measles have been largely eliminated from the US and modern Western societies through effective vaccination programs allowing for “herd immunity.” Continuing outbreaks of measles in the U.S. are due primarily to two factors: 1) importation of cases from other countries with lower immunization rates, and 2) lack of immunization among certain segments of the childhood population. Often more affluent, educated families comprise the majority anti-vaccination movement. The United States has experienced a record number of measles cases in 2014 (more than 600). This is greatest number in more than 14 years.

Prevention:

Unfortunately, with more people refusing vaccination for their children, herd immunity is decreased and this puts everyone at risk. Measles immunization is the key to prevention of this potentially very serious infection.

For more information about measles, please see:

<http://www.cdc.gov/measles/index.html>

<http://www.cdc.gov/measles/hcp/index.html>

<http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/measles-rubeola>

<https://www.cdc.gov/vaccines/vpd/mmr/public/index.html>

http://kidshealth.org/parent/infections/bacterial_viral/measles.html

PHOTOGRAPHS:

Figure 1: Boy with measles, 3rd day of rash (CDC)



Figure 2: Day 4 rash (CDC)



Figure 3: This was a patient who presented with Koplik's spots on the soft palate due to pre-eruptive measles on day 3 of the illness (CDC)

