

PRACTITIONER INFORMATION

Quick Summary of Similarities and Differences of Measles, Influenza, and Rubella



Purpose: To help practitioners differentiate between the febrile illnesses of influenza and measles, and the rash producing illnesses of measles and rubella.

Measles:

Early symptoms of measles include runny nose, cough, red eyes and fever followed in about 3-5 days by a maculopapular rash that starts on the face and travels down the body slowly over 7 days. Conjunctivitis is the main symptom that distinguishes it from flu early in the onset of the disease. Measles cases are usually quite ill.

Most people do not have complications. However, complications include otitis media, pneumonia, and encephalitis, and are more likely to occur in children younger than 5 years of age and in immunocompromised persons of all ages.

Measles is highly contagious and able to spread even in a highly immunized population. Therefore, be aware that any febrile illness in a person with red eyes and cough could be a case of measles presenting *before* the rash develops. Place patients with possible measles in airborne isolation.

Rubella:

Rubella also presents as a rash developing first on the face and upper body, but it is a much milder illness. The rash moves quickly from the face down to the feet over 3 days. Usually the rash is the first sign of illness and there is no fever. The patient is not toxic. Occipital lymph node swelling may be present.

Influenza:

Influenza starts with a sudden onset of high fever, severe malaise, cough, sore throat, and runny nose. A rapid NP swab for influenza is often positive.

Evaluation of an influenza-like illness with cough

During influenza season, a patient with the sudden onset of high fever, cough, chills and malaise will likely have influenza. However, **if the patient also has conjunctivitis, consider measles in the differential diagnosis!** Place patients with possible measles in airborne isolation.

Evaluation of a maculopapular rash starting on the head and upper body:

Consider measles and rubella. Contact your [county health department](#). Order measles and rubella IgM and IgG. Place patients with possible measles in airborne isolation.

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Comparison of Measles, Influenza and Rubella			
	Measles	Influenza	Rubella
Rash	Yes	Uncommon	Yes
Fever	Yes	Yes	No
Toxic	Yes	Yes	No
Symptoms	High fever, red eyes, runny nose, cough and for 3-5 days, followed by rash	Quick onset of high fever, severe prostration, cough, sore throat, runny nose	Rash with minimal to no fever or toxicity; infection possible without rash
Prodrome before rash	Yes. Red eyes & Cough & Runny nose	N/A	No
Spread of Rash	Starts on head and upper body Spreads <u>slowly</u> down to feet over 7 days	If rash occurs, it does not have measles' typical head → foot progression	Starts on head and upper body Spreads <u>quickly</u> down to feet over 3 days
Complications	Viral or bacterial pneumonia, encephalitis, otitis media, blindness	Viral or bacterial pneumonia and respiratory failure, encephalitis, otitis media, secondary bacteremia	Congenital infection
Immunocompromised	<i>May have severe disease and pneumonia without rash; high risk for death</i>	Higher risk for death	May not have rash
Isolation	Airborne	Droplet	Droplet

Additional Resources

CDC websites for pictures, public, and practitioner information

Measles: <http://www.cdc.gov/vaccines/vpd-vac/measles/default.htm#disease>

Influenza: <http://www.cdc.gov/flu>

Rubella: <http://www.cdc.gov/vaccines/vpd-vac/rubella/default.htm>