

CIC Study Group Week 7

- Measles, mumps, rubella
- Neisseria meningitidis



MEASLES – Key Concepts

- Measles is an extremely contagious febrile exanthema (widespread rash).
- Morbidity and mortality are still high in nonindustrialized nations.
- Complications can occur in malnourished, pregnant, immunocompromised, and young patients.





Measles Continued

Measles (rubeola, 7-day measles) is a distinct clinical syndrome. Early symptoms: affecting the respiratory tract (**cough, coryza, and conjunctivitis**) Symptoms progress into a febrile exanthem (widespread rash) and then into a recovery period that includes a persistent cough for many weeks.

Humans are the only source of measles infection; there is no animal reservoir.

Illness usually begins 8 to 12 days after exposure.

Airborne + Standard transmission precautions. Duration: 4 days after onset of rash; duration of illness in immune compromised

MUMPS – Key Concepts

1. Since 1989, there has been a decline in reported mumps cases, most likely as a result of implementation of the second-dose of the MMR vaccine.
2. The most important intervention to keep incidence low is to ensure that susceptible persons, including healthcare personnel, receive two doses of MMR.
3. Outbreaks have been common whenever large groups of individuals are in close contact or a significant number of susceptible persons are gathered, such as in **schools, military settings, prisons, ships, and remote islands.**

MUMPS – Key Concepts

Humans are the only known natural host of mumps virus.

Transmission is by droplet spread of respiratory secretions, through direct contact with infected fluids (primarily saliva or urine), and occasionally via fomites.

Supportive measures and use of analgesic-antipyretics for pain and fever are typical measures for those with disease, with attention to adequate hydration.

Droplet + Standard transmission precautions are recommended for people with acute mumps infection for 5 days after onset of parotid swelling. Susceptible healthcare personnel should not care for such patients; use immune personnel instead.

Rubella – Key Concepts

- There is mild acute exanthematous infection of children and adults.
- Greatest health risk is associated with **fetal infection** (acute clinical manifestations, birth defects, and long-term sequelae) acquired after maternal infection in the first trimester of pregnancy.
- Droplet + Standard transmission precautions. Duration: Until 7 days after onset of rash. Susceptible HCWs should not enter room if immune caregivers are available. No recommendation for wearing face protection (e.g., a surgical mask) if immune. Pregnant women who are not immune should not care for these patients. Administer vaccine within 3 days of exposure to non-pregnant susceptible individuals.
- Place exposed susceptible patients on Droplet Precautions; exclude susceptible healthcare personnel from duty from day 5 after first exposure to day 21 after last exposure, regardless of postexposure vaccine.

Neisseria meningitidis

– Key Concepts

- Meningococcal disease is a severe, potentially lethal, transmissible infection. Appropriate infection prevention and other public health interventions are effective in preventing the spread of this disease within the hospital and the community.
- *Neisseria meningitidis* is transmitted via respiratory droplets from colonized or infected individuals to susceptible ones.
- Persons should be vaccinated if they are at high risk of infection
- Droplet + Standard transmission precautions. Until 24 hours after initiation of effective therapy
- PEP is an effective way to prevent disease for exposed

MMR - Vaccine

- MMR vaccine resulted in a 71% decrease in measles deaths between 2000 and 2011 worldwide, as well as a decrease of approximately 90% in the eastern Mediterranean and Africa regions.
- Live vaccine, do not give to pregnant women
- Considered immune after 2 doses of MMR or serological evidence
- Measles vaccination during the 72 hours after measles exposure may be protective. (PEP)