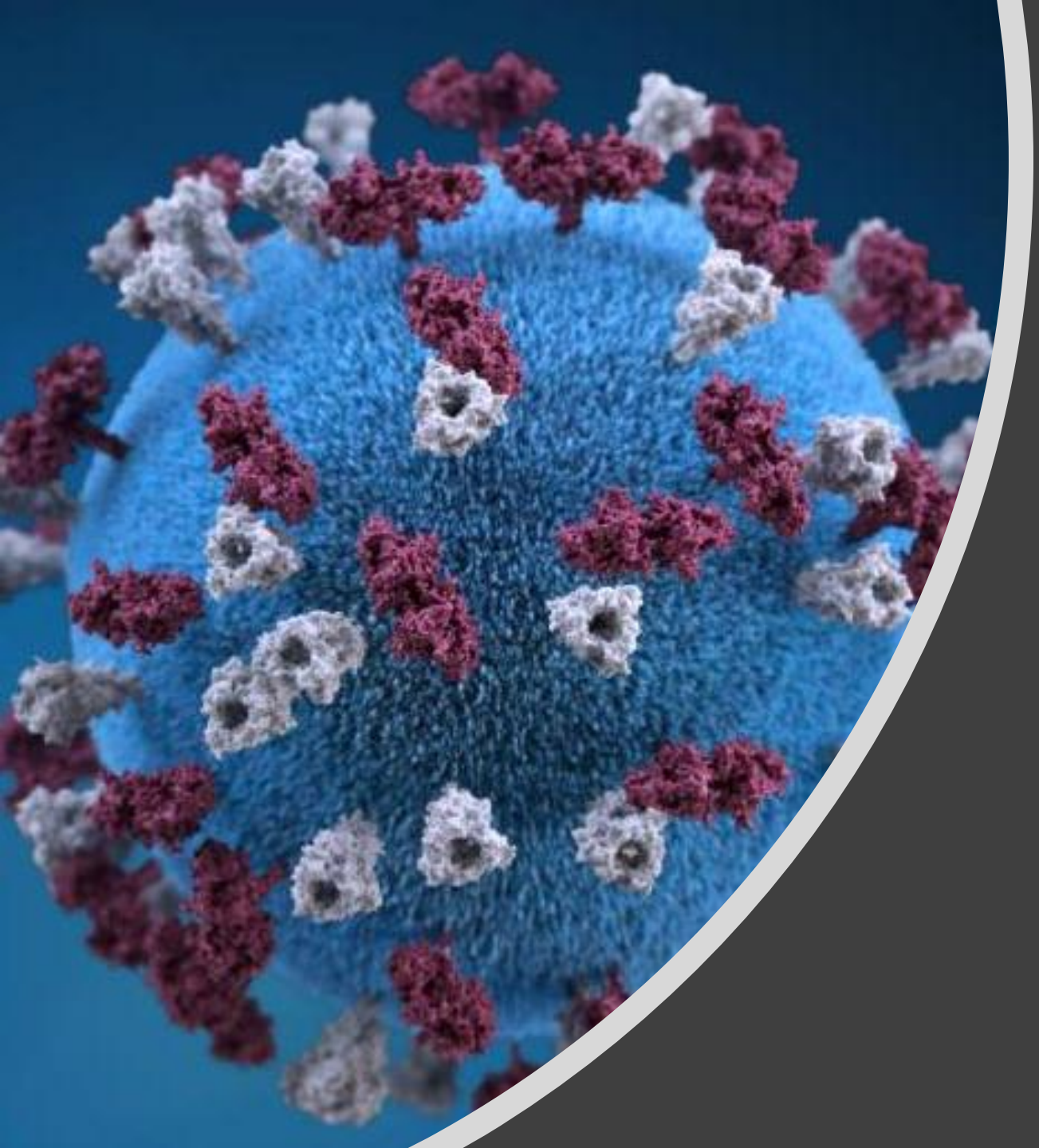


Measles for the Provider

Jeff Lee, RN

Epidemiologist

Measles (Rubeola)

- Single-stranded, enveloped RNA virus with 1 Serotype
- Family Paramyxoviridae, Genus Morbillivirus
- One of the most highly communicable of all infectious diseases
- Humans are the only known reservoir

Transmission

- Direct contact with nasal or throat secretions
- Airborne by droplet spread
- May persist in its airborne state for up to 2 hours after carrier leaves.
- Secondary attack rate in susceptible populations is 90%

Incubation Period

- Full incubation period is 7 to 21 days
- Typically prodrome onset at 10 days
- Typically rash appears around day 14
- IG may prolong incubation period to 28 days

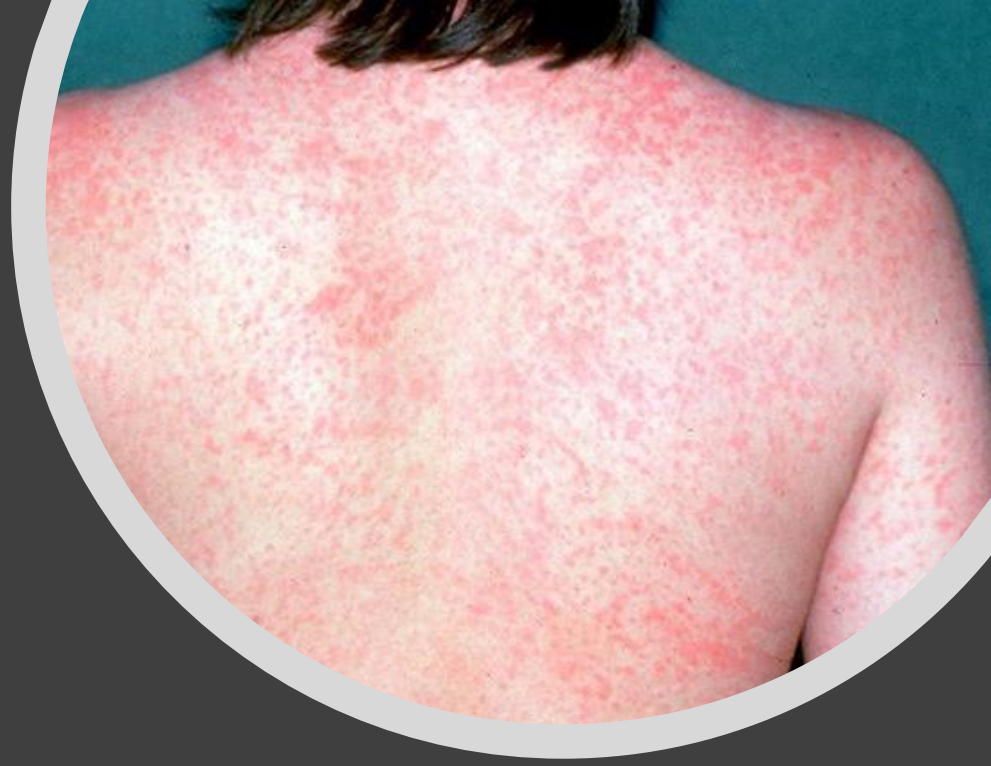
Prodrome

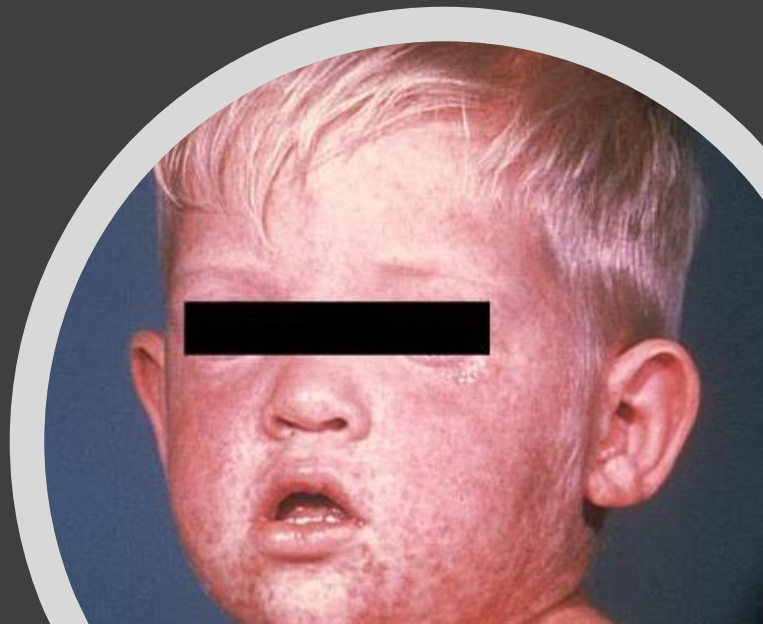
- Acute onset of fever increasing in a step-wise fashion to as high as 105^{o} F (40.6^{o} C)
- Cough, coryza and/or conjunctivitis
- Koplik Spots

Koplik Spots white specs found in the oral mucosa

Rash

- Spreads from head to trunk to lower extremities
- Person is infectious from 4 days before to 4 days after rash onset





Complications

Subacute sclerosing panencephalitis (SSPE)	• Rare but fatal degenerative disease of CNS • Appears 7-10 years after the measles infection
1/1000 cases will develop acute encephalitis	• Often results in permanent brain damage
1-3/1000 infected children will die from complications	• Respiratory • neurological

People at High Risk for Complications

Infants and children < 5 years old

Adults > 20 years old

Pregnant Women

Immunocompromised people

Treatment

Support and tincture of time

In severe cases (e.g. requiring hospitalization) treat pediatric patients with Vitamin A

- < 6 months old : 50,000 iu
- 6-11 months old: 100,000 iu
- ≥ 12 months old: 200,000 iu

Post-Exposure Prophylaxis

1 dose of MMR given within 72 hours of exposure

- MMR should not be given 6-45 days post exposure

Immune Globulin given within 6 days of exposure

- Contacts < 1 year old
- Pregnant women
- Immunocompromised
- Follow up with 1ST dose of MMR no less than 5 months later

Vaccination - Routine

Annual cases in US have dropped by 99% since introduction of vaccine

CDC and APIC recommend MMR for all persons born on/after 1 Jan 1957

Pediatric patients – 2 doses

- Dose 1 at 12 to 15 months
- Dose 2 at 4-6 years old (school age)

Adults patients – 1 dose

Vaccination – Adult Exceptions

- 2 doses (given at least 28 days apart)
  - HIV infection: CD4 ≥ 200 cells/µL for at least 6 months and no evidence of immunity
  - Students in postsecondary educational institutions
  - International travelers
  - Household or close personal contacts w/ no evidence of immunity
    - Only 1 dose required if they had previously received a dose of MMR
  - Healthcare personnel born on/after 1 Jan 1957
    - Only 1 dose required if they had previously received a dose of MMR

Testing

Testing should only be done for clinically compatible symptomatic patients who are un- or under-vaccinated

When there is a decision to test, collect both serologies and swabs

Serologies (IgM/IgG)

- Collect acute phase serum ASAP upon suspicion of measles
- Note: IgM may not be detectable until 3 days after onset of sx
  - May need to collect another specimen 3-10 days s/p sx onset

RNA PCR (throat/NP swab)

- Most successful when obtained w/in first 3 days of rash onset
- May collect up through day 10 post rash onset

Seeing the Patients

Scheduling Symptomatic Patients to be Seen

If possible, schedule visits towards the end of the day

Instruct patients to call from home before coming in

Patient calls again from parking lot

- Mask the patient(s)
- Escort them directly to exam room
- Avoid the main patient entrance and waiting room

Infection Control/Room Decontamination

- All staff seeing patients need to be up to date on MMR vaccination
- All staff with direct patient contact should wear N-95 or better respirator
- Leave door closed while patient is roomed
- Use gloves
- Adhere to strict hand hygiene
- Clean exam room surfaces with disinfectants effective against enveloped viruses
- Leave room empty with door closed for two hours after patient leaves

Reporting

Report all suspected measles cases to public health within 24 hours

- Faxed report – 208-772-3920 (24/7 – use fax report form)
- Phone report – 208-771-0271 (during normal business hours)
- Phone Report – 800-632-8000 (State Comm for nights, weekends and holidays)

If a measles infected person has come in to the waiting room

- Make note of all patients in waiting room from time of first exposure until 2 hours after the infected person left the waiting room
- Make note of all un-/under-vaccinated staff in office while infected patient was there and for 2 hours after the patient left.

Take Away Points

Protect staff and patients

Test appropriately for measles

Report ALL suspected, probable and confirmed cases to public health within 24 hours of diagnosis

Online Resources

https://www.cdc.gov/measles/hcp/index.html

http://panhandlehealthdistrict.org/immunization#tab-1-3

https://healthandwelfare.idaho.gov/Health/Labs/tabid/99/Default.aspx

http://healthandwelfare.idaho.gov/Health/Epidemiology/tabid/111/Default.aspx