Measles prevention and response in the healthcare setting

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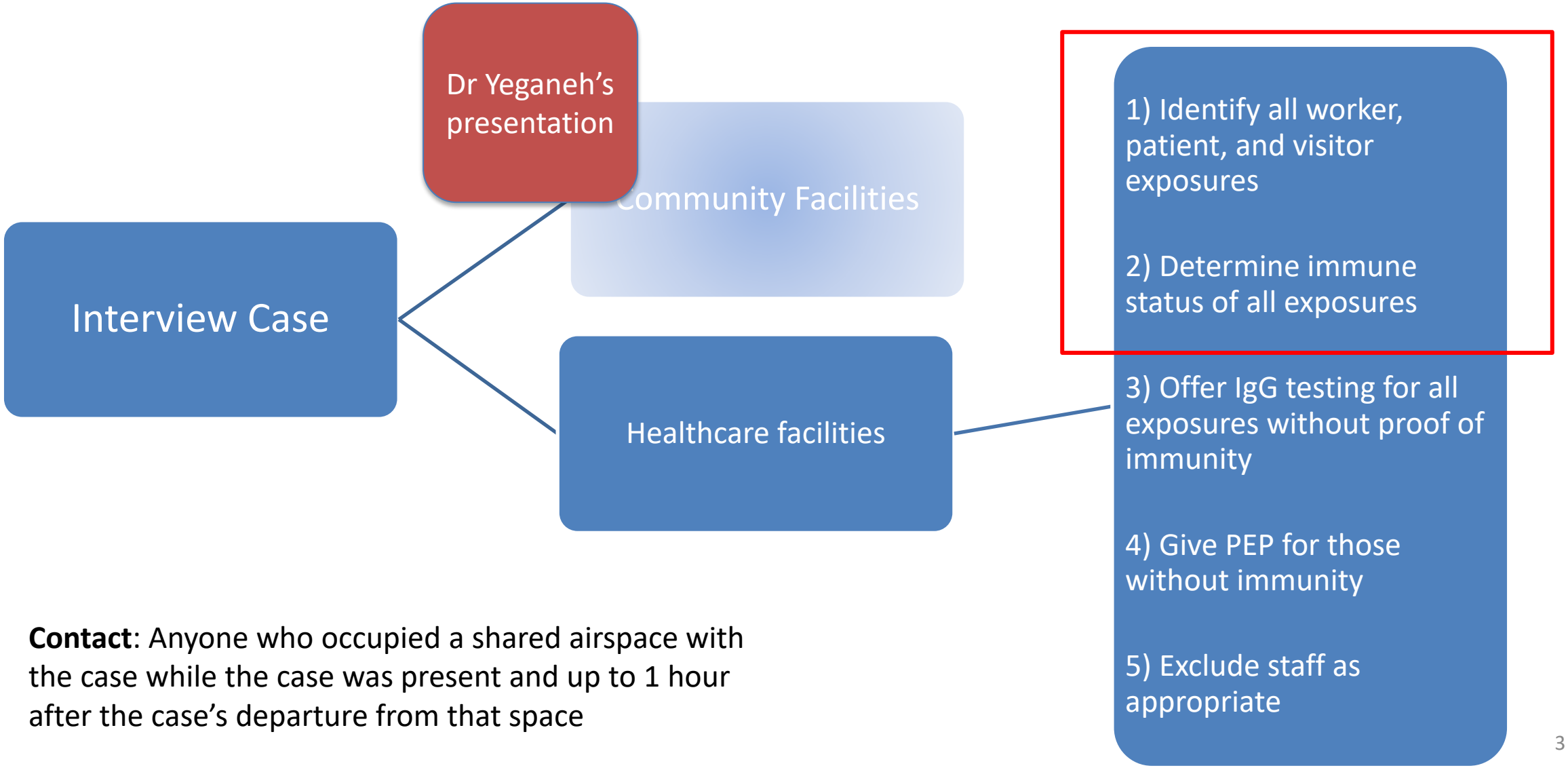
Vaccine Preventable Disease Program

Outline

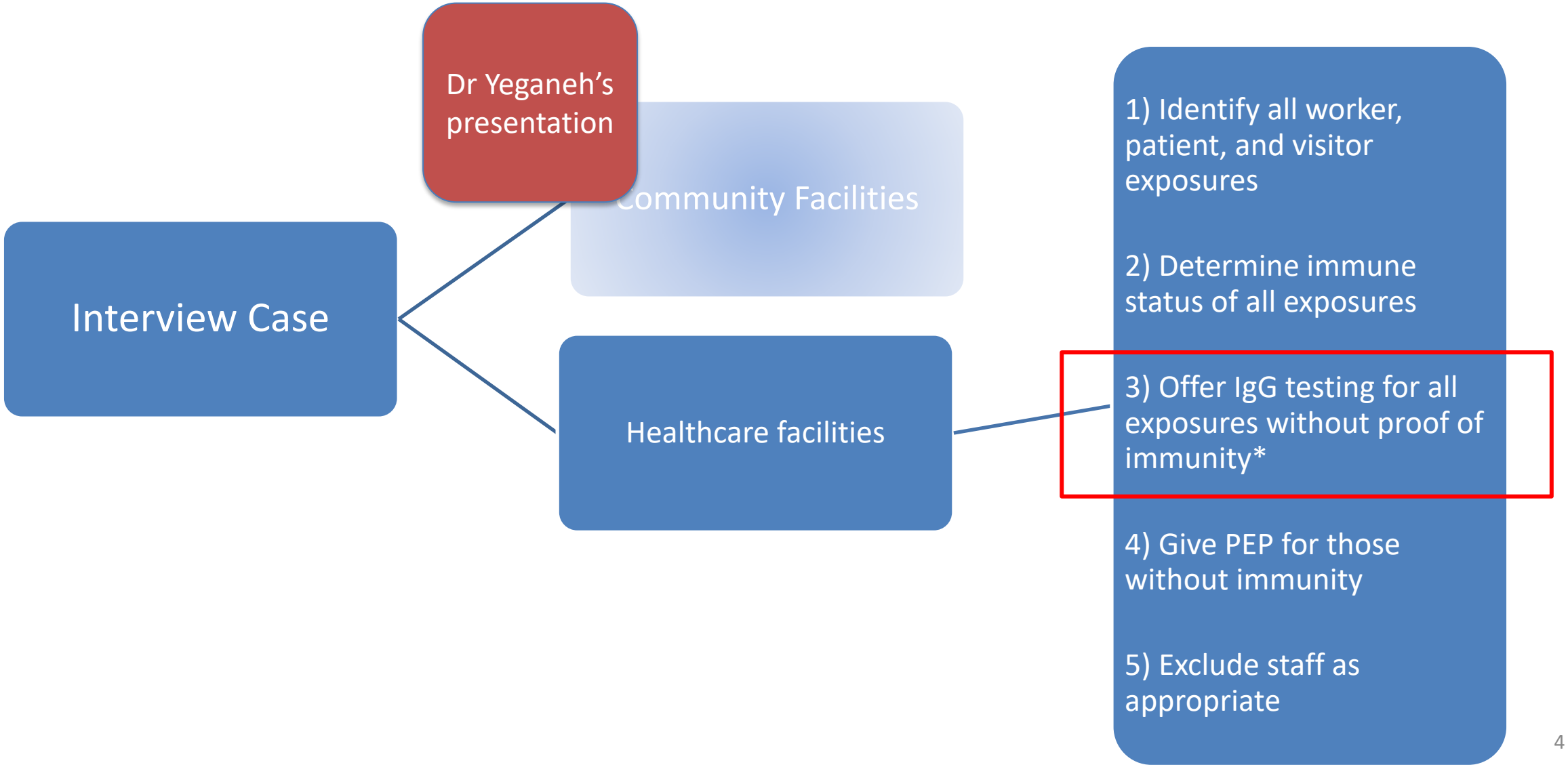
- Contact tracing responsibilities for healthcare facilities
  - Facility and DPH roles
  - Expectations for handling exposed staff
- How to prevent measles transmission in the healthcare setting
  - Establishing staff immune status
  - Appropriate triaging
  - Infection prevention principles

Public Health responsibilities

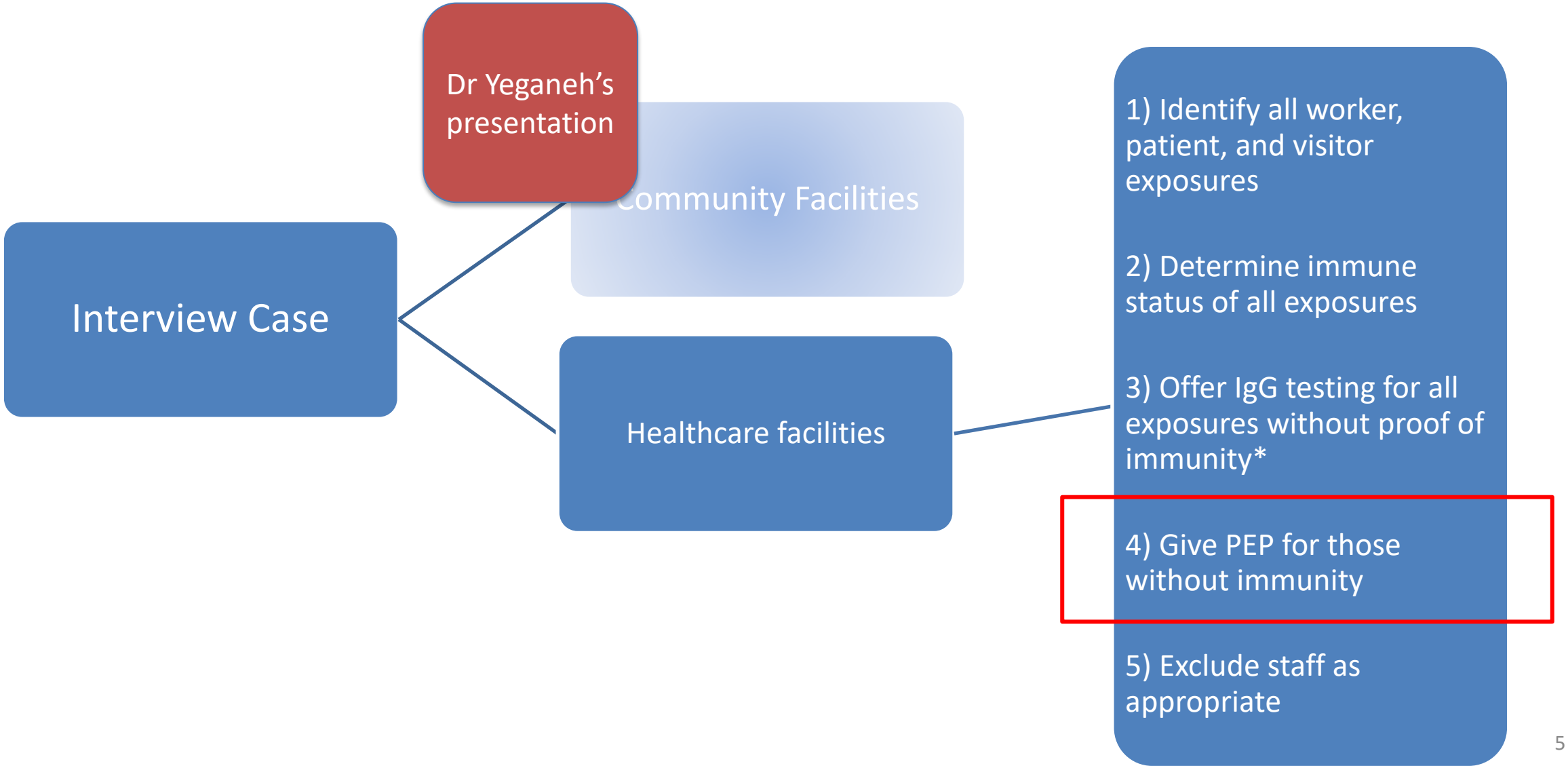


Contact: Anyone who occupied a shared airspace with the case while the case was present and up to 1 hour after the case's departure from that space

Public Health responsibilities



Public Health responsibilities



Post Exposure prophylaxis

PEP within the target window may provide measles protection or modify the clinical course of disease among susceptible people

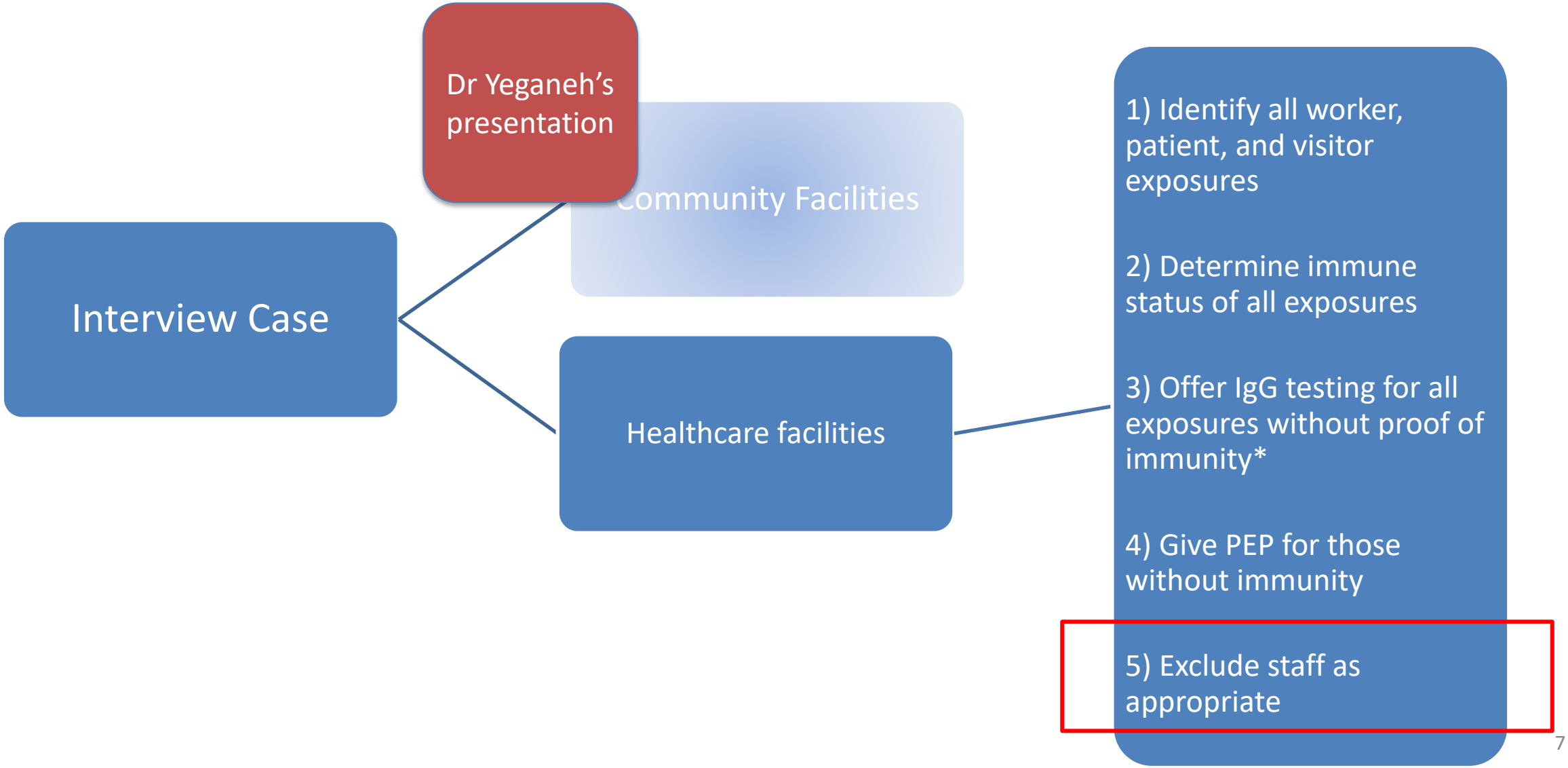
MMR

- Should be given within 72 hours (3 days) of initial measles exposure
- Vaccination can be given after this window, but would only be expected to protect from future exposures and is not considered “adequate PEP”

Immunoglobulin

- Needs to be given within 6 days of initial exposure
- Can be given intramuscularly (IMIG) or intravenously (IVIG)
  - IVIG should be prioritized for adults at high risk of severe disease

Public Health responsibilities



If there is no evidence of immunity: Exclusion vs Quarantine

- Quarantine: Home isolation for non-immune contacts who have not received PEP
  - If quarantine is implemented, it should begin on day 7 after the date of first exposure through day 21 after the date of last exposure.
- Exclusion for healthcare workers
  - Should begin on day 5 after the date of first exposure through day 21 after the date of last exposure (day of exposure is day 0)
  - Exclusion is required for anyone without 2 documented MMRs or serologic evidence of immunity, even if they received PEP

Contacts who work in a healthcare setting or other high-risk setting	IgG testing*	PEP	Quarantine if no PEP‡	Exclusion§	Monitoring
High-risk for severe disease due to personal medical history and without 2 documented MMR vaccine doses or serologic evidence of immunity	See Table 1				
Low risk for severe disease and with 1 documented MMR vaccine dose and no serologic evidence of immunity	Yes	MMR	No	Yes	Active
Low risk for severe disease and with no documented MMR vaccine doses and no serologic evidence of immunity	Yes	MMR	Yes	Yes	Active
With 2 documented MMR vaccine doses or serologic evidence of immunity	No	No	No	No	Passive

County of Los Angeles Public Health

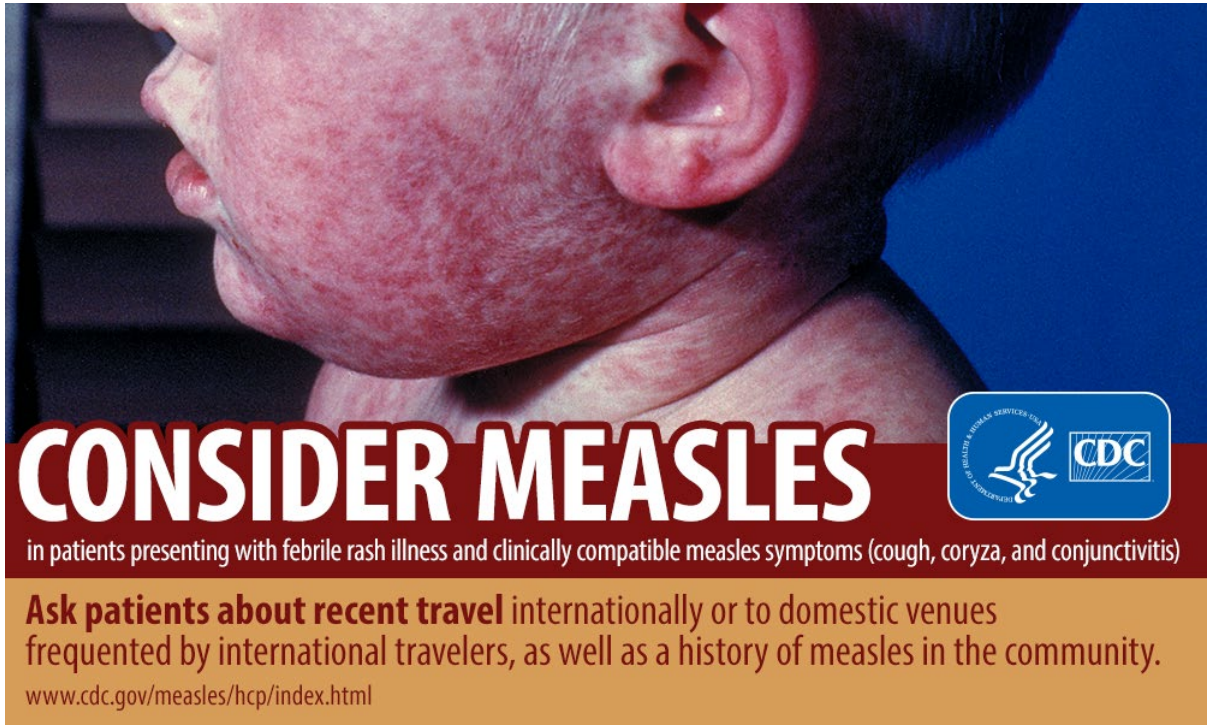
How to prepare your facility for measles

Accounting for staff immunity

- Obtain documentation of measles immunity at hiring or ASAP
  - Consider offering IgG testing for any worker unable to provide documentation
  - Consider offering MMR for any non-immune workers
- Those born before 1957 are presumed immune, but should be considered for vaccination anyway if they do not have other evidence of immunity
  - CDC advises people in this group receive 2 doses of MMR during outbreak scenarios
- Use incidence of cases to re-engage staff regarding immunity testing or receiving MMR vaccine.

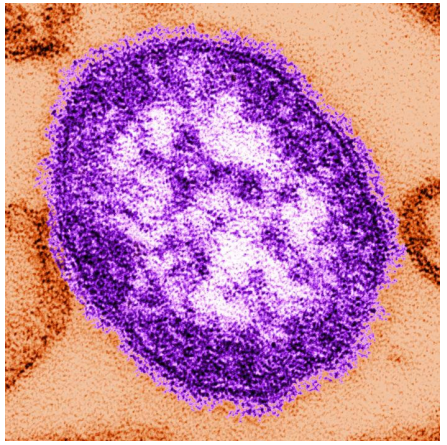
When to suspect measles

- Any patient with fever and rash with cough, runny nose, and conjunctivitis who:
  - Is unvaccinated or under-vaccinated
  - Has recent travel, especially internationally or through a US international airport
  - Had contact with another person with a febrile rash illness
  - Was exposed to a known or possible measles case



Preparing staff

- Hospitals that are prepared for measles avoid exposure follow-up when measles cases present
- Consider the following preparations:
  - Post measles warning outside of ED
  - Educate triage to identify potential cases upon entry to ED and divert these individuals to appropriate isolated areas
  - Ensure good adherence to respiratory hygiene, cough etiquette, and hand hygiene among staff
  - If cases have been detected in the community, consider screening visitors prior to entry



Photos courtesy of CDC image library

Triaging and infection prevention

- Immediately place any suspect case into **private airborne isolation room**
  - Airborne precautions remain in place **until 4 days after rash onset**
    - Severely immunocompromised patients require airborne precautions for duration of illness
- Any workers without documented presumptive evidence of measles immunity should be excluded from contact with the suspect case if immune workers are available

Traffic control

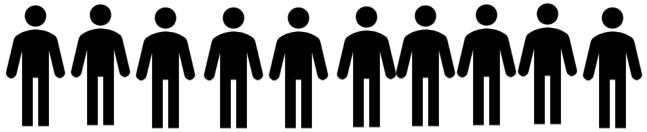
- Limit suspect case's transportation outside of their room – use for essential diagnostic and therapeutic procedures only
  - Patient should **always be wearing facemask during transport**
  - Transport route and process should include minimal contact with person's not essential to patient's care
- Limit suspect case's visitors to those who are both necessary for the patient's well-being and have presumptive evidence of immunity

Considerations on Cleaning, Disinfection, and Regulated Medical Waste

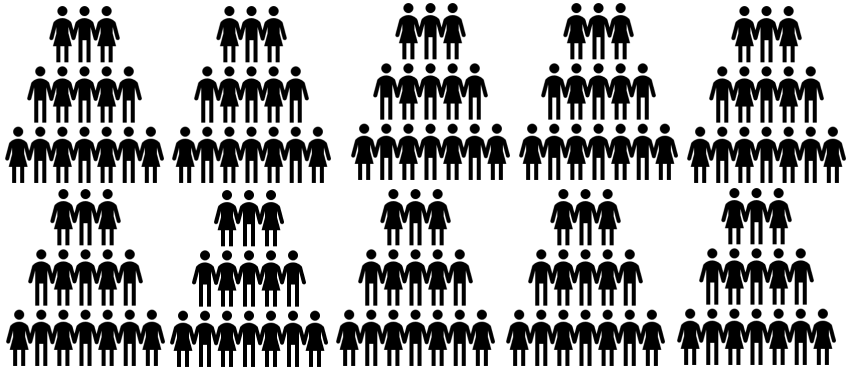
- **Standard cleaning and disinfection procedures are appropriate for measles**
- **EPA-registered disinfectants should be used per the manufacturer's instructions for use**
- **No special management of measles waste is required**
  - Follow federal and local regulations for management of regulated medical waste

Measles: 2 examples

- Hospital A
  - Exposures:
    - HCW = 11 (10 immune)
    - Pts = 0
  - Closed in 2 days after 1 HCW titer required

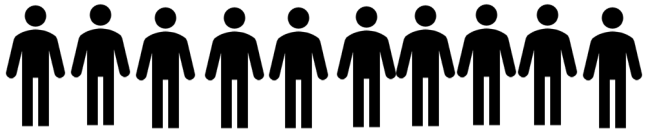


- Hospital B
  - Exposures:
    - HCW = 53
    - Pts = 99
  - Required multiple vaccinations and titers of HCW, pts
  - Took 2+ weeks of work to close all cases



Measles: 2 examples

- Hospital A
  - Posted signage
  - Triaged to NPIR immediately
  - Had provider immune status to measles available
  - Escort with mask through back door (avoiding ED)



- Hospital B
  - Prolonged wait in ED waiting room
  - Prolonged wait in ED before being placed in NPIR
  - Provider measles immune status not available