Ask an IP
Learning and Communication Series
Measles 101

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Disclosures

There is no commercial support for today's call

Neither the speakers nor planners for today's call have disclosed any financial interests related to the content of the meeting

This call is meant for healthcare facilities and is off the record and reporters should log off now

Housekeeping

- **Microphones** are disabled. For questions, please use the chat.
- **Cameras:** please keep them turned off during the presentation.
- **Recording**: the presentation is being recorded and will be posted on the Ask an IP Website within a week following the session.
- We will not review COVID-19 guidelines (including CDPH AFLs) during these sessions.

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Contact Us: LACSNF@ph.lacounty.gov

Website:
http://publichealth.lacounty.gov/acd/AskAnIPProgram/index.htm

Questions

If you have any questions, please hold on to them until the Q & A portion at the end of the session.

Some of your questions that arise throughout the presentation may be answered during the presentation.

Thank you☺

Objectives

- Identify the early clinical signs of measles, including fever and the “three C’s,” to ensure rapid detection
- Understand what transmission-based precautions to implement and strategies to prevent transmission within the facility and community
- Apply current Los Angeles reporting protocols and vaccine verification standards for both residents and staff

Measles 101: The Basics

Overview of Measles: Why is it concerning?

- Measles is one of the most contagious infectious diseases and can lead to severe illness and death
  - This is why it's important for everyone in your facility to be prepared to recognize possible measles and take action to prevent spread in your facility
  - The best way to protect healthcare workers from measles is to ensure they are up to date on MMR vaccinations

Overview of Measles: What exactly is it?

- Measles is a respiratory virus
- Early symptoms can seem like a common cold and include fever, cough, runny nose, red and watery eyes, and/or tiny white spots in the mouth
- Measles virus lives in the nose and throat of infected people
- Can spread to others through airborne droplets, some of which can remain in the air for up to two hours after an infected person leaves the area

Overview of Measles: What about the rash?

- A rash generally occurs three to five days after symptoms begin and usually appears on the face and behind the ears first and then spreads down the body

Overview of Measles: why is it concerning for SNFs?

- Measles cases have been rising in the US, including cases in California, and more specifically Los Angeles County over the last two years
- SNFs are congregate living settings, with shared air and common spaces which increases transmission risk
- Elderly and immunocompromised residents may not present with “classic” high fever and textbook rash, leading to missed diagnoses
- Our population is vulnerable
- High staff turnover in SNF can lead to gaps in vaccination records

Audience Question

- How many confirmed cases of Measles were there in California in 2025?

CDPH Statistics

- In 2023, there were 4 cases in California
- In 2024, there were 15 cases
- **In 2025 there were 25…IT'S ON THE RISE!**

The Importance of Managing Vaccination Status

- It is best practice to keep track of both resident and staff vaccination status in the event of an exposure
- Residents
  - Typically assessed upon admission.
  - Most residents born before 1957 are presumed immune, but verification or lab evidence (titer) confirmation makes it safer
- Staff
  - Evidence of Immunity: Documentation of 2 doses of MMR, or lab evidence (titer) of immunity

Reminder

- If you have an outbreak, you will be asked by Public Health to produce a list of non-immune staff immediately

Audience Question

- How many doses of MMR are recommended for healthcare workers if their titer shows up as non-immune to measles??

Vaccination & Schedule

- Adults without evidence of immunity should get at least one dose
- **High risk groups like healthcare workers need two doses, separated by at least 28 days**
- In California, 2 doses of MMR vaccine are recommended for children
  - Typically, the first dose is between 12-15 months old; the second dose before school entry (4-6 years old, or sooner in some cases)
- 1 dose: ~93%
- 2 dose: ~97%

Identification

Clinical Recognition: Signs and Symptoms

- **Prodrome (early phase):** high fever and the 3C's
  - Cough
  - Coryza (common cold symptoms/inflammation of the nasal mucous membranes)
  - Conjunctivitis

Clinical Recognition: Signs and Symptoms

- **Prodrome (Early phase):** Koplik spots:(tiny white spots inside the mouth), which appear 2-3 days before rash

Koplik's spots

- Resembling tiny grains of white sand surrounded by inflammatory areolae
- Buccal mucosa opposite the 1st and 2nd upper molars

Clinical Recognition: Signs and Symptoms

- Widespread rash appears 3-5 days after symptoms start

Clinical Recognition: Additional Risk Considerations

- Spent time in an area in the U.S. with a known measles outbreak
- Recently been around someone else with measles
- Traveled internationally in the last 21 days
- Not been vaccinated for measles or don’t know vaccination status

Clinical Recognition: Additional Consideration

- If your facility is located in an area where measles is known to be spreading, anyone with measles symptoms should be considered to have measles until you can rule it out

Audience Question

- What type of transmission based precautions would you use for a resident with Measles?

Audience Question

- What type of transmission-based precautions would you use for a resident with Measles?
- **Answer: Airborne Precautions**

Airborne Precautions

Note: NOT the same as Novel Respiratory Precautions

INFECTION PREVENTIONISTS & DIRECTORS OF NURSING:
PLEASE SEE BACK OF THE FORM FOR URGENT INSTRUCTIONS

STOP

ALTO

Airborne Precautions

Medidas de Precaución por Transmisión Aérea

See nurse before entering the room

Vea a la enfermera(o) antes de entrar al cuarto

Clean hands on room entry	Wear an N-95 respirator	Always keep door closed	Clean hands when exiting
Límpiese las manos antes de entrar al cuarto	Use un respirador N-95	Mantenga la puerta siempre cerrada	Límpiese las manos al salir

At discharge, keep door closed for ___ HOUR(s) prior to admitting next resident

Al dar de alta al paciente, mantenga la puerta cerrada durante ____ HORA(s) antes de admitir al siguiente residente

Content adapted from UCLA Health Infectious Disease Signs

Airborne Precautions

NOTE THIS IS NOT INTENDED FOR NOVEL RESPIRATORY DISEASES

Facilities must isolate in an Airborne Infection Isolation Room (AIIR) per Cal-OSHA Aerosol Transmissible Disease (ATD) Standards. If the facility is not equipped with a functioning AIIR, they must transfer the patient to a facility that does have an AIIR in *5 hours or less*. Facilities may follow these instructions and use this signage in the interim while awaiting for transfer.

Hand Hygiene
Clean hands when entering room and when leaving the room.

PPE
- Wear a fit-tested respirator (N-95 or higher). **Note that for visitors without fit-tested respirators available, provide respirators on-hand with seal checks.**
- Dispose of all PPE before leaving the resident care area. Dispose of mask in the room. PPE is single use.

For Varicella (chickenpox), disseminated zoster, or measles (rubeola):
- If you are immune to varicella or measles, you do not need to wear respiratory protection.
- If you are susceptible (i.e., non-immune), or unaware of your status, report to your supervisor or nurses' station.

Room Assignment
- Door must be closed at all times, including when the resident is out of room.

Visitors
- Visitors shall follow Airborne Precautions as outlined above.
- for visitors without fit-tested respirators available, provide respirators on-hand with seal checks.

Resident Transport
- If transport is necessary, place a medical-grade mask on the resident.
- Notify the receiving department or facility that Airborne Precautions are required. Use the LAC DPH Infectious Organism Transfer form: http://publichealth.lacounty.gov/acd/docs/InterfacilityTransfersGuide.pdf
- Practice hand hygiene before and after transporting the resident.

Room Cleaning
- Use standard precautions.
- **DISCHARGE CLEANING:** The room should remain unoccupied for enough time to allow for complete air exchange to occur. There should be at least 6 to 12 air exchanges per hour, and air should be directly exhausted to the outside. In most facilities, this time is usually 2-3 hours, depending on the air handling capacity of the facility.

Ambulation
- Resident should only leave room for necessary treatment, e.g., radiology or surgery.
- Resident shall wear a medical-grade mask for the entire duration they are outside the room.

Please scan the QR code on the right to view the CDC's Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings

Content adapted from UCLA Health Infectious Disease Signs

Los Angeles County Department of Public Health
publichealth.lacounty.gov/acd/SNF.htm
Airborne Precaution Rev. 9-9-24

Disease Management and Precautions

- Airborne Precautions + Standard Precautions
- **Immediate Action**
  - **Isolate:** place resident in single room Airborne Infection Isolation Room (AIIR) or negative pressure room with door closed
  - **Protect:** Staff must wear fit-tested N95 mask before entering room
  - **Mask the resident:** If the resident must be moved or transferred

But we don't have an AIIR or negative pressure room?

- If you do not have an AIIR or negative pressure room then you must transfer to a facility that does immediately (within 5 hours or less)
- Ensure that your staff wear fit-tested N95 and keep door closed and minimize entry until you can arrange a transfer
- Keep track of possible exposures

Transfer Protocol

- If you're facility does not have an AIIR or negative pressure room, this is your only option, per Cal-OSHA
- You will notify the receiving facility (hospital/EMS) before transport so they can prepare airborne isolation
- Before transporting the resident, make sure they are wearing, at minimum, a surgical mask during transport
- Complete the infectious organism transfer form

“Down Time”

- Do not enter the vacated room without an N95 for at least 2-3 hours depending on air changes per hour
- Should be at least 6-12 air changes per hour, with air directly exhausted to the outside
- Leave the room empty with door closed to allow the virus to settle/vent

Cleaning and Disinfection Considerations

- Cleaning and Disinfection: After the “down time” ensure you are using disinfectant that is effective against Measles.
  - You can review the disinfectant label to see if it kills this specific virus

Exposure Response: Staff

- **Immune staff**: no work restriction needed, monitor for symptoms
- **Non-immune staff:** exclude from work from day 5 after first exposure through day 21 after last exposure
- This is why it's handy to know their vaccination status ahead of time

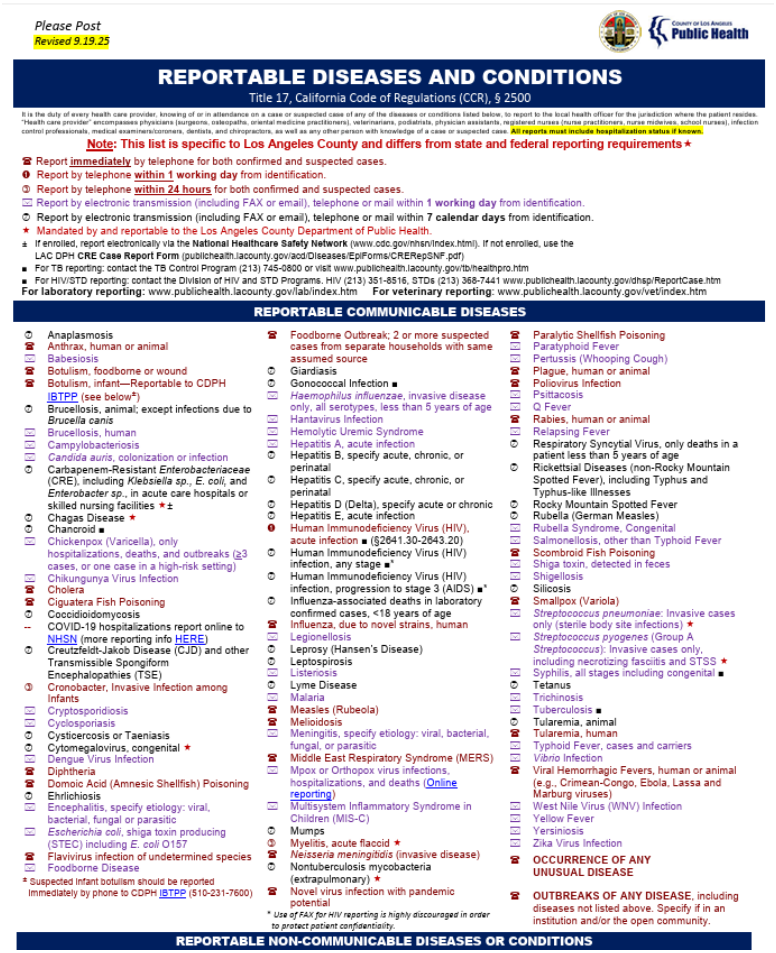
Exposure Response: Residents

- Assess immunity upon admission
- Non-immune residents exposed to measles may need PEP (Post-Exposure Prophylaxis)- MMR vaccine (within 72 hours) or Immune Globulin, IG (within 6 days)

Audience Question

- Is measles a reportable disease in Los Angeles County?

Reportable Disease List



Please Post
Revised 9.19.25

REPORTABLE DISEASES AND CONDITIONS

Title 17, California Code of Regulations (CCR), § 2500

It is the duty of every health care provider, knowing of or in attendance on a case or suspected case of any of the diseases or conditions listed below, to report to the local health officer for the jurisdiction where the patient resides. "Health care provider" encompasses physicians (surgeons, osteopaths, oriental medicine practitioners), veterinarians, podiatrists, physician assistants, registered nurses (nurse practitioners, nurse midwives, school nurses), infection control professionals, medical examiners/coroners, dentists, and chiropractors, as well as any other person with knowledge of a case or suspected case. **All reports must include hospitalization status if known.**

Note: This list is specific to Los Angeles County and differs from state and federal reporting requirements ★

☎ Report **immediately** by telephone for both confirmed and suspected cases.
❶ Report by telephone **within 1 working day** from identification.
① Report by telephone **within 24 hours** for both confirmed and suspected cases.
✉ Report by electronic transmission (including FAX or email), telephone or mail within **1 working day** from identification.
⑦ Report by electronic transmission (including FAX or email), telephone or mail within **7 calendar days** from identification.
★ Mandated by and reportable to the Los Angeles County Department of Public Health.
± If enrolled, report electronically via the **National Healthcare Safety Network** (www.cdc.gov/nhsn/index.html). If not enrolled, use the LAC DPH **CRE Case Report Form** (publichealth.lacounty.gov/acd/Diseases/EpiForms/CRERepSNF.pdf)
■ For TB reporting: contact the TB Control Program (213) 745-0800 or visit www.publichealth.lacounty.gov/tb/healthpro.htm
■ For HIV/STD reporting: contact the Division of HIV and STD Programs. HIV (213) 351-8516, STDs (213) 368-7441 www.publichealth.lacounty.gov/dhsp/ReportCase.htm
For laboratory reporting: www.publichealth.lacounty.gov/lab/index.htm **For veterinary reporting:** www.publichealth.lacounty.gov/vet/index.htm

REPORTABLE COMMUNICABLE DISEASES

⑦ Anaplasmosis
☎ Anthrax, human or animal
✉ Babesiosis
☎ Botulism, foodborne or wound
☎ Botulism, infant—Reportable to CDPH IBTPP (see below*)
⑦ Brucellosis, animal; except infections due to *Brucella canis*
✉ Brucellosis, human
✉ Campylobacteriosis
✉ *Candida auris*, colonization or infection
⑦ Carbapenem-Resistant *Enterobacteriaceae* (CRE), including *Klebsiella sp., E. coli*, and *Enterobacter sp.*, in acute care hospitals or skilled nursing facilities ★±
⑦ Chagas Disease ★
⑦ Chancroid ■
✉ Chickenpox (Varicella), only hospitalizations, deaths, and outbreaks (≥3 cases, or one case in a high-risk setting)
✉ Chikungunya Virus Infection
☎ Cholera
☎ Ciguatera Fish Poisoning
⑦ Coccidioidomycosis
-- COVID-19 hospitalizations report online to NHSN (more reporting info HERE)
⑦ Creutzfeldt-Jakob Disease (CJD) and other Transmissible Spongiform Encephalopathies (TSE)
① Cronobacter, Invasive Infection among Infants
✉ Cryptosporidiosis
✉ Cyclosporiasis
⑦ Cysticercosis or Taeniasis
⑦ Cytomegalovirus, congenital ★
✉ Dengue Virus Infection
☎ Diphtheria
☎ Domoic Acid (Amnesic Shellfish) Poisoning
⑦ Ehrlichiosis
✉ Encephalitis, specify etiology: viral, bacterial, fungal or parasitic
✉ *Escherichia coli*, shiga toxin producing (STEC) including *E. coli* O157
☎ Flavivirus infection of undetermined species
✉ Foodborne Disease
* Suspected infant botulism should be reported immediately by phone to CDPH IBTPP (510-231-7600)

☎ Foodborne Outbreak; 2 or more suspected cases from separate households with same assumed source
⑦ Giardiasis
⑦ Gonococcal Infection ■
✉ *Haemophilus influenzae*, invasive disease only, all serotypes, less than 5 years of age
✉ Hantavirus Infection
✉ Hemolytic Uremic Syndrome
✉ Hepatitis A, acute infection
⑦ Hepatitis B, specify acute, chronic, or perinatal
⑦ Hepatitis C, specify acute, chronic, or perinatal
⑦ Hepatitis D (Delta), specify acute or chronic
⑦ Hepatitis E, acute infection
❶ Human Immunodeficiency Virus (HIV), acute infection ■ (§2641.30-2643.20)
⑦ Human Immunodeficiency Virus (HIV) infection, any stage ■*
⑦ Human Immunodeficiency Virus (HIV) infection, progression to stage 3 (AIDS) ■*
⑦ Influenza-associated deaths in laboratory confirmed cases, <18 years of age
☎ Influenza, due to novel strains, human
✉ Legionellosis
⑦ Leprosy (Hansen's Disease)
⑦ Leptospirosis
✉ Listeriosis
⑦ Lyme Disease
✉ Malaria
☎ Measles (Rubeola)
☎ Melioidosis
✉ Meningitis, specify etiology: viral, bacterial, fungal, or parasitic
☎ Middle East Respiratory Syndrome (MERS)
✉ Mpox or Orthopox virus infections, hospitalizations, and deaths (Online reporting)
✉ Multisystem Inflammatory Syndrome in Children (MIS-C)
⑦ Mumps
① Myelitis, acute flaccid ★
☎ *Neisseria meningitidis* (invasive disease)
⑦ Nontuberculosis mycobacteria (extrapulmonary) ★
☎ Novel virus infection with pandemic potential
* *Use of FAX for HIV reporting is highly discouraged in order to protect patient confidentiality.*

☎ Paralytic Shellfish Poisoning
✉ Paratyphoid Fever
✉ Pertussis (Whooping Cough)
☎ Plague, human or animal
☎ Poliovirus Infection
✉ Psittacosis
✉ Q Fever
☎ Rabies, human or animal
✉ Relapsing Fever
⑦ Respiratory Syncytial Virus, only deaths in a patient less than 5 years of age
⑦ Rickettsial Diseases (non-Rocky Mountain Spotted Fever), including Typhus and Typhus-like Illnesses
⑦ Rocky Mountain Spotted Fever
⑦ Rubella (German Measles)
✉ Rubella Syndrome, Congenital
✉ Salmonellosis, other than Typhoid Fever
☎ Scombroid Fish Poisoning
✉ Shiga toxin, detected in feces
✉ Shigellosis
⑦ Silicosis
☎ Smallpox (Variola)
✉ *Streptococcus pneumoniae*: Invasive cases only (sterile body site infections) ★
✉ *Streptococcus pyogenes* (Group A *Streptococcus*): Invasive cases only, including necrotizing fasciitis and STSS ★
✉ Syphilis, all stages including congenital ■
⑦ Tetanus
✉ Trichinosis
✉ Tuberculosis ■
⑦ Tularemia, animal
☎ Tularemia, human
✉ Typhoid Fever, cases and carriers
✉ *Vibrio* Infection
☎ Viral Hemorrhagic Fevers, human or animal (e.g., Crimean-Congo, Ebola, Lassa and Marburg viruses)
✉ West Nile Virus (WNV) Infection
✉ Yellow Fever
✉ Yersiniosis
✉ Zika Virus Infection
☎ **OCCURRENCE OF ANY UNUSUAL DISEASE**
☎ **OUTBREAKS OF ANY DISEASE**, including diseases not listed above. Specify if in an institution and/or the open community.

REPORTABLE NON-COMMUNICABLE DISEASES OR CONDITIONS

Reporting Requirements

- Mandatory Reporting
- Report by phone immediately upon suspicion of measles
- Phone Number (Weekdays-8:30am-5:00pm)
  - 213-351-7800
- Phone Number (After Hours)
  - 213-974-1234
- You do not have to wait for lab confirmation before reporting!

Summary – Key Takeaways

- Quickly identify and place residents with known or suspected measles on precautions as soon as possible
- Assess, test, and manage patients in Airborne precaution room, and if that is not possible, select a private room with the door shut that doesn't vent air into the facility (until transfer)
- Properly use a fit-tested N-95 or higher-level respirator before room entry, even if you are vaccinated
  - Two doses of MMR vaccine protects people about 97% of the time.

Summary – Key Takeaways 2

- Recommend that residents wear a mask until appropriately inside an airborne precaution room and during transport
- Limit transport or movement of such residents outside the room unless medically necessary
- Continue Standard Precautions as well
  - Performing hand hygiene
  - Adhering to your facility's routine practices to clean and disinfect
  - Use additional PPE for specific tasks, if needed

Summary – Key Takeaways 3

- Notify local or state public health about a suspected measles case
- Collect samples for testing as directed by local or state health departments
- Manage residents with supportive care
- Every healthcare worker has a role to play in rapidly recognizing measles to prevent its spread in healthcare settings and in our communities

CDC PFL Measles Micro-Learn Resource

Resources 1

- CDC PFL Measles Microlearn
  - https://www.cdc.gov/project-firstline/media/pdfs/PFL-MeaslesMicroLearn.pdf
- LACDPH Measles Webpage + Vaccine Guidance
  - http://publichealth.lacounty.gov/ip/diseases/measles/index.htm
- CDC Measles
  - https://www.cdc.gov/measles/index.html

Resources 2

- CDC “Air” Document
  - https://www.cdc.gov/infection-control/hcp/environmental-control/appendix-b-air.html
- APIC Measles Playbook updated in 2025
  - https://apic.org/measles/
- CDPH Measles Webpage
  - https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/measles.aspx#

Questions