



MEASLES PREPAREDNESS: Guidance for Hospitals and Urgent Care Providers

Jordan Braunfeld, MD

June 18, 2025



Educational Objectives

- Describe the current measles situation on a global, national, and local level.
- Recognize key clinical features of measles.
- Implement appropriate infection control measures to reduce measles exposure in healthcare settings.
- Apply public health reporting requirements for measles cases.
- Utilize available tools and resources to help prepare facilities for measles cases.



All about measles



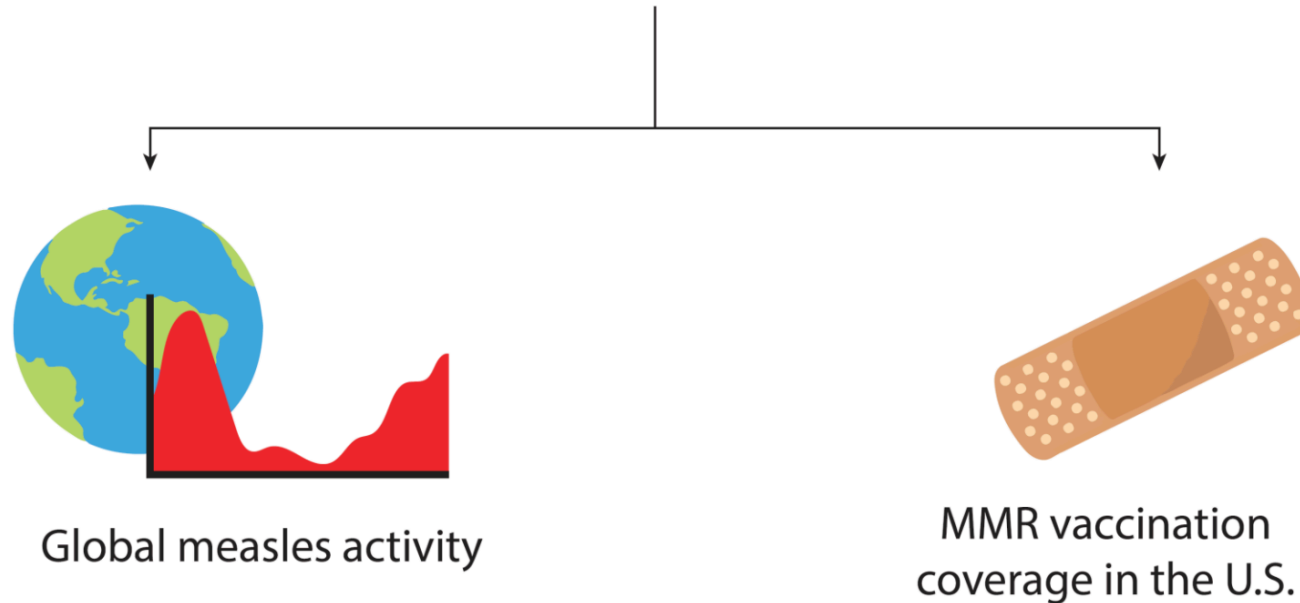
Outline

- What predicts transmission of measles
 - Epidemiology of measles
 - Vaccines and vaccination coverage
- Clinical diagnosis
- Actions taken to decrease transmission in the community
 - Post-exposure prophylaxis (PEP)
 - Notification
 - Risk assessment, exclusion, quarantine and monitoring

Measles overview

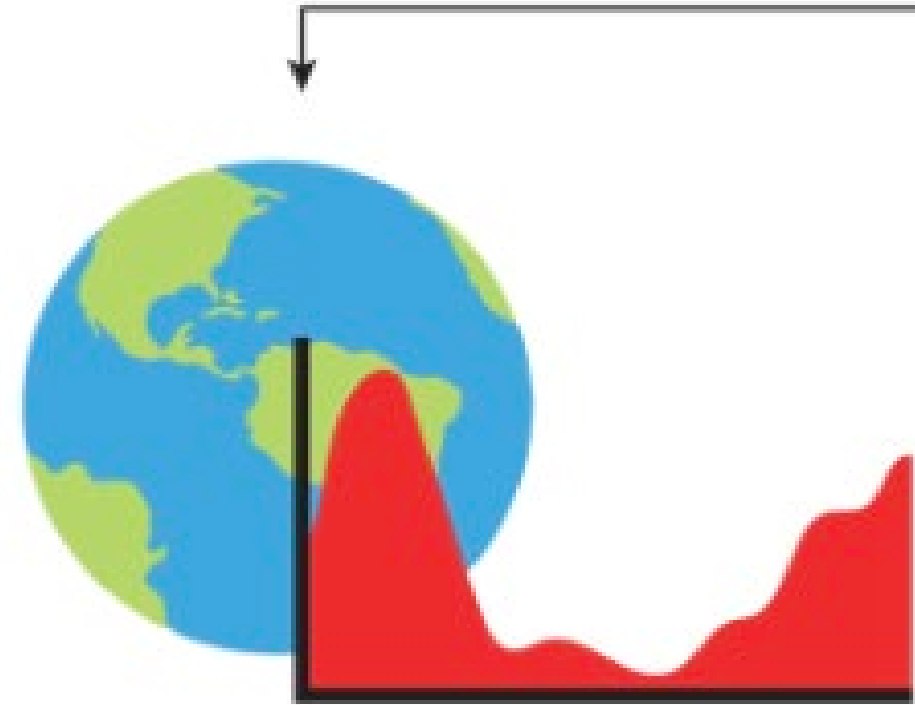
- Highly contagious viral illness
 - Spreads easily through the air through talking, breathing, coughing and sneezing
 - Can stay in the air and live on surfaces for 2 hours after case has left
 - 9 out of 10 people will become sick with measles if they are not protected
- Near universal infection in childhood in pre-vaccination era (before 1957)
- Need more than 95% immunization uptake to provide herd immunity

Measles outbreak risk in the U.S.
depends on two main factors:



<https://www.cdc.gov/ncird/whats-new/measles-outbreak-risk-in-us.html#>

Measles activity:
Globally
United States
LAC



Global measles activity



International Travel Risk

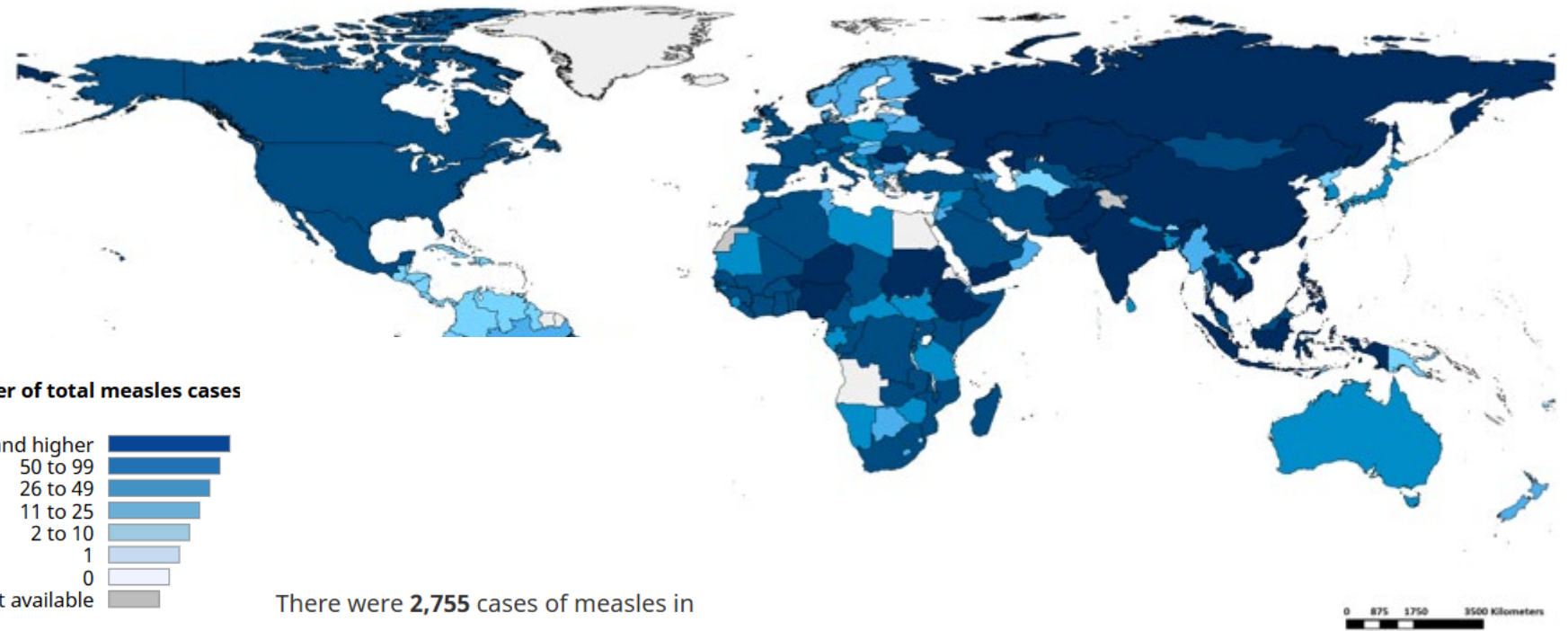




Top 10 countries with me

Country	Number of C
Yemen	10,487
Pakistan	8,895
India	8,397
Afghanistan	6,255
Ethiopia	6,188
Kyrgyzstan	5,849

Number of Reported Measles Cases (Last 6 months)



Disclaimer: The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

There were **2,755** cases of measles in **Canada** in 2025, as of **May 24, 2025**.

The epidemiological week **4** of the last rash onset in **Canada** was week **21** (May 18 to 24, 2025).

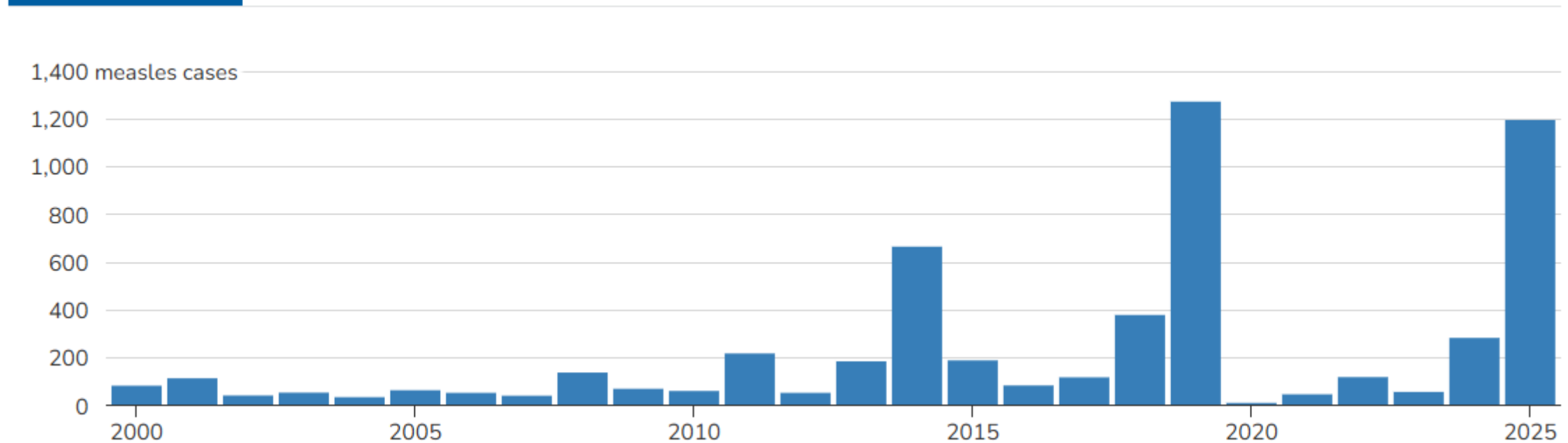
Source: Canadian government Health Infobase



Measles activity in the United States

2000–Present*

1985–Present*



Source: <https://www.cdc.gov/measles/data-research/index.html>

Accessed 6/13/2025



Measles Cases are on the rise

Total U.S. measles cases in 2024: 285

U.S. measles cases year to date: 1,197

Source: <https://www.cdc.gov/measles/data-research/index.html>

Accessed 6/13/2025

U.S. Measles Cases, 2025

- 17 outbreaks across several states:
 - Kansas (n=76)
 - Colorado
 - Indiana
 - New Mexico (n=81)
 - Oklahoma
 - Ohio
 - Montana
 - North Dakota
 - Texas (n=777)

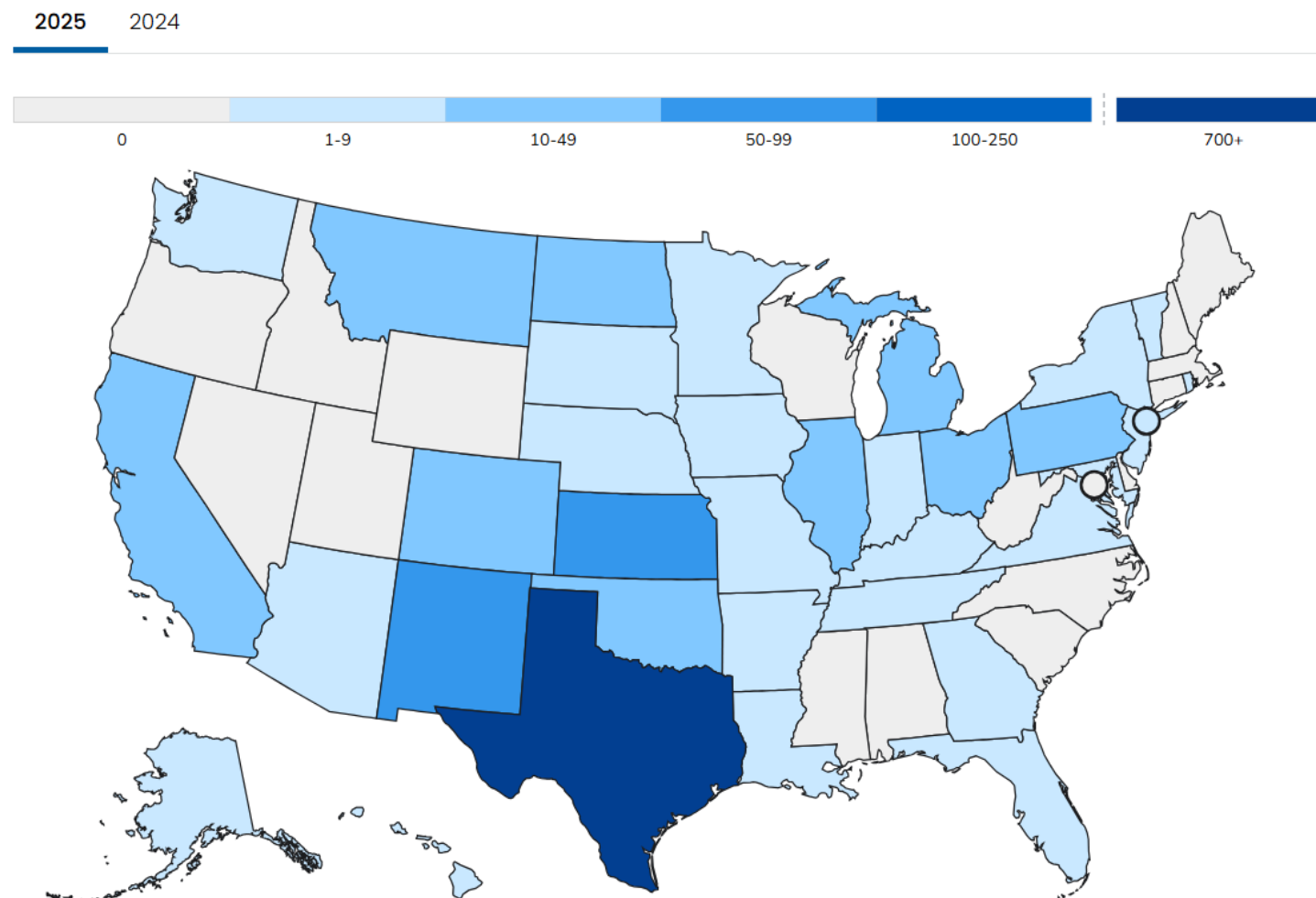
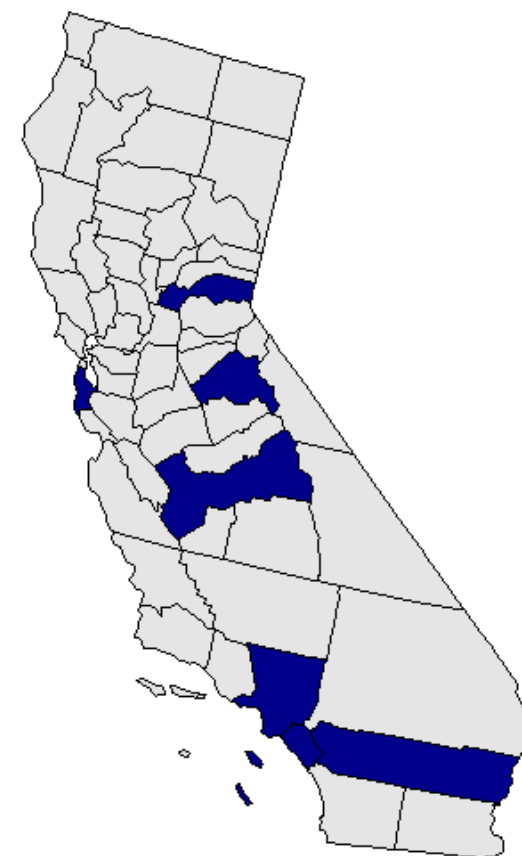


Image: Number of Measles Cases by State, 2025

Source: <https://www.cdc.gov/measles/data-research/index.html>
Accessed 6/13/2025

Measles Cases Continue to Occur

- **14 confirmed** cases in 2025 in California across 9 counties
 - 5 cases present in LA County during infectious period year-to-date



Data source: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/measles.aspx>

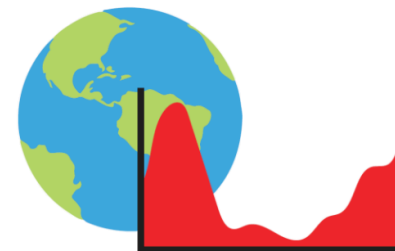
Accessed 6/13/2025

Figure: Affected California jurisdictions highlighted in blue



Vaccine coverage

Measles outbreak risk in the U.S.
depends on two main factors:



Global measles activity

<https://www.cdc.gov/ncird/whats-new/measles-outbreak-risk-in-us.html#>



Vaccine

- First licensed in 1963 in the United States as measles vaccine
- Licensed in 1971 as MMR
- Live attenuated vaccine
- Highly effective
- 1 dose: 93% protection
 - First dose recommended 12-15 months
- 2 doses: 97% protection
 - Recommended 4-6 years of age

Important notes

- A dose 6-11 months of age can be given for travel or outbreak response
 - Does not count towards 2 doses but can offer protection
- Additionally, can get an “accelerated” series, with second dose 4 weeks after first dose
 - Teenagers and adults without evidence of immunity

Infants under 12 months old who are traveling

- Get an early dose at 6 through 11 months
- Follow the recommended schedule and get another dose at 12 through 15 months and a final dose at 4 through 6 years

Children over 12 months old

- Get first dose immediately
- Get second dose 28 days after first dose

Teens and adults with no evidence of immunity*

- Get first dose immediately
- Get second dose 28 days after first dose



MMR Coverage among U.S. Kindergartners

	2019-20	2020-21	2021-22	2022-23
MMR (2 doses)	95.2	93.9	93.0	93.1

National MMR coverage of 93.1% translates to **250,000** kindergartners at risk of measles infection each year

Required Vaccines for Kindergarten and Childcare —Los Angeles County

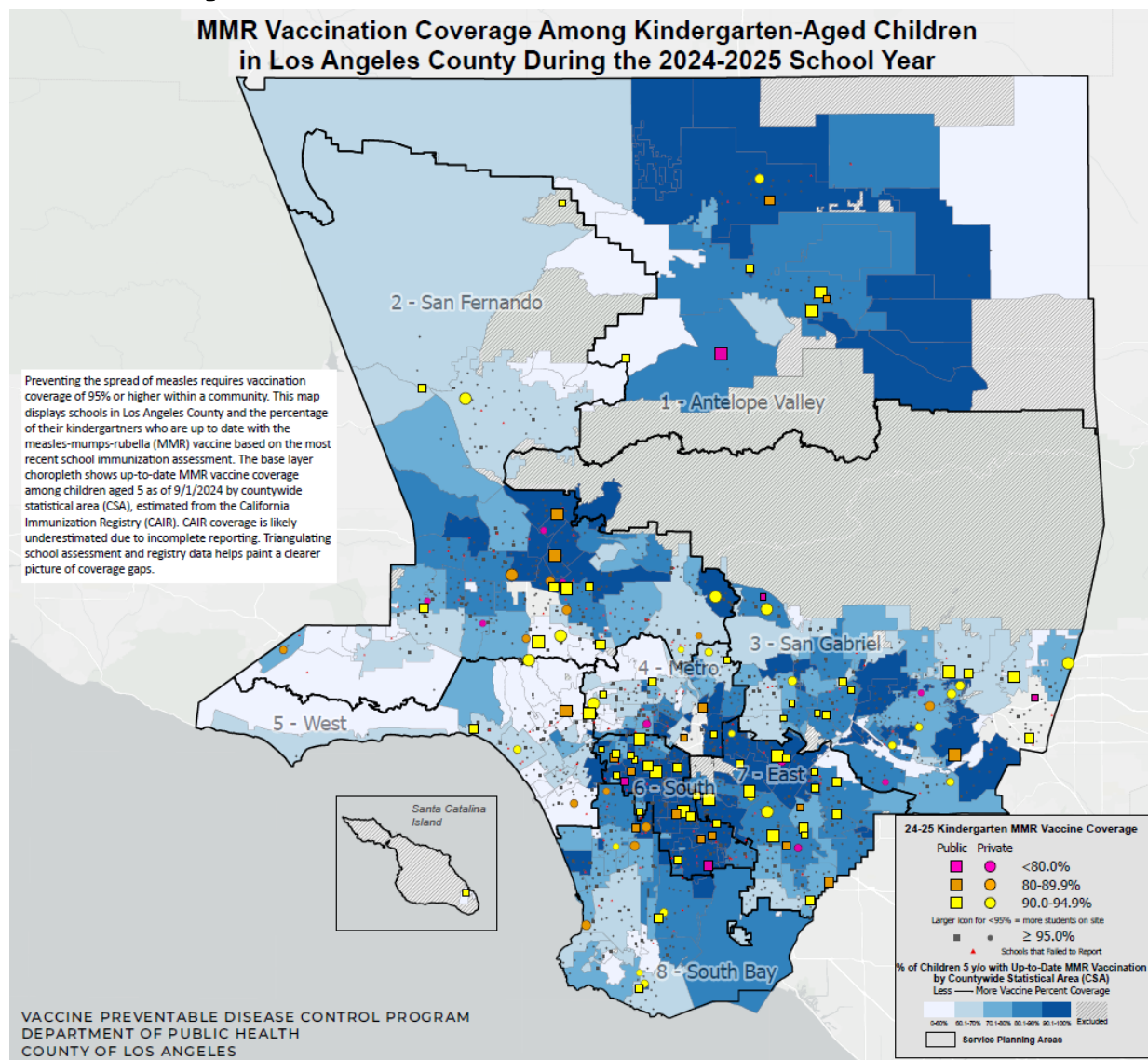
Up-to-date vaccination coverage
among students in **kindergarten**
during 2024-2025 school year

SPA	Schools	Enrollment	All Vaccines	MMR
▲				
SPA 1	83	7,440	90.9%	→ 94.0%
SPA 2	414	29,411	95.7%	98.2%
SPA 3	322	20,831	96.4%	98.1%
SPA 4	204	11,158	95.5%	98.4%
SPA 5	130	7,294	96.1%	98.2%
SPA 6	233	13,936	93.7%	97.7%
SPA 7	244	18,286	96.2%	97.9%
SPA 8	191	14,423	96.3%	98.5%
Total	1,821	122,779	95.5%	97.9%

Up-to-date vaccination coverage
among children in **childcare**
during 2023-2024 academic year

SPA	# Children	All Vaccines	DTaP	Polio	MMR
1	3,043	94%	96%	97%	97%
2	22,804	96%	98%	99%	98%
3	16,568	98%	98%	99%	99%
4	8,711	96%	98%	99%	99%
5	7,996	97%	98%	99%	99%
6	6,586	94%	96%	98%	99%
7	9,280	99%	98%	99%	99%
8	12,623	96%	98%	98%	99%
Total	87,611	97%	98%	99%	99%

Many children are still vulnerable to infection



- 95%+ coverage is our target to prevent outbreaks
- Of schools/childcares that reported last year
 - Kindergartens with low coverage are clustered in San Fernando Valley, South, and East San Gabriel Valley



Does my patient have measles?



Classical Measles Presentation

Fever & 3 C's

- Cough
- Conjunctivitis
- Coryza
- Fever starts low grade and progresses to high

2-3 days after
initial sx onset

Koplik Spots

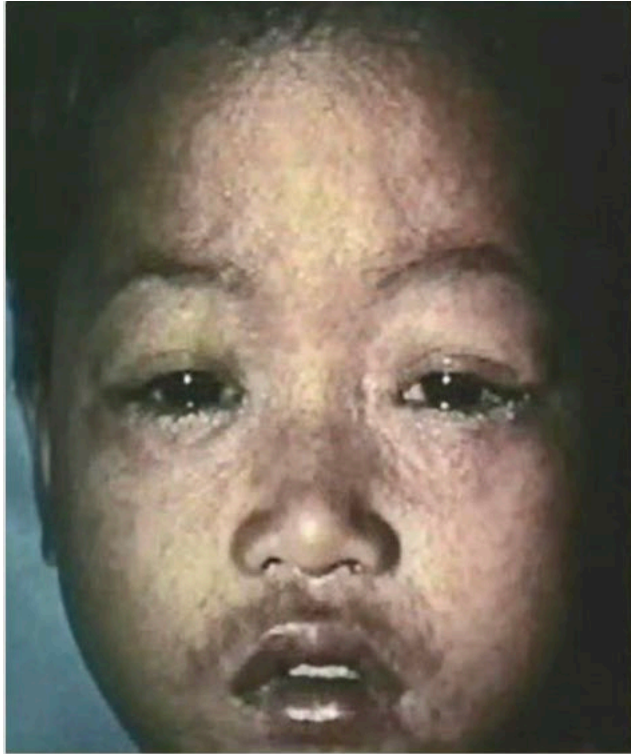
- Tiny white spots in mouth



3-5 days after
initial sx onset

Rash

- Starts on face/hairline
- Spreads downward to neck, trunk, extremities
- Not itchy
- Small raised bumps may also appear on top of the flat red spots.
- Maculopapular - The spots may become joined together as they spread from the head to the rest of the body (maculopapular)

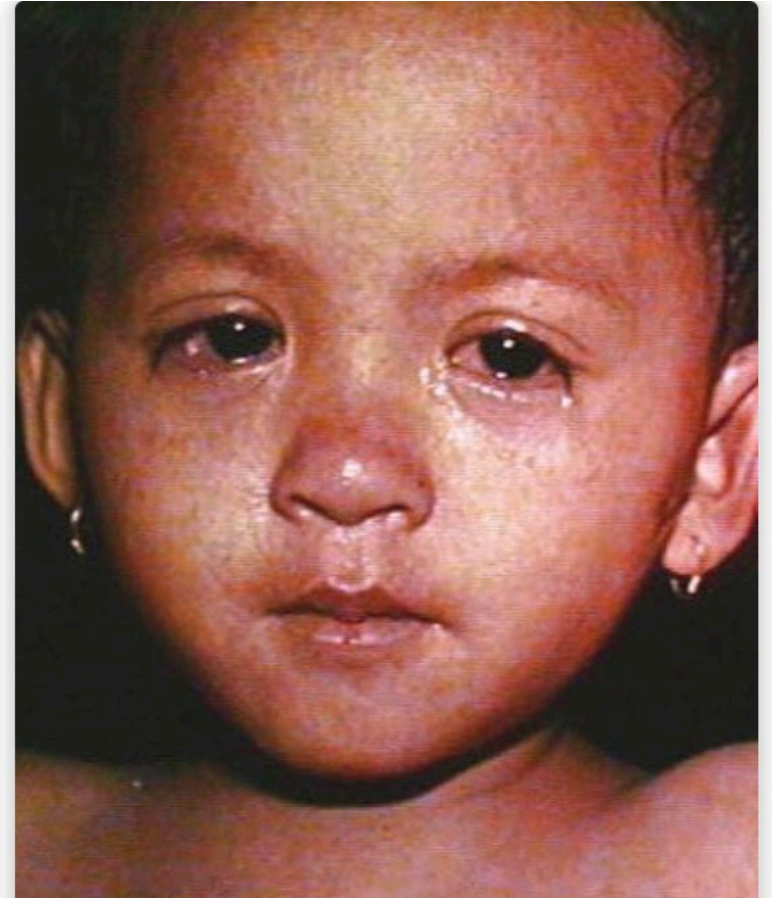


Young, dark-skinned child with watery eyes, runny nose, and raised rash.

Source: "Measles Clinical Features" video



Child with a classic measles rash after four days.



Eyes of a child with measles

Source: [CDC/PHIL](https://www.cdc.gov/phil)

Complications:

- Common:
 - Diarrhea (8%)
 - Otitis Media (7-9%)
 - Pneumonia (1-6%)
 - Immune amnesia--reset the immune system, lose immunity to other infections
- Rare but serious
 - Hospitalizations (14-25%)
 - Encephalitis 1/1000
 - Death: 1-3/1000
 - Later...subacute sclerosing panencephalitis (SSPE): 7-11/100,000

Immunocompromised individuals

- MMR may be contraindicated
- With increasing levels of immunosuppression
 - More atypical signs and symptoms
 - Atypical rash that's transient OR severe and desquamating
 - High risk for complications
 - 20% without rash, diagnosed after complications (pneumonia, liver failure, encephalitis) or at autopsy
- Key to diagnosis in this population is an awareness of community and epidemiologic risk.

When to Suspect Measles

- Consider measles in any patient with
 - febrile rash
 - clinically compatible symptoms*especially* if they are **unvaccinated** or **under-vaccinated** or have any of the following risk factors in the past 4 weeks:
 - **Travel**, especially international or domestic through an international airport
 - Contact with someone with a febrile rash illness
 - Exposure to a known or possible measles case



Diagnosis



Diagnosis: PCR of NP/throat and Urine specimens

- RT-PCR can be performed on NP, throat swabs and urine
 - Most sensitive from onset of rash—>10 days after rash
- Offered by public health labs, but also Quest/Labcorp as well as other commercial labs
- Preferred public health lab
 - PCR can assist in genotyping and MeVA
 - Outbreak tracking
 - Can determine if virus is community vs vaccine derived

Diagnosis-Serology

- Important to have high clinical suspicion for measles when ordering tests to make the diagnosis
- IgG: Can be used to measure immunity
 - Avidity: Can help with breakthrough measles cases among vaccinated individuals
- IgM detection starts 1-3 days after rash, detected for 6-8 weeks
 - Can be used in conjunction with PCR to confirm diagnosis
 - **Non-specific and unreliable as sole test** - can have cross reactivity with other viruses, meaning positive predictive value declines when disease likelihood is low (e.g. fully vaccinated individuals, no epidemiologic link)
 - If you think measles is a possibility, **DO NOT SEND IgM ALONE**, get a PCR!

UPDATED WEBSITE: ph.lacounty.gov/measles

- The WHO recommends [vitamin A](#) for all children with acute measles, regardless of complications.

Additional Resources

LAC DPH

- [Measles B73](#)
- [Check List: Managing Patients Suspected of Having Measles](#)

CDC

- [Measles for Healthcare Providers](#)
- [Infection Prevention and Control for Measles in Healthcare Settings](#)
- [Plan for Travel](#) patient measles resource
- Measles Trainings:
 - [You Call the Shots](#)
 - [The Pink Book Webinar Series](#)

CDPH

- Measles investigation [Quick Sheet](#)
- [Immunization and Immunity Testing Recommendations for Healthcare Personnel](#)

Guidance for Clinicians

Check List: Managing Patients Suspected of Having Measles

The purpose of this checklist is to provide clinicians with step-by-step guidance for evaluating patients suspected to have measles to reduce the spread of measles and facilitating Public Health investigations.

Step 1. Immediately isolate patients with an acute febrile rash, using Airborne Transmissible Diseases precautions.^{1, 2}

- ☐ 1a. Airborne precautions should be followed in healthcare settings.
- ☐ 1b. Regardless of prior immunity status, all healthcare staff entering the room should use respiratory protection consistent with airborne infection control precautions (use of an N95 respirator or a respirator with similar effectiveness in preventing airborne transmission).
- ★ *Note:* The preferred placement for patients who require airborne precautions is in a single-patient airborne infection isolation room (AIIR) or negative air pressure room. To prevent possible exposure of measles, the patient should remain completely isolated from other patients, and the exam room should not be used for 2 hours after the patient has departed.

Step 2. Determine if the patient has measles-like symptoms.

- ☐ 2a. Assess if patient has had any of the following symptoms and obtain onset and resolution dates:
 - Prodrome of fever, cough, coryza (runny nose), conjunctivitis.
 - Fever AND maculopapular rash: determine location of rash onset and progression on body. If patient is unvaccinated, fever and rash on face, hairline, or behind ears are typically present concurrently.
- ★ *Note:* If patient is vaccinated or immunocompromised, symptoms of fever and rash can vary in presentation and timing. See CDC Pink Book [Measles](#) for information on presentations.

Common differential diagnoses

- ★ Kawasaki, rubella, scarlet fever, enteroviruses and other febrile rash exanthems.

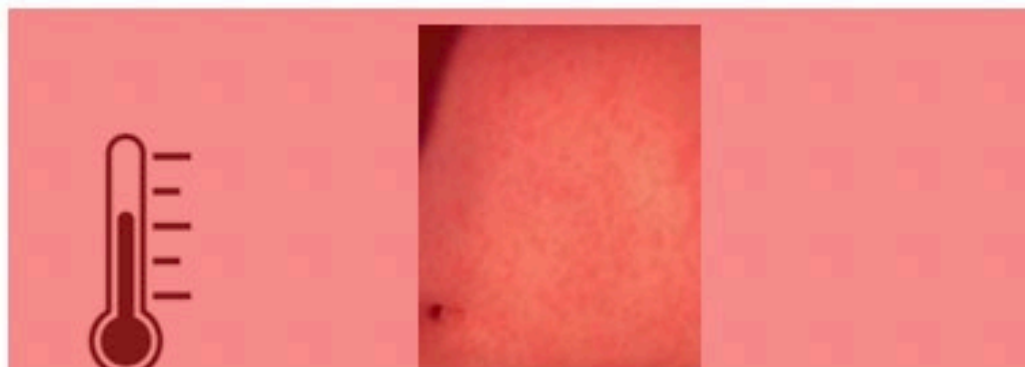
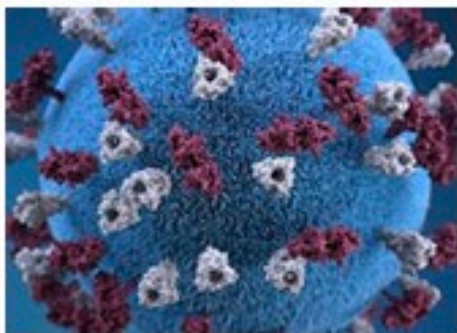
Step 3. Assess for measles immunity and ask about exposure risk factors?

Secondary Prevention

Investigating measles in the community



Measles – Typical Timeline



Contagious

Day -4 to -2

Day 0

Day 4

Incubation Period: -21 to -7 days

Infectious Period:
4 days before rash to 4 days after rash

Case management

Isolation:

- Case-patients should be isolated for **four** days after rash onset
 - People with immunocompromising conditions with measles may require more prolonged isolation

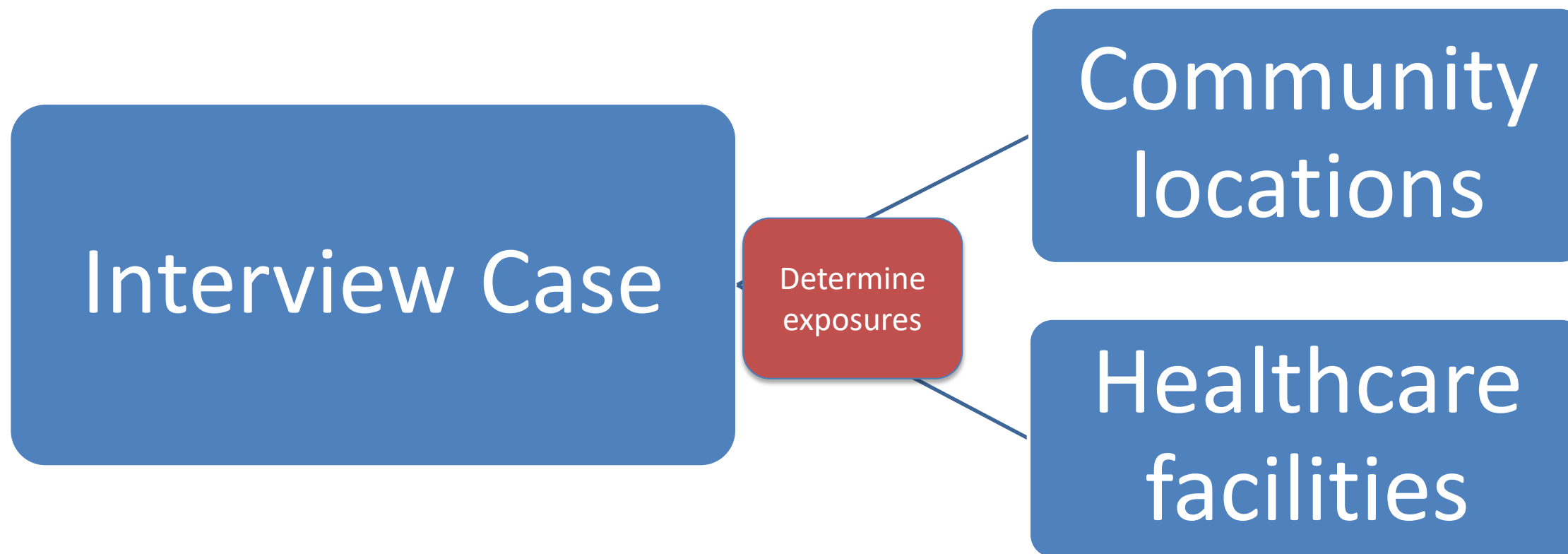
Contact tracing:

- Detailed history of activities during infectious period
 - All individuals in the same airspace 4 days before and 4 days after rash onset

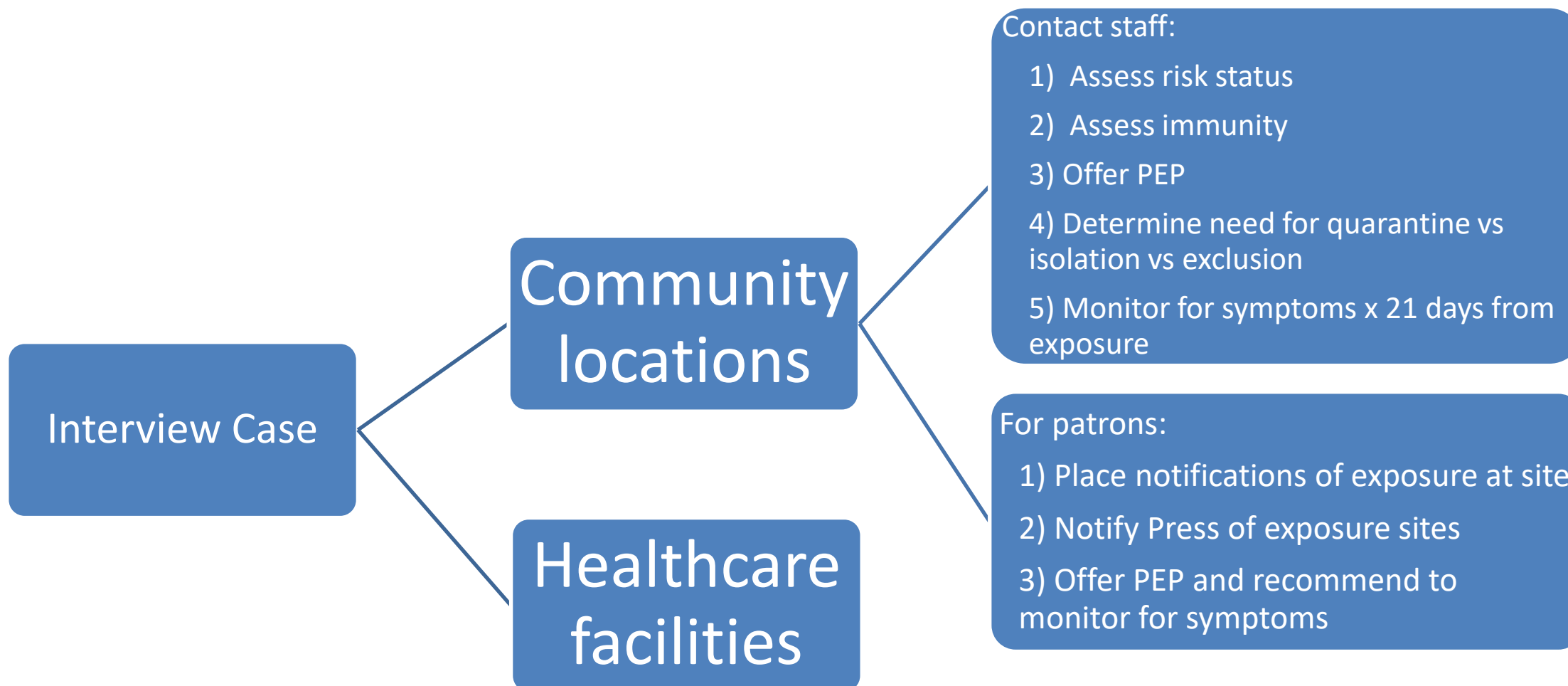
Contacts

- Sharing the same airspace with a person infectious with measles e.g., same classroom, home, clinic waiting room, airplane etc., or being in these areas up to 1 hour after the infectious person has left the area
 - Although CDC recommends using a 2-hour window, there is little evidence for measles transmission >60 minutes after an infectious person has left the setting.
- Exposure criteria apply even if the infectious person was masked.

Public Health responsibilities



Public Health responsibilities



Notification of Public



For Immediate Release

April 13, 2024

Public Health Confirms Measles Case in Los Angeles County Health Officials Identify Locations for Possible Measles Exposure

The Los Angeles County Department of Public Health has been notified by the California Department of Public Health of one case of measles in a non-Los Angeles County resident who traveled throughout Los Angeles County from Saturday, March 30, 2024, to Monday, April 1, 2024.

Individuals who were at the following locations during the dates and times below may be at risk of developing measles within 21 days:

Century Blvd, Los Angeles, CA 90045 (5:30 a.m. - 8 a.m.)
 Century Blvd, Los Angeles, CA 90045 (time not yet determined)
 Universal City, CA 91608
 Universal City, CA 91608 (approx. 12 p.m.)
 Universal City Plaza, Universal City, CA 91608 (approx. 4 p.m.)
 Universal Studios - 100 Universal City Plaza, Universal City, CA 91608 (time not yet determined)

Century Blvd, Beverly Hills, CA 90210 (time not yet determined)
 Century Blvd, Los Angeles, CA 90045

Century Blvd, Los Angeles, CA 90045 (5:30 a.m. - 8 a.m.)
 Century Blvd, Los Angeles, CA 90045 (approx. 11:00 a.m.)
 Century Blvd, Los Angeles, CA 90045

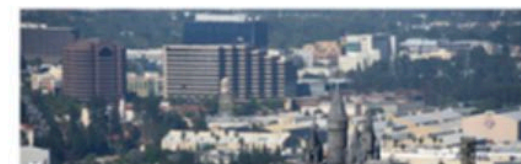
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 Century Blvd, Los Angeles, CA 90045

Century Blvd, Los Angeles, CA 90045
 Century Blvd, Los Angeles, CA 90045 (time not yet determined)

HOME / BUSINESS / NEWS

L.A. County Public Health Warns About Traveler With Measles Visiting Local Attractions, Including Universal Studios And Santa Monica Pier

By [Diana Hsieh](#)
 April 14, 2024 11:30am



Universal Studios
 Paul Hannon/PA

L.A. public health officials issue measles exposure warning for Universal Studios, other locations



A trolley with measles visited Universal Studios and several other locations in Los Angeles County on March 30-April 1. (Glenis Maltby / Los Angeles Times)

By Hannah Wiley
 Staff Writer

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ALL STARS ALL GAMES ALL

ATENCIÓN: AVISO DE EXPOSICIÓN AL SARAMPIÓN

ESTE LUGAR HA SIDO IDENTIFICADO COMO LUGAR DE EXPOSICIÓN AL SARAMPIÓN.

SI ESTUVISTE EN ESTE LUGAR _____, ENTRE LAS HORAS DE _____, PUEDES CORRER EL RIESGO DE CONTRAER SARAMPIÓN. POR FAVOR, CONFIRMA TU ESTADO DE VACUNACIÓN CONTRA EL SARAMPIÓN Y VIGILA LOS SÍNTOMAS DURANTE 21 DÍAS DESPUÉS DEL DÍA ANTERIORMENTE INDICADO. **LLAMA INMEDIATAMENTE A UN PROFESIONAL SANITARIO SI EXPERIMENTAS:**

- FIEBRE ALTA

1) Assess Risk Status: Low-Risk

- Low-risk setting:
 - A low-risk setting is one in which transmission risk is low and multiple high-risk contacts are not present (NOT HCW, work with infants, work with immunocompromised individuals)
- Low-risk contact:
 - Not high risk of experiencing severe measles illness, or to/from whom the transmission potential is not high.
 - Examples: immunocompetent, >12 months of age
 - NOT pregnant, NOT a healthcare worker, and NOT a household contact (or other person with prolonged exposure)

2) Assess immunity:

For Low-Risk Contacts: Presumptive Immunity

- were born in the U.S. prior to 1957 (**does not include healthcare workers**)
- were born outside the U.S. prior to 1970 AND moved to the U.S. in 1970 or later
- were born in any country in 1970 or later AND attended a U.S. primary or secondary school
- have written documentation with date of receipt of at least one dose of measles-containing vaccine given on or after their first birthday in 1968 or later
- have a documented IgG positive test for measles
- have laboratory confirmation of previous measles disease
- served in the U.S. armed forces
- entered the U.S. as a permanent U.S. resident or became one in 1996 or later (i.e., have a “green card”)

Exposure management:

3) Post Exposure prophylaxis (PEP)

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”



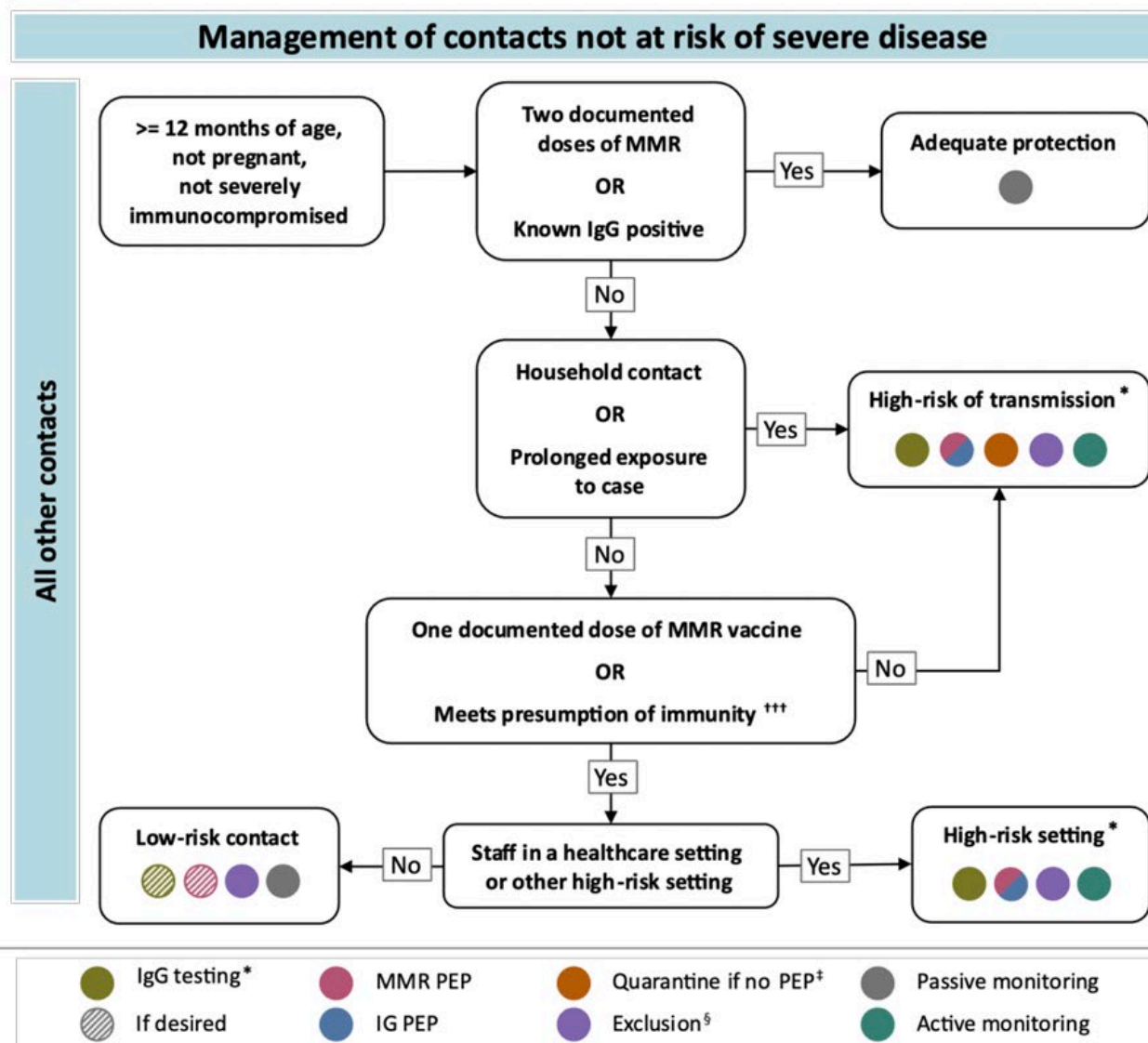
Immunoglobulin

- 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

4) Monitor for Symptoms

If there is no evidence of immunity AND appropriate PEP: 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: high-risk settings (healthcare settings, infant daycare etc)
 - If exclusion of those other than healthcare workers is implemented, it should begin on day 7 after the date of **first** exposure through day 21 after the date of **last** exposure (day of exposure is day 0)
 - For healthcare workers, CDC recommends starting exclusion on day 5.
 - If received IG for PEP, exclusion should extend through day 28 after **last** exposure



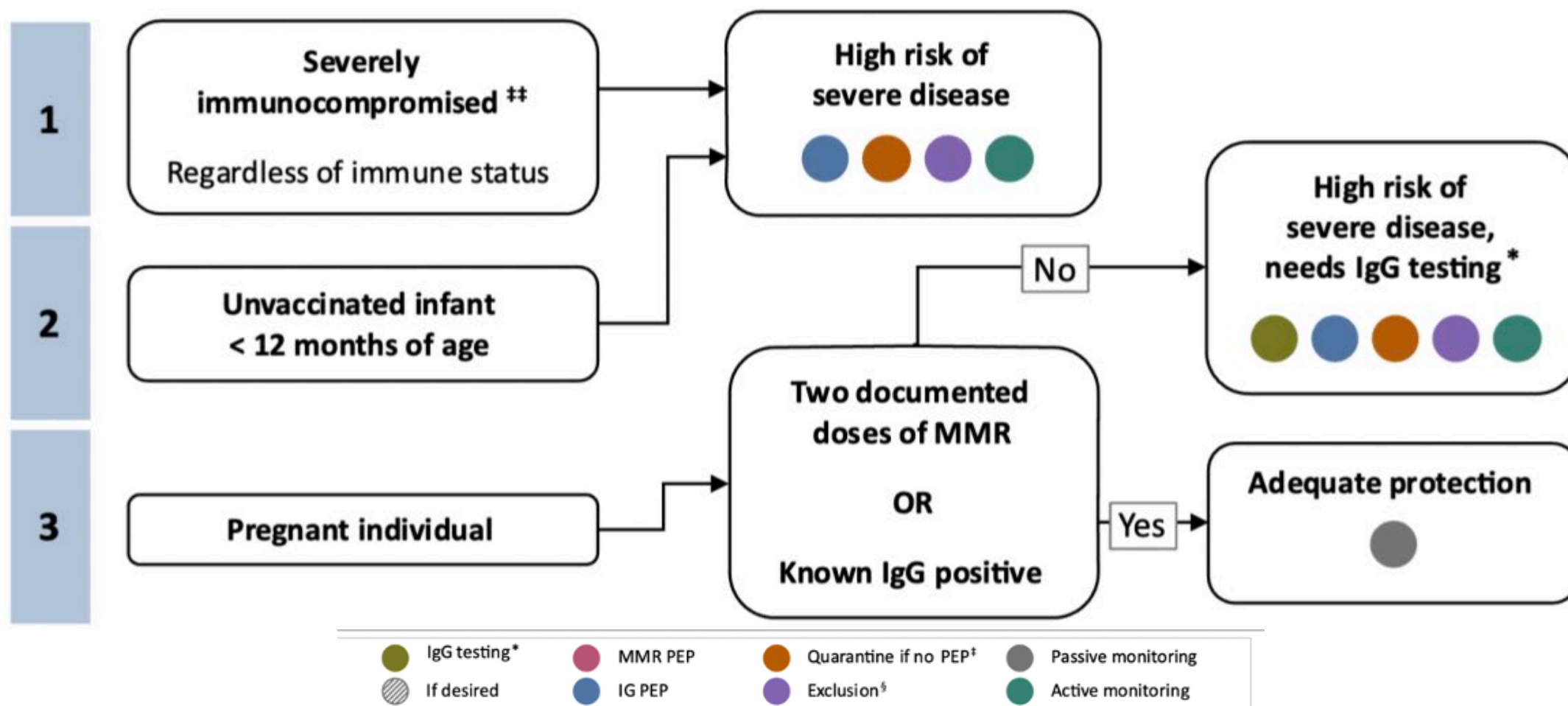
High-Risk contacts

- May experience severe illness if they become infected with measles or to whom the transmission potential is high.
 - Infants
 - Household contacts or other prolonged exposure (eg Uber driver)
 - Immunocompromised persons
 - Pregnant persons

Presumptive Immunity for High-Risk (pregnant) Individuals

- Documentation of two doses of measles vaccine given in 1968 or later, separated by at least 28 days, with the first dose on or after the first birthday
- A documented IgG positive test for measles
- Laboratory confirmation of previous disease.

Management of contacts at risk of severe disease



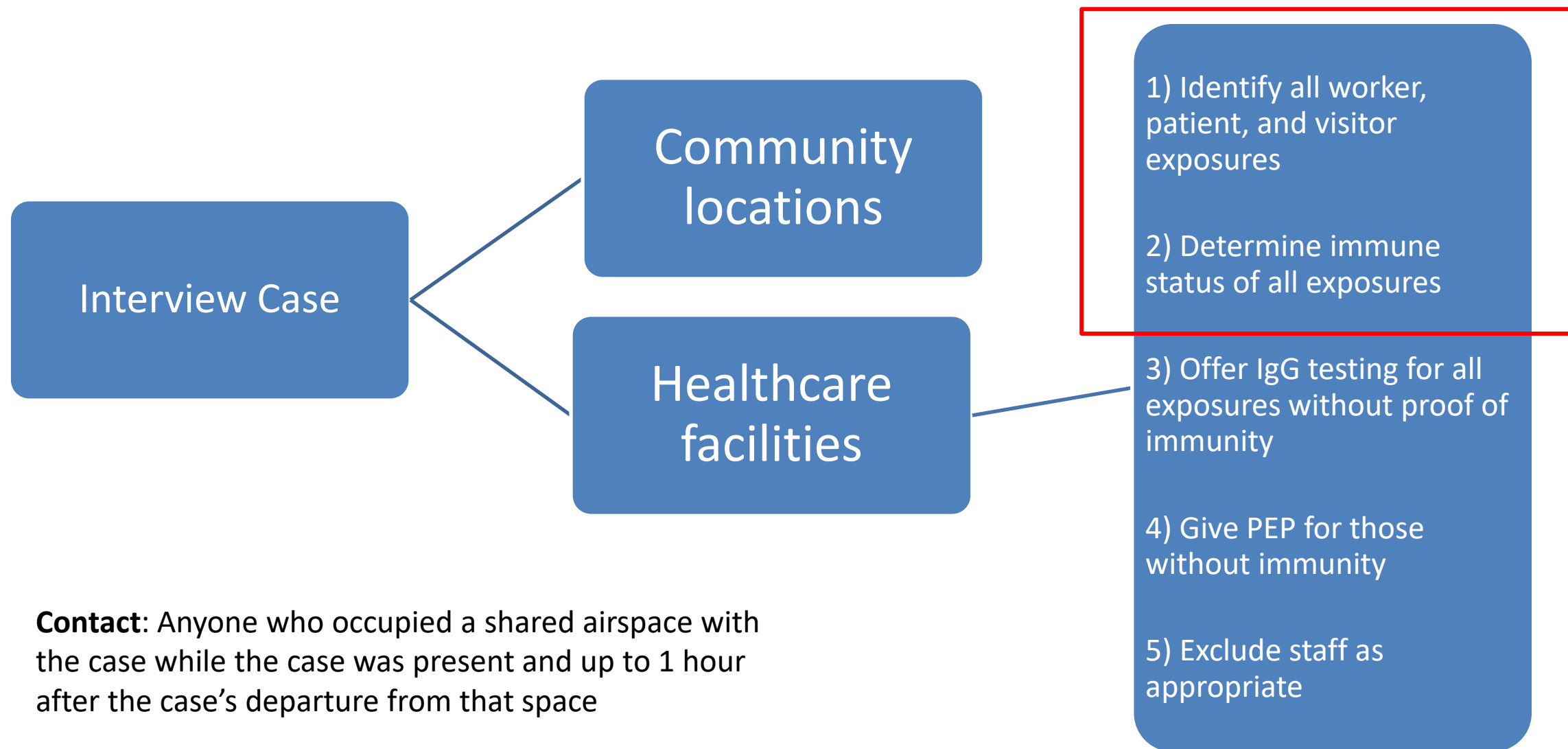
Measles cases in the healthcare setting



Outline

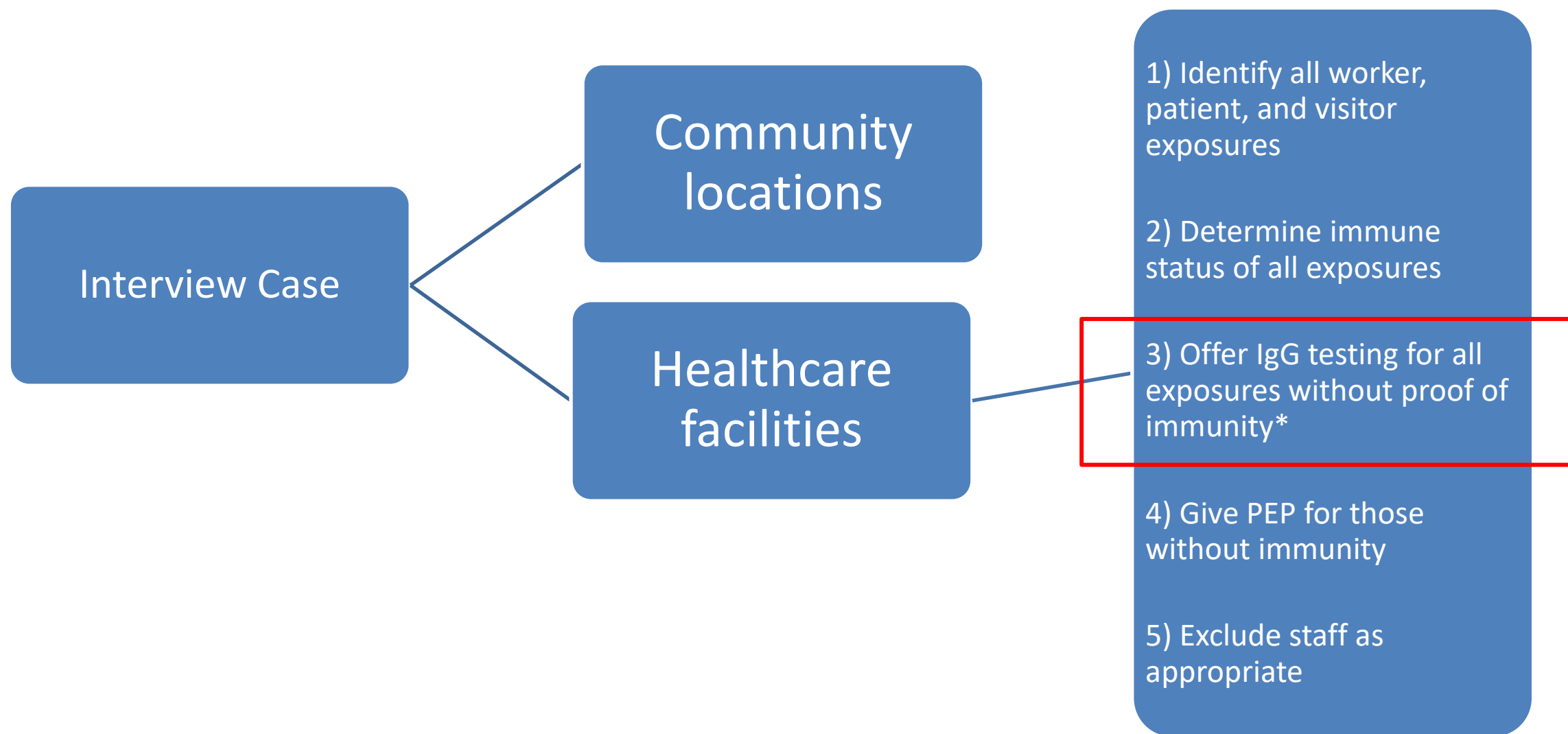
- Contact tracing responsibilities for healthcare facilities
 - Facility and DPH roles
 - Expectations for handling exposed staff
- How to prevent measles transmission in the healthcare setting
 - Establishing staff immune status
 - Appropriate triaging
 - Infection prevention principles

DPH and healthcare facility partnership

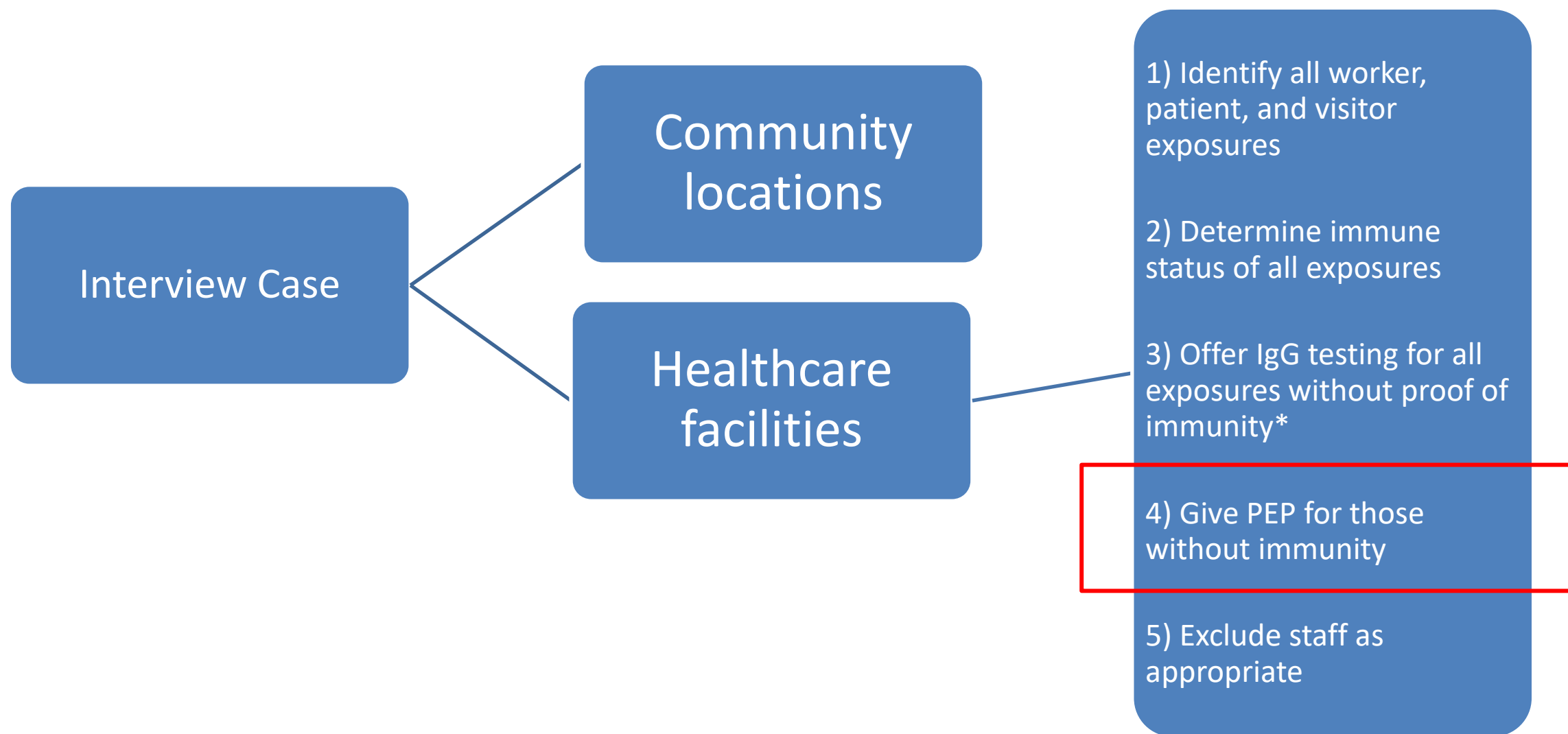


Contact: Anyone who occupied a shared airspace with the case while the case was present and up to 1 hour after the case's departure from that space

DPH and healthcare facility partnership



DPH and healthcare facility partnership



Post Exposure prophylaxis

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



MMR

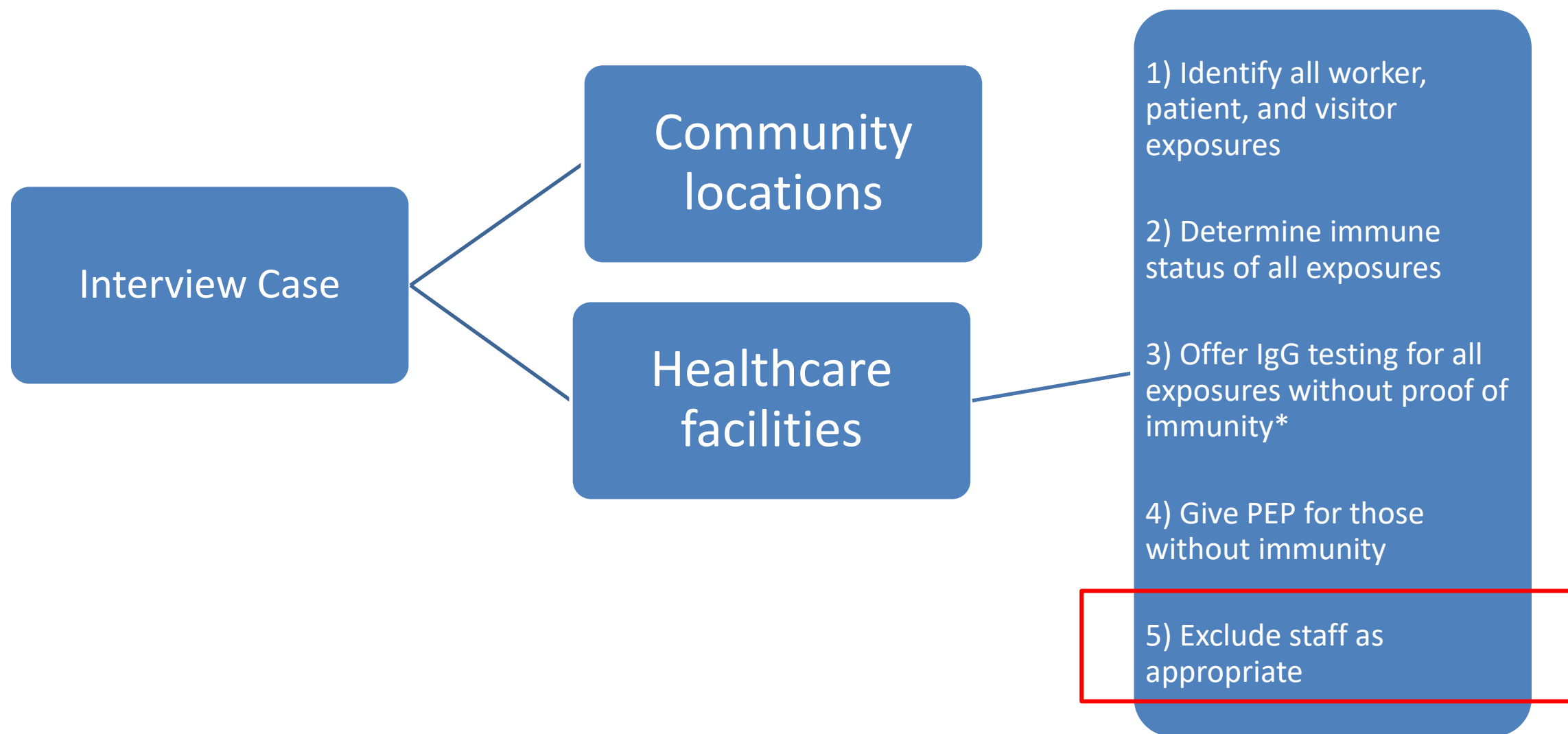
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- Vaccination can be given after this window, but would only be expected to protect from future exposures and is not considered “adequate PEP”



Immunoglobulin

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- Can be given intramuscularly (IMIG) or intravenously (IVIG)
 - IVIG should be prioritized for adults at high risk of severe disease

DPH and healthcare facility partnership



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 <u>no</u> 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



How to prepare your facility for measles



Accounting for staff immunity

**Obtain
documentation of
immunity for all
healthcare workers**

This includes custodial
staff, contracted
workers, etc.

Have this information on
hand and readily
available for DPH in the
event of a case!

**Healthcare workers
MUST have
documentation of 2
MMRs or positive IgG to
be presumed immune**

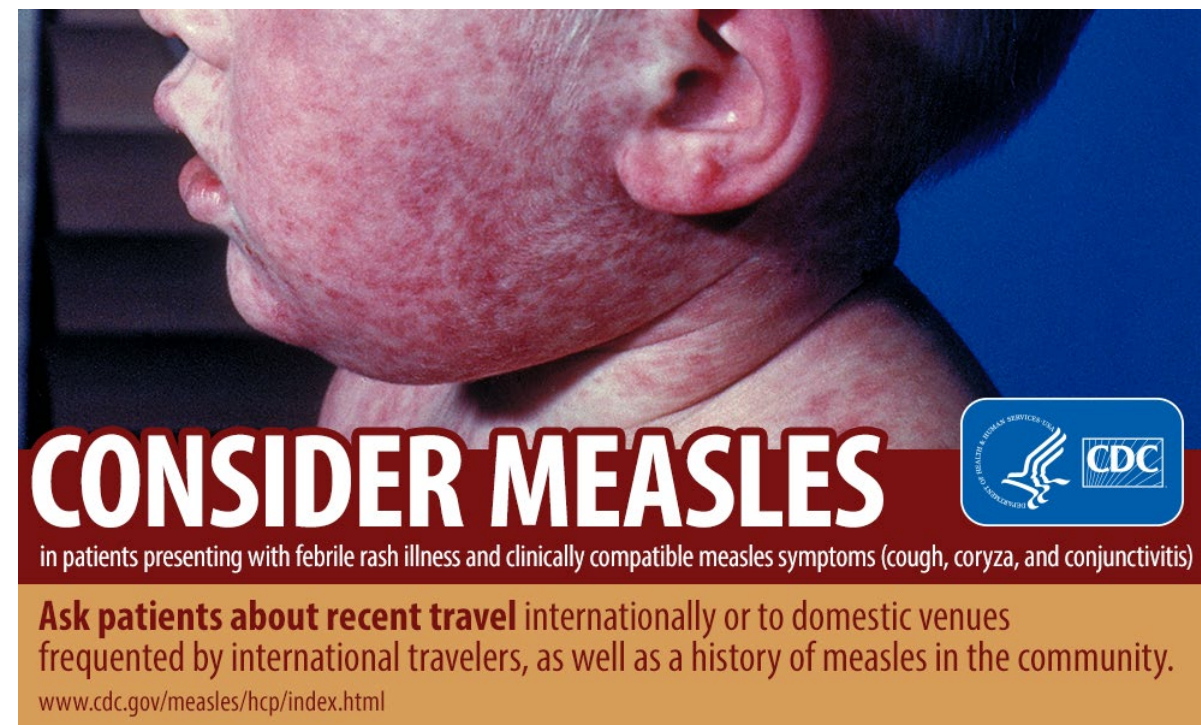
Birth date before 1957
does not suffice for
healthcare workers

**Have MMR vaccine
and IMIG on hand
and ready for
distribution**

Patients/contacts may
need this for PEP and
you are likely the first
and fastest option!

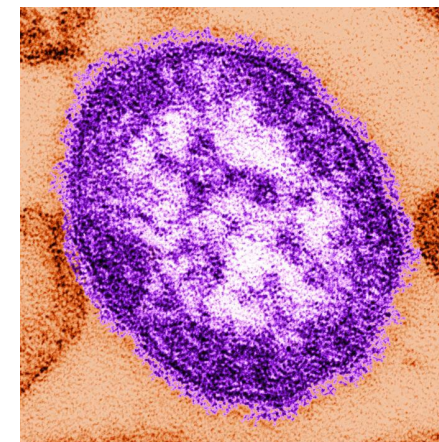
When to suspect measles

- 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



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
 - If this type of room is not available, consider developing a protocol to evaluate cases outside
- Any workers without documented presumptive evidence of measles immunity should be excluded from contact with the suspect case if immune workers are available

Report to Public Health

- If you think you have a case, please call DPH **immediately** to help facilitate testing and to receive additional guidance!
 - Weekdays 8:00 am – 5:00 pm: Call **213-351-7800** - Epidemiologist on Duty
 - Non-business hours/weekends: Call **213-974-1234** - Administrative Officer on Duty

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

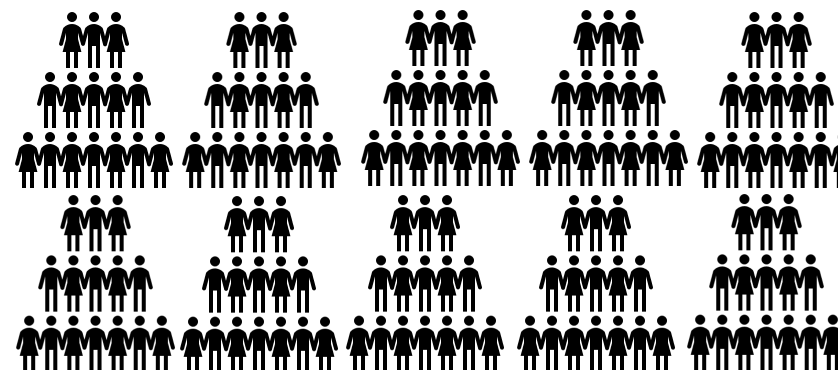
- **Standard cleaning and disinfection procedures are appropriate for measles**
- **EPA-registered disinfectants should be used per the manufacturer's instructions for use**
- **No special management of measles waste is required**
 - Follow federal and local regulations for management of regulated medical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

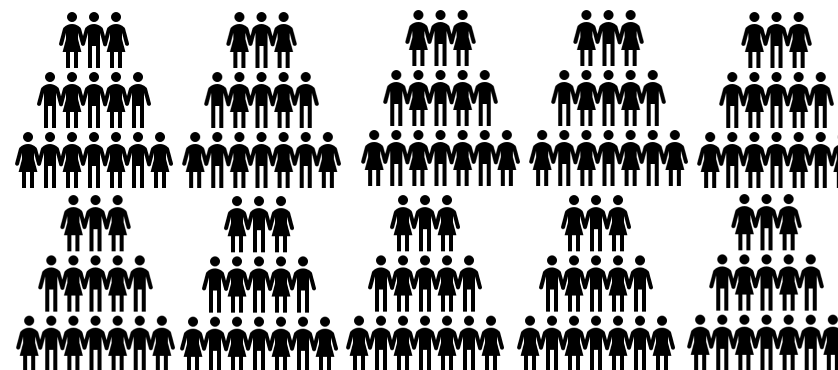


Measles: 2 examples

- Hospital A
 - Posted signage
 - Triage 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



Available Resources

- Disease-specific websites:
ph.lacounty.gov/measles
- [Measles Provider Checklist](#)
- Email our VPD disease surveillance team at vpdc@ph.lacounty.gov

Guidance for Clinicians

Check List: Managing Patients Suspected of Having Measles

The purpose of this checklist is to provide clinicians with step-by-step guidance for evaluating patients suspected to have measles, helping to reduce the spread of measles and facilitate Public Health investigations.

Step 1. Immediately isolate patients with an acute febrile rash, using Airborne Transmissible Diseases (ATD) precautions.^{1,2}

- ☐ 1a. Airborne precautions should be followed in healthcare settings.
- ☐ 1b. Regardless of prior immunity status, all healthcare staff entering the room should use respiratory protection consistent with airborne infection control precautions (use of an N95 respirator or a respirator with similar effectiveness in preventing airborne transmission).

★ *Note:* The preferred placement for patients who require airborne precautions is in a single-patient airborne infection isolation room (AIIR) or negative air pressure room. To prevent possible exposure of measles, the patient should remain completely isolated from other patients, and the exam room should not be used for 2 hours after the patient has departed.

Step 2. Determine if the patient has measles-like symptoms.

- ☐ 2a. Assess if patient has had any of the following symptoms and obtain onset and resolution dates:

- Prodrome of fever, cough, coryza (runny nose), conjunctivitis.
- Fever AND maculopapular rash: determine location of rash onset and progression on body. If patient is unvaccinated, fever and rash on face, hairline, or behind ears are typically present concurrently.

Common differential diagnoses:
★ Kawasaki, rubella, scarlet fever, enteroviruses, and other febrile rash exanthems

The following factors increase the probability of measles:

- Reporting an exposure risk-factor for measles (see 3b)
- Lacking immunity: unvaccinated or unknown vaccination, immunocompromised, IgG negative.

Note: If patient is vaccinated or immunocompromised, symptoms of fever and rash can vary in presentation and timing. See the CDC Clinical Overview of Measles: Diagnosis, Laboratory Testing, and Outbreak Response (Web on Demand) - WD4728

Step 3. Assess for measles immunity and ask about exposure risk-factors.³

- ☐ 3a. Determine whether patient has one of the following to indicate probable measles immunity:
 - At least 2 documented MMR doses that were administered in the U.S. at ≥12 months of age.
 - Documented IgG (+) test for measles.
- ☐ 3b. Ask about exposure risk-factors. Have they had, in the past 4 weeks:
 - Contact to a known measles case or with an ill international visitor
 - Traveled internationally or through an international airport
 - Visited an outbreak community or venues where a confirmed measles exposure occurred.

Step 4. Immediately call and report suspect measles to Public Health while the patient is still at the facility. Public Health will advise which of steps 5-8 are indicated.⁴

- ☐ Report immediately by telephone for both confirmed & suspected cases upon suspicion of measles. Consultation is required before sending specimens to the Public Health Laboratory
 - Weekdays 7:30 am – 5:00 pm: Call 213-351-7800 - Epidemiologist on Duty
 - Non-business hours/weekends: Call 213-974-1234 - Administrative Officer on Duty