Measles Preparedness for Health Care Clinics

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Is Your Clinic Ready?

Preparedness Checklist

- Develop/Share Rash Protocol
- Verify Staff Immunity
- Prevent Spread of Infection
- Supply Clinic with PPE
- Identify Exposed Persons
- Review Measles Knowledge
- Report to Health Department
- Know How to Collect Specimens
- Promote Vaccines

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Develop & Share Rash Protocol

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Example Febrile Rash Protocol

Adapt to your unique clinic and share widely.

- ❑ Ask that patients call ahead. They should not walk in unscheduled when they have fever and rash.
- ❑ Ask patients if they have fever and/or rash during appointment scheduling.
- ❑ Schedule patients with suspected measles:
  - At the end of the day, or
  - When other patients will not arrive within 2 hours of the suspected measles patient.
- ❑ Instruct measles patients to arrive to a side or back entrance and escort masked patients straight to an isolation room.

Verify Staff Immunity

Verify Staff Immunity

- Make/update your list of staff with measles immunity
- **HCWs are presumed immune to measles if they have documentation of:**
  - 2 doses of MMR, or
  - Positive IgG titer, or
  - Previous measles infection
- Healthcare workers (HCWs) have different immunity requirements than other adults.
- **Only immune HCWs should evaluate patients with suspect measles.**

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IMPORTANT

Exposed, non-immune healthcare workers must be furloughed from patient care for **21 days**, even if they receive their **first** MMR dose as post-exposure prophylaxis

Prevent Spread of Infection

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Infection Control

- Measles is transmitted by droplets that can linger in the air for **up to 2 hours**.
- Use **airborne precautions** in addition to **standard precautions**.
- If measles is suspected, immediately provide a **surgical mask** and place the patient in a room with **negative pressure** (preferred) or a **closed door**.
- Any shared airspace (exam, waiting room, hallway, elevators) occupied by the patients should **not be used for the next 2 hours.**
- Only allow staff with evidence of measles immunity to work with the patient.

Infection Control Training

Web link to training:
[Measles Micro-Learn]

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Infection Control Micro-Learns

User Guide

PROJECT FIRSTLINE

About the Micro-Learns

The Project Firstline Infection Control Micro-Learns are a series of guided infection control discussions that provide brief, on-the-job educational opportunities. Each micro-learn focuses on a single infection control topic and connects infection control concepts to immediate, practical value. Healthcare workers can easily apply the key points to their daily work and perform the recommended actions to keep germs from spreading.

Using the Micro-Learns

The micro-learns can be incorporated into existing opportunities where groups of healthcare workers gather, such as pre-shift "huddles" or team meetings. The sessions should be led or facilitated by an experienced team member with infection control expertise.

Each micro-learn package includes an adaptable discussion guide for the facilitator and one job aid, which facilitators are encouraged to review prior to presenting.

Discussion Guide. The discussion guide is not a script. Facilitators are encouraged to adapt the guide for their audience by incorporating relevant and practical questions and ideas. For instance, facilitators can connect the content to the audience's job duties, facility-specific cases or issues, resources and points of contact, or other information.

Job Aid. The one-page, visual job aid helps to reinforce the key messages of the micro-learn. Facilitators are encouraged to make the job aid available after the micro-learn session, such as in digital or hard copy form.

Notes for Facilitators

- Before presenting a micro-learn, check the policies and protocols at your facility and adapt the content accordingly.
- Build on your knowledge, experience, and awareness to connect the content to local context or relevant recent events so that your audience can apply the concepts confidently.
- The micro-learns reinforce infection control concepts when risks are observed in patients or in the patient environment, not necessarily in visitors or other staff members.

www.cdc.gov/ProjectFirstline

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

Supply Clinic with Personal Protective Equipment (PPE)

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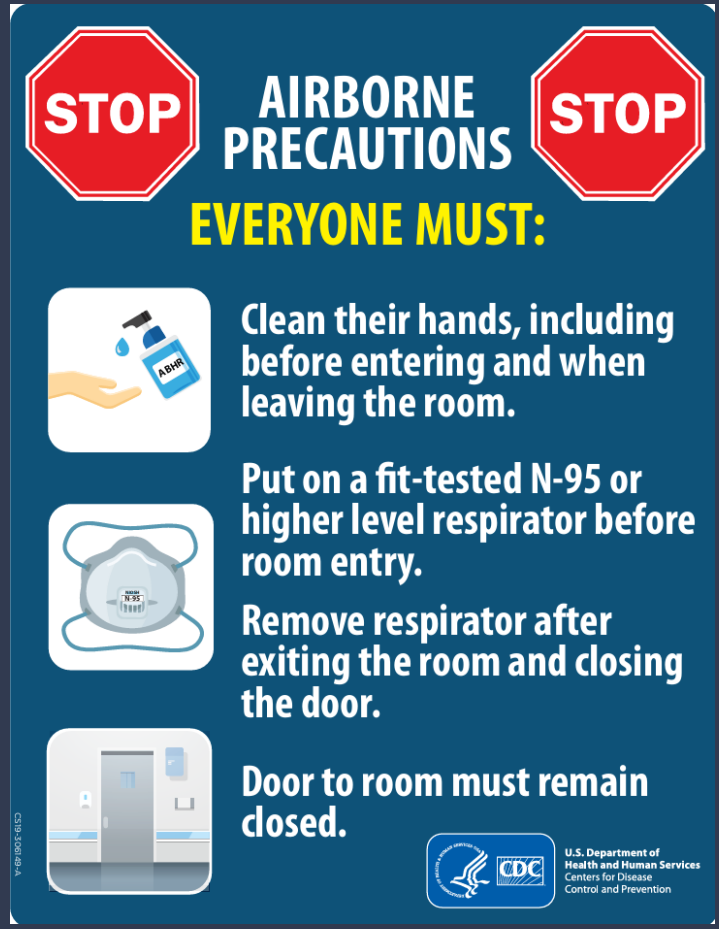
Personal Protective Equipment (PPE)

- Airborne Precautions
- N95 Respirator (or higher)
  - **Required** for *ALL* staff entering the room
  - Must be **fit-tested** (N95) or use PAPR if not fit-tested, meeting OSHA's Respiratory Protection standard **(29 CFR 1910.134)**



Personal Protective Equipment (PPE)

Droplet Precautions*

- Patient: Ask patient to wear a face mask
- Healthcare provider: Gown and eye protection
- *Note if you suspect contact with any infectious respiratory secretions or droplets please follow droplet precautions in addition to Airborne precautions.

Interim Infection Prevention and Control Recommendations for Measles in Healthcare Settings

Identify Exposed Persons

Exposure Definition

- Exposure to measles = patients, visitors, and staff who are **not wearing** fit-tested N95 (regardless of measles immunity status) who are:
  - In a shared air space (serviced by same HVAC lines) with an infectious measles patient at the same time, OR
  - In a shared air space **vacated** by an infectious measles patient **2 hours prior**
- If exposed & not immune, post-exposure prophylaxis (PEP) =
  - MMR dose **within 72 hours**, OR
  - Measles Immunoglobulin (IG) **within 6 days** (if MMR contraindicated)
  - There are specific PEP recommendations for people who are **pregnant** and not immune, **immunocompromised**, or only have **one dose** of MMR.

Exposure Takeaways

- The post-exposure prophylaxis window is **narrow** (MMR within 72 hours or IG within 6 days).
- Keep staff immunity information up-to-date in case of an exposure.
- Develop a process for determining which patients and visitors were exposed in exam areas, waiting rooms, common areas, and elevators.
- Be prepared to quickly share a list of exposed staff and visitors with the health department following an exposure.

Measles Review

MEASLES TIMELINE

Incubation Period
The time between exposure and first symptoms is typically 7-14 days.

Infectious Period
An infected person can infect others usually 1 day before symptoms begin until 4 days after rash appears.

Exposure

2-3 days

1-2 days

4-7 days
Rash Stage

First Symptoms Appear
Common symptoms include: fever, cough, runny nose and pink eye.

Source

Koplik Spots
These are tiny white spots on the inside of the cheek.

Source

Rash Appears
A measles rash consists of small red spots and bumps which first appear on the face and spread down the body over the next few days.

Source

OFFICE OF THE CHIEF HEALTH OFFICER
APPLIED PUBLIC HEALTH
UNIVERSITY OF MICHIGAN

Measles Rash on Dark Skin Tones

- The measles rash, which is typically described as red and blotchy on lighter skin, may appear darker brownish-red, purple, or even difficult to see on darker skin tones.
- It is important for providers to be aware of the various ways a measles rash may appear in patients with dark skin tones so they can be tested quickly and receive appropriate care.

Slide courtesy of: VDH VIRGINIA DEPARTMENT OF HEALTH

Common Rash Differentials

Human Herpesvirus 6 ("Sixth Disease", "Roseola")

- Common cause of febrile rash in infants (6mo– 3yrs)
- Sudden onset high fever x 2-3 days with few or minor symptoms (appears 'inappropriately' well for temperature). Fever resolves before start of rash (measles fever peaks around time of rash onset)
- Exanthem subitem = 'sudden rash'.
  - Pale pink, almond-shaped macules appear on trunk and neck and become a confluent morbilliform rash (measles rash starts on face/hairline)

Slide courtesy of: Meredith L. Porter, MD

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Common Rash Differentials

Parvovirus B-19 (“Fifth Disease”, Erythema Infectiosum)

- Mild fever and headache
- Classic warm “slapped cheek” rash lasting 2-4 days
- Followed by lacy reticular rash on extremities/trunk (may recur for up to 6 weeks)
- More common in school-aged children than infants
- Complications: Early pregnancy and aplastic crises

Slide courtesy of: Meredith L. Porter, MD

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Common Rash Differentials

Enteroviruses (Coxsackie A16, A6)

- Common cause of Hand/Foot Mouth
- Rash can involve hands/feet (measles generally spares hands and feet)
- Rash can be flat or slightly raised, red tender macules and vesicles on red base (not typical for measles) Affects hands/feet – rarely generalizes

Slide courtesy of: Meredith L. Porter, MD

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Reporting to the Health Department

Reporting & Testing

- Become familiar with the VDH Measles Testing Algorithm
- **Inform the health department of every patient tested** for measles, regardless of public health or commercial testing.
  - In Alexandria City, call Alexandria Health Department immediately at 703-746-4951 to report suspicion and for guidance on **testing.**
  - If rapid public health testing is requested, local Epidemiologists must obtain state approval.
- Advise patient to stay home and isolate from others until test results come back.

How to Collect Specimens

Specimen Collection Quick Reference

Multiple specimen types are needed: Nasopharyngeal and oropharyngeal swab, serum, and urine

Public Health Testing (DCLS):

1–2-day turnaround.

- **Primary PCR** is Nasopharyngeal (NP) swab in Viral transport medium (VTM), refrigerated
- **Secondary PCR** is Oropharyngeal (OP) swab in VTM, refrigerated
- **Secondary PCR** is urine in sterile urine cup, refrigerated
- **Serum** in serum-separator tube (SST) or red top blood tube (spun down), refrigerated

Commercial Testing:

3–6-day turnaround. Not recommended when there is a **high index of suspicion**.

- **Primary specimen** is 1 OP swab **(preferred)**
  - Or can be 1 NP swab
- **Secondary specimen** is serum
- **LabCorp Test Code(s):** 160077 and/or 140470, 140515
- **QUEST Test Code(s):** 34166 and/or 39306

Specimen Collection Kits - State & Commercial Labs

Specimen Source	Test Type	State Lab Instructions (DCLS)	State Lab Comments	Commercial Lab *(longer turn around time than State lab)*	
Nasopharyngeal (NP) swab	PCR	• Preferred primary specimen • Use 1 synthetic swab with 1 vial of VTM • Use the same swab for both nostrils • Keep refrigerated until ready to ship	• Collect as close to clinical onset as possible preferably within the first 3 days of illness, but no later than 10 days after rash onset.	• **LabCorp:** Collect 1 NP swab using standard techniques • VTM or UTM • Refrigerated	• **Quest:** 1 NP swab in liquid Amies elution swab (eSwab), VCM, M4, or equivalent UTM • Refrigerated
Throat/ oropharyngeal (OP) swab	PCR	• Use 1 synthetic swab with 1 vial of VTM • Take sample from back of the throat, not sides of the mouth or cheek cavity. • Keep refrigerated until ready to ship	• Only tested if accompanying a NP specimen.	• **LabCorp:** 1 OP **is primary specimen**, swab posterior pharynx • VTM or UTM • Refrigerated	• **Quest:** 1 OP swab in liquid Amies elution swab (eSwab), VCM, M4, or equivalent UTM • Refrigerated
Urine	PCR	• 10-50 mL of urine in 1 sterile urine cup • First voided morning urine preferred • Keep refrigerated until ready to ship	• Must accompany a NP specimen. • Do not catheterize patient for specimen collection	• **LabCorp:** supplemental specimen; 0.5mL-10 mL. • **Quest: N/A**	
Serum	Serology	• 1 serum-separator tube (SST) or red top blood tube. If collected in a red top blood tube, spin down the tube and place separated serum in a sterile tube. • Optimal serum volume is 2mL • Keep refrigerated until ready to ship	• Repeat specimen should be collected if IgM serology testing is negative for specimens collected within 72 hours of rash onset.	• **LabCorp:** 1 gel-barrier tube, red-top tube or transfer tube. If gel-barrier tube not used, transfer serum to a plastic transport tube; 1 mL serum. Refrigerated • **Quest:** 1 mL serum, Transport tube, Refrigerated or Room Temp	

Promote Vaccines

Promote Vaccines - Children

MMR vaccination is the most important tool for preventing measles.

- Ensure all eligible patients are vaccinated against measles, especially before traveling **internationally** or to a **domestic area** with an ongoing outbreak.
- Children are recommended to receive 2 doses of MMR:
  - First dose: 12-15 months of age
  - Second dose: 4-6 years of age before school entry
  - **Infants 6-11 months** should receive an **additional, early MMR** prior to international travel or in outbreak settings.

Promote Vaccines - Adults

MMR vaccination is the most important tool for preventing measles.

- Vaccinate all eligible patients with 2 doses of MMR, especially before traveling **internationally** or to a **U.S. area** with an ongoing outbreak.
- <5% of adults may have received **inactivated** measles vaccine from **1963 – 1967**.
  - ACIP recommends re-vaccinating anyone with 1 or 2 doses of MMR who received between 1963 – 1967:
    - Inactivated measles vaccine,
    - Further attenuated measles vaccine accompanied by immunoglobulin or high-titer measles immune globulin, or
    - Measles vaccine of unknown type

Promote Vaccines - Adults

- Review other vaccine recommendations for **specific groups**, such as those born before 1957, students at post-high school educational institutions, close contacts of immunocompromised people, and people with HIV infection.

Promote Vaccines:
Free Continuing Education

Addressing Common Vaccine Concerns (1.0 CEU)

In pediatric populations:

In adult populations:

NDSU CENTER FOR IMMUNIZATION RESEARCH AND EDUCATION

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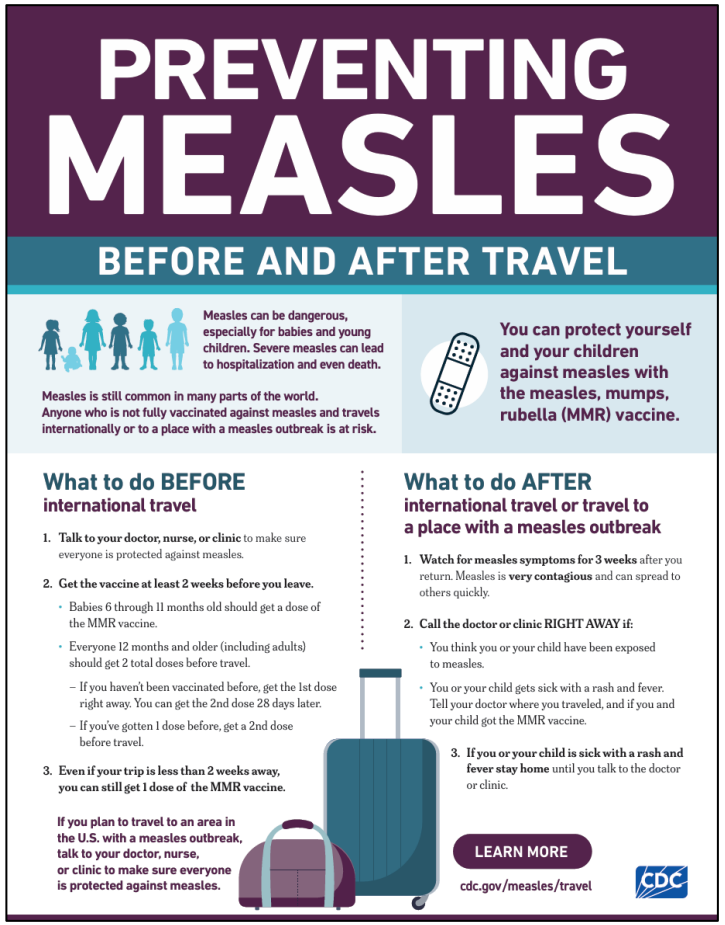
Promote Vaccines

Click the images to download and share these posters in your clinic:

[Measles Poster Link]



[Measles Travel Poster Link]

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Additional Documents (for reference or printing)

- Infection Control
  - Healthcare Personnel Exposure Tool
  - APIC Measles Playbook
  - CDC Interim Infection Prevention and Control Recommendations for Measles in Healthcare Settings
- Testing
  - Measles_HCP_Reporting_and_Testing_Guidance.pdf
  - DCLS State Lab: Specimen Collection
- Signage
  - Airborne Precautions
  - Droplet Precautions

Free Measles Continuing Medical Education

CLINICIAN UPDATE ON MEASLES CASES AND OUTBREAKS IN THE UNITED STATES

CDC MEASLES COCA CALL SEPTEMBER 11, 2025

WATCH THE RECORDING AND GET CME THROUGH OCTOBER 15, 2025.

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