



Return of the Rash: Measles in Oregon

Alicia Sampson, MN, RN, CPHQ, CPN
Clinical Quality Program Manager
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Disclosure

- No potential conflicts to disclose, financial or otherwise, for this presentation

Accreditation

- Accreditation Council for Continuing Medical Education (ACCME)

Criteria for Completion

- Participate in Grand Rounds
- Complete Evaluation



Learning Objectives

1. Understand the Epidemiology and Transmission Pathway of Measles:

By the end of this presentation, learners will be able to describe the regional prevalence of measles, which populations at higher risk, how it is transmitted and the primary factor that facilitates its spread.

2. Recognize Clinical Manifestations, Diagnostics, and Complications:

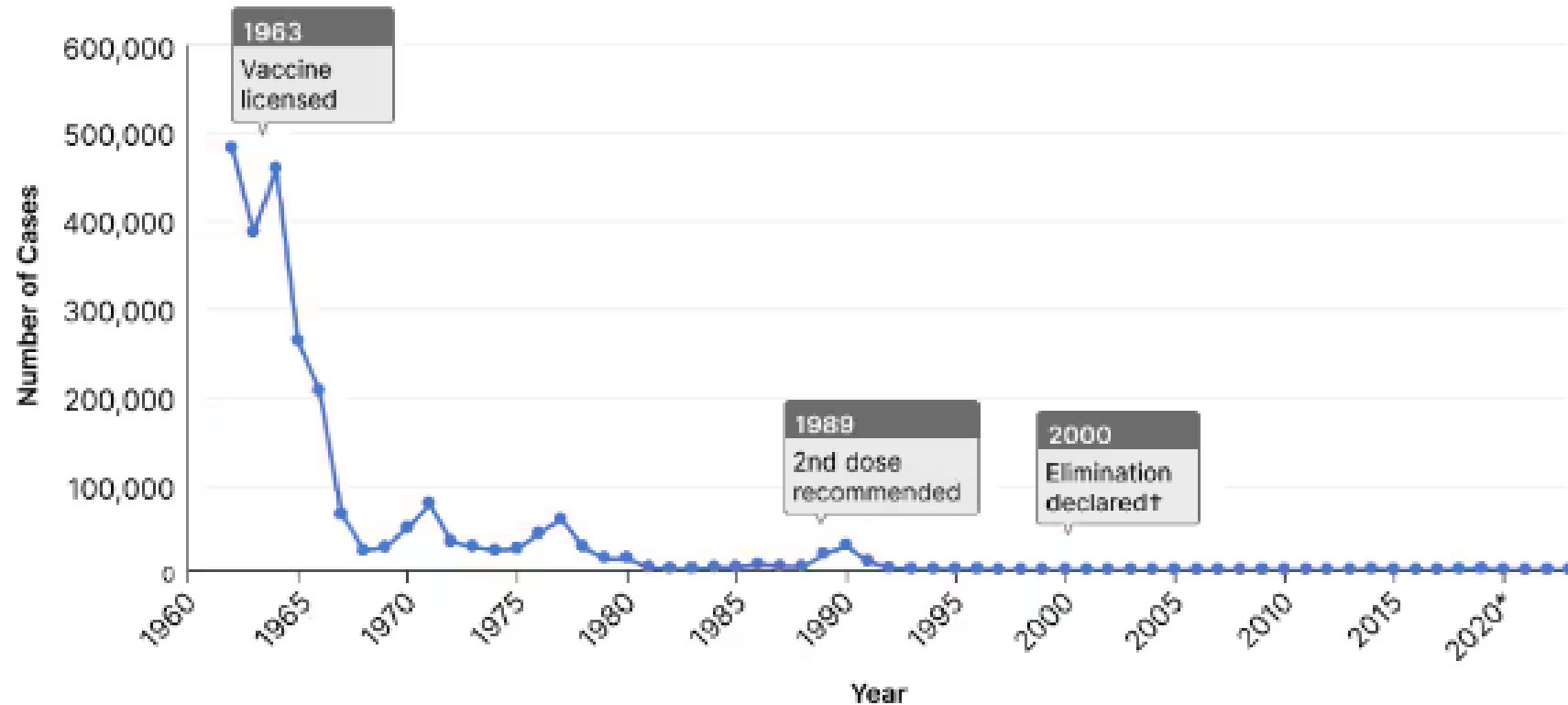
Participants will be able to list the typical signs and symptoms of measles in children, diagnostic testing options, and discuss potential complications that can arise from the disease.

3. Explore Symptom Management and Prevention & Control Measures:

Participants will learn about treatment and supportive care options and effective prevention strategies including vaccination schedules, herd immunity, and public health measures.

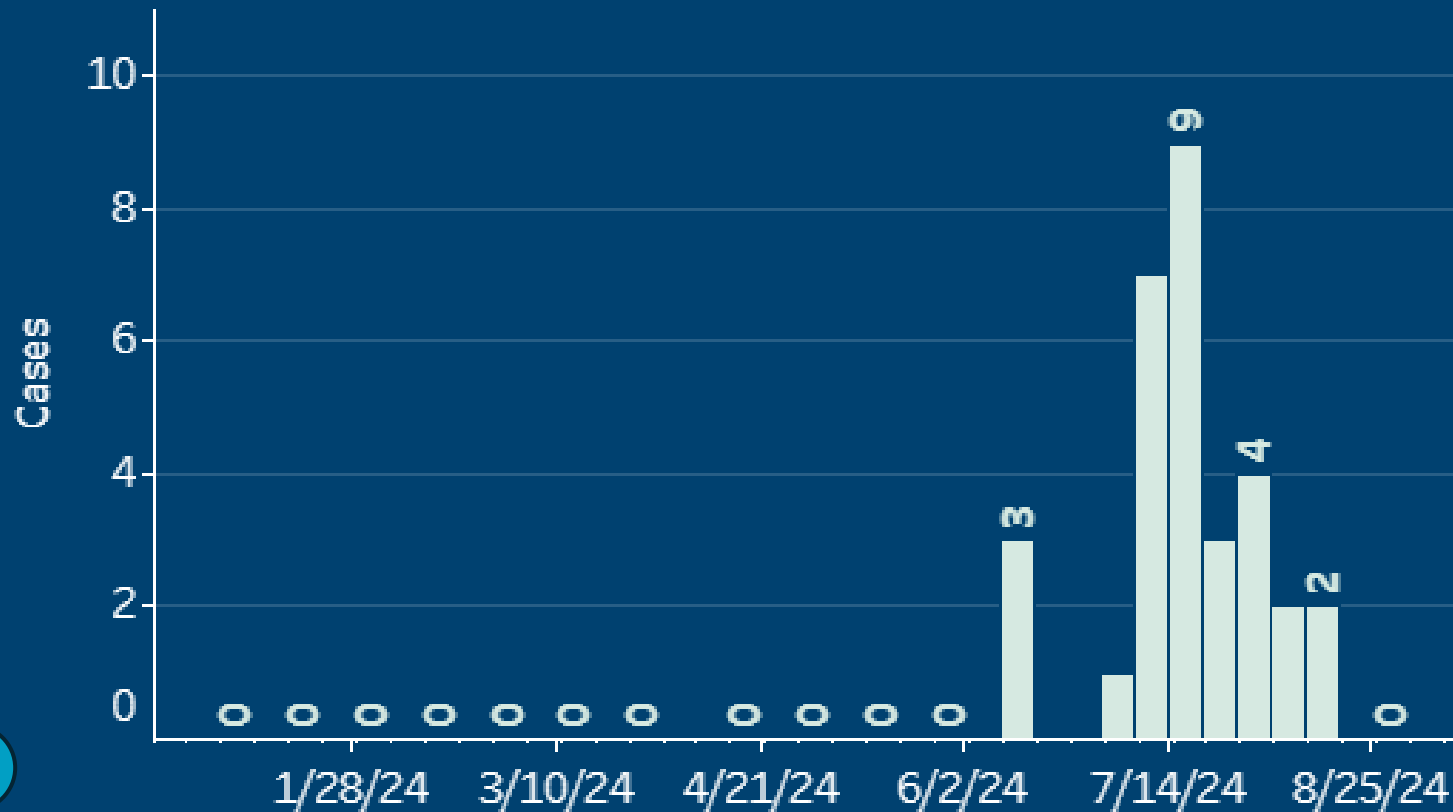
By achieving these objectives, attendees will gain a comprehensive understanding of measles in pediatric patients, focusing on identification, management, and prevention, enhancing their capability to handle cases effectively in clinical practice.

Reported Measles Cases in the United States from 1962 – 2023*

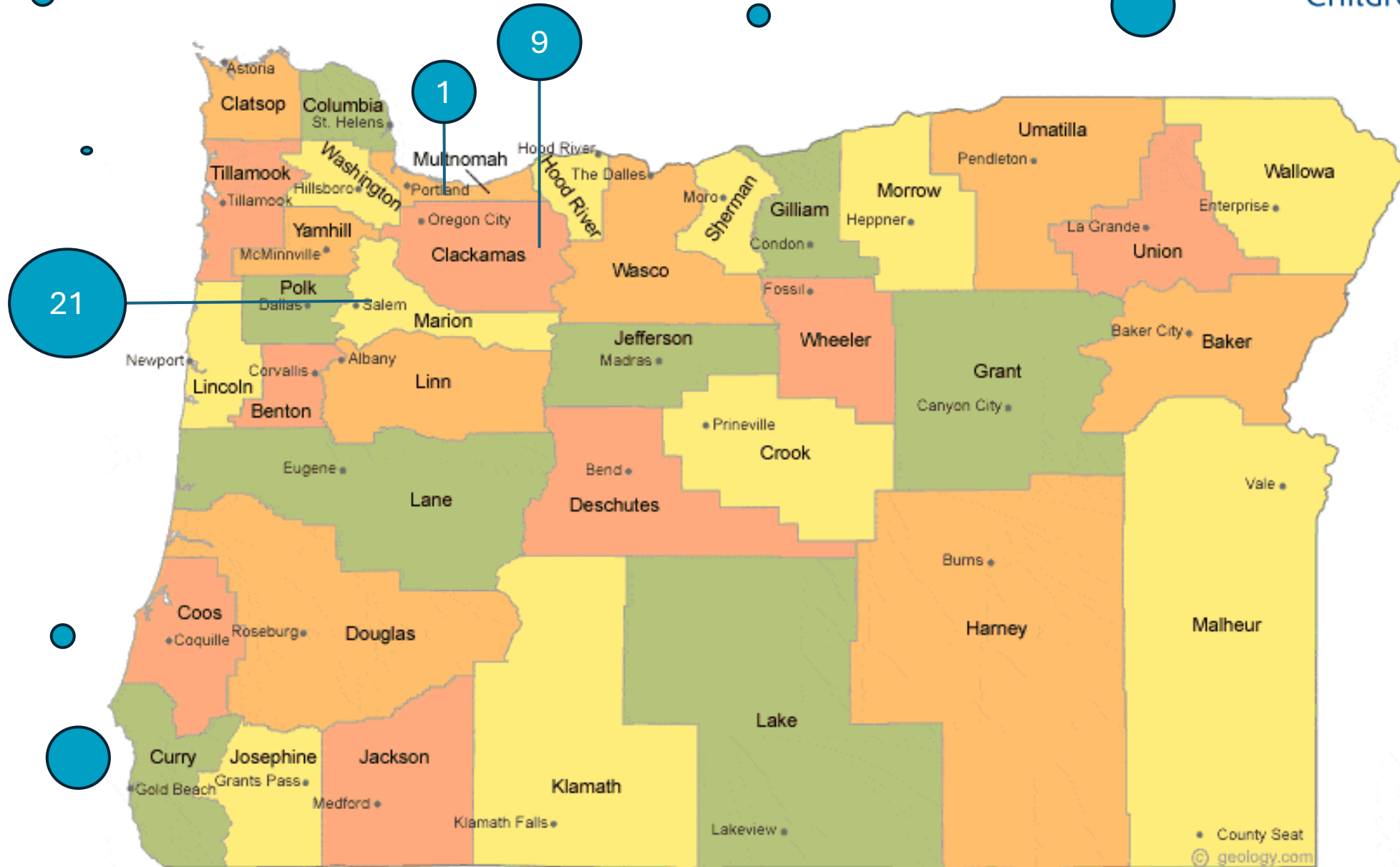


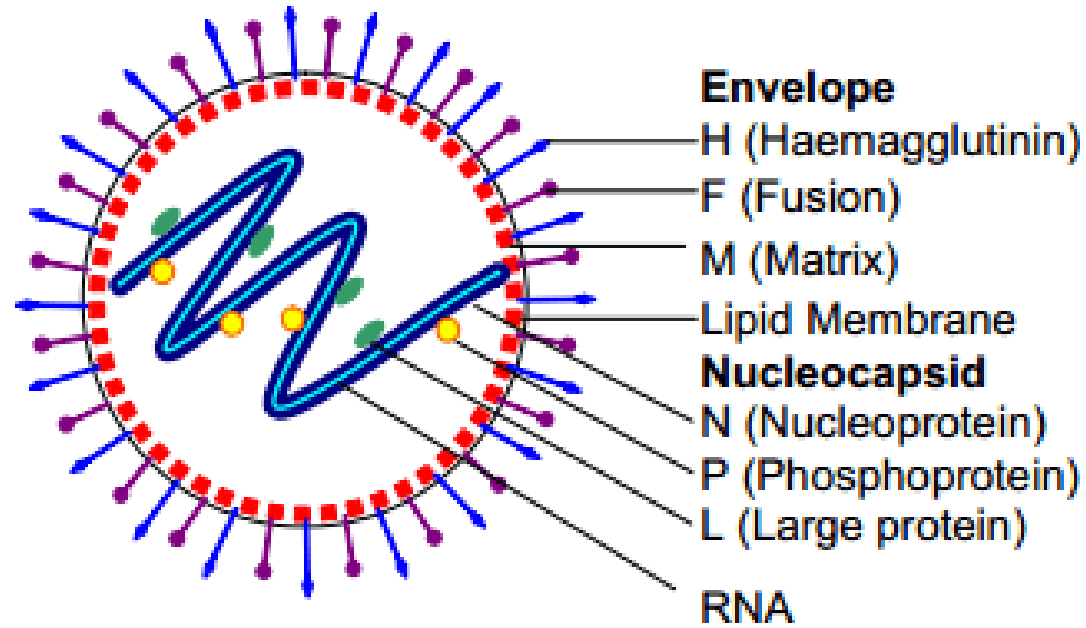
Measles Cases by Report Week*

The **light blue bars** show the case count for each report week of the current year.



(Oregon Health Authority, 2024)





Microbeonline.com

Incubation

Prodromal

Exanthem

Recovery





Incubation

11-12 days after exposure

Prodromal

2-4 days after initial symptoms

Exanthem

3-6 days after prodromal phase starts

Recovery

Case dependent

Incubation

11-12 days after exposure

→ Prodromal

2-4 days after initial symptoms

- Fever and Cough
- Conjunctivitis and Coryza
- Malaise and Anorexia
- Lymphadenopathy

-Elevated Fever

-Koplik spots

Exanthem

3-6 days after prodromal phase starts

Recovery

Case dependent

Incubation

11-12 days after exposure

Prodromal

2-4 days after initial symptoms

Exanthem

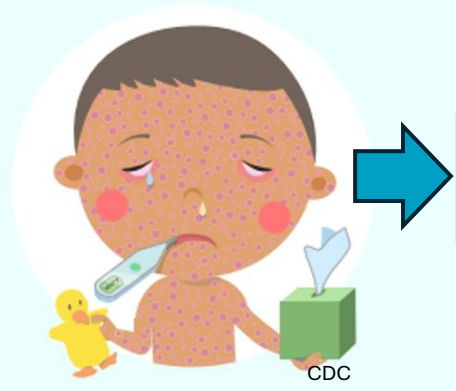
3-6 days after prodromal phase starts

- Flat red spots on face at hairline outward

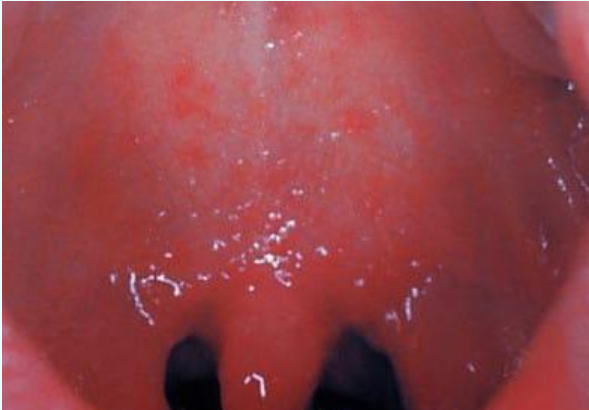
- Rash spreads downward and
- Small raised bumps on red spots
- Exanthem

Recovery

Case dependent



Symptoms- Koplik Spots and Measles Rash





Incubation

11-12 days after exposure

Prodromal

2-4 days after initial symptoms

Exanthem

3-6 days after prodromal phase starts

Recovery

Case dependent

Incubation

11-12 days after exposure

Prodromal

2-4 days after initial symptoms

- Fever
- Conjunctivitis
- Coryza
- Cough

- Elevated Fever
- Koplik spots

Exanthem

3-6 days after prodromal phase starts

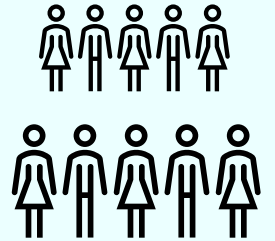
- Flat red spots on face at hairline

- Rash spreads downward and outward
- Small raised bumps on red spots
- Exanthem

Recovery

Case dependent

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Suspected Case





- Mask or tent
- Isolate using Standard plus Airborne precautions!
- Ensure vaccination and fit testing status of caregivers
- Limit patient transport or movement
- Notify Hospital Infection Control Testing
- Contact Local Health Department (lab-confirmed or suspected)

Alert All suspect measles cases and specimens submitted for testing must be coordinated by the ordering provider with and approved by an Oregon State Acute and Communicable Disease Epidemiologist at 971-673-1111.



Measles Tests

When to Collect?

Acute Disease	PCR	Nasopharyngeal (NP) or Throat (OP) Swab 	As soon as possible upon suspicion of measles: ideally 0-3 days after rash onset, up to 10 days after rash onset.
	PCR	Urine 	Within 10 days of rash onset <i>*Collecting a urine specimen along with an NP/OP swab may improve test sensitivity, especially if at the end of the PCR detection window.</i>
	IgM	Serum 	Collect with specimen for PCR. Can be negative up to 3 days after rash onset. IgM can be detected for 6-8 weeks after acute measles.
Immunity	IgG	Serum 	When assessing evidence of immunity, can be detected ~2 weeks after MMR vaccination

(CDC, n.d.)



Treatment

Depends on:

- Symptoms
- Age
- General health
- Severity of condition

May include:

- Antipyretics
- Nutritional supplementation
- Antibiotics if bacterial complications



Other Supportive Care

- Rest
- Fever management
- Eye care
- Respiratory care
- Skin care
- Diet



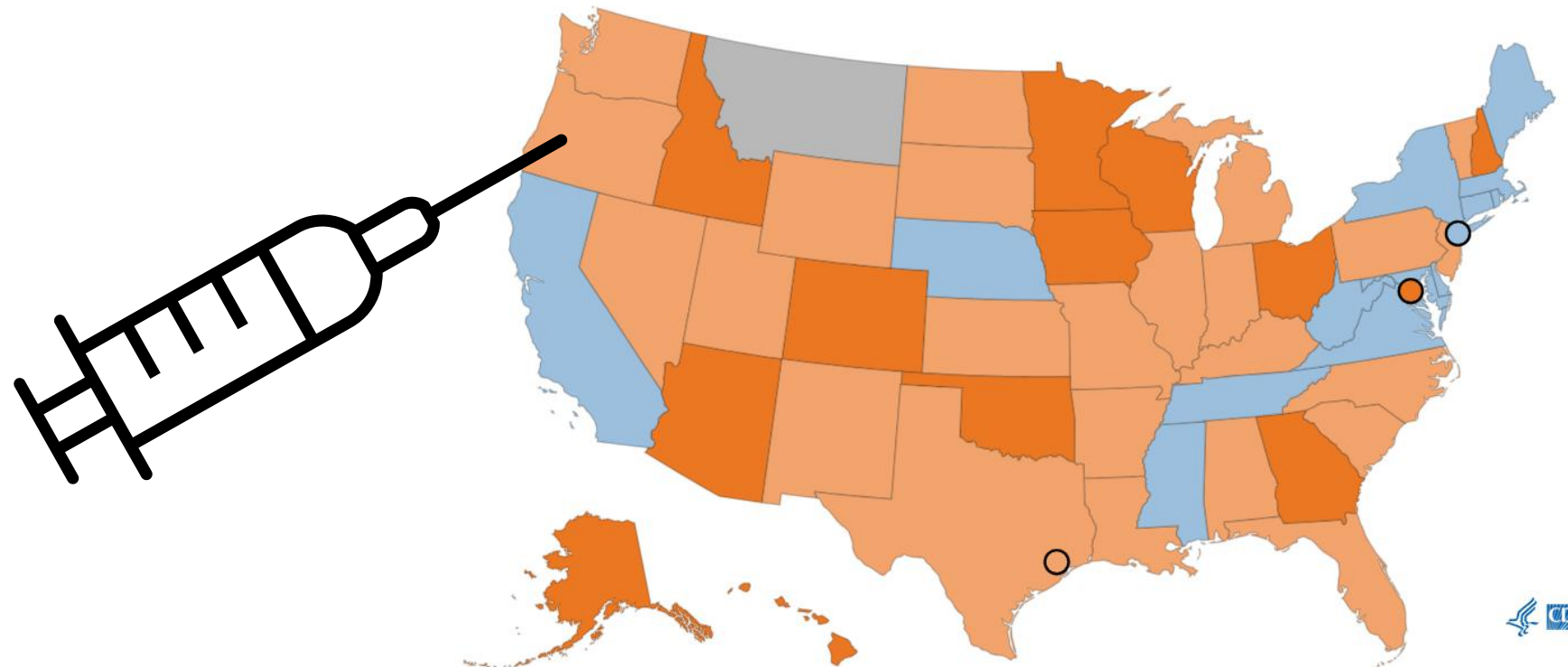
Complications

Common	Severe
Hospitalization (1/5 unvaccinated)	Pneumonia (1/20)
Otitis media (1/10)	Encephalitis (1/1,000)
Diarrhea (<1/10)	Death (1-3/1,000; pna primary cause)
Cough (may persist 1-2 weeks)	Subacute Sclerosing Panencephalitis (SSPE)(4-11/100,000)



Prevention

2022-23 ▾



Legend - Coverage (%)

● Less than 90%

● 90-94.9%

● 95%+

● Not available





Closing

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Thank you

Alicia Sampson MN, RN, CPHQ, CPN
alicia.sampson@providence.org