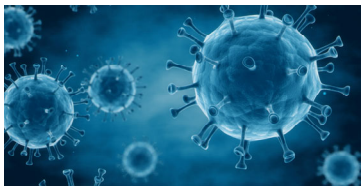




Communicable Disease Exercises & Hot Topics

2026

Public Health Division
Acute and Communicable Disease Program

1

Rabies Scenarios

Thanks to Dr. Emilio Debess, DMV

2

2

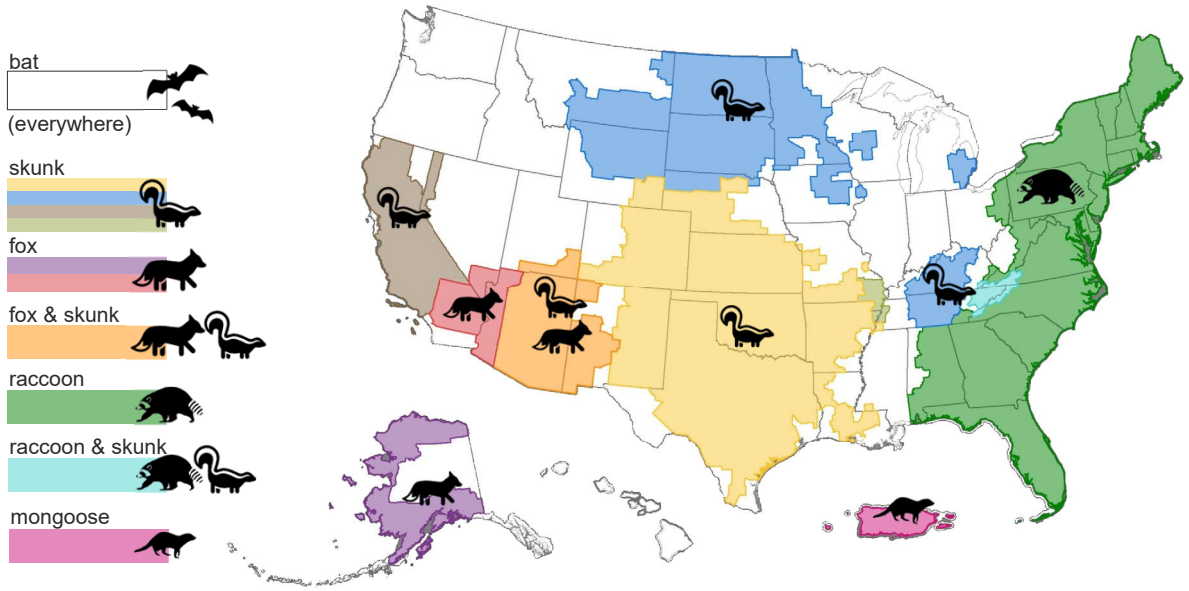
Rabies Overview

- Virus
- Infected animals act oddly
  - Wild animals unafraid of humans
  - Bats in daylight
  - Bats crawling & hissing
  - Profuse salivation
- Spreads by saliva entering broken tissue
- In OR, WA, ID bats are the only reservoir (cats & foxes may be infected predators)
- No terrestrial rabies in Oregon!

3

3

Rabies variants in the US



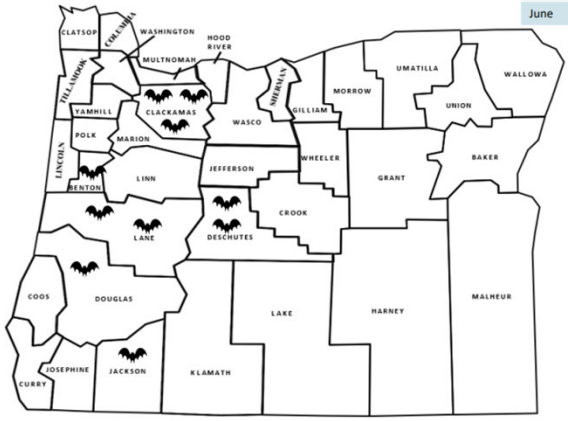
https://www.cdc.gov/rabies/media/images/2024/05/rabies-virus-variant_1.jpg

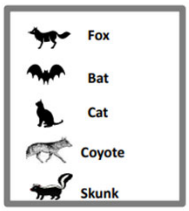
4

4

Rabies-positive Animals Oregon, 2026

Month	County	Species	Common Names
March	Jackson	BAT	Brazilian Free tailed
April	Clackamas	BAT	Big Brown Bat
May	Deschutes	BAT	Big Brown Bat
May	Douglas	BAT	Big Brown Bat
June	Lane	BAT	Brazilian Free tailed
June	Deschutes	BAT	California Myotis
June	Lane	BAT	Big Brown Bat
June	Benton	BAT	Big Brown Bat
June	Clackamas	2 BATS	Big Brown Bat



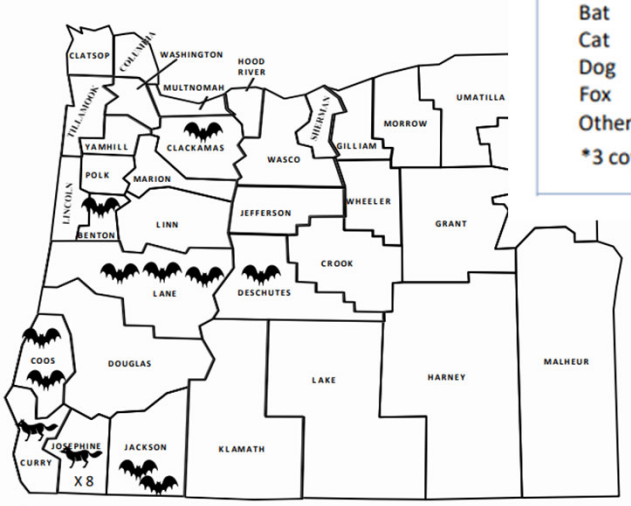


June 2026

OREGON HEALTH AUTHORITY

5

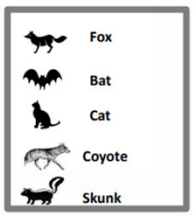
Rabies-positive Animals Oregon, 2025



Rabies Testing in Oregon, 2000-2025

Animal	Positive	Tested	% Positive
Bat	301	3969	7.6%
Cat	2	2122	0.09%
Dog	0	975	0%
Fox	42	206	20.3%
Other*	5	943	0.53%

*3 coyotes, 1 goat, 1 skunk



November 2025

OREGON HEALTH AUTHORITY

6

SW Oregon foxes

From CDC:

- "Phylogenetic analysis of three RABV sequences obtained from rabid gray foxes from southern Oregon collected in 2000, 2006 and 2008, identified all three foxes were infected with RABV variant associated with **Myotis bats** (little brown bats)"
- "More sequences, ideally containing samples from bats near Josephine and Jackson counties are needed to confirm or rule out a rabies host shift"

7

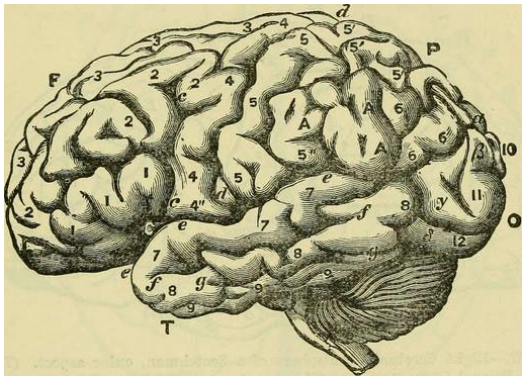
7

Rabies detection

- The only way to test for rabies requires analyzing brain tissue
- Only one lab in Oregon:

Oregon State University
Oregon Veterinary Diagnostic Laboratory

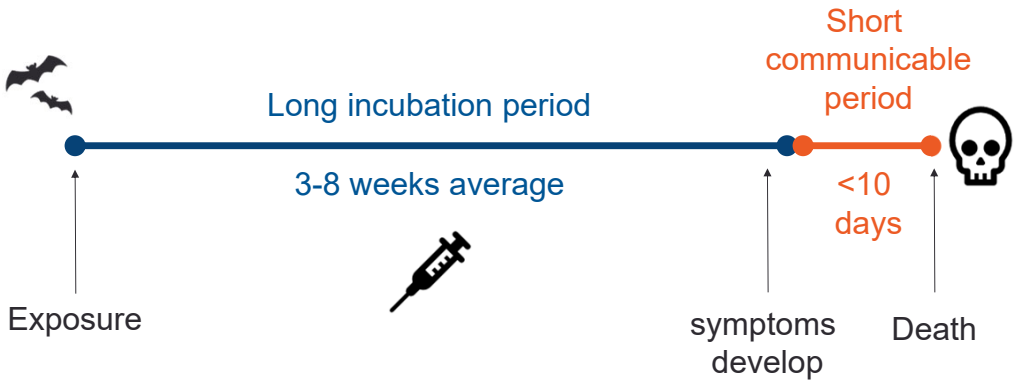
Cost $85
+ $10-$158 carcass disposal fee



8

8

Progression of Rabies



9

9

Managing animal bites

- Wash the wound immediately with soap and water
- If medical care is needed, provider may prescribe antibiotics and give a Tetanus booster
- Assess whether post exposure prophylaxis (PEP) or animal testing is needed
  - If so, initiate as soon as possible
  - Rabies immune globulin (RIG)
  - 4 vaccines given on days 0, 3, 7, 14
- Know where someone can get rabies PEP in your county

10

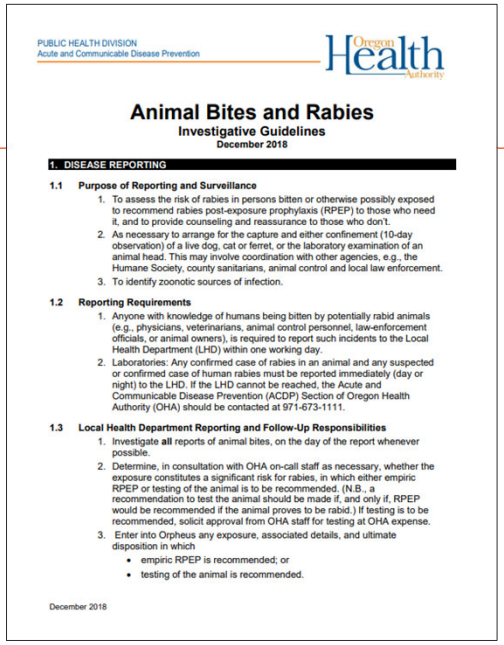
10

To PEP or not to PEP?

- Recommendation for PEP or testing varies by:
  - Type of animal involved
  - Circumstances of the bite:
    - Actual bite?
    - Provoked bite?
    - Behavior of the animal

11

Rabies & animal bite investigative guidelines



PUBLIC HEALTH DIVISION
Acute and Communicable Disease Prevention

Oregon Health Authority

Animal Bites and Rabies
Investigative Guidelines
December 2018

1. DISEASE REPORTING

1.1 Purpose of Reporting and Surveillance

1. To assess the risk of rabies in persons bitten or otherwise possibly exposed to recommend rabies post-exposure prophylaxis (RPEP) to those who need it, and to provide counseling and reassurance to those who don't.
2. As necessary to arrange for the capture and either confinement (10-day observation) of a live dog, cat or ferret, or the laboratory examination of an animal head. This may involve coordination with other agencies, e.g., the Humane Society, county sanitarians, animal control and local law enforcement.
3. To identify zoonotic sources of infection.

1.2 Reporting Requirements

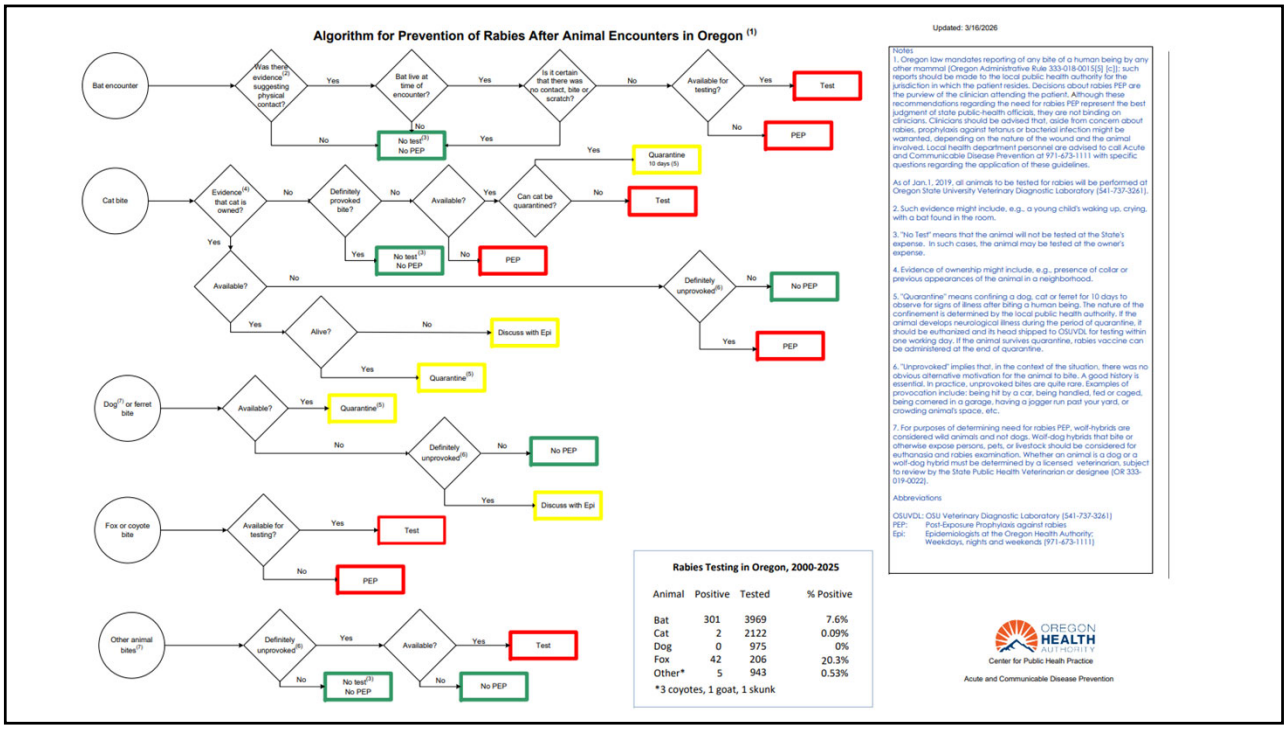
1. Anyone with knowledge of humans being bitten by potentially rabid animals (e.g., physicians, veterinarians, animal control personnel, law-enforcement officials, or animal owners), is required to report such incidents to the Local Health Department (LHD) within one working day.
2. Laboratories: Any confirmed case of rabies in an animal and any suspected or confirmed case of human rabies must be reported immediately (day or night) to the LHD. If the LHD cannot be reached, the Acute and Communicable Disease Prevention (ACDP) Section of Oregon Health Authority (OHA) should be contacted at 971-673-1111.

1.3 Local Health Department Reporting and Follow-Up Responsibilities

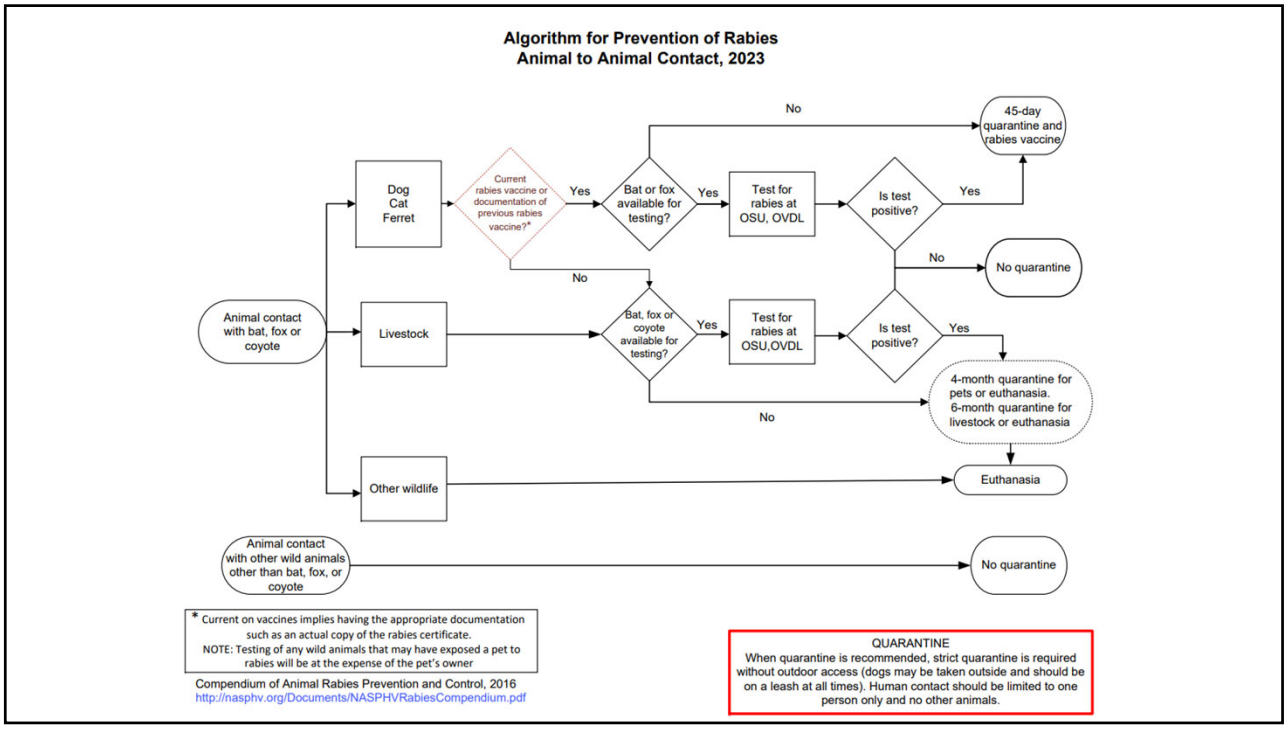
1. Investigate **all** reports of animal bites, on the day of the report whenever possible.
2. Determine, in consultation with OHA on-call staff as necessary, whether the exposure constitutes a significant risk for rabies, in which either empiric RPEP or testing of the animal is to be recommended. (N.B., a recommendation to test the animal should be made if, and only if, RPEP would be recommended if the animal proves to be rabid.) If testing is to be recommended, solicit approval from OHA staff for testing at OHA expense.
3. Enter into Orpheus any exposure, associated details, and ultimate disposition in which
   - empiric RPEP is recommended; or
   - testing of the animal is recommended.

December 2018

12


Algorithm for Prevention of Rabies After Animal Encounters in Oregon (1)
Updated: 3/16/2026
Bat encounter
Was there evidence(2) suggesting physical contact?
Bat live at time of encounter?
Is it certain that there was no contact, bite or scratch?
Available for testing?
Test
PEP
No test(3) No PEP
Quarantine 10 days (5)
Cat bite
Evidence(4) that cat is owned?
Definitely provoked bite?
Available?
Can cat be quarantined?
Test
PEP
No test(3) No PEP
Definitely unprovoked(6)
No PEP
Alive?
Discuss with Epi
Quarantine(5)
Dog(7) or ferret bite
Fox or coyote bite
Other animal bites(7)
Rabies Testing in Oregon, 2000-2025
Animal Positive Tested % Positive
Bat 301 3969 7.6%
Cat 2 2122 0.09%
Dog 0 975 0%
Fox 42 206 20.3%
Other* 5 943 0.53%
*3 coyotes, 1 goat, 1 skunk
Notes
1. Oregon law mandates reporting of any bite of a human being by any other mammal [Oregon Administrative Rule 333-018-0015(5) [c]]; such reports should be made to the local public health authority for the jurisdiction in which the patient resides. Decisions about rabies PEP are the purview of the clinician attending the patient. Although these recommendations regarding the need for rabies PEP represent the best judgment of state public-health officials, they are not binding on clinicians. Clinicians should be advised that, aside from concern about rabies, prophylaxis against tetanus or bacterial infection might be warranted, depending on the nature of the wound and the animal involved. Local health department personnel are advised to call Acute and Communicable Disease Prevention at 971-673-1111 with specific questions regarding the application of these guidelines.
As of Jan.1, 2019, all animals to be tested for rabies will be performed at Oregon State University Veterinary Diagnostic Laboratory (541-737-3261).
2. Such evidence might include, e.g., a young child's waking up, crying, with a bat found in the room.
3. "No Test" means that the animal will not be tested at the State's expense. In such cases, the animal may be tested at the owner's expense.
4. Evidence of ownership might include, e.g., presence of collar or previous appearances of the animal in a neighborhood.
5. "Quarantine" means confining a dog, cat or ferret for 10 days to observe for signs of illness after biting a human being. The nature of the confinement is determined by the local public health authority. If the animal develops neurological illness during the period of quarantine, it should be euthanized and its head shipped to OSUVDL for testing within one working day. If the animal survives quarantine, rabies vaccine can be administered at the end of quarantine.
6. "Unprovoked" implies that, in the context of the situation, there was no obvious alternative motivation for the animal to bite. A good history is essential. In practice, unprovoked bites are quite rare. Examples of provocation include: being hit by a car, being handled, fed or caged, being cornered in a garage, having a jogger run past your yard, or crowding animal's space, etc.
7. For purposes of determining need for rabies PEP, wolf-hybrids are considered wild animals and not dogs. Wolf-dog hybrids that bite or otherwise expose persons, pets, or livestock should be considered for euthanasia and rabies examination. Whether an animal is a dog or a wolf-dog hybrid must be determined by a licensed veterinarian, subject to review by the State Public Health Veterinarian or designee (OR 333-019-0022).
Abbreviations
OSUVDL: OSU Veterinary Diagnostic Laboratory (541-737-3261)
PEP: Post-Exposure Prophylaxis against rabies
Epi: Epidemiologists at the Oregon Health Authority; Weekdays, nights and weekends (971-673-1111)
OREGON HEALTH AUTHORITY
Center for Public Health Practice
Acute and Communicable Disease Prevention

13


Algorithm for Prevention of Rabies
Animal to Animal Contact, 2023
Animal contact with bat, fox or coyote
Dog
Cat
Ferret
Current rabies vaccine or documentation of previous rabies vaccine?*
Bat or fox available for testing?
Test for rabies at OSU, OVDL
Is test positive?
45-day quarantine and rabies vaccine
No quarantine
Livestock
Bat, fox or coyote available for testing?
Test for rabies at OSU,OVDL
Is test positive?
4-month quarantine for pets or euthanasia. 6-month quarantine for livestock or euthanasia
Other wildlife
Euthanasia
Animal contact with other wild animals other than bat, fox, or coyote
No quarantine
Yes
No
* Current on vaccines implies having the appropriate documentation such as an actual copy of the rabies certificate.
NOTE: Testing of any wild animals that may have exposed a pet to rabies will be at the expense of the pet's owner
Compendium of Animal Rabies Prevention and Control, 2016
http://nasphv.org/Documents/NASPHVRabiesCompendium.pdf
QUARANTINE
When quarantine is recommended, strict quarantine is required without outdoor access (dogs may be taken outside and should be on a leash at all times). Human contact should be limited to one person only and no other animals.

14

General rules of thumb

- If it's a bat, fox, or coyote assume it has rabies
- Cats may also be rabid because they hunt bats
- If a wakeful child is involved it's probably a provoked bite
- Your state epi is here to help!

15

15

1. A man calls to say that he was jogging close to his house when a dog ran out of its yard and bit him on the ankle. He wants to know what to d. What do you tell him?

a) Advise him to seek medical attention (antibiotics, tetanus booster)
b) Advise him to report the bite to animal control so they can place the dog on a 10-day post-bite quarantine
c) Assume the dog is vaccinated since it lives in his neighborhood. Just tell the jogger to be more careful next time

16

16

2. A family is having a BBQ. The parents look over just in time to see their two-year-old girl pick up a dead, desiccated bat on the deck and put it in her mouth. (Yes, this actually happened!) What do you tell them?

a) Provide PEP: RIG and vaccines for the girl as soon as possible
b) Bats rarely carry rabies in Oregon. No PEP
c) Rabies virus does not survive in saliva after an animal dies. No PEP
d) Children will put anything in their mouths. Don't leave dead bats lying around!

17

17

OREGON HEALTH AUTHORITY

Measles

18

18

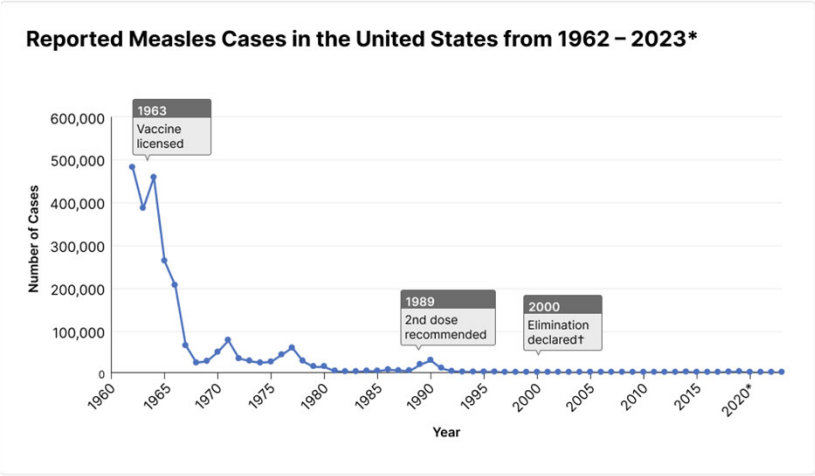
Measles: the big picture

THERE'S A CURRENT OUTBREAK OF
MEASLES

19

19

Context: Measles history



~ **500,000** cases before vaccine

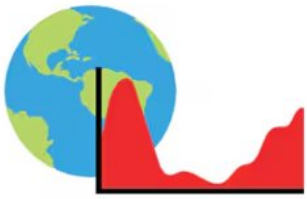
From 2000 to 2020, average of **190** cases a year

99.9% decrease

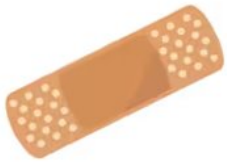
20

20

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



Global measles activity



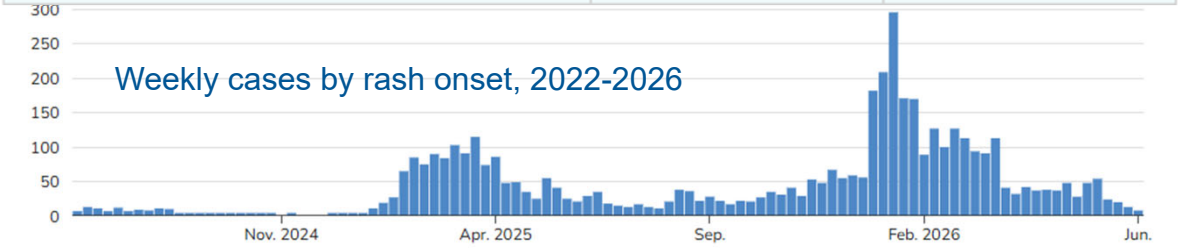
Declining MMR vaccination coverage in the U.S.

21

21

US measles cases

	2026 To date	2025 Full year
Total Cases	**2,170**	**2,289**



22

22

U.S. Hospitalizations

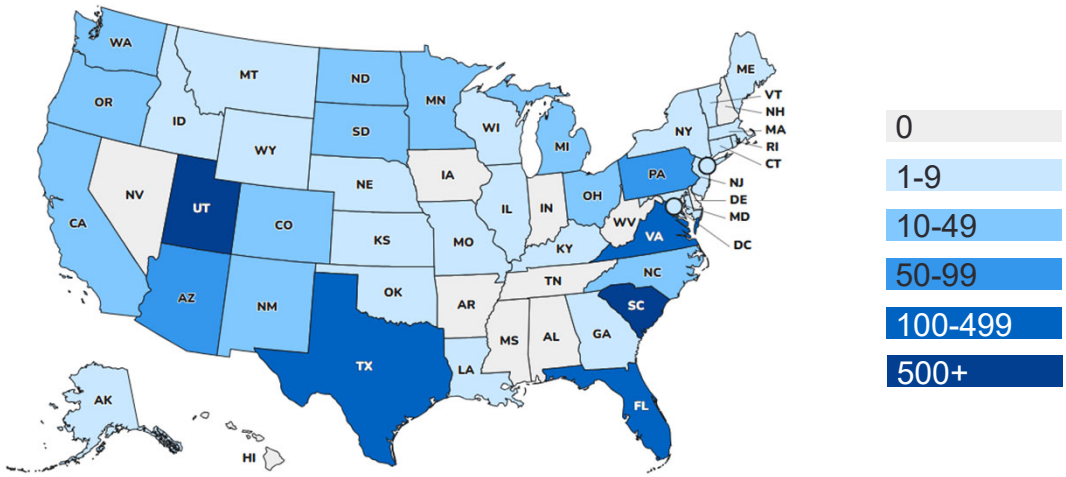
	2026	2025
Total Hospitalized	**6%** (138 of 2,170 cases)	**11%** (243 of 2,289 cases)

U.S. Deaths

	2026	2025
Total Deaths	**0**	**3**

23

Mapping measles in the US, 2026



24

Measles in Oregon

2026 Situation Summary

Measles Cases in Oregon

Total Cases	24
Unvaccinated or Unknown	23
1 MMR Dose	1
2 MMR Doses	0
Hospitalizations	1
Deaths	0

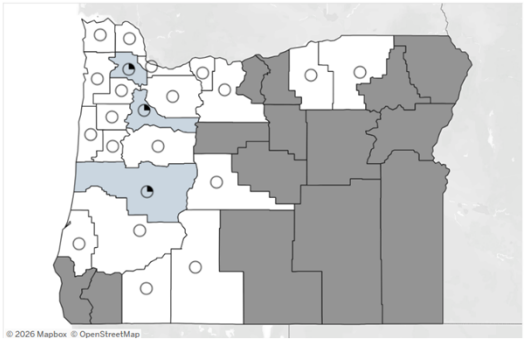
https://www.oregon.gov/oha/ph/diseasesconditions/diseasesaz/pages/measles.aspx#M2 25

25

Measles in wastewater

Oregon Respiratory Viral Pathogen Wastewater Monitoring Dashboard

Map of counties by **Measles** virus concentration detected by community wastewater treatment centers in the two-week period ending **3/28/2026**.



Explore the map by selecting a date, or highlighting a virus concentration level

Select a 2-week period end date

3/28/2026

Highlight a Level by color

- High
- Moderate
- Low
- Very Low
- Non-detectable
- No Data

Highlight a Level by shape

- High
- Moderate
- Low
- Very Low
- Non-detectable

https://public.tableau.com/app/profile/oregon.public.health.division.acute.and.communicable.disease.pre/viz/OregonsRVPWastewaterMonitoring/Mainpage?publish=yes 26

26

Not all cases of measles are benign.

Hospitalization	18%
Diarrhea	20%
Otitis media	11%
Pneumonia	5%
Encephalitis	1.7 per 1000 cases
Death	0.7 per 1000 cases

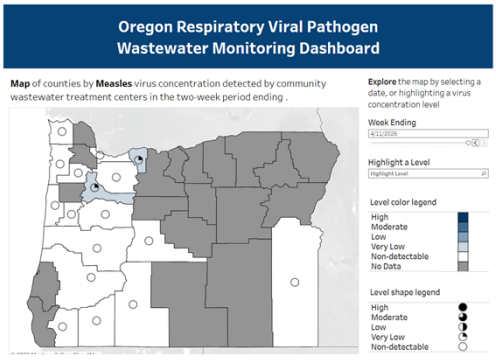
Complications are more common in children <5 and adults >20

27

Questions

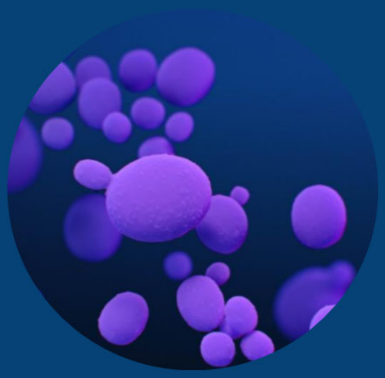
3. Have you worked on a measles case (yet)?

4. Is there wastewater testing in your community?



https://public.tableau.com/app/profile/oregon.public.health.division.acute.and.communicable.disease.pre/viz/OregonsRVPWastewaterMonitoring/Mainpage?publish=yes

28



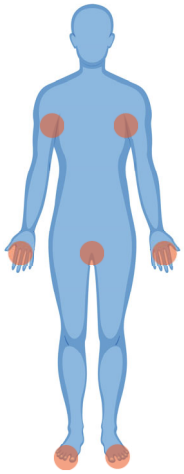
Candidozyma auris

29

29

Candidozyma auris (formerly *Candida auris*)

- Fungus (yeast)
- Skin colonizer
- Colonization outcomes differ:
  - Most healthy people eventually decolonize (62%)
    - median length carriage 8.6 months
  - Long-term colonization (~20%)
  - 7%-13% develop an infection

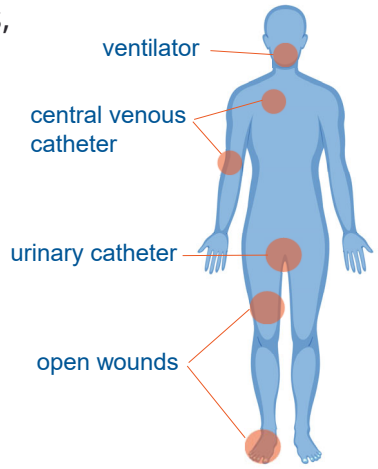


30

30

C. auris infections

- Non-specific infections: bloodstream infections, wound infections, urinary tract infections
- Risk factors include invasive medical devices and open wounds
- Among critically ill patients, progression to illness is much higher (17-25%)
- Crude mortality is quite high:
  - 1 in 3 patients



31

Why are we concerned?

- High morbidity & mortality for invasive infections
- Drug-resistant : difficult or impossible to treat
- Spreads quickly in healthcare settings

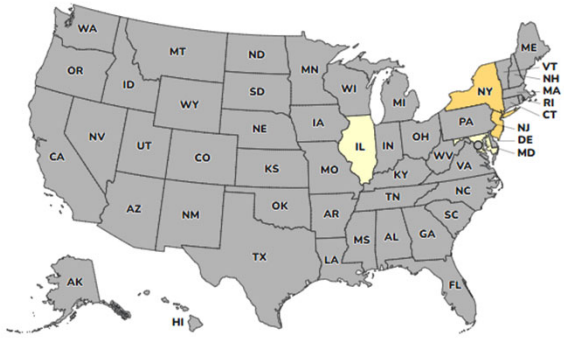
32

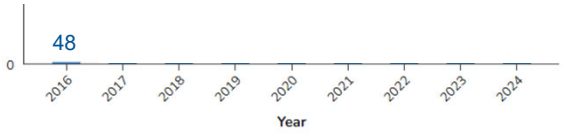
5. Candida auris is considered an emerging pathogen. Why?

a) It is a healthcare-associated infection, so cases emerge from healthcare systems into the community
b) It is a relatively new disease and incidence is increasing rapidly
c) It colonizes sweat glands and emerges when you sweat.

33

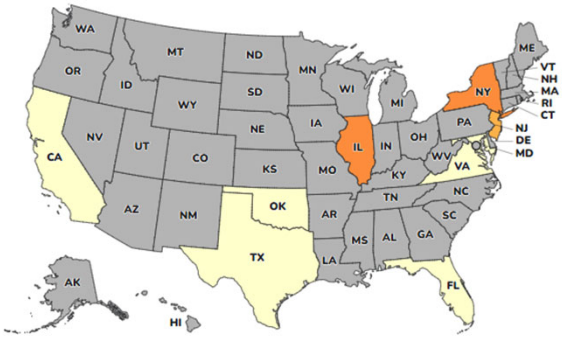
33

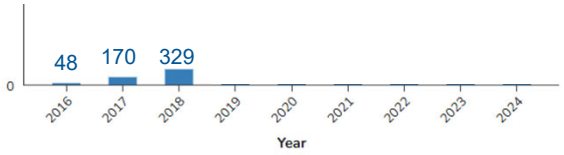




34

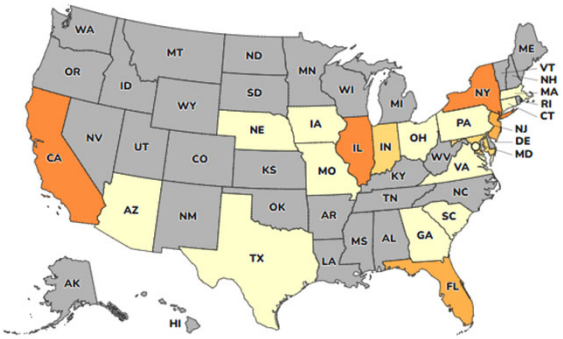
34


WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
ME
VT
NH
MA
RI
CT
NJ
DE
MD
AK
HI


48
170
329
0
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year

35

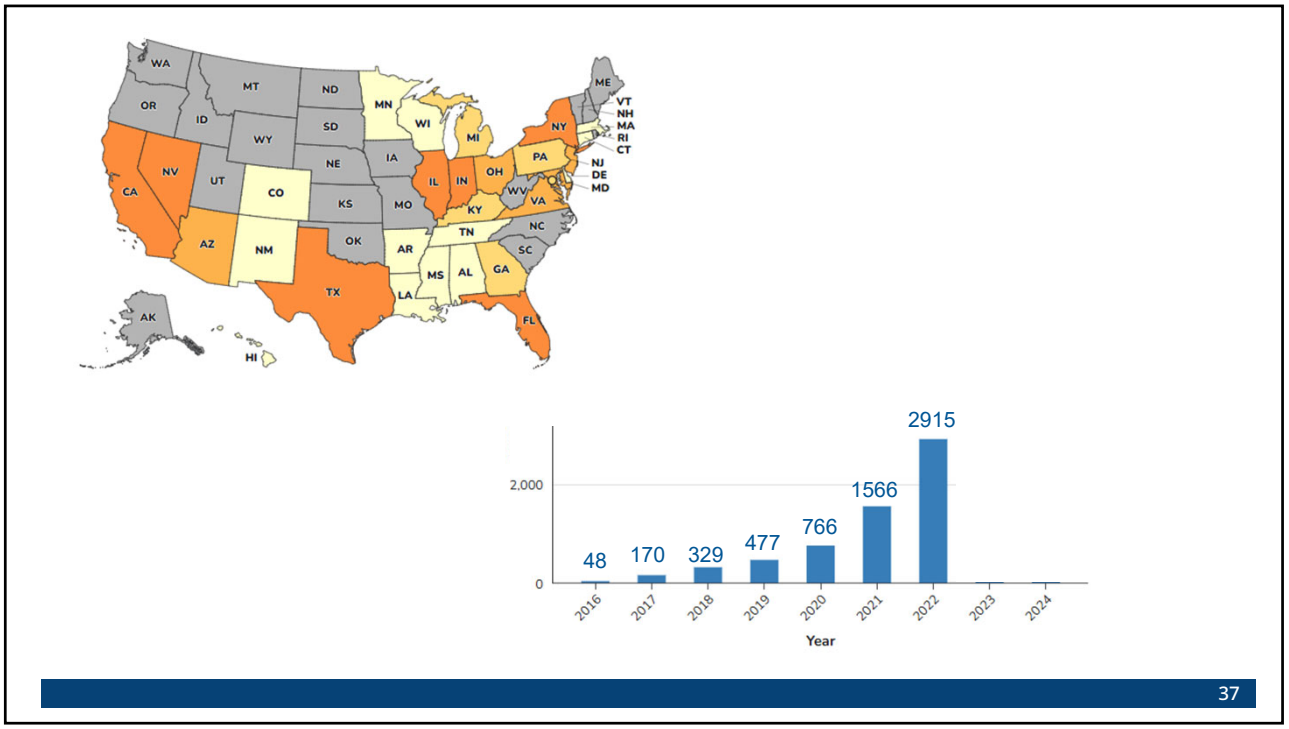
35


WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
ME
VT
NH
MA
RI
CT
NJ
DE
MD
AK
HI

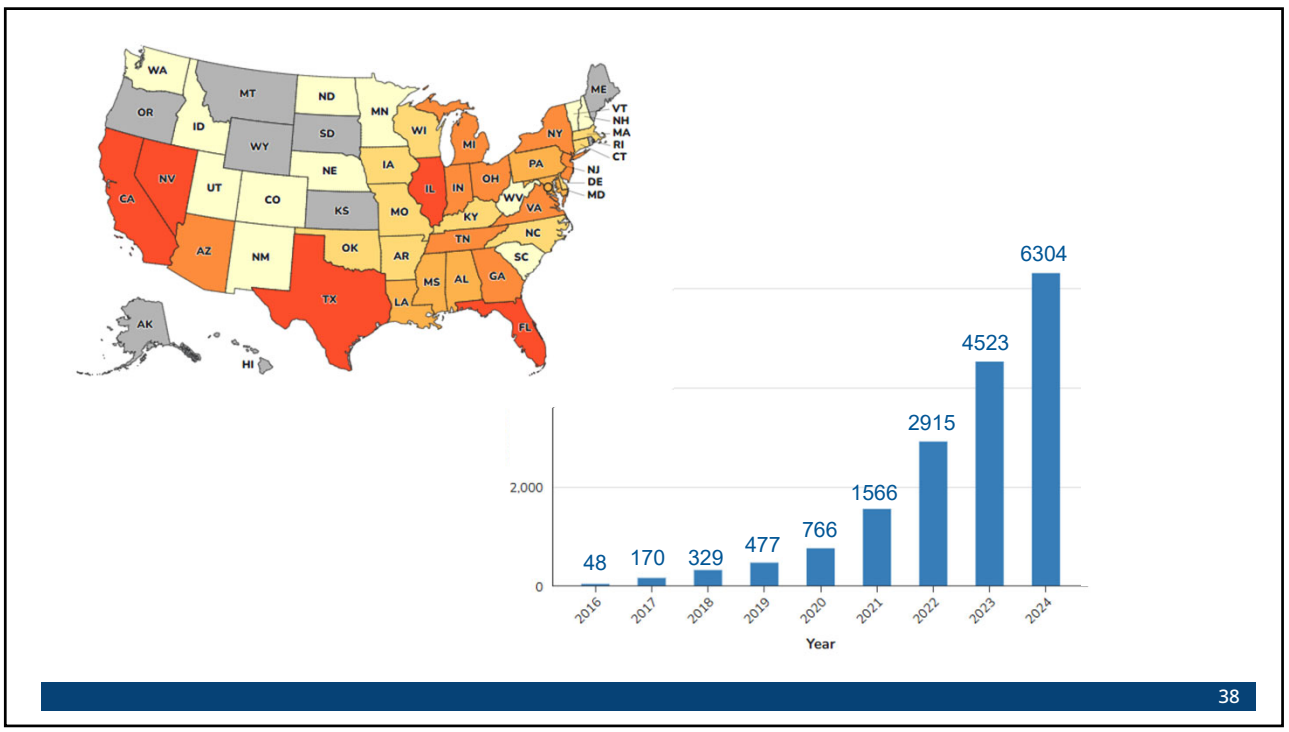

48
170
329
477
766
0
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year

36

36

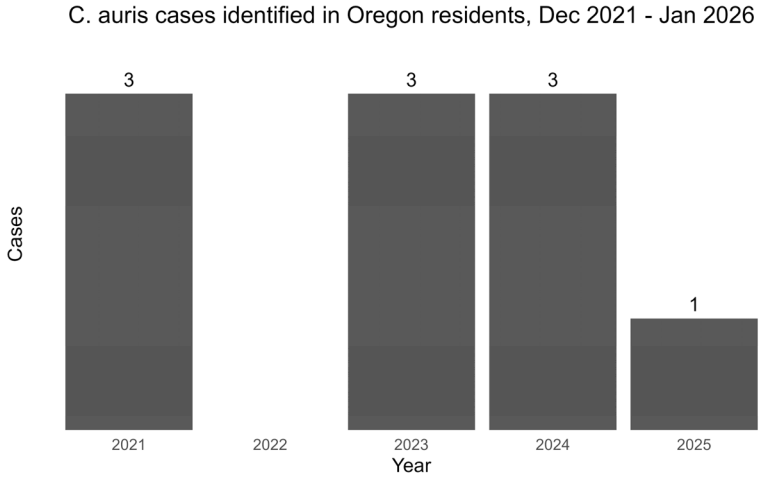

WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
ME
VT
NH
MA
RI
CT
NJ
DE
MD
AK
HI
2915
1566
766
477
329
170
48
2,000
0
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year
37

37


WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
ME
VT
NH
MA
RI
CT
NJ
DE
MD
AK
HI
6304
4523
2915
1566
766
477
329
170
48
2,000
0
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year
38

38

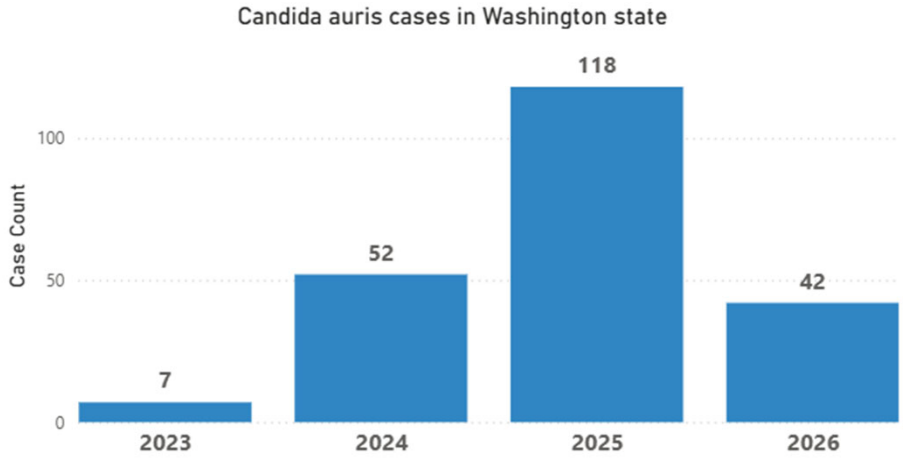
C. auris in Oregon



39

39

C. auris in Seattle-metro

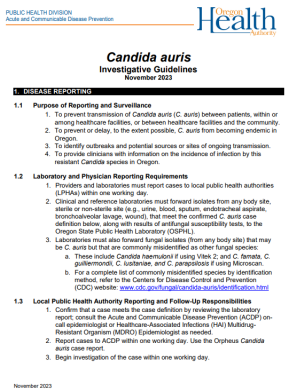


40

40

Responding to *C. auris*

- First 24 hours: healthcare facility call
- Case interview
- Testing healthcare contacts
- On-site visit



PUBLIC HEALTH DIVISION
Acute and Communicable Disease Prevention

Oregon Health Authority

Candida auris
Investigative Guidelines
November 2023

1. DISEASE REPORTING

1.1 Purpose of Reporting and Surveillance

1. To prevent transmission of *Candida auris* (*C. auris*) between patients, within or among healthcare facilities, or between healthcare facilities and the community.
2. To prevent or delay, to the extent possible, *C. auris* from becoming endemic in Oregon.
3. To identify outbreaks and potential sources or sites of ongoing transmission.
4. To provide clinicians with information on the incidence of infection by this resistant *Candida* species in Oregon.

1.2 Laboratory and Physician Reporting Requirements

1. Providers and laboratories must report cases to local public health authorities (LPHAs) within one working day.
2. Clinical and reference laboratories must forward isolates from any body site, sterile or non-sterile site (e.g., urine, blood, sputum, endotracheal aspirate, bronchoalveolar lavage, wound), that meet the confirmed *C. auris* case definition below, along with results of antifungal susceptibility tests, to the Oregon State Public Health Laboratory (OSPHL).
3. Laboratories must also forward fungal isolates (from any body site) that may be *C. auris* but that are commonly misidentified as other fungal species:
   a. These include *Candida haemulonii* if using Vitek 2; and *C. famata*, *C. guilliermondii*, *C. lusitaniae*, and *C. parapsilosis* if using Microscan.
   b. For a complete list of commonly misidentified species by identification method, refer to the Centers for Disease Control and Prevention (CDC) website: www.cdc.gov/fungal/candida-auris/identification.html

1.3 Local Public Health Authority Reporting and Follow-Up Responsibilities

1. Confirm that a case meets the case definition by reviewing the laboratory report; consult the Acute and Communicable Disease Prevention (ACDP) on-call epidemiologist or Healthcare-Associated Infections (HAI) Multidrug-Resistant Organism (MDRO) Epidemiologist as needed.
2. Report cases to ACDP within one working day. Use the Orpheus *Candida auris* case report.
3. Begin investigation of the case within one working day.

November 2023

6. If you receive a report of a *c. auris* case in your county, what should you do first?

a) Call the on-call epidemiologist right away
b) Call Heather or Evelyn (MDRO Epidemiologists) directly right away
c) Assume it's incorrect because *C. auris* is very rare in Oregon
d) Make a case in Orpheus
e) Read the *C. auris* IGs

Questions?

Public Health Division
Acute and Communicable Disease Program
800 NE Oregon Street, Suite 370
Portland, OR 97232
971-673-1111
www.healthoregon.gov/diseases

43

Please complete a course evaluation

Thank you!

44