

XDRO Database

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What does XDRO Stand For?

X – eXtensively

D - Drug

R - Resistant

O - Organism



XDRO Database

Purpose

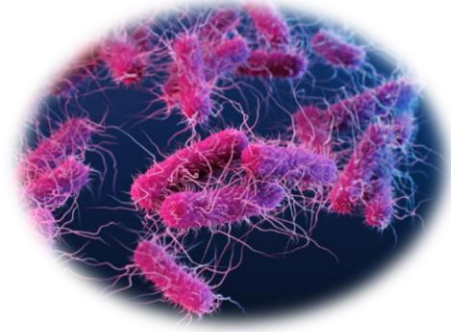
- Database for Washoe County cases
 - Carbapenemase-Producing Organism (CPO)
 - *Candida auris*
- Surveillance tool
 - Helps hospitals check if a patient has had a drug-resistant infection before
- Hosted online



CPOs and *C. auris*

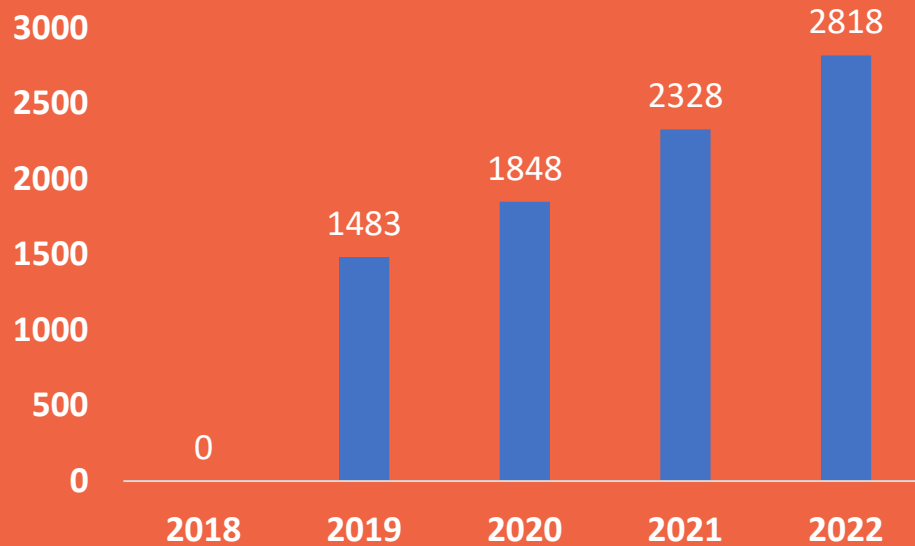
High-Priority Pathogens

- **Carbapenemase-Producing Organism (CPO):** bacteria resistant to carbapenems (“last-resort” antibiotics)
- *Candida auris* (*C. auris*): fungus resistant to antifungals
- Difficult to treat and spreads in healthcare settings
- Cases are either:
 - **Colonized** – CPO/*C. auris* present without infection
 - **Clinical** – active infection
- **NNPH and healthcare staff respond immediately**
 - Notify hospital
 - Initiate contact tracing
 - Education and prevention measures for case and contacts
 - Collaborate with State and CDC partners



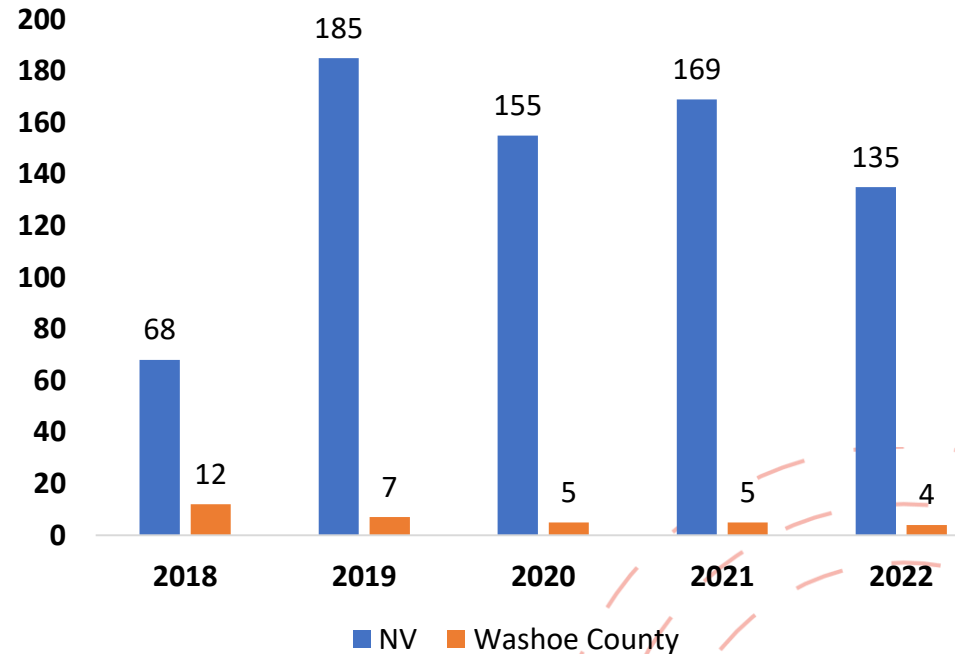
CPO Impact

Fig 1: Carbapenemase-producing carbapenem-resistant *Enterobacteriaceae* cases, U.S., 2018-2022



- 2018: CPOs became nationally reportable as Carbapenemase-producing carbapenem resistant *Enterobacteriae*
- National counts increasing over the years

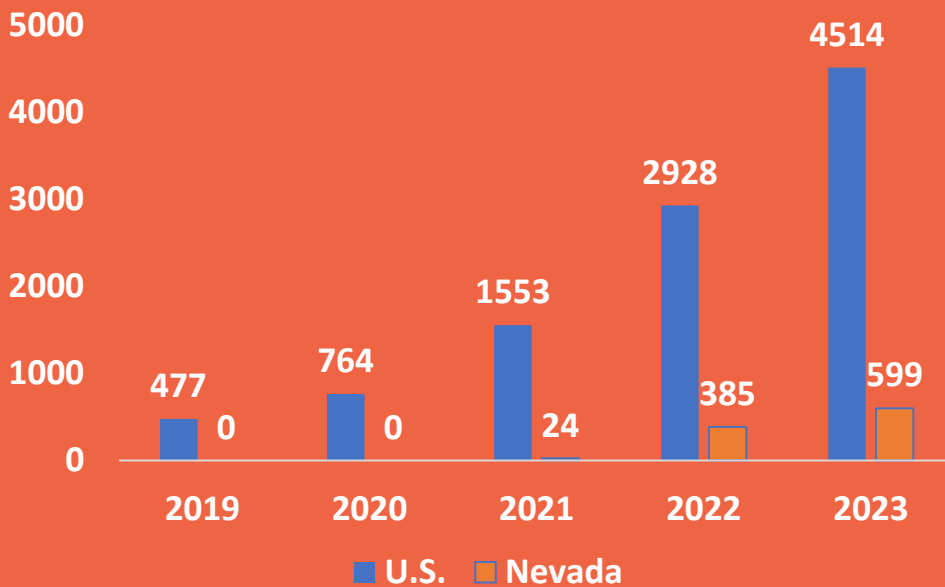
Fig 2: CPO cases reported, Nevada, Washoe County, 2018-2022



- Nevada has ranged between 68 to 185
- Washoe cases decreasing

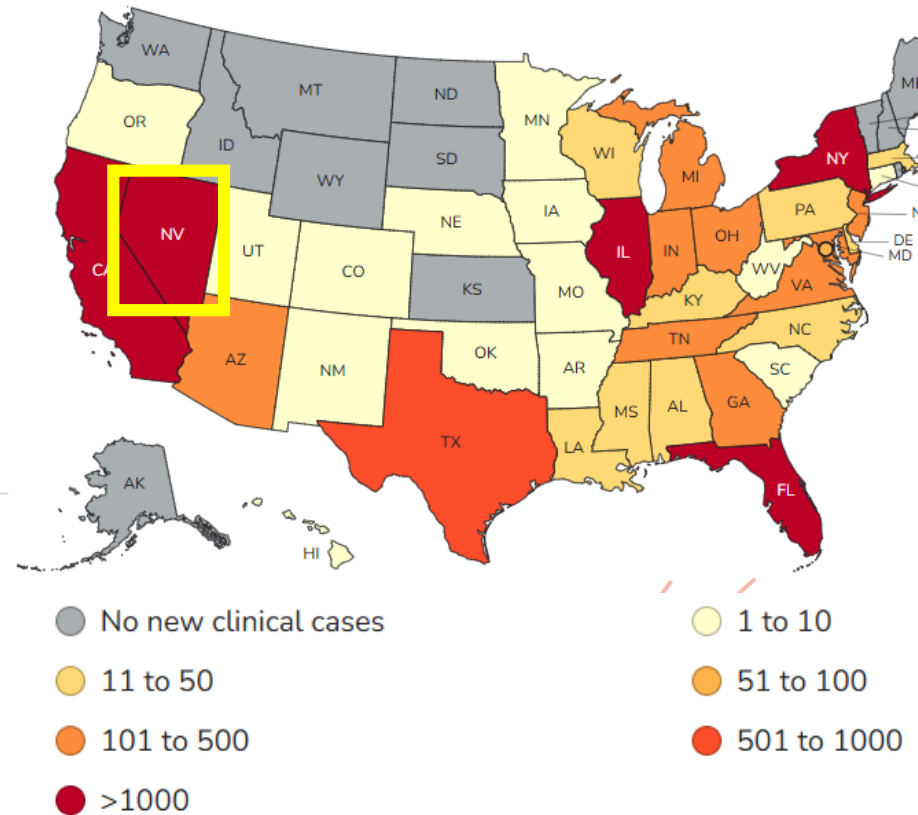
C. auris Impact

Fig 3. Clinical *C. auris* cases reported, U.S., Nevada, 2019-2023

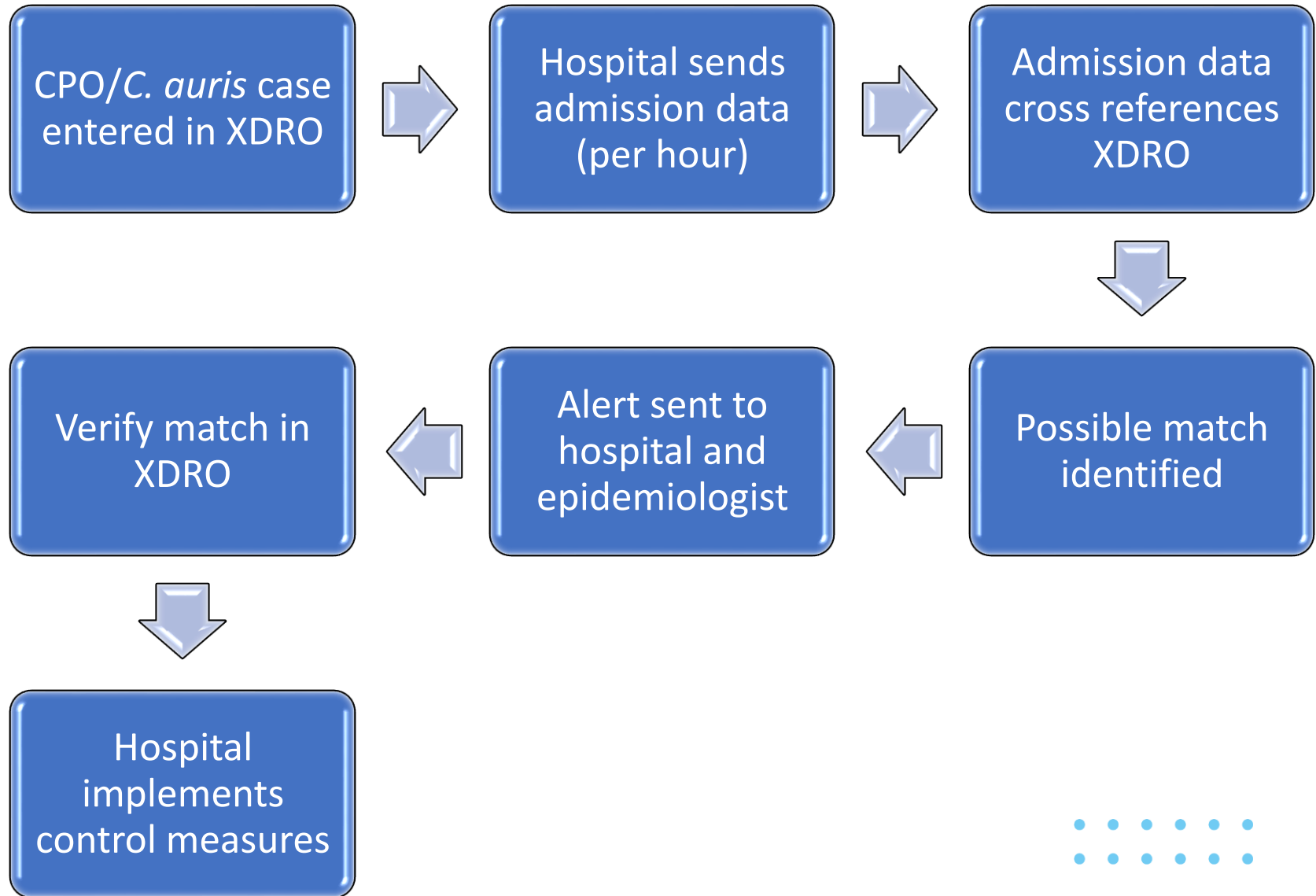


- Washoe County cases 2019-2023: 5

Fig 4. New clinical cases of *C. auris* reported in the U.S., 2016-2023



XDRO Diagram



XDRO Database

NNPH

XDRO registry

Username: | [Logout](#)

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[MANAGE USER PROFILE](#)

[CASE](#)

[ALERT](#)

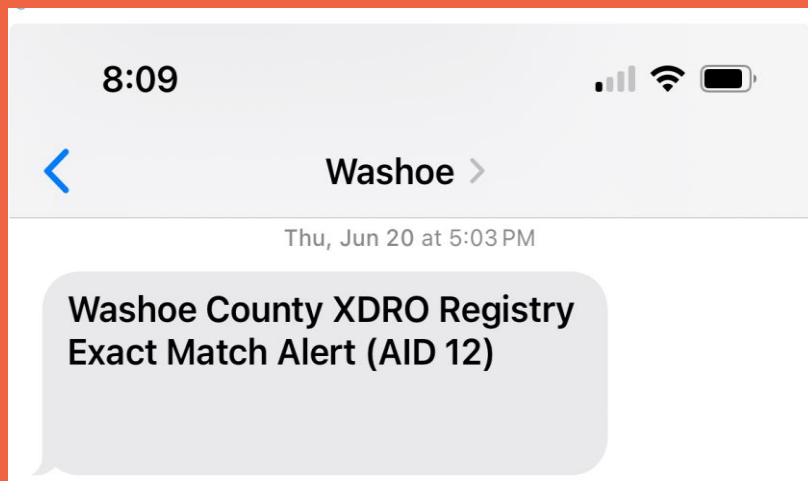
XDRO registry

Extensively drug resistant organism registry

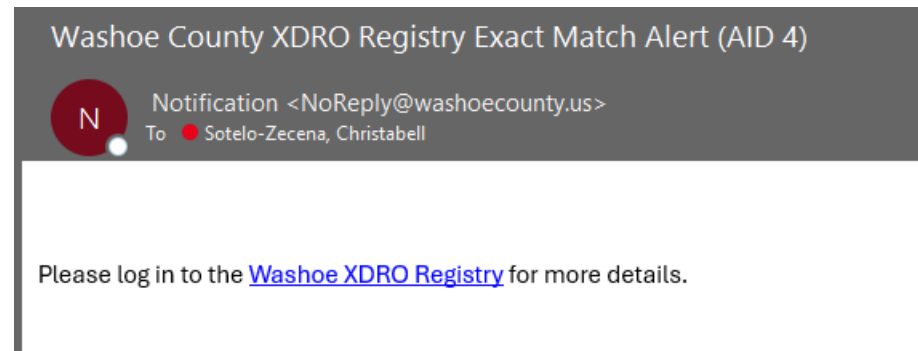


Alert Types

Text message



E-mail



Manage Facility Alert

Show 10 entries

Search:

Alert ID	Name	DOB	Organism	Match Result	Match Date	Acknowledged On
12			Klebsiella pneumoniae	Exact Match	6/20/2024 5:03:09 PM	Acknowledge

Showing 11 to 11 of 11 entries

Previous 1 2 Next

Disclaimer: A match on name and date of birth only may not be 100% accurate.

Note:
Full match: There was a complete match on first name, last name, and date of birth.
Partial match: There was a match on last name and date of birth; the first name was matched only on the first initial.
Patients with a known history of carbapenemase producing organisms (CPO) or *Candida auris* (*C. auris*) should be placed in a single room, if possible, and under standard and

XDRO Report

Patient Demographics

Last Name: First Name: Date of birth: Case Id: 550 Address:

XDRO Culture Information

Organism: Klebsiella pneumoniae Specimen Type: Urine
Date Collected: 05/12/2023 CPO Lab Status: Yes Candida auris PCR:

Why is XDRO beneficial to hospitals



- Implement infection control practices
 - Contact precautions
 - Isolation
 - Personal protective equipment (PPE)
 - Prioritize cleaning and disinfection of rooms
- Reduce spread of CPO/*C. auris* in hospital setting



Progress

Current

- Successfully integrated one local hospital
 - Alerts have been received
- Two others in queue to integrate
- One in communication

Future Direction

- Expand XDRO to other health jurisdictions
- Onboard additional facilities (ex. skilled nursing facilities)

Acknowledgements

NNPH Tech Services



- Shuan Soo
- Dale Montgomery
- Donald Bailey

Hospital partners



- Infection Preventionists

Epidemiologist



- Fellow NNPH colleagues

Leadership



- EPHP Division Director
- Epi Program Manager

Questions?