Public Health

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

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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

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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



XDRO registry

Extensively drug resistant organism registry

WASHOE COUNTY HEALTH DISTRICT
) is now
NORTHERN NEVADA
Public riediti



Alert Types

Text message



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E-mail

Washoe County XDRO Registry Exact Match Alert (AID 4)



Notification <NoReply@washoecounty.us> To • Sotelo-Zecena, Christabell

Please log in to the Washoe XDRO Registry for more details.

Manage Facility Alert

12 Klebsiella pneumoniae Exact Match 6/20/2024 5:03:09 PM Acknowledge	24 7

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.

Patjonte with a known history of carbananamasa producing organism (CDO) or Candida auris (C. auris) should be placed in a single room if possible, and under standard

and XDRO Report

Patient Demographics				
Last Name a Birmen	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



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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)

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Questions?