Washington State Department of Health
ELABORATIONS
News and Issues for Washington's Clinical Laboratories

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Candida auris Is Coming To Town

Candida auris is an emerging fungal pathogen that impacts the most vulnerable patients. Laboratories play a critical role in identifying *C. auris* so that patients can quickly get proper medical therapy and facilities know to rapidly implement stringent infection prevention practices to prevent transmission to others.

C. auris is the first fungal pathogen to be declared a public health threat. *C. auris* is difficult to identify in the laboratory, persists long-term on fomites and in the environment, is highly resistant to antifungal drugs, asymptomatically colonizes skin, rapidly spreads within healthcare facilities, and causes severe disease with high mortality in vulnerable patients.

The Washington State Department of Health (WA DOH) is actively conducting surveillance for *C. auris* and educating laboratory partners on how to detect it and prepare for its emergence in Washington State.

Since its discovery in Japan in 2009, *C. auris* has spread globally making it difficult to contain outbreaks in healthcare settings. In 2016, retrospective analysis by CDC confirmed the first known case of *C. auris* in the United States. This isolate had been collected in 2013 from a patient hospitalized in New York and was previously misidentified as another *Candida* species. As of the close of 2021, cases have been reported in over 30 U.S. states (Figure 1, pg 3).

As of March 1, 2022, *C. auris* has not been identified in Washington State. However, cases have been detected in other Western US states and in British Columbia, Canada.

In December of 2021, the Oregon Health Authority announced the first cases of *C. auris* detected at a hospital in their state. Southern California has experienced prolonged healthcare outbreaks since *C. auris* was first identified in Orange County in 2019. The geographic proximity of *C. auris* cases and outbreaks to Washington State healthcare facilities prompts us to increase surveillance for *C. auris* through direct isolate submission by clinical laboratory partners and to expand proactive colonization screening of high risk patients and reactive screening of patients who are epidemiologically linked to a known case.

The Washington State Public Health Lab (WAPHL) has served as the Antibiotic Resistance Laboratory Network (AR Lab Network) West Regional Laboratory since 2016. Centers for Disease Control and Prevention (CDC) established the AR Lab Network in order to increase lab capacity for rapid detection and characterization of multi-drug resistant threats, such as *C. auris*. As the West Regional Lab, WAPHL provides advanced testing for Washington, Oregon, California, Nevada, Hawaii, Alaska, and Guam.

continued on page 2

Inside This Issue

Practice Guidelines

The following practice guidelines have been developed by the Clinical Laboratory Advisory Council. They can be accessed at the LQA website.

Acute Diarrhea
Anemia
ANA
Bioterrorism Event Mgmt
Bleeding Disorders
Chlamydia
Diabetes
Group A Strep Pharyngitis
Group B Streptococcus
Hepatitis
HIV
Infectious Diarrhea
Intestinal Parasites
Lipid Screening
PAP Smear Referral
Point-of-Care Testing
PSA
Rash Illness
Red Cell Transfusion
Renal Disease
STD
Thyroid
Tuberculosis
Urinalysis
Wellness

Candida auris Is Coming To Town

Through WAPHL's work as the West Regional Laboratory, we have contributed to increased national capacity for *C. auris* isolate testing and colonization screening.

C. auris can be difficult to identify and may be misidentified as other unusual *Candida* species. Only targeted PCR assays, MALDI-TOF, and WGS can reliably identify it. Limited access to these methods represents a barrier to rapid identification and response. Clinical laboratories should refer to Table 1(pg 4) to be aware of which *Candida* species may represent a misidentification and forward these suspect isolates to WAPHL for confirmatory testing. CDC routinely provides laboratory resources related to *C. auris* identification. Please refer to CDC laboratory guidance (links can be found in the Resources portion of this article).

In order to expand surveillance for *C. auris* and other high priority antimicrobial resistant pathogens, we encourage clinical laboratories to join the AR Lab Network sentinel laboratory group. Sentinel labs submit at least one of the following categories of isolates: *Candida* species (excluding *albicans*), Carbapenem-resistant *Acinetobacter baumannii* (CRAB), Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA), and less common carbapenem-resistant Enterobacterales genera, such as *Morganella* and *Providencia*. Sentinel laboratories can forward any eligible *Candida* isolates for confirmatory testing. WAPHL provides supplies (media slants, Category B shipping materials, and shipping labels) free of charge. Please contact ARLN for additional information regarding joining the sentinel lab group. All *Candida* isolates sent to WAPHL will be identified using Matrix Assisted Laser Desorption/Ionization Time of Flight Spectroscopy (MALDI-TOF-MS) and will have antifungal susceptibility testing performed.

Early detection of *C. auris* is key for rapid containment. Clinical laboratories should consider implementing routine identification of *Candida* isolates from non-sterile sites, such as urine. *C. auris* is known to colonize non-sterile body sites, hence routine identification of *Candida* species from these sites can facilitate rapid detection of *C. auris*. In September 2018, state and local public health departments in Southern California requested a clinical laboratory associated with 9 long-term acute-care hospitals (LTACH) begin species identification of *Candida* isolated from urine. In February 2019, this clinical laboratory detected the first case of *Candida auris* in California. This early identification allowed for rapid public health action and investigation of the index case. Clinical labs should ensure they can accurately detect *Candida auris*, either through in-house identification or sending suspect isolates to WAPHL. Additionally, please consider enhanced surveillance projects, such as the California clinical lab implemented. The WAPHL is here to offer expert support, please contact ARLN.

Upon detection of *Candida auris* and the need for response testing arises, WAPHL can also provide colonization screening, free of charge. The WAPHL uses a CDC-developed PCR assay and culture-based isolate recovery upon a positive PCR. The CDC-developed PCR assay can also be found on the CDC website; laboratories should consider onboarding this assay. Additionally, CDC recommends implementing admission screening of patients that have received overnight international healthcare in the past 12 months. These patients should be screened for *Candida auris* and carbapenemase-producing organisms (CPO). Interested facilities should contact their local health jurisdiction (LHJ) to coordinate admission screening. Implementation will require internal coordination (i.e. lab and infection control) and with public health (state and local).

continued on page 3

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Secretary, DOH: Umair A. Shah, MD, MPH
Acting Health Officer: Scott Lindquist, MD
Director, PHL: Romesh Gautom, PhD
Program Manager, LQA: Elizabeth Parent
Editor: Chuck Talburt
Circulation: Chuck Talburt

Comments, letters to the editor, information for publication, and requests for subscription can be directed to:
ELABORATIONS
1610 NE 150th St
Shoreline, WA 98155

e-mail address: chuck.talburt@doh.wa.gov

NOTE: Letters to the editor may be published unless specified otherwise by the author.

Website access:
Department of Health
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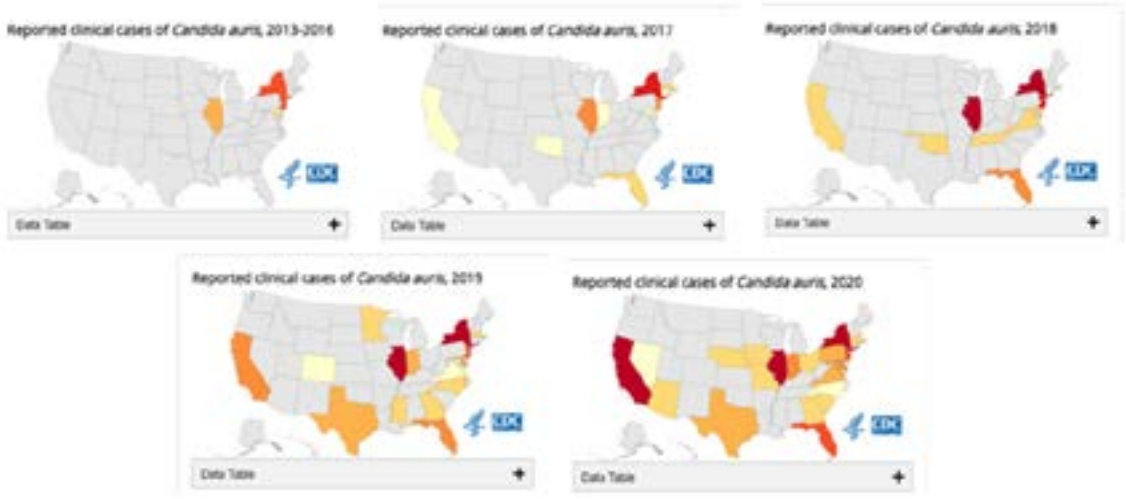
Figure 1: Spread in the United States, 2013-2020



continued on page 4

Table 1. Commonly Misidentified Species

Identification Method	Organism *C. auris* can be misidentified as
Vitek 2 YST*	*Candida haemulonii* *Candida duobushaemulonii*
API 20C	*Rhodotorula glutinis* (characteristic red color not present) *Candida sake*
API ID 32C	*Candida intermedia* *Candida sake* *Saccharomyces kluyveri*
BD Phoenix yeast identification system	*Candida haemulonii* *Candida catenulata*
MicroScan	*Candida famata* *Candida guilliermondii*** *Candida lusitaniae*** *Candida parapsilosis***
RapID Yeast Plus	*Candida parapsilosis***

Resources:
CDC lab identification

CDC Tracking C.auris

ARLN

Rapid Assessment and Containment *C. auris*

Antibiotic Resistance Threats

Calendar of Events

Training Classes:

2022 Virtual Joint Spring Seminar
April 20-22
(VIRTUAL)

2022 NWMLS
October 12-14
(VIRTUAL)

2022 Clinical Laboratory Conference
November (date TBD)

Contact information for the events listed above can be found on page 2. The Calendar of Events is a list of upcoming conferences, deadlines, and other dates of interest to the clinical laboratory community. If you have events that you would like to have included, please mail them to ELABORATIONS at the address on page 2. Information must be received at least one month before the scheduled event. The editor reserves the right to make final decisions on inclusion.

Washington State Department of Health

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Washington State Department of Health
1610 NE 150th St
Shoreline, WA 98155

For persons with disabilities, this document is available upon request in other formats. To submit a request, please call 1-800-525-0127 (TTY/TDD 1-800-833-6388).

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