

Evaluation of An Outbreak Investigation of Candida auris at Southside Medical Center



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Objectives

- Describe the epidemiology of *Candida auris (C. auris)*
- Outline timeline of *C. auris* outbreak at Southside Medical Center (SMC) and response activities
- Highlight internal and external partnerships that are critical for successful outbreak investigations
- Lessons learned



Candida auris

- C. auris was first identified in Japan in 2009
- C. auris became nationally notifiable in 2018
- Can affect many regions of the body and can cause invasive infections
- Incubation Period: variable and not well defined
- Infectious Period: variable, transient, indefinite?





Candida auris

- *C. auris* is an emerging fungus (yeast) that can spread easily in healthcare facilities
- *C. auris* is a serious global health threat because it is:
 - Difficult to identify
 - Often multidrug-resistant (three classes of antifungals)
 - Able to cause serious infections
 - Increasing in the number of cases



Clinical vs. Colonization

Clinical

- Typically identified via cultures
- Symptoms may not be noticeable
- Infectious
- High Risk:
 - Other co-morbidities
 - Hospitalizations
 - Drains, lines, or tubes
 - Previous antibiotics and antifungals
 - History of other Multi Drug Resistant Organisms (MDROs)

Colonization

- Identified via screening (PCR)
- Fungus is somewhere on the body
- No symptoms
- Increased risk for developing infection
- Can transmit disease
- Does not receive treatment



Southside Medical Center (SMC)

- Located in the City of Petersburg right off I-95
- 300 licensed bed facility that provides acute care inpatient and outpatient services
- Services the communities of Petersburg, Hopewell, Colonial Heights, Fort Gregg-Adams, Chester, Prince George, Dinwiddie, Sussex, Surry, and Southern Chesterfield, as well as visitors to the area





Initial Notification

- January 18, 2023: Notification of first hospital acquired *C. auris* clinical case (Patient A)
- January 30, 2023: Screened two individuals exposed to Patient A and reported results as NOT DETECTED on February 9, 2023
- February 25, 2023- Notification that one of the previously screened patients is now a clinical case (Patient B)

Outbreak Initiated





Next Steps: VDH



VDH

- Provided IP recommendations
 - Cleaning and disinfecting with Environmental Protection Agency (EPA) List P antimicrobial registered products
 - Personal Protective Equipment (PPE) adherence
 - Reduce bed movement
- Requested point prevalence survey (PPS) on impacted units
- Requested thorough bed traceback
- Consulted with the Healthcare-Associated Infections (HAI) and Antimicrobial Resistance (AR) Program
- Participated on calls with The Centers for Disease Control and Prevention (CDC)
- Collaborated with the Maryland Public Health Laboratory to ensure additional laboratory capacity



VDH

- We followed discharged patients forward:
 - At least 18 congregate care facilities received patients who were exposed at SMC
- Coordinated screening of exposed patients around Virginia
- Began providing education to facilities about Contact Precautions vs Enhanced Barrier Precautions, as well as cleaning and disinfecting with a List P product
- Hosted "Candida auris and It's Potential Impact on Long Term Care Facilities" in partnership with SMC Infection Preventionists



Congregate Care- Screening

- Between March 6- March 13, 2023: 21 patients were screened across 10 different facilities
 - 3 colonized cases were detected in the Central Region (attack rate of 14%)
- Two additional colonized cases were detected from other districts





Next Steps: SMC

Outbreak Response Activities Summary

- Cohorted known colonized and clinical cases to a dedicated unit
- Implemented Empiric Contact Precautions on impacted units
- Temporarily discontinued admissions to the impacted units
- Implemented hospital-wide terminal clean using an EPA List P product
- Environmental testing (cultures and adenosine triphosphate (ATP) bioburden testing)
- Situation-Background-Assessment-Recommendation (SBAR) communication to all staff via email and reinforced during safety huddles
- Daily Infection Prevention (IP) rounds with Personal Protective Equipment (PPE) audits and just-in-time corrective education
- Complied with screening requests



SMC- Screening

	Specimen Collection Date	Number of Patients Screened	Percent Positivity
Week 1	March 1, 2023	42	0%
Week 2	The Maryland Public Health Laboratory didn't have any lab capacity the week of March 6 th		
Week 3	March 15, 2023	33	0%
Week 4	March 22, 2023	38	0%



Additional Cases

- Retrospective review of prior clinical cases
 - Identified what is thought to be the index case- August 2022
- January 2023- Accidental finding of a new colonized case who was screened as part of another acute care hospital's routine admission screening process
- March 2023- Identified a positive clinical patient who was tested at another acute care hospital (December 2022) and was not reported to VDH
- Identified 3 additional clinical cases on impacted units until April 2023

7 clinical cases (2 converted from colonization) and 4 colonized cases were associated with the outbreak





Screening Best Practices

- Comprehensive list of at-risk patients (ex. specific unit, wound care service)
- Line list with patient demographics for submission into the MD lab portal
- Alert nursing leadership on impacted units ahead of the screening
- Have a plan in place to collect patient consent
- Needs during the day of:
 - 1 swabber and 1 non-clinical person in each swabbing team
 - 1 cart/swabbing team
 - 1 cooler/cart
 - Pens
- Use patient label in medical chart to label the tubes (write in additional information- specimen collection date and time, specimen source)
- Pre-plan to drop off specimens at DCLS by a certain time or request courier



Lessons Learned

- Lab capacity can determine screening frequency
- Gaps in discharge/admission communications
- Gaps in reporting
- Gaps in knowledge of Contact vs. Enhanced Barrier Precautions
- Most facilities don't use a List P product for routine cleaning
- Collaboration and open communication is essential



Acknowledgments

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- Community/LTCF facilities
- Crater HD CD Team
- Central Region Staff
- Central Region Epidemiologists/CD Staff
- Surrounding District and Regional Epi staff
- HAI/AR Program
- MD Public Health Laboratory
- CDC





Questions?