



FYI

- If you are following along with [Mitigating the Spread of *C. auris* in Los Angeles County](#), you can see which sections each slide corresponds to here



Mitigating the Spread of *C. auris* in Los Angeles County

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Background



Why is *Candida auris* important?

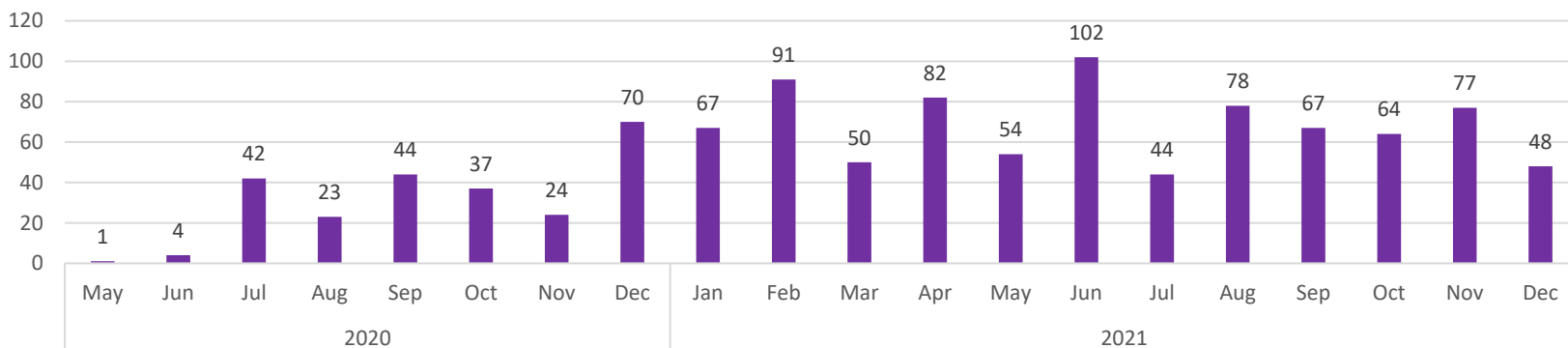
- **NASTY**-- it is a pathogen that can cause significant morbidity & mortality in high-risk pts
 - Up to 45% mortality in some series.
 - 5-10% of pts colonized will become infected
- **HARDY**-- it can survive in the environment and can spread quickly and establish residency in healthcare facilities.
 - Can survive quaternary ammonium cleaners
- **DIFFICULT TO TREAT**— some strains are resistant to most of the commonly used antifungal treatments available.
 - Echinocandin, azole resistance and amphotericin resistance has been seen.



Overview of *C. auris* in LAC

- Since July 2020:
 - 1,071 total cases
 - 21 total outbreaks
 - 29% GACH, 38% LTACH, 33% SNF
- Now considered to be endemic in LA County

C. auris cases in LAC, by specimen collection date, n=1,071, May 2020–December 2021



See Figure 1



Goals of the LACDPH *C. auris* Mitigation Strategy

1. Enhance facility identification of *C. auris* and improve inter-facility communication of patient status.
2. Identify and contain outbreaks of *C. auris* in healthcare facilities in LAC.
3. Monitor the *C. auris* antifungal susceptibility testing (AST) profile in LAC.
4. Educate healthcare facilities on the best ways to prevent transmission of all MDROs.



Definitions

- GACH: general acute care hospital
- LTACH: long-term acute care hospital
- SNF: skilled nursing facility
- vSNF: SNF with a ventilator unit
- LTC: long-term care
- Disinfectant effective against *C. auris*: any product on
 - [EPA List P](#) or
 - [EPA List K](#) (must follow instructions for *C. diff* if using EPA List K)



Goal 1: Enhance facility identification of *C. auris* and improve inter-facility communication of patient status





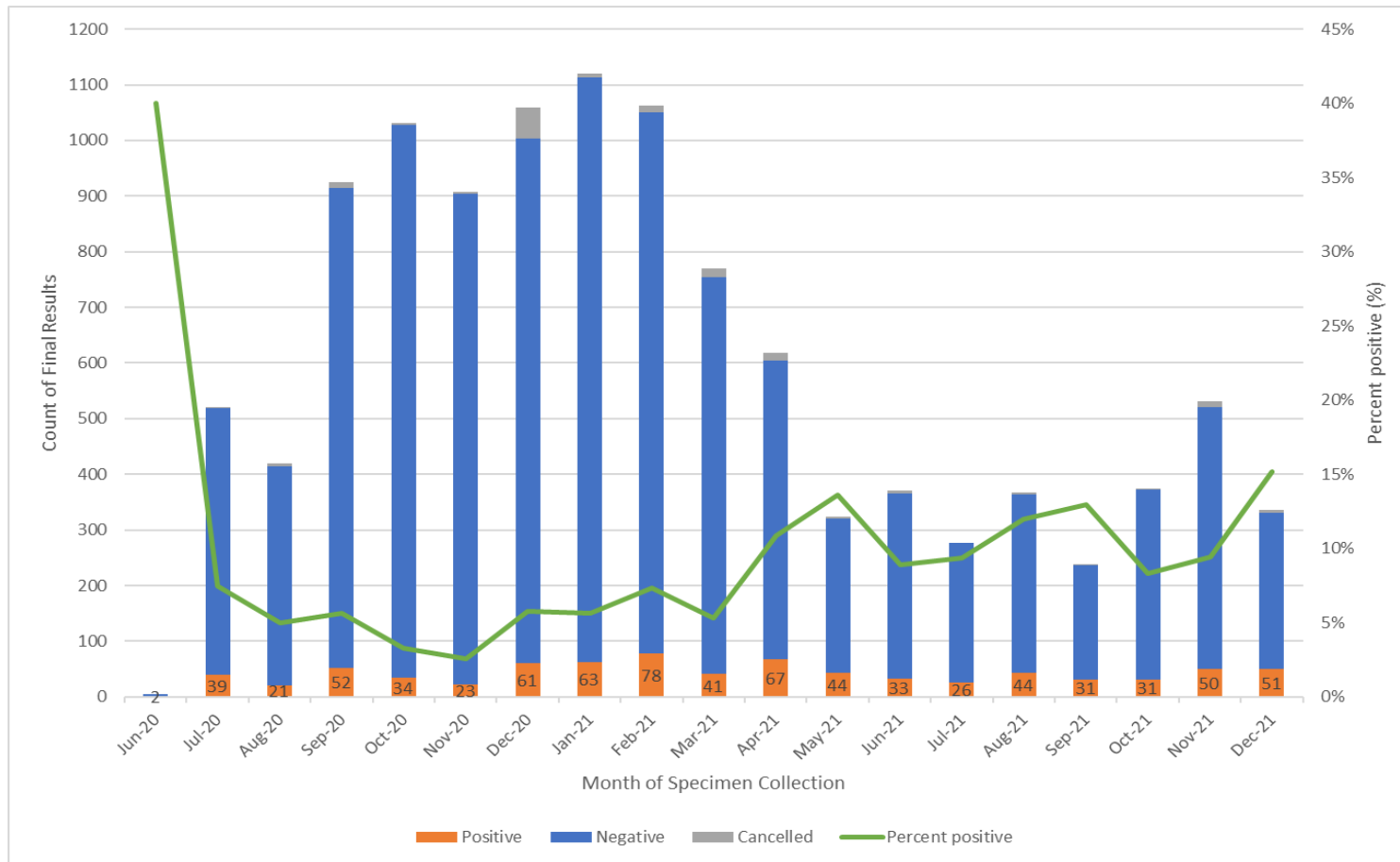
C. auris Colonization vs. Infection

- **Colonization** is when *C. auris* is present without causing disease
 - Screening specimen
 - No signs or symptoms of infection
 - Should not be treated
 - Is still transmissible
 - Status may be indefinite

- **Infection** is when *C. auris* is identified in otherwise sterile sites and causes symptoms
 - Blood stream infection

C. auris screening coordinated by DPH

Figure 3. C. auris screening results conducted by LACDPH, n=11,006, June 2020-December 2021



See Figure 3



Case counts by Type

Table 1. C. auris cases by case and HCF type, n=1,071, May 2020–December 2021

HCF Type	Case Type			Total
	Colonization [*]	Clinical [^]	Colonization-to-clinical [†]	
GACH	58 (6.7%)	47 (57.3%)	12 (10.3%)	117 (10.9%)
LTACH	760 (87.2%)	35 (42.7%)	99 (84.6%)	894 (83.5%)
SNF	52 (6.0%)	0 (%)	6 (%)	58 (5.4%)
Other	2 (0.2%)	0 (%)	0 (%)	2 (0.1%)
Total	872 (81.4%)	82 (7.7%)	117 (10.9%)	1,071
CA State	-	309	-	-
US National	3772	1278	-	5,050

1. Note that all cases are counted by facility type at time of first positive specimen collection.

2.* Swab collected from the skin (i.e., axilla, groin) for the purpose of screening for C. auris colonization.

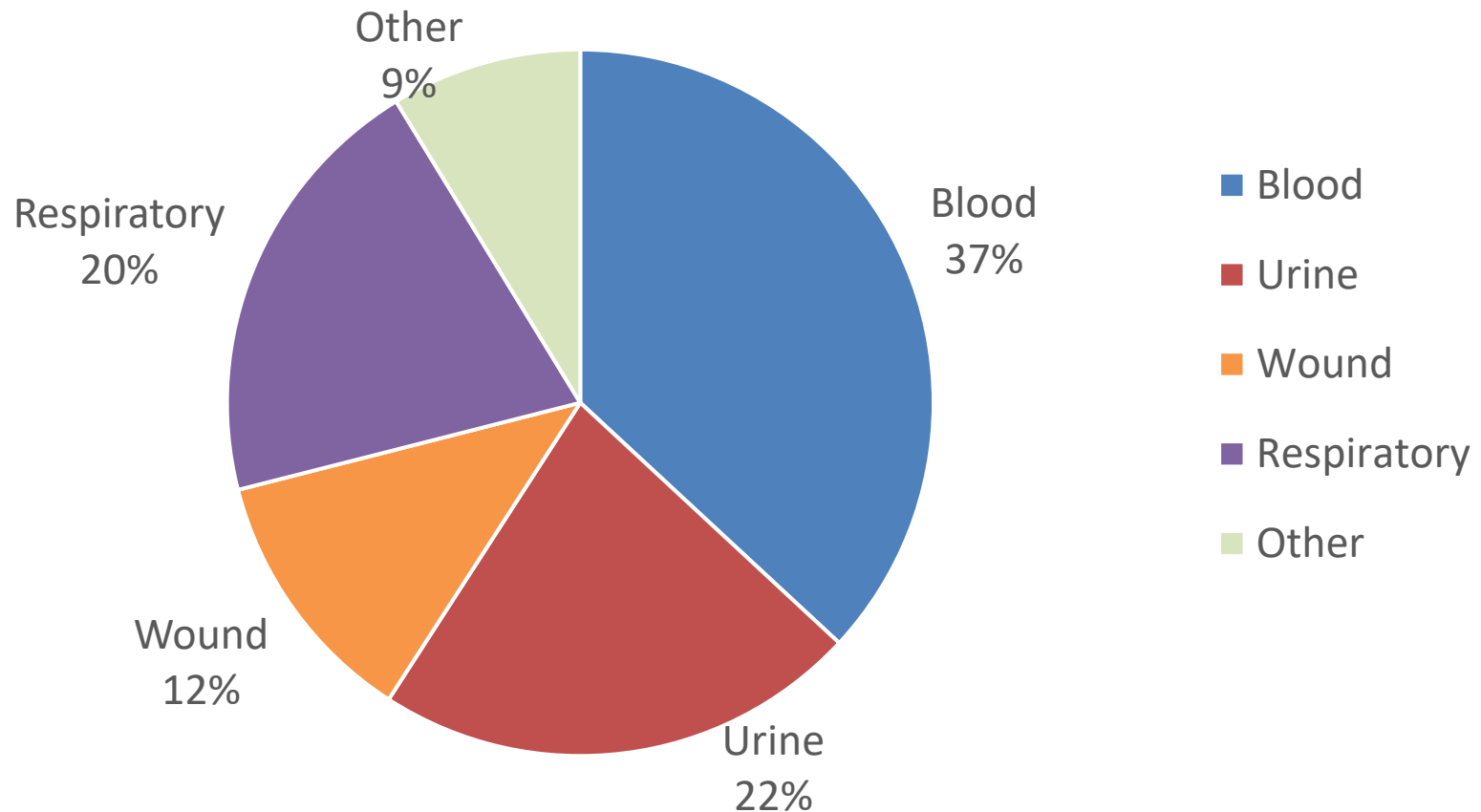
3.^ Specimen collected for the purpose of diagnosing or treating disease in the normal course of care, from any non-skin body site.

4.† Cases who were first identified via screening swab and later had one or more positive clinical specimen(s).

5.. †† CDC data January 01, 2021–December 31, 2021

Cases with a positive clinical specimen

Figure 2. C. auris clinical specimen source (n=252, May 2020–December 2021)





Surveillance Requirements and Recommendations for HCFs

■ REPORT

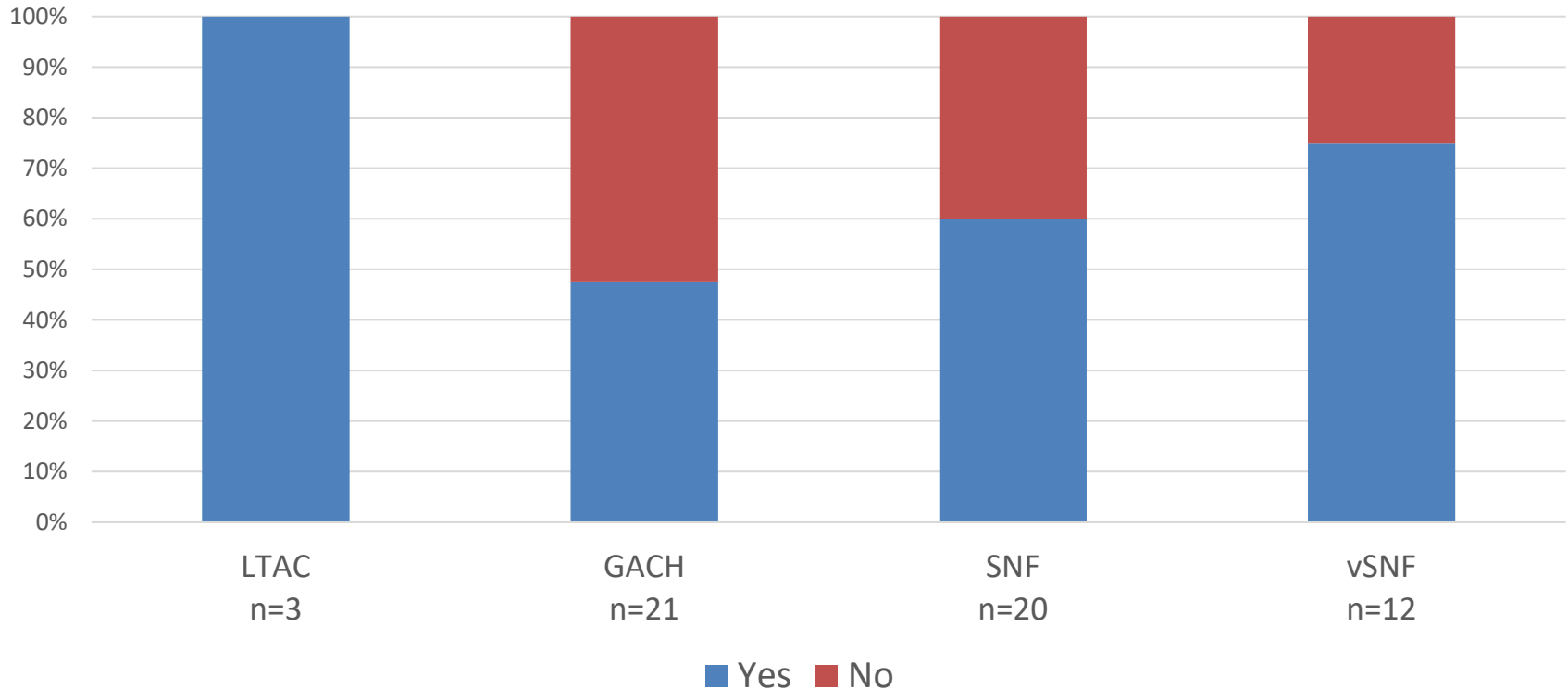
- All laboratory tests positive for confirmed *C. auris* (colonized or clinical)
- Presumptive *C. auris* from all specimen sources (laboratory)
- Outbreaks or suspect clusters

■ SCREEN

- Patients/residents who are epidemiologically linked to newly identified *C. auris* cases (i.e., roommates) and/or on the same unit during an outbreak
- Recommended to screen all admissions and transfers in from HCFs with a *C. auris* outbreak and all high-risk patient populations

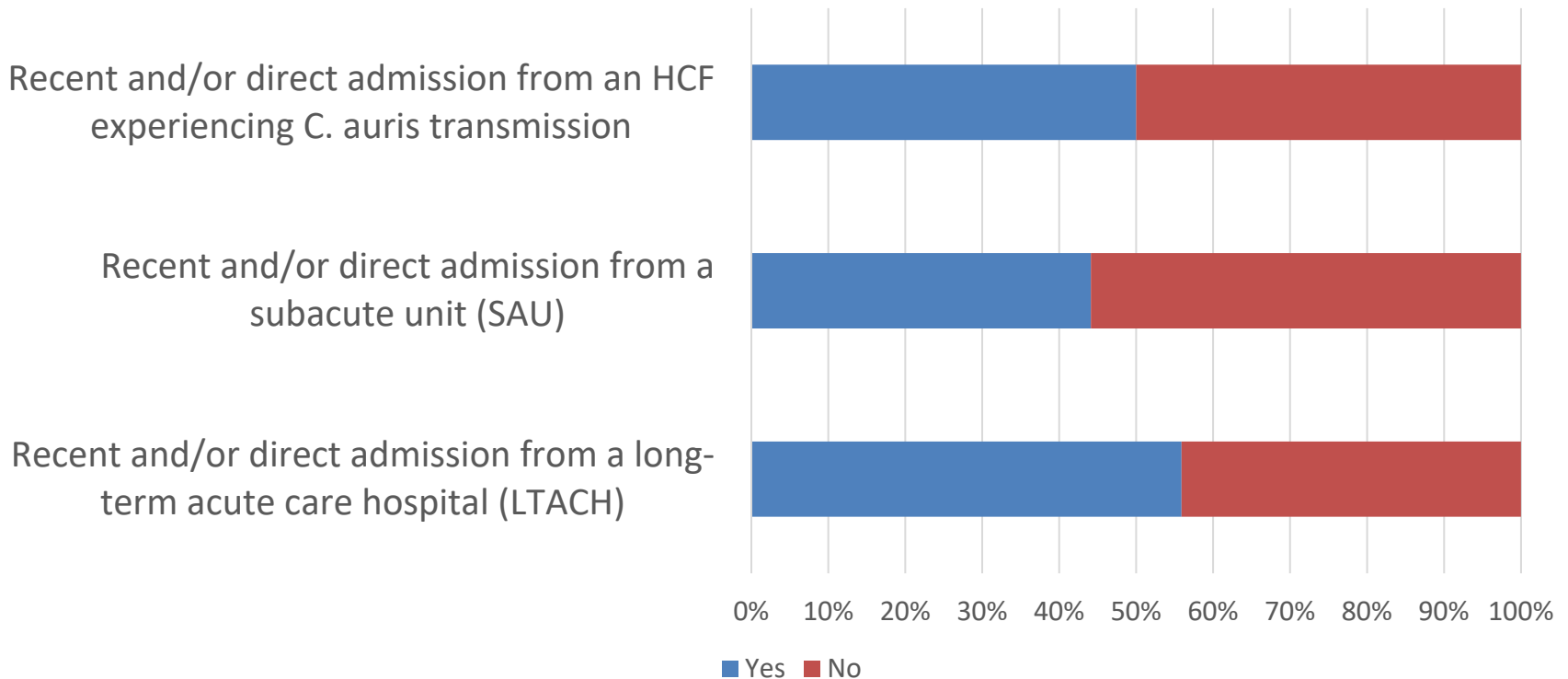
C. auris Admission Screening in LAC HCFs Survey Results

C. auris Admission Screening by Facility Type, LAC 2022 (n=56)



C. auris Admission Screening in LAC HCFs Survey Results, continued

Admission Screening Criteria n=34



DPH Communication



WEEKLY MDRO UPDATE

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

03/09/2022

PURPOSE

This update informs Los Angeles County (LAC) healthcare staff as to which healthcare facilities' (HCFs) admissions should be monitored for multi-drug resistant organism (MDRO) transmission, and provides links to more guidance.

This document is meant for internal purposes only and should not be shared externally.

HEALTHCARE FACILITIES TO MONITOR

The following HCFs are currently experiencing transmission. In addition, **LACDPH considers all patients discharged from any long-term acute care hospital (LTACH) or subacute unit of a skilled nursing facility (SNF) to be at high-risk for *C. auris* or other MDRO colonization.** For persons discharged from any of these locations, verify their MDRO status and screen if needed. Note that inclusion on this list does not necessarily reflect the quality of care delivered on-site.

Candida auris

NDM-CRAB



Goal 3: Monitor the *C. auris* antifungal susceptibility testing (AST) profile in LAC *C. auris* ‘Resistance’ profile, n=35 (2020-2021)

Antifungals		% R	Minimum Inhibitory Concentration (µg / mL) MIC at or above tentative breakpoint values in red*														
Class	Drug		0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	>256
Polyenes	Amphotericin B (n = 35)	2.8%				3 (8.6%)	25 (71.4%)	6 (17.1%)	1 (2.9%)								
Echinocandins	Anidulafungin (n = 35)	0.0%	1 (2.9%)	6 (17.1%)	8 (22.9%)	9 (25.7%)	9 (25.7%)	1 (2.9%)	1 (2.9%)								
	Caspofungin (n = 35)	0.0%	4 (11.4%)	10 (28.6%)	13 (37.1%)	7 (20.0%)	1 (2.9%)										
	Micafungin (n = 31)	0.0%	1 (3.2%)	9 (29.0%)	13 (41.9%)	6 (19.4%)	2 (6.5%)										
Azoles	Fluconazole (n = 35)	100%											1 (2.9%)	3 (8.6%)	25 (71.4%)	6 (17.1%)	
	Itraconazole [†] (n = 35)	N/A			4 (11.4%)	11 (31.4%)	19 (54.3%)	1 (2.9%)									
	Posaconazole [†] (n = 35)	N/A		8 (22.9%)	14 (40.0%)	11 (31.4%)	2 (5.7%)										
	Voriconazole [†] (n = 35)	N/A						5 (14.3%)	28 (80.0%)	2 (5.7%)							
	Isavuconazole [†] (n = 35)	N/A		2 (5.7%)	17 (48.6%)	14 (40.0%)	2 (5.7%)										

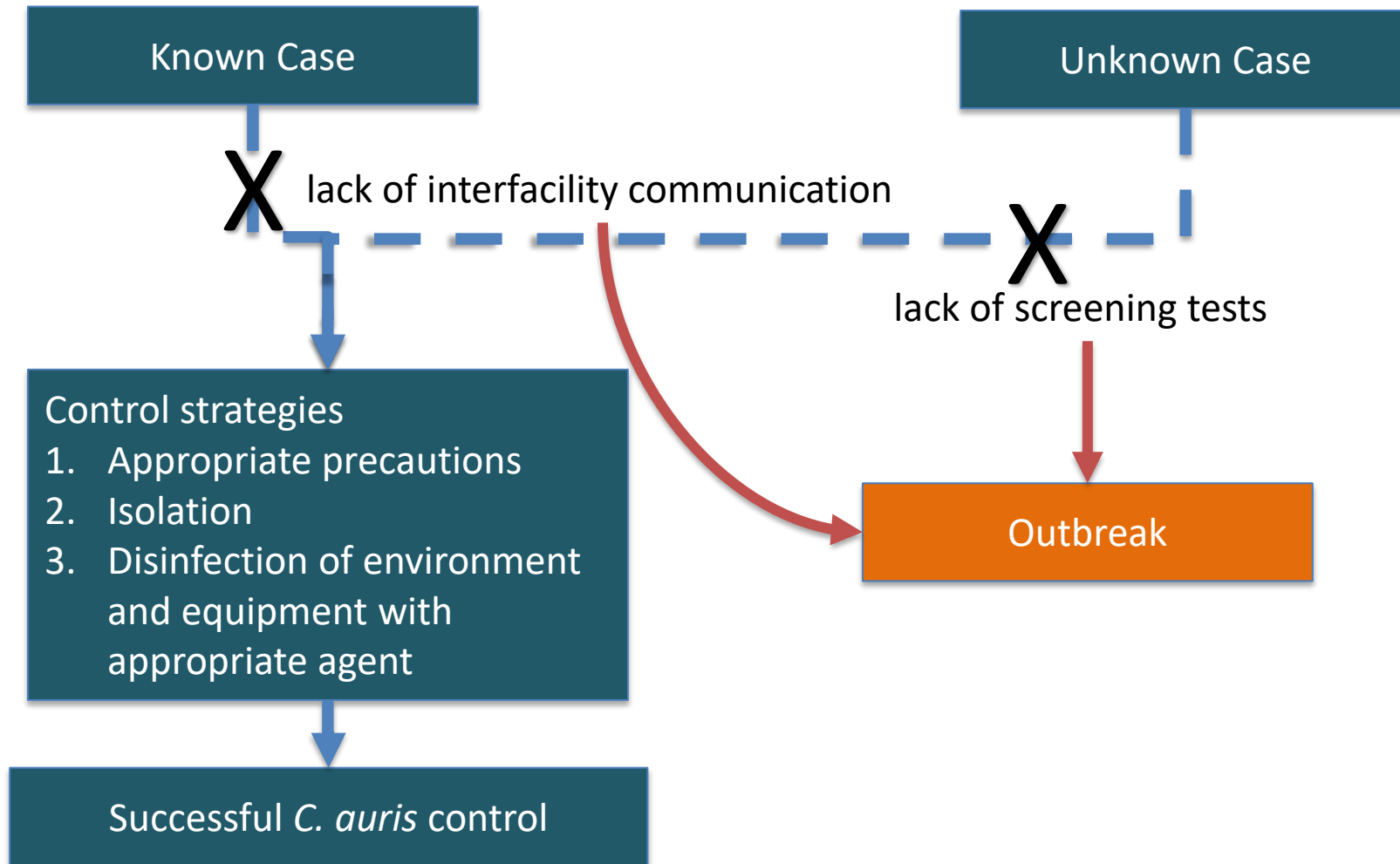
*Tentative breakpoint values in red; if none, breakpoint is N/A. For more information, see <https://www.cdc.gov/fungal/candida-auris/c-auris-antifungal.html>

[†]No breakpoints available. Consider using fluconazole susceptibility as a surrogate for second generation triazole susceptibility assessment. However, isolates that are resistant to fluconazole may respond to other triazoles occasionally.



Goal 2: Identify and contain outbreaks of *C. auris* in healthcare facilities in LAC

Common causes of *C. auris* outbreaks in LA County





Inter-Facility Communication

- Sending facilities:
 - Use an inter-facility transfer form
 - Lab reports should be attached
- Receiving facilities:
 - Conduct an assessment upon admission
- See our Transferring Guidance for MDROs¹ for more details

1. http://publichealth.lacounty.gov/acd/docs/LACDPH_TransferringGuidanceforMDROs.pdf

Investigation Steps for Healthcare Facilities

Assess

- Determine if any exposures occurred
 - Look at IC compliance¹, identify epi-linked contacts²

Screen

- Swab all exposed individuals³
 - LACDPH can assist with point prevalence surveys (PPS) only

Report

- If screening identifies new positives, report to LACDPH
 - If positive on admit, notify prior facility

1. See https://www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/Tier2_Pathogen_Screening_Decision_Tree_Oct2020.pdf

2. See page 3 of document for list of epi-linked contacts

3. See here for a list of labs that offer *C. auris* screening services: http://publichealth.lacounty.gov/acd/docs/List_C.aurisLabs.pdf



Outbreak Management

- Not closing to admissions
- Requirements:
 - Conduct repeat PPS until transmission is halted
 - Increase infection control (IC) audits
 - Use effective disinfectant in all affected areas
 - For all discharges, use inter-facility transfer form and call the receiving facility



Goal 4: Educate healthcare facilities on the best ways to prevent transmission of all MDROs



Commonly identified IC gaps during on-site visits

Hand Hygiene

- Missed opportunities on room entry, room exit, and between tasks inside the room

Disinfectant use

- Failure to achieve contact time for disinfection

PPE use

- Failure to change PPE (and perform HH) between patients in the same room

Cohorting

- Overly complicated cohorting schemes

IP Staff

- IP staff wearing too many hats (i.e., employee health, COVID testing) with little dedicated IC time

Communication

- Failure to clearly indicate MDRO status upon discharge to a new facility

Infection Control Guidance

Precautions

- GACHs+LTACHs: Contact Precautions
- SNFs: Follow CDPH Enhanced Standard Precautions¹
- Other LTC: Standard Precautions

Disinfection

- Use a disinfectant effective against *C. auris*
 - For room and any shared equipment/devices

Communicate

- Provide *C. auris* status to receiving facility

1. CDPH ESP: <https://www.cdph.ca.gov/Programs/CHCO/HAI/Pages/ESP.aspx>



MDRO* & SARS-CoV-2: Containment, IC Measures

	<i>C. auris</i>	<i>Acinetobacter</i>	Other MDRO (e.g., CRE)	<i>C. diff</i>	SARS-CoV-2
Good hand hygiene – ABHS preferred	X	X	X	Soap & water	X
Appropriate precautions, single room if possible	X	X	X	X	+ respirator, eye protection
Thorough environmental cleaning and disinfection	Use List P agent	X	X	Use List K agent	Use List N agent
Routine adherence monitoring	X	X	X	X	X
Cohorting of patients and healthcare personnel	X	X	X	X	X
Lab surveillance	X	X	X	X	X
Screening of high-risk contacts	X	X	X		X

*Including *Clostridioides difficile* (*C. diff*); *C. auris*=*Candida auris*; CRE=carbapenem-resistant Enterobacteriaceae
ABHS=alcohol-based hand sanitizer



Resources

- LACDPH *C. auris* website: <http://publichealth.lacounty.gov/acd/Diseases/CandidaAuris.htm>
 - See our [Mitigating the Spread of C. auris in Los Angeles County](#) document!
- LACDPH Interfacility transfers website:
<http://publichealth.lacounty.gov/acd/InterfacilityTransfers.htm>
- LACDPH NMDRO website: <http://publichealth.lacounty.gov/acd/Diseases/NMDRO.htm>
- CDPH *C. auris* website: <https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris.aspx>
 - *C. auris*/MDRO prevention in LTC:
https://www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/C_auris_AHR_C_DC_CDPHshareWebinarCombined_ADA_121020.pdf
- CDC *C. auris* website: <https://www.cdc.gov/fungal/candida-auris/index.html>
 - IC recommendations: <https://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html>

Questions? Email us at hai@ph.lacounty.gov