



The Antimicrobial Stewardship and Resistance Update

Biannual newsletter providing updates on news, reports, research, policies, and events related to antimicrobial stewardship and resistance in California.

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U.S. Antibiotic Awareness Week 2025

To address the public health threat of antimicrobial resistance, CDC's Antibiotic Awareness Week theme "Fighting Antimicrobial Resistance Takes All of Us" emphasizes cross-sector collaboration. Our collective responsibility for antimicrobial stewardship collaboration may be most important within our local communities. Here, well-resourced healthcare facilities have a unique opportunity to support lower-resourced facilities. For example, acute care hospitals and large health systems can engage regional partners, such as skilled nursing facilities and outpatient clinics. Support can include mentorship, improving interfacility communication, sharing expertise, developing clinical guidelines, creating and interpreting antibiograms, tracking antimicrobial use data, and providing education. These partnerships strengthen AS across regions.

Proactive Strategies to Detect Echinocandin-Resistant *Candida auris*

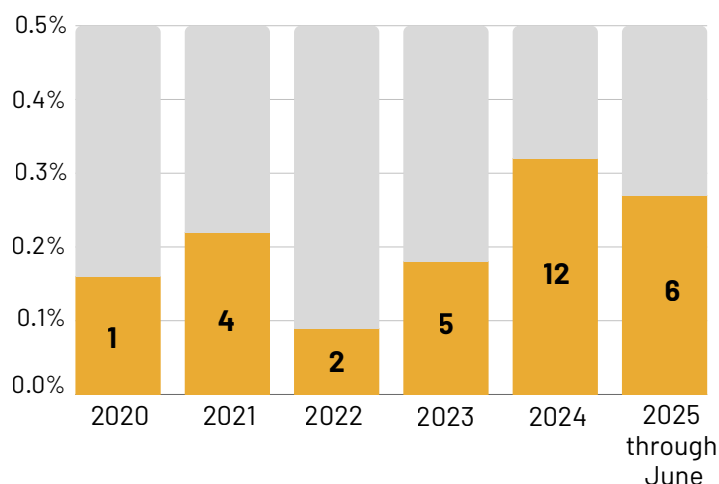
Candida auris cases have risen in California and the United States. Echinocandin-resistant *C. auris* cases have also increased, though remain relatively rare (n=30, <1% of all cases in California since 2020) (doi.org/10.7326/M 22-3469). Echinocandin-resistant cases are the result of both antifungal pressure and spread among patients. Because echinocandins are the first-line treatment for invasive *C. auris* infections, it is critical to minimize further spread of echinocandin resistance by strengthening lab surveillance and core infection prevention and control practices. CDPH recommends facilities and labs:

- ensure species identification of all *Candida* isolates from sterile sites, and non-sterile sites as feasible
- obtain antifungal susceptibility testing (AFST) on all *C. auris* isolates from sterile sites, and submit these isolates to public health per Title 17
- submit *C. auris* isolates from urine to public health for AFST
- investigate echinocandin-resistant cases and report them to public health

Furthermore, increasing numbers of patients are at risk of acquiring a fungal infection (e.g., patients with transplants, cancer, or other immunosuppressive conditions) (doi.org/10.1093/jac/dkaf269). This underscores the need for effective antifungal medications and antifungal stewardship. However, despite 30–50% of antifungal prescriptions being suboptimal, antifungals are less commonly prioritized by AS programs (doi.org /10.1093/infdis/jiaa394). As with antibacterials, inappropriate antifungal prescribing increases risks of medication toxicities and antifungal resistance. Therefore, CDPH encourages stewardship programs to:

- incorporate antifungal stewardship into their routine stewardship activities
- implement interventions such as requiring pre-authorization or prospective audit and feedback for specific antifungal drugs or classes prioritized by the antimicrobial stewardship program, and collaborating on evidence-based treatment and prophylaxis guidelines with high-prescribing providers (e.g., oncologists, transplant teams, and infectious disease physicians)

Echinocandin-Resistant *C. auris* in California

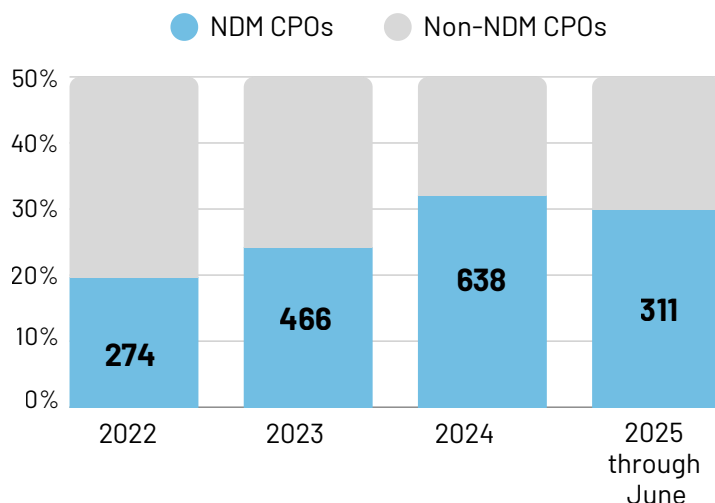


New Fungal Clinical Disease Consultation

The CDC Mycotic Disease Branch (MDB) is offering a brand-new clinical consult service to help support clinicians in diagnosing and treating fungal diseases. The MDB is partnering with expert mycologists from the Mycoses Study Group to support providers by answering questions about fungal diseases.

Call 404-639-5168 or email fungalconsult@cdc.gov for consultation on diagnosis or treatment for suspected or confirmed fungal diseases. Learn more at [Clinical Resources](https://www.cdc.gov/fungal/hcp/communication-resources/index.html) (www.cdc.gov/fungal/hcp/communication-resources/index.html)

Carbapenemase Testing Critical as Difficult-to-Treat Carbapenemase-Producing Organism Cases Rise



Another group of antimicrobial resistant pathogens, carbapenemase-producing organisms (CPOs) are also on the rise. CPOs with the New Delhi metallo- β -lactamase (NDM) have been increasing more than other CPO types. In California, the proportion of NDM-producing cases of all CPO cases increased by two-thirds since 2022. This is concerning because NDM-producing CPOs are highly resistant and there are fewer effective antimicrobial agents effective versus NDM- and other metallo- β -lactamase-producing CPOs than for other CPOs. CDPH recommendations for carbapenemase testing [support](https://doi.org/10.1016/j.cll.2024.10.006) (doi.org/10.1016/j.cll.2024.10.006) infection prevention and control (IPC) measures, treatment decisions, and public health surveillance and investigations. CDPH recommendations also align with [Infectious Diseases Society of America](https://www.idsociety.org/practice-guideline/amr-guidance) (www.idsociety.org/practice-guideline/amr-guidance) and [Clinical and Laboratory Standards Institute](https://em100.edaptivedocs.net) (em100.edaptivedocs.net) guidance.

Carbapenem use is a risk factor for carbapenem-resistant for carbapenem-resistant organism (CRO), CPO and *C. auris* colonization, as well as *Clostridioides difficile* infection. Studies show that only about [half of carbapenem prescriptions are appropriate](https://doi.org/10.1093/jac/dka008) (doi.org/10.1093/jac/dka008); they also show that [antimicrobial stewardship programs](https://doi.org/10.1093/jac/dkab008) (doi.org/10.1093/jac/dkab008) can improve carbapenem prescribing without increasing adverse patient outcomes.

Best Practices



CDPH recommends facilities and laboratories:

- test CRO isolates for carbapenemases using a test that is capable of identifying the specific carbapenemase type
- if unable to conduct testing:
 - submit CRO isolates to [public health](https://www.cdph.ca.gov/Programs/cls/idld/mdl/Pages/MDL-Expanded-Carbapenemase-Testing-Services-FAQs-2025.aspx) (www.cdph.ca.gov/Programs/cls/idld/mdl/Pages/MDL-Expanded-Carbapenemase-Testing-Services-FAQs-2025.aspx)
 - strengthen support for carbapenemase testing through collaboration with the antimicrobial stewardship committee, IPC team, and other facility stakeholders



CDPH encourages stewardship teams to:

- review carbapenem use trends in their facility
- implement a bundle of interventions such as pre-authorization for carbapenems, routine prospective audit and feedback on carbapenem orders, clinical guidelines directing appropriate empiric carbapenem use, rapid culture review and antimicrobial de-escalation as appropriate, and targeted education for high-prescribing units and/or individuals



Expanded Antimicrobial Susceptibility Testing Services for Enterobacterales

CDC's [Antimicrobial Resistance Laboratory Network \(PDF\)](#) (www.cdc.gov/antimicrobial-resistance-laboratory-networks/media/pdf/s/drug-susceptibility-tests-P.pdf) offers expanded antimicrobial susceptibility testing through the regional laboratory in Washington state. Laboratories can submit Enterobacterales isolates that are either non-susceptible to all beta-lactams or test-positive for New Delhi metallo- β -lactamase (NDM), Verona integron-encoded metallo- β -lactamase (VIM) or Imipenemase metallo- β -lactamase (IMP) carbapenemases to find potentially effective treatment options for their patients.

A Collaborative Approach to Antimicrobial Stewardship in San Diego County Skilled Nursing Facilities

Up to 70% of skilled nursing facility (SNF) residents receive an antibiotic each year, and as many as 40–75% of antibiotic prescriptions in SNFs may be unnecessary or inappropriate (www.cdc.gov/antibiotic-use/hcp/core-elements/nursing-homes-antibiotic-stewardship.html). SNF residents are at increased risk for adverse drug reactions, *Clostridioides difficile* infections, and colonization with resistant organisms. To address this problem, CDPH partnered with Bridget Olson, PharmD, a pharmacist with SNF stewardship expertise, and Raymond Chinn, MD, an infectious disease specialist from San Diego County's HAI Program, to help SNFs in San Diego County establish effective antimicrobial stewardship programs (ASPs). Facilities identified several barriers to stewardship, including staffing shortages and turnover, a lack of expert guidance or support for infection preventionists, limited stewardship knowledge, emergency department treatment of asymptomatic bacteriuria, and uncertainty on how to measure stewardship impact. Our interventions included providing education and training to improve knowledge of ASP principles, expanding consultant pharmacist stewardship roles, providing antimicrobial use tracking tools, improving interfacility communication, and providing practical stewardship training (e.g., effective patient assessments using the Loeb criteria and appropriate indications for ordering urine studies). The initiative led to reductions in antimicrobial use among participating facilities, with total antimicrobial days of therapy (DOT) decreasing by 14–40% and fluoroquinolone DOT decreasing by 20–33%. These reductions were accompanied by preliminary evidence of reduced antimicrobial resistance. We hope this initiative will serve as a model for future SNF support. Additionally, through this partnership, we are developing practical tools, customizable templates, and bite-sized educational content we hope to share with SNFs by mid-2026.

CDPH HAI ASP Honor Roll Gold Submission Spotlight – Los Angeles County

In July 2025, the Antimicrobial Stewardship Team at the Los Angeles County Department of Public Health (LAC DPH) highlighted community engagement submissions from CDPH HAI ASP Honor Roll gold members.

The following projects are a snapshot of the facilities featured. For more, please visit the [LAC DPH Antimicrobial Stewardship](https://publichealth.lacounty.gov/acd/antibioticstewardshipprogram/index.htm) website (publichealth.lacounty.gov/acd/antibioticstewardshipprogram/index.htm).



Children's Hospital Los Angeles (CHLA) is providing pediatric-specific antimicrobial guidance to a local outpatient clinic that regularly treats pediatric patients. CHLA identified pediatric clinic leaders, established regular meetings with the clinic, and developed guidelines on optimal antimicrobial selection, dosing, and duration for common pediatric infectious diagnoses. CHLA continues to provide resources for ongoing needs.



KAISER PERMANENTE

Woodland Hills-West Ventura

Kaiser Permanente Woodland Hills and West Ventura collaborate with local long-term care facilities (LTCFs) and provide tele-stewardship consultations with prospective chart reviews and proposed stewardship interventions. Since the collaboration began, the facilities have noted lower rates of infection-related diagnoses such as sepsis, pneumonia, urinary tract infections, *Clostridioides difficile*, and cellulitis for hospital admissions. The program has been well received by LTCF providers.



**Martin Luther King, Jr.
Community Hospital**

Martin Luther King Jr. Community Hospital (MLKCH), after analyzing prescribing patterns, partnered with a 'street medicine' program to optimize antimicrobial use in syphilis treatment of unhoused patients. Acting on identified needs, they developed education and an algorithm for diagnosing and treating syphilis. Future interventions aim to reduce antibiotic exposure in other conditions and prevent resistance more broadly.



Pomona Valley Hospital Medical Center (PVHMC) partners with five local primary care and urgent care clinics utilizing the CDC's Core Elements of Outpatient Stewardship. They implement a variety of stewardship strategies like commitment posters, identifying stewardship champions, and analyzing bronchitis prescribing practices. PVHMC also supports antimicrobial use analysis, developed a urinary antibiogram, and provides up-to-date treatment education. The project led to increased "watchful waiting" for conditions not requiring antimicrobials, decreasing antimicrobial prescriptions at most clinics.



UCLA Medical Centers – Ronald Reagan and Santa Monica partner with a federally qualified health center's collaborative to promote antimicrobial stewardship by addressing the unique challenges of treating patients experiencing homelessness. They provide consistent and coordinated care outside of the traditional healthcare setting to reduce inappropriate antibiotic use, including developing clinical guidelines for dalbavancin use.

CDPH HAI Antimicrobial Stewardship Program Honor Roll Gold-Level Facility Spotlights



In each newsletter, we highlight CDPH Antimicrobial Stewardship Honor Roll Members (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/HonorRollMembers.aspx) that achieved gold designation. The facilities listed below achieved, or renewed, gold status during the March 2025 deadline. Facilities may be listed in more than one category below.

Direct Engagement with Outpatient Partners in the Community

- Children's Hospital of Orange County
- Mercy Hospital of Folsom
- St. John's Campuses – Camarillo and Regional
- USC Verdugo Hills Hospital
- Watsonville Community Hospital

Collaborations to Improve Antimicrobial Stewardship

- St. John's Campuses – Camarillo and Regional
- University of California Irvine Medical Center

Supporting a Less Resourced Facility

- Kaiser Foundation Hospital – Sacramento
- Loma Lina University Children's Hospital
- VA Palo Alto Health Care



CDPH ASP Honor Roll

- Deadlines are March 1st and September 1st; *as a reminder, designations are for 3 years.*
- Visit the ASP Honor Roll webpage (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/HonorRoll.aspx) for more information about application requirements.



Stay Connected with CDPH

CDPH HAI Websites

Visit CDPH webpages for more information and resources.

- CDPH HAI Program (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/HAI/ProgramHome.aspx)
- CDPH Antimicrobial Stewardship (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/AntimicrobialStewardshipLandingPage.aspx)
- CDPH Antimicrobial Resistance (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/AntimicrobialResistanceLandingPage.aspx)

CDPH HAI Newsletters

Subscribe to our HAI Program newsletters (cdph-marketing.powerappsportals.com/HAI/HAI-Registration/) to receive updates on our program's initiatives and educational opportunities.

CDPH Listserv

To stay connected with all things antimicrobial stewardship at CDPH, join the California Antimicrobial Stewardship Collaborative Network (ASCN) (www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/ASCN.aspx).



HAI Program LinkedIn

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