



# California Department of Public Health

## *Candida auris* Wastewater Surveillance

### Frequently Asked Questions (FAQ)

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CDPH is collaborating with WastewaterSCAN to conduct [wastewater surveillance for \*Candida auris\*](https://data.wastewaterscan.org/) (data.wastewaterscan.org/) at participating wastewater treatment plants in California.

#### 1) What is wastewater surveillance?

- Wastewater surveillance is a form of environmental monitoring, where wastewater (sewage) is tested for the presence and quantity of something, for instance, an infectious disease.
- Monitoring of wastewater for the presence of indicators of infectious pathogens (like DNA or RNA) has been used as a tool for public health surveillance, for example tracking SARS-CoV-2 in wastewater during the COVID-19 pandemic (see [CDPH COVID-19 Wastewater Surveillance](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Wastewater-Surveillance.aspx) (www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Wastewater-Surveillance.aspx)).
- Through wastewater surveillance, rather than testing individual people for a specific disease, it is possible to test an environmental sample (in this case, wastewater or sewage mixed from the entire community) for that disease. This is a public health tool that can provide information about whether a disease is present in a community.
- Wastewater surveillance works by testing a small sample from the millions of gallons of wastewater flowing into wastewater treatment plants each day. The results provide information about the community that can inform public health but do not contain any personally identifiable information or intrude on personal privacy.

#### 2) Who contributes to wastewater samples?

- Contributors to wastewater include residents and visitors to the sewershed, which might include patients or residents of healthcare facilities as well as community members who live in the sewershed.

#### 3) What does *Candida auris* detection in wastewater mean?

- Positive detection in wastewater indicates that *C. auris* fungal DNA has been detected in untreated wastewater (in wastewater samples taken before it is treated at the treatment plant).
- Detection indicates the likely presence of at least one person with *C. auris* infection (symptomatic or asymptomatic), or colonization (a person with *C. auris* somewhere on their body but who does not have an infection or symptoms of disease), within the sewershed catchment area.
- Positive detection in California sewersheds is not surprising since there are known cases of *C. auris* colonization and infection across the state.

#### 4) What does positive detection mean when there are no reported cases of *C. auris* in a sewershed?

- Positive detections in sewersheds without known cases of *C. auris* suggests the as-yet unidentified presence of the infection or colonization in a person(s) in the sewershed.

When this happens, healthcare facilities and public health agencies can take measures to enhance surveillance for *C. auris* and strengthen infection prevention and control measures (see [CDPH Regional C. auris Prevention and Response Strategy](https://www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/Cauris_Phases.pdf) (PDF)([www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/Cauris\\_Phases.pdf](https://www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/Cauris_Phases.pdf))).

**5) Who is at risk of *C. auris* colonization and infection?**

- In general, healthy people are not at risk of *C. auris* colonization or infection. Patients or residents who have spent a lot of time in healthcare facilities like hospitals or skilled nursing facilities are at the highest risk of becoming colonized with *C. auris* and developing infections (see [CDPH C. auris Information for Patients and their Families](https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris_InfoForPatientsAndFamilies.aspx) ([www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris\\_InfoForPatientsAndFamilies.aspx](https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris_InfoForPatientsAndFamilies.aspx))).

**6) Does a negative detection mean there are no *C. auris* cases in the sewershed?**

- Not necessarily. Currently, the sensitivity of wastewater testing to detect *C. auris* cases in persons residing in a sewershed is unknown. There have been instances when *C. auris* was not detected in wastewater (negative detection) when there were known cases within the sewershed.

**7) Is there any additional information about what *C. auris* levels or trends in wastewater indicate?**

- Currently there are not enough data to determine trends about *C. auris* activity or transmission. As more data are collected, we may be able to provide more information on what different concentrations or levels might mean in terms of transmission and prevalence of the *C. auris* pathogen.

**8) Where is testing for *C. auris* in wastewater happening?**

- Testing for the fragments of *C. auris* fungal DNA in wastewater is being conducted through partners at the WastewaterSCAN project (a Stanford University and Emory University project run with Verily Life Sciences as a laboratory partner). They are currently monitoring wastewater from many sewersheds across the country (see [WastewaterSCAN map](https://data.wastewaterscan.org/) ([data.wastewaterscan.org/](https://data.wastewaterscan.org/))). For more information, please contact the project directors Drs. Alexandria Boehm ([aboehm@stanford.edu](mailto:aboehm@stanford.edu)) or Marlene Wolfe ([marlene.wolfe@emory.edu](mailto:marlene.wolfe@emory.edu)).

**Resources**

- [CDPH C. auris website](https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris.aspx) ([www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris.aspx](https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/Candida-auris.aspx))
- [CDPH COVID-19 wastewater surveillance website](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Wastewater-Surveillance.aspx) ([www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Wastewater-Surveillance.aspx](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Wastewater-Surveillance.aspx))