A CDC message to laboratory staff on Candida auris

C. auris is a fungus that causes serious infections and spreads in healthcare facilities. Laboratory staff can help prevent it from spreading and protect themselves from becoming carriers.

Why is *Candida auris* a problem?

- **It causes serious infections**. *C. auris* can cause bloodstream and invasive infections, especially in patients in hospitals and nursing homes who have many other medical problems. More than 33% of patients die within a month of being diagnosed with an invasive *C. auris* infection.
- **It is often multidrug-resistant**. Antifungal medications commonly used to treat other *Candida* infections often don't work. Some *C. auris* isolates are resistant to all three major classes of antifungal medications.
- **It is becoming more common**. Although *C. auris* was just discovered in 2009, the number of cases has grown quickly. Since 2009, cases have been reported in dozens of countries, including the United States.
- **It is difficult to identify**. *C. auris* can be misidentified as other types of yeasts unless sequencing is done. *C. auris* is a budding yeast, which almost never forms short pseudohyphae and does not form germ tubes. Some strains form aggregates of cells, whereas others do not. Unlike most other *Candida* species, it grows well at 40–42º C on CHROMagar. *C. auris* colonies appear white, pink, red, or purple, but must be confirmed by sequencing. Correctly identifying *C. auris* is critical for starting measures to stop its spread and prevent outbreaks.
- **It can spread and cause outbreaks in healthcare facilities**. Just like other multidrug-resistant organisms, *C. auris* can be transmitted in healthcare settings and cause outbreaks. It can colonize patients for many months, persist in the environment, and withstand some commonly used healthcare facility disinfectants.

Prepare for *C. auris* identification

- Some phenotypic methods for yeast identification can misidentify *C. auris* as several different organisms.
    - Misidentifications depend on the lab methodology used. Know whether the yeast identification method used in your laboratory misidentifies *C. auris* and, if so, what the possible misidentifications are. See https://www.cdc.gov/fungal/candida-auris/recommendations.html and

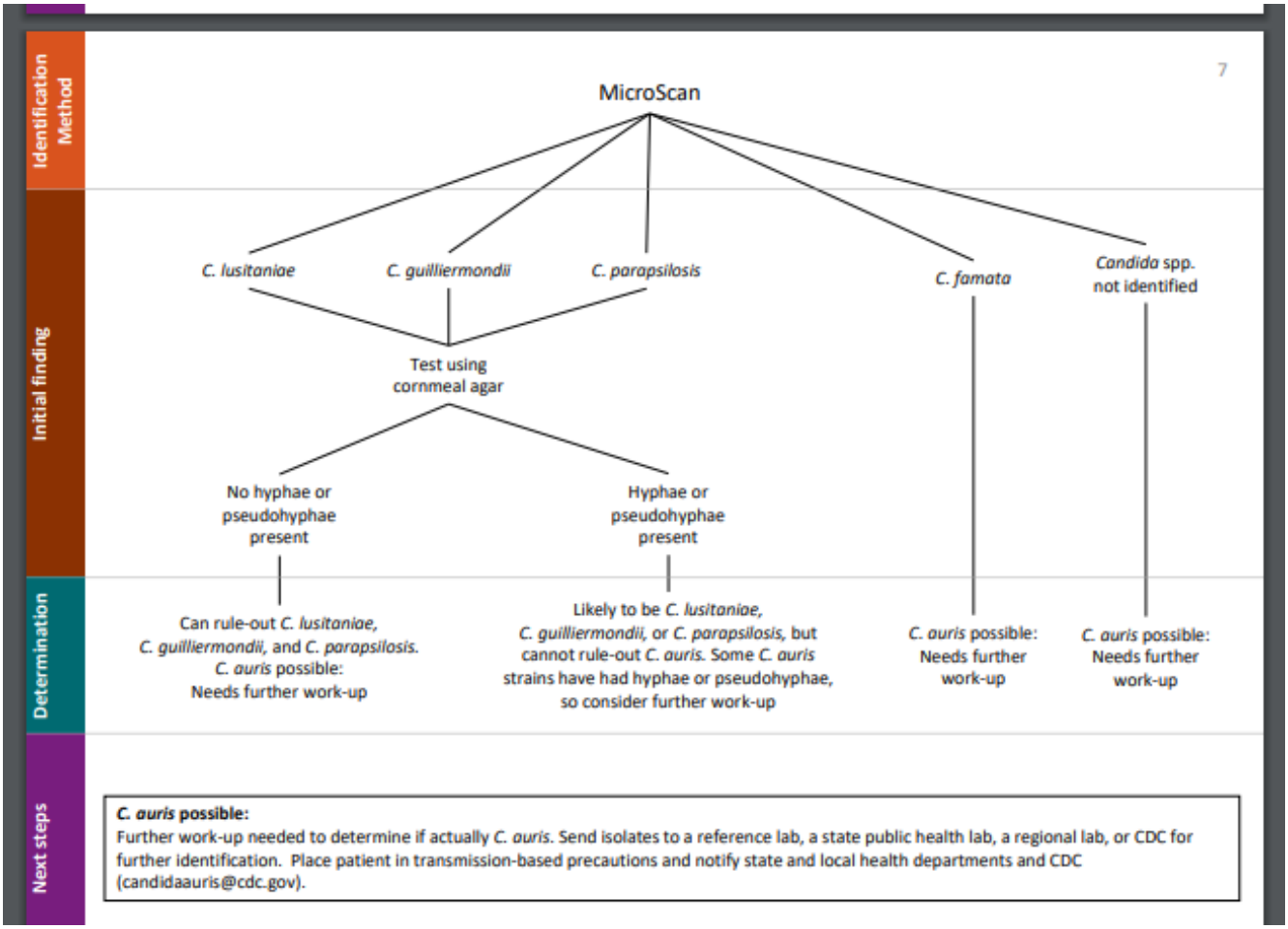
https://www.cdc.gov/fungal/candida-auris/pdf/Testing-algorithm_by-Method_508.pdf for common misidentifications by method.
    - *C. auris* is often misidentified as *Candida haemulonii or C duobushaemulonii*, other rare yeasts.
    - Misidentification can lead to inappropriate patient treatment and delay appropriate infection control precautions.
- There are no phenotypic characteristics that can easily distinguish *C. auris* from other *Candida* species.
- The most reliable way to identify *C. auris* is matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS).
    - If you have a MALDI-TOF MS in your lab, ensure that *C. auris* is included in the database.
- Molecular methods based on DNA sequencing can also identify *C. auris*. Accepted methods include sequencing of the D1-D2 region of the 28s ribosomal DNA (rDNA) or the internal transcribed spacer (ITS) region of rDNA.
- Some labs have recently been successful implementing qPCR methods, which provide the fastest test results at this time.
- Validate your instrument to confirm it can identify *C. auris*. If needed, use isolates from wwwn.cdc.gov/ARIsolateBank/.
- Work with your facility's infection preventionist to set up a plan for informing them about possible or confirmed *C. auris* and subsequent notification of public health authorities.
- Work with your state and local public health department for further characterization of these isolates. The health department will determine whether additional outreach to the Antibiotic Resistance Laboratory Network or CDC is needed.

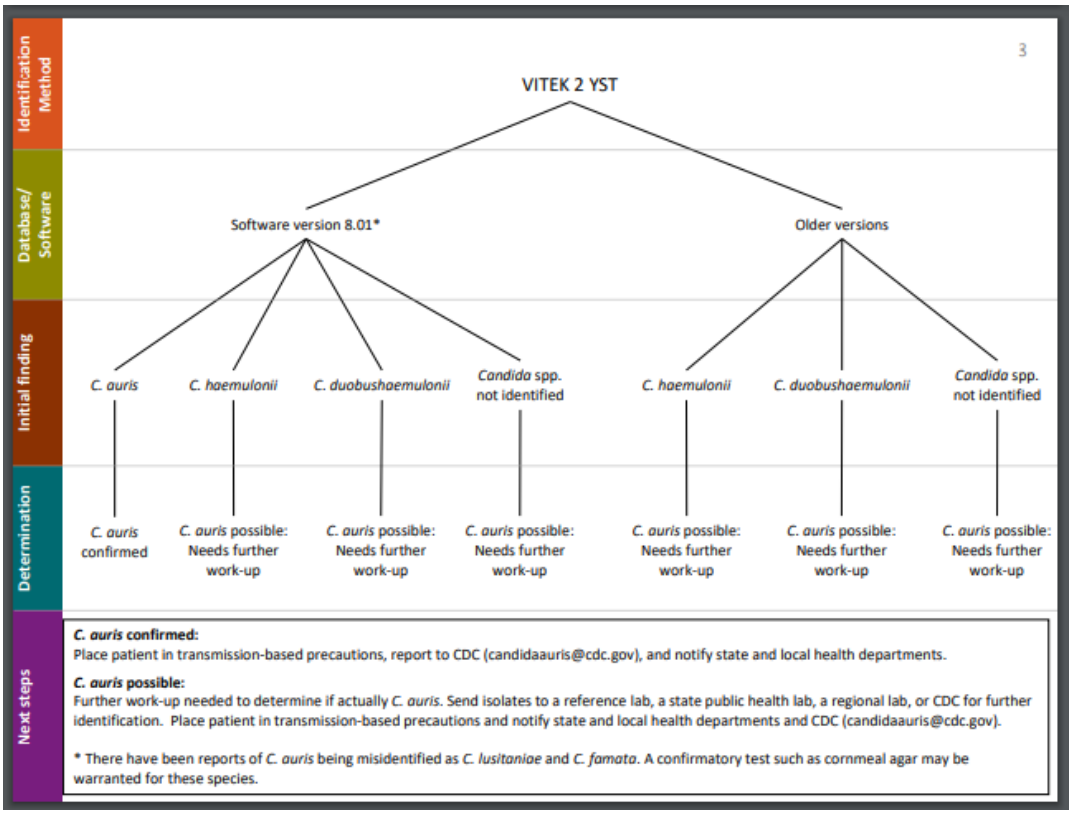
What should I do if *C. auris* is confirmed?

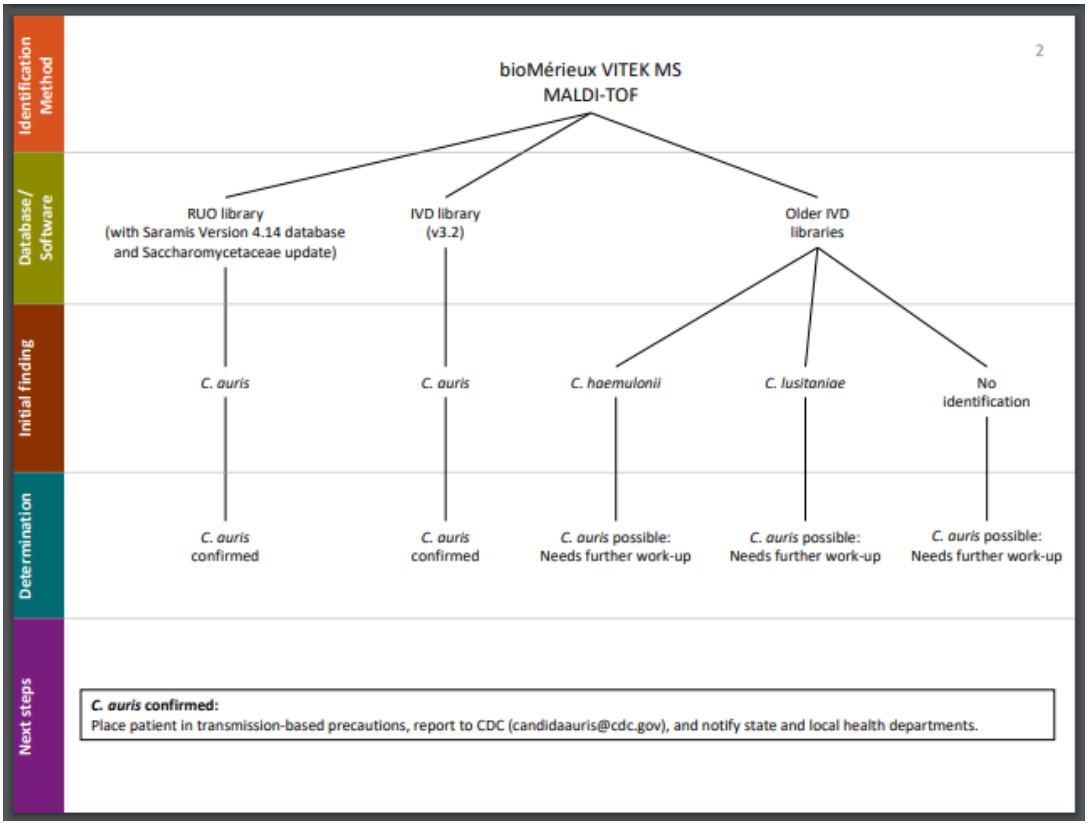
- Report possible or confirmed *C. auris* cases immediately to your facility's infection prevention and control department.
- Follow your facility's process for reporting to local public health departments.
- Send suspected or confirmed pure isolate to the Nebraska Public Health Laboratory for sequencing and antifungal susceptibility testing.
- Work with the infection preventionist to look for other cases of *C. auris* in your facility:

- Review microbiology records to find potentially missed cases.
- Begin surveillance for *C. auris* from clinical specimens to identify new cases.
    - *C. auris* is found in many body sites and fluids, including blood, respiratory, and abdominal specimens.
    - Consider identifying the species of *Candida* isolates from both sterile and non-sterile sites, even if this is not routine practice at your facility. Continue surveillance for at least one month or until there is no evidence of transmission.

Common methods in Nebraska to identify *C auris*







More guidance on when to suspect *C. auris,* how to correctly identify *C. auris,* and suggested antifungal drug minimum inhibitory concentration (MIC) cutoff values are available on CDC's web pages for

- **Identification of *C. auris*: https://www.cdc.gov/fungal/diseases/candidiasis/recommendations.html**
- **Antifungal Susceptibility Testing and Interpretation: https://www.cdc.gov/fungal/candida-auris/c-auris-antifungal.html.**