

Addressing Antifungal-Resistant *Aspergillus* spp.

Characterizing the Burden



Agricultural azole fungicides drive resistance to medical azole antifungals

Western Europe:

- 40% of antifungal-resistant *Aspergillus* infections in the UK linked to fungicides¹
- Up to 19% of *Aspergillus fumigatus* cases in Europe are antifungal-resistant (in some studies)²



United States:

- Lack of surveillance
- Limited antifungal susceptibility testing
- Prevalence of resistant *Aspergillus fumigatus* unknown



50%-100% mortality rate for azole-resistant invasive aspergillosis³

Use Medical Azoles Appropriately

Patient with invasive *Aspergillus* who is failing therapy



Obtain AFST



No lab capacity/testing at your institution? Contact CDC's Antibiotic Resistance Lab Network (AR LAB Network).^{*}



Be ready to transition to a broader therapeutic approach

- Avoid azole monotherapy³
- Consider LAmB or voriconazole plus an echinocandin³



^{*}<https://www.cdc.gov/drugresistance/ar-lab-networks/domestic.html>

References

1. Shelton JMG et al. Citizen science reveals landscape-scale exposures to multiazole-resistant *Aspergillus fumigatus* bioaerosols. *Sci Adv.* 2023;9(29):eadh8839. doi:10.1126/sciadv.adh8839 2. Lestrade PP et al. Voriconazole resistance and mortality in invasive aspergillosis: A multicenter retrospective cohort study. *Clin Infect Dis.* 2019; 68:1463–1471; doi:10.1093/cid/ciy859. 3. Meis JF et al. PE. Clinical implications of globally emerging azole resistance in *Aspergillus fumigatus*. *Philos Trans R Soc Lond B Biol Sci.* 2016;371(1709):20150460. doi:10.1098/rstb.2015.0460