Laboratory News

VOL. 49, NO. 4 August 20, 2026

Upcoming Changes to Minimum Inhibitory Concentration (MIC) Reporting

Dr. Taylor Wahlig, Dr. Sophie Arbefeville, Bronnyn Bulgrin, Kevin Davy

Effective August 31, 2026, the clinical microbiology laboratory will be reporting the minimum inhibitory concentration (MIC) values along with the qualitative interpretation of susceptibility results.

The MIC is defined as the lowest concentration of an antimicrobial agent that prevents visible growth of a microorganism in an agar or broth dilution susceptibility test. The laboratory uses the obtained MIC value for a specific bacterial species-drug combination to provide a quantitative interpretation using standardized clinical breakpoints.

Clinical breakpoints are established MIC thresholds that determine whether a patient's bacterial isolate is classified as Susceptible (S), Susceptible-dose-dependent (SDD), Intermediate (I), or Resistant (R) to a particular drug. This classification aids in guiding targeted treatment and reporting. The Clinical and Laboratory Standards Institute (CLSI) defines the breakpoints for various bacterial species-drug combinations. It is important to note that the breakpoint for a given antibiotic may vary by site of infection (e.g., urine versus tissues or skin) and among organisms.

Results Without MIC Values

Occasionally, some of the results received will either lack MIC values or include results in which some antibiotics have MIC values, and others do not. This occurs when:

- There are no validated MIC values for the organism in question, but there are validated Kirby-Bauer Disk Diffusion zone sizes, and so the disk diffusion method is used to determine susceptibility.
- The organism in question is intrinsically resistant to an antibiotic or a class of antibiotics.

Questions

For inquiries, please contact Dr. Sophie Arbefeville or Dr. Taylor Wahlig in the Clinical Microbiology laboratory at 715-221-6141, or Philip (Logan) Whitfield, the Infectious Disease pharmacist, at 715-387-7578.