Summary of 2019-2021 Minnesota Statewide Acute Care Antibiograms

The annual Acute Care Statewide Antibiogram was made for the years 2019-2021. During the timeframe, there was an increase in the number of submitted antibiograms from 41 to 61, leading to better representation of acute care Minnesota hospitals. The statewide Acute Care Antibiograms are not intended to inform clinical decision making, but rather track emerging trends. Clinical members of the Minnesota One Health Antibiotic Stewardship Collaborative (MOHASC) reviewed the antibiograms to identify patterns statewide in Minnesota that may be useful in supporting antibiotic stewardship efforts and the need for ongoing antibiotic resistance data. While there were some changes noted in susceptibility patterns, the majority were not consistent over the time frame or had minimal clinical significance due to standards already implemented in prescribing practices by most providers. Highlights from this review include:

Gram negative

- ***Pseudomonas aeruginosa*** susceptibility to piperacillin-tazobactam and cefepime remains stable (>90%).
- While this antibiogram includes ***Stenotrophomonas maltophilia*** susceptibility rates to ceftazidime based on 2019 – 2021 CLSI recommendations, it should be noted that ceftazidime breakpoints were removed per CLSI in 2023. The only antimicrobial agents currently recommended for routine testing are levofloxacin, minocycline, and trimethoprim-sulfamethoxazole (CLSI M100 [https://em100.edaptivedocs.net/]). Cefiderocol testing can often be requested specifically for MDROs.
- ***E. coli*** remains very susceptible to nitrofurantoin (97%), making it one of the best agents for empiric uncomplicated UTI treatment.

Gram positive

- It should be noted that ***Enterococcus*** susceptibility to daptomycin is variable, and confirmatory testing is strongly encouraged when appropriate. Daptomycin does not have recognized breakpoints for *E. faecium*, but susceptibilities may be reported based on the susceptible dose dependent (SDD) MIC ($\leq$ 4) requiring an 8-12 mg/kg daily dosing regimen (CLSI M100 [https://em100.edaptivedocs.net/]).
- ***E. faecalis*** remains very susceptible to ampicillin.
- **Group B *Streptococcus*** is poorly susceptible to clindamycin (<50%) across the state, and this may be particularly important in high-risk populations (e.g., Group B *Streptococcus* prophylaxis in pregnancy, skin and soft tissue infections in patients with diabetes).
- Although the reported **vancomycin susceptible *Staphylococcus aureus*** rate ranges from 93 – 100%, vancomycin-resistant *Staphylococcus aureus* (VRSA) remains rare in MN and the US. The weighted susceptibility is still 99% for *S. aureus* and 100% for MRSA, with all facilities except for one reporting 100% susceptibility for *S. aureus* and all except for three facilities reported a susceptibility of 100% for MRSA.

The highlights above are intended to guide interpretation and application of the Acute Care Statewide Antibiogram but should not supersede clinical judgment, assessment of site specific antibiogram data, or institution specific guideline recommendations. Utilization of this data may help smaller sites with less access to antibiograms, or sites with site specific testing limitations.

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