

Selective Antibiotic Reporting Increases Narrow-Spectrum Antibiotic Use in Hospital Settings



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Selective antibiotic reporting guides clinicians to optimized antibiotic therapy of *Staphylococcus aureus* infections and enhances narrow-spectrum antibiotic use, according to a recent publication in *Antimicrobial Resistance of Infection Control*.

Researchers conducted a one-year interventional study at the Helios Clinics of Schwerin (Germany) to investigate the effect of switching from non-selective reporting of all tested antibiotics to selective reporting of recommended antibiotics when culturing *S. aureus*. Reports on susceptibility testing of all tested methicillin-sensitive *S. aureus* were restricted to flucloxacillin/ cefazolin/cefalexin, trimethoprim-sulfamethoxazole, clindamycin, gentamicin and rifampin/fosfomycin. Researchers measured the effect of the intervention on overall antibiotic consumption of the entire hospital and on an individual level.

Impact at hospital level

Selective susceptibility reporting significantly increased the total use of the following narrow-spectrum beta lactams in the entire hospital:

- **Intravenous flucloxacillin and cefazolin** use as first-line treatment for severe *S. aureus* infections
- **Oral cefalexin** use for less severe infections or follow-up therapy
- **Trimethoprim-sulfamethoxazole** use increased

The total use of narrow-spectrum beta-lactams more than doubled from 1.2 to 2.8 RDD/100 BD* (P = .001) after implementing selective reporting.

Impact at individual patient level

- **Oral cefalexin** use for skin and soft tissue infections (SSTI) increased
- All selectively reported antibiotic use nearly doubled in SSTI and third-generation cephalosporin and carbapenem use stopped
- **Flucloxacillin/cefazolin** use increased



*RDD/100 BD: recommended daily dose / 100 bed days

The study authors indicate that selective antibiotic reporting is a useful AMS tool that can be implemented with few personnel and technical efforts.

“We recommend implementing selective reporting rules in the national and international standards for susceptibility reporting,” they concluded.

REFERENCE

[Lestin-Bernstein F, Harberg R, Schumacher I, Briedigkeit L, Heese O, Biedermann K. Staphylococcus aureus - selective reporting of antibiogram results and its impact on antibiotic use: Interventional study with a reference group on the effect of switching from non-selective to selective antibiotic reporting. *Antimicrob Resist Infect Control*. 2021;10\(1\):157. doi:10.1186/s13756-021-01021-7](#)