

KASIC NEWSLETTER

Issue Five, Volume Four

*Pictured Top: Maysville, KY
Attribution to City of Maysville*



National Improvements in Healthcare-Associated Infection (HAI) Prevention in Acute Care Hospitals – 2024 CDC Progress Report –

The CDC released a progress report showing most HAI standardized infection ratios (SIRs) decreased in 2024 compared to 2023.

Decreases

- **9%** decrease in central line-associated bloodstream infections (CLABSI)
- **10%** decrease in catheter-associated UTI (CAUTI)
- **2%** decrease in ventilator-associated events (VAE)
- **4%** decrease in surgical site infections (SSI) following colon surgery
- **7%** decrease in hospital-onset MRSA bacteremia
- **11%** decrease in hospital-onset *C. difficile* infections

Increases

- **8%** increase in abdominal hysterectomy SSIs

Overall, the report shows a favorable trend for HAIs in the acute care setting, with rates approaching pre-pandemic levels.

[Click here to read the full report!](#)

De-escalate antibiotics to escalate outcomes

Recently published in JAMA Internal Medicine, a multicenter observational target trial emulation evaluated whether de-escalation of empiric broad-spectrum antibiotic (BSA) therapy by hospital day 4 is safe and beneficial for adults hospitalized with **community-onset sepsis who have no positive cultures**. The study included 36,924 patients from 67 hospitals in the Michigan Hospital Medicine Safety Consortium. Patients initiated on anti-MRSA or anti-pseudomonal (PSA) coverage were compared based on whether therapy was de-escalated on day 4 versus continued. After inverse probability treatment weighting to balance baseline characteristics, de-escalation of both anti-MRSA and anti-PSA regimens was associated with similar 90-day all-cause mortality compared with continuation of broad-spectrum therapy. Importantly, de-escalated patients had fewer total antibiotic days through day 14 and shorter hospital stays. Readmission was lower with anti-PSA de-escalation in secondary analyses. In clinically stable patients, de-escalation of anti-MRSA coverage was associated with lower mortality.

These findings support recommendations to de-escalate empiric anti-MRSA and anti-Pseudomonas antibiotics when cultures do not identify MRSA and/or Pseudomonas spp.

[Click here to read the study!](#)



KASIC Cases

Each week, a fictional case describing a common antimicrobial stewardship opportunity is posted on X (formerly Twitter) and LinkedIn. Participants are encouraged to answer the poll first and then review the best answer along with an explanation.

Ready to test your antimicrobial stewardship knowledge?

Try out the latest case:

An inpatient is diagnosed with heart failure exacerbation and pneumonia. They are on IV diuretics and IV antibiotics.

What is a good way to lower sodium load to improve heart failure management?

- A. Switch to PO antibiotics
- B. Broaden antibiotics



[Click here for the BEST answer](#)

[Read more cases here](#)

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Novel route: subcutaneous antibiotic administration

- Intravenous (IV) antibiotics are commonly used to treat patients with severe infections when oral antibiotics cannot be used. However, IV antibiotics might not be feasible to certain patients. Subcutaneous (SC) antibiotics are being evaluated as an emerging option.
- A recent review summarizes promising evidence supporting the use of SC route. This route lends itself well to time-dependent antibiotics, since SC administration provides a lower concentration of drug over a longer period. For example, it has been well described for several beta-lactams (e.g. penicillin, ceftriaxone, ertapenem). In contrast, there is reservation regarding the use of antibiotics with concentration dependent activity such as aminoglycoside (e.g. gentamicin) due to attenuated peak levels.
- Further studies are needed to strengthen clinical evidence and establish standardized guidance for the use of SC antibiotics. Additionally, logistical and practical barriers for this delivery system will need to be overcome before widespread adoption.

[Click here to read the review!](#)

Latest Clinical Education Pearls: Click to Read!

[Know Your Antibiotic: Nitrofurantoin](#)

[β-lactam/β-lactamase Inhibitors for MSSA](#)

[Amoxicillin-Clavulanate for ESBL UTIs](#)

[Hemodialysis-only Antibiotic Dosing](#)

[Know Your Antibiotics: Silent Sodium](#)