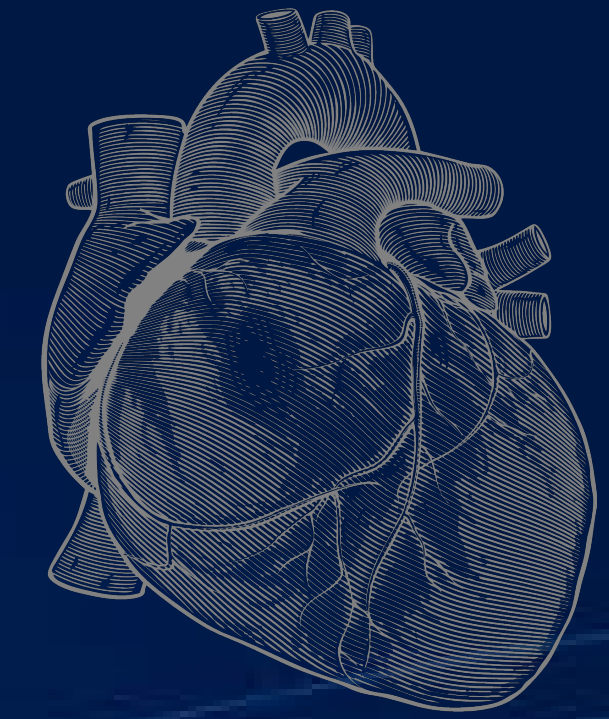


Improving Perioperative Vancomycin Timing

Andreea Lazar, MD; Maxie Phillips, DO; George Whitener, MD
Department of Cardiothoracic Anesthesiology



BACKGROUND

Perioperative antibiotics are a crucial part of reducing post-operative infections. Timing of these medications are important to ensure adequate tissue concentrations prior to incision. Administering antibiotics in the correct time interval can be difficult, particularly with long-infusion antibiotics like vancomycin. This often leads to incision being made before antibiotic administration is completed.

Currently, in our cardiothoracic ORs, the time from infusion start to incision is an average of 31 minutes. This is well below the minimum recommended vancomycin infusion time of 60 minutes.

AIM STATEMENT

Improve average vancomycin infusion start to incision time to at least 60 minutes.

MUSC Pillar: Quality



METHODS

Preintervention data were collected from November and December 2021 in open-heart surgeries excluding emergencies or transplant operations. Time from vancomycin administration start time to incision time was recorded in each operation. This was mostly due to vancomycin being initiated after the central venous catheter was inserted.

To remedy this, we had housestaff begin vancomycin infusions on entry to the operating room on the patient's existing peripheral IV after it was checked for adequacy.

Postimplementation data were collected in January and February of 2022 via the same methods as mentioned above.

RESULTS

After omitting cases with improper documentation, the preintervention period included 59 cases. Four cases that had administration of vancomycin after incision were also excluded, giving a final number of 55 data points with an average infusion start to incision time of 30 minutes.



30 min → 63 min



Postimplementation data included 73 cases with a single case excluded for post-incision vancomycin administration. The average of these 72 cases was 63 minutes.

CONCLUSION

We were able to significantly improve perioperative, long-infusion antibiotic timing with a simple change in practice over a two month period.

BARRIERS

- High-dose vancomycin infusions can infuse over periods longer than 60min
- Peripheral IV failure

NEXT STEPS

As vancomycin administration times fall more consistently in the recommended perioperative time, a retrospective analysis could be performed to assess perioperative infection rates post-intervention.