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Alternating Antibiotics in Multiple Lumen Central Lines: Best Practice

Jade Laird, BSN, RN; Jazmin Schaeftbauer, BSN, RN; Brooke Shirley, BSN, RN; Morgan Whiting, BSN, RN

Background

The Center for Cancer and Blood Disorders (CCBD), comes in contact with multiple lumen central lines daily. It is standard on a Bone Marrow Transplant (BMT) patient to rotate antibiotics between each lumen on a multiple lumen central line. However, this is not practiced consistently among the rest of CCBD. We discovered there was no evidenced based policy to guide practice. There is a common perception among oncology nurses that there is a benefit to rotating antibiotics, however, the practice in which to do so is unclear.

PICO Question

In pediatric patients with multiple lumen central lines receiving antibiotics, does rotating the antibiotics through each lumen impact CLABSI prevention/established infection clearance?

Methods

- Literature review
- Review of CCBD policies and guidelines
- Staff survey consisting of both Dallas and Plano campuses
- Completed a historical review of the Association of Pediatric Hematology/Oncology Nurses (APHON) Member connection List Serve

Survey Results

1. Where is your primary campus?

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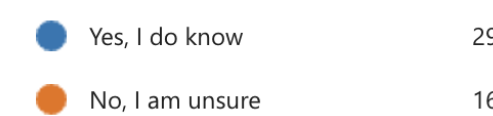
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2. Do you know if there is a policy regarding rotating antibiotics through multiple lumen central lines

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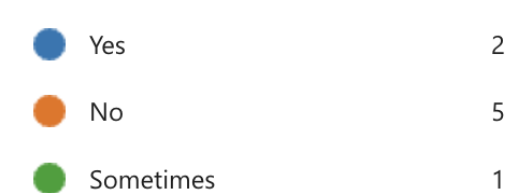
[Insights](#)



5. Do you link your line and lumen in the Rover/EPIC?

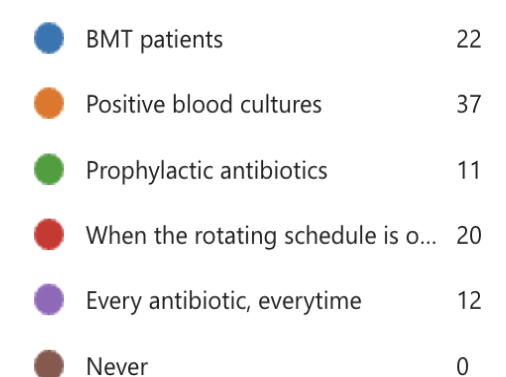
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3. In your practice, do you rotate antibiotics through each lumen with... (select all that apply):

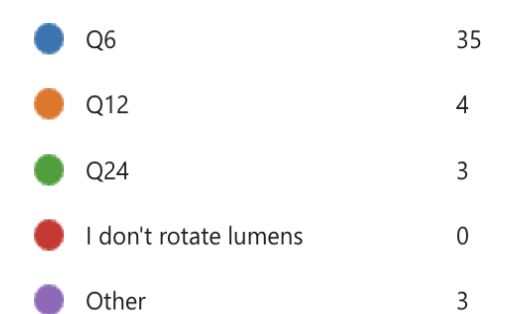
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4. If you do rotate lumens and have an antibiotic Q6 hours, when do you rotate through each lumen?

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Literature Review

- There is currently no research to support the PICO question.
- Although the literature discusses the use of antibiotics to prevent/treat central line infections it does not go into detail on whether the practice of alternating lumens is beneficial.

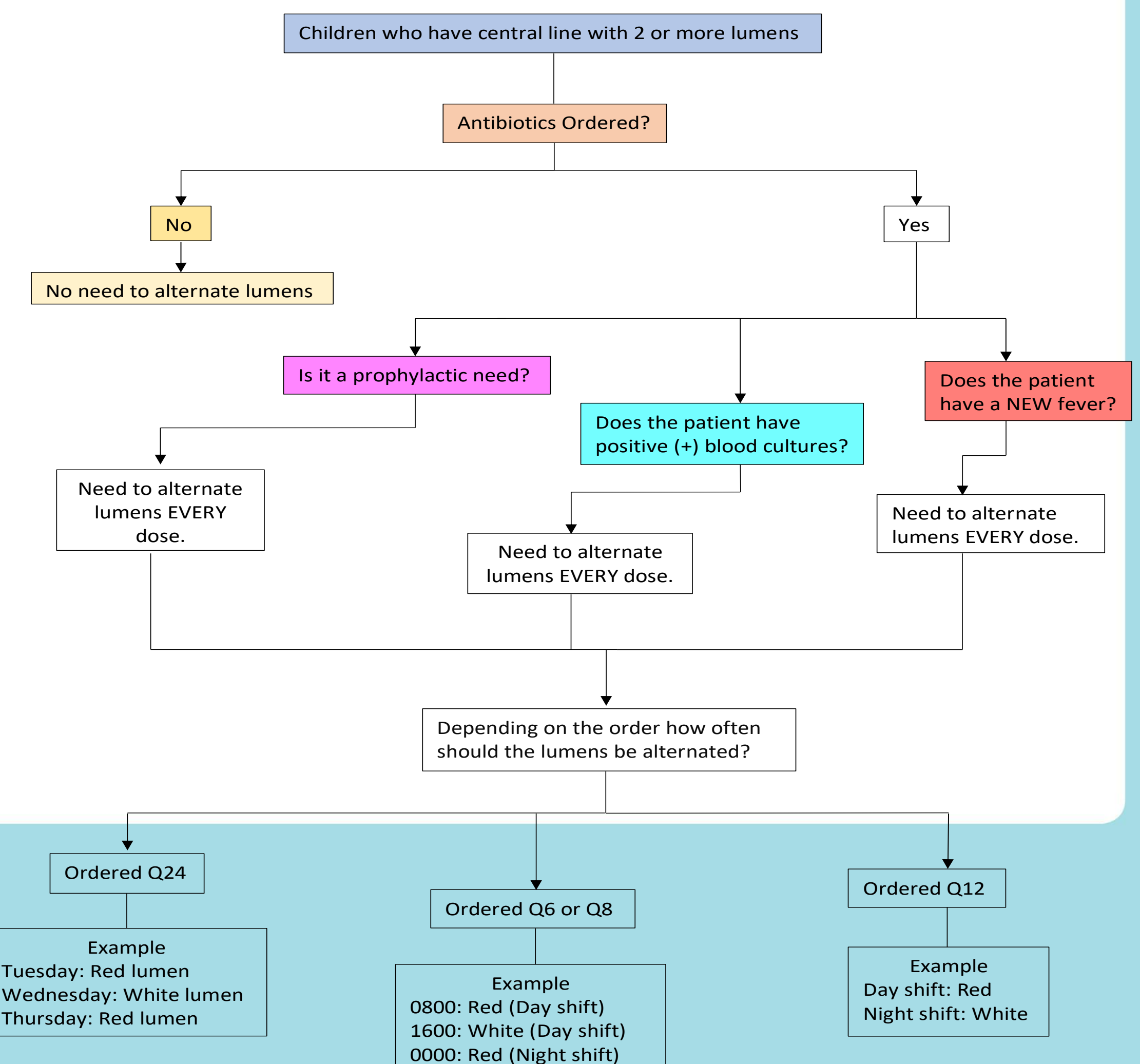
Benchmarking

- Results from Association of Pediatric Hematology/Oncology Nurses (APHON) Member connection List Serve did not reveal a consistent best practice in alternating antibiotics with multiple lumen central line.

Recommendations

- Recommend a Childrens Health Policy on alternating lumens with antibiotics to standardize care and guide nursing practice
 - Develop a clinical practice guideline that defines when and how often to alternate lumens when patients are receiving antibiotics
- Create a hard stop in EPIC when administering every dose of each antibiotic that requires nurses to link LINE & LUMEN every time a dose is given
- Once practice is standardized conduct research to determine if a standardized approach to antibiotic rotation is beneficial in prevention/treatment of CLABSI.

Multiple Lumen Central Line Receiving Antibiotics Clinical Guideline



Benchmarking Results



Comments from
Oncology Staff
Survey



References

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