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Policy Area Carolina Antimicrobial Stewardship Program
Applicability UNC Medical Center

Staphylococcus aureus/Staphylococcus lugdunensis bacteremia and Candidemia

I. Description

The policy outlines procedures for carrying out required Infectious Diseases evaluation of inpatients with positive blood cultures for *Staphylococcus aureus*, *Staphylococcus lugdunensis*, and *Candida* species at University of North Carolina Medical Center (UNC-MC).

II. Rationale

Multiple studies have demonstrated that Infectious Diseases consultation is associated with improved outcomes, including significantly decreased mortality, in cases of *Staphylococcus aureus* bacteremia, *Staphylococcus lugdunensis* bacteremia (a *Staphylococcus* species that causes aggressive, invasive infections similar to *Staphylococcus aureus*), and candidemia (positive blood cultures with *Candida* species).

KEY POINT:	This policy applies to all inpatients with positive blood cultures for <i>Staphylococcus aureus</i>, <i>Staphylococcus lugdunensis</i>, and <i>Candida</i> species at UNC-MC.
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III. Policy

All inpatients who have one or more positive blood cultures for *Staphylococcus aureus*, *Staphylococcus lugdunensis* or *Candida* species are required to have an adult Infectious Diseases consultation or

pediatric Infectious Diseases consultation during their admission.

There are two exceptions to this requirement:

- Patients who have been transitioned to comfort care at the time of positive culture results with these pathogens (or are actively being considered for transition to comfort care at the time of positive blood culture results with these pathogens, if it is anticipated that this will occur within the next 48 hours); or
- The attending physician is board certified in Infectious Diseases.

IV. Procedure

A. Implementation

Implementation of this policy will include at least one of the following:

1. When blood cultures positive for *Staphylococcus aureus*, *Staphylococcus lugdunensis*, or *Candida species* are resulted, the result will include a message stating that "Blood cultures positive with *Staphylococcus aureus* (or *Staphylococcus lugdunensis* or *Candida species*) require Infectious Diseases consultation due to increased morbidity and mortality."
2. In cases that the on-call pharmacist contacts team members regarding positive blood cultures for *Staphylococcus aureus* or *Staphylococcus lugdunensis*, based on the Gram-Positive Rapid Diagnostic Testing Guideline, they will remind the team members that an Infectious Diseases consultation is required for these patients (if an Infectious Diseases consultation has not been called yet, unless exceptions as mentioned above).
3. Carolina Antimicrobial Stewardship (CASP) team members review daily positive blood cultures and will contact the team members of a patient with one or more positive blood cultures with *Staphylococcus aureus*, *Staphylococcus lugdunensis*, or *Candida species* regarding the requirement for Infectious Diseases consultation in these patients, if an Infectious Diseases consultation has not been called yet, unless exceptions as mentioned above.

B. Infectious Diseases Consult Team

1. Patients admitted in an adult inpatient service will be seen by one of the adult Infectious Diseases consult teams. Patients <18 years of age or patients admitted in a pediatric inpatient service, will be seen by the pediatric Infectious Diseases consult team, unless the patient is <18 years of age but admitted to a primarily adult service such as Burn Surgery or CVTICU, in which case they will be seen by an adult Infectious Diseases consult team.
2. For special units of UNC-MC where in person Infectious Diseases consultation is not an option at the time of the request (e.g., Advanced Care at Home), an inpatient e-

consult will be used instead. The e-consult may be either an interprofessional telephone/internet consultation (i.e., chart review without patient involvement) or a telehealth consultation (i.e., chart review with audio/video-enabled patient involvement), at the discretion of the Infectious Diseases consultant on e-consult duty.

C. Time to Consultation

- Infectious Diseases consultation should take place within 24 hours from the time it was called.

V. References

Bai AD, et al. Impact of infectious disease consultation on quality of care, mortality, and length of stay in *Staphylococcus* bacteremia: results from a large multicenter cohort study. *Clin Infect Dis*. 2015;60:1451-61.

Fowler VG, et al. Outcome of *Staphylococcus aureus* bacteremia according to compliance with recommendations of infectious diseases specialists: experience with 244 patients. *Clin Infect Dis*. 1998;27:478-86.

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Jenkins TC, et al. Impact of routine infectious disease service consultation on the evaluation, management, and outcomes of *Staphylococcus aureus* bacteremia. *CID* 2008;46:1000-8.

Lahey T, et al. Infectious diseases consultation lowers mortality from *Staphylococcus aureus* bacteremia. *Medicine (Baltimore)*. 2009;88:263-7.

Forsblom E, et al. Infectious diseases specialist consultation in *Staphylococcus lugdunensis* bacteremia. *PLOS ONE*. 2021; 16 (10): e0258511.

Kobayashi T, et al. Impact of infectious disease consultation in patients with candidemia: A retrospective study, systemic literature review and meta-analysis. *Open Forum Infectious Diseases*. 2020; 7 (9): ofaa270.

VI. Responsible for Content

Carolina Antimicrobial Stewardship Program (CASP)

All Revision Dates

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Approval Signatures

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Applicability

UNC Medical Center

Standards

No standards are associated with this document