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Memorandum

To: UMHS Physicians, Nurse Practitioners and Physicians Assistants

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Subject: **UMHS Clinical Care Guideline: Inpatient Diagnosis and Treatment of Central Vascular Catheter (CVC) Infections**

What's New!

These new guidelines have been developed to improve appropriate early antimicrobial treatment of bloodstream infections, standardize management of CVC infections, and improve patient outcomes associated with CVC infections.

Key Aspects of Care

Diagnosis

- In any patient with a CVC and clinical suspicion for line infection, blood cultures should be drawn. Do **not** draw blood cultures routinely via a CVC, unless CVC infection is suspected.
- Blood cultures should be obtained prior to the initiation of antibiotics, *unless* the patient is unstable or critically ill (necessitating immediate initiation of antimicrobials, regardless of whether blood cultures have been obtained).
  - When infection is suspected, at least 2 sets of cultures should be drawn (aerobic & anaerobic).
  - Blood cultures should be drawn from peripheral site and the central line if catheter infection is suspected. Blood cultures should not be drawn from central catheters routinely.

Treatment

- Empiric treatment should be initiated after blood cultures are obtained.
- Definitive antimicrobial therapy should be tailored to the organism identified and the susceptibilities of that organism.
- The preferred management of confirmed CVC infection includes removal of the central vascular catheter in most cases.
- There are different considerations for short-term and non-tunneled hemodialysis CVC), long-term CVC, and tunneled hemodialysis CVC.
- Unless there is an urgent need for central vascular access, new central vascular catheter placement should be delayed until 48 hours after the first negative blood cultures when treating any bacteremia, including CVC-related bacteremia.
- CVC removal and ID consultation is recommended for any of the following situations related to CVC infections: cultures positive for *S. aureus* or *Candida* species; persistent bacteremia with any organism after 72 hours of appropriate antimicrobial therapy; persistence of septic shock; presence of an intravascular prosthetic device (e.g., mechanical valve, pacemaker, or AICD); or development of any complication (e.g., endocarditis, osteomyelitis, suppurative thrombophlebitis, or others).

All UMHS Inpatient Clinical Care Guidelines can be found at: http://www.uofmhealth.org/provider/clinical-care-guidelines