STAPHYLOCOCCUS AUREUS BACTEREMIA AND MANAGEMENT

- *Staphylococcus aureus* (*S.aureus)* bacteremia (SAB) can be either a community or a healthcare associated infection and is associated with 50% risk of morbidity and mortality
- *S. aureus is never considered a bloodstream contaminant*: isolation of *S.aureus* from $\geq$ 1 venous or arterial blood culture samples collected from a symptomatic patient should always be considered clinically significant
- Management of SAB by Infectious Diseases service has been shown to improve outcomes Mandatory ID consult at HHS and SJH (HHS – please refer to policy titled Mandatory Infectious Diseases Consult for *Staphylococcus aureus* bacteremia and fungemia in the policy library)

Assessment and Management

- **Clinical assessment**: identify source, extent and presence of septic complications of infection
- **Source control**: Elimination and/or debridement of sites of infection (e.g. remove central lines, debride soft tissue infection). Follow-up blood cultures q48 hours after start of appropriate treatment until clearance of *S.aureus* is documented
- Echocardiography (TEE preferred especially if high index of suspicion for endocarditis, prosthetic valve or pacemaker present)

Antibiotic Treatment (target therapy once susceptibilities are available)

- If MRSA risk is **low**:
  IV cloxacillin 2 g IV q4-6h or IV cefazolin 2 g IV q8h

- If MRSA risk is **moderate** or the **patient is severely ill**:
  Vancomycin 25 mg/kg IV load can be considered in severely ill patients then 15mg/kg IV q12h (frequency will depend on renal function but target trough between 10-15 ug/mL)
  ADD IV cloxacillin 2 g IV q4-6h or IV cefazolin 2 g IV q8h

- If known MRSA:
  Vancomycin 25mg/kg IV load can be considered in severely ill patients then 15mg/kg IV q12h (frequency will depend on renal function but target trough between 10-15 ug/mL)
  No benefit for addition of rifampin or gentamicin for uncomplicated bacteremia or native valve endocarditis

- Duration:
  2 weeks from last positive blood culture **if** no endocarditis or deep tissue infection, prompt clinical response AND repeat blood cultures negative within 72 hours
- 4-6 weeks **if** endocarditis or deep tissue infection or slow to clear bacteremia
- Intravenous treatment for the entire treatment duration is highly recommended