Vancomycin Use Criteria

Vancomycin is the most highly utilized antibiotic at CHI Memorial. About 60% of *Staphylococcus aureus* isolates in inpatients are methicillin resistant. Patients in whom there is a high suspicion for *S. aureus* infection, should receive empiric IV vancomycin. However, vancomycin should be discontinued if culture data do not indicate a resistant gram positive infection. There are few situations when continued use of vancomycin is appropriate in the absence of positive cultures. Please refer to the below guideline to determine the appropriate circumstances to initiate and discontinue IV vancomycin.

Acceptable empiric uses of IV vancomycin:

	Empiric	Recommend discontinuation in 48-72 hours:
Severe Sepsis	• Known MRSA colonization • Indwelling hardware/ catheter • Transfer from LTCF • Injection drug use • Recent hospitalization or current prolonged hospitalization • Hemodynamically unstable	• Patient clinically stable & • If source identified, use source related guidance or • If no source identified, and no microbiologic evidence of drug resistant gram positive infection
Pneumonia	• HAP, VAP • CAP in patients with previous (within 1 year) respiratory isolation of MRSA • Severe CAP in patients with hospitalization & IV antibiotics in past 90 days • CAP in patients with necrotizing or cavitary infiltrates, empyema	<u>Respiratory cultures obtained</u> • Good quality respiratory culture growing alternate (non-MRSA) organism • Good quality respiratory culture within 48 hrs of antibiotics with no growth <u>No respiratory culture obtained</u> • Patient clinically improving • MRSA nares swab negative within 48 hours of antibiotics & prior to mupirocin decolonization • Chest imaging – not suggestive of empyema or cavitary infiltrates
ABSSSI	• Abscess • Diabetic foot/ peripheral vascular disease ulcer • Surgical site infection • Necrotizing fasciitis	• Patient clinically stable & • No microbiologic evidence of drug resistant gram positive infection
Bacteremia	• ≥ 2 sets of blood cultures positive for GPC • ≥ 1 set of blood culture in a moderately or severely ill patient	• BioFire results an organism for which vancomycin is not the drug of choice (ex: *S. aureus* mecA not detected, GBS)
Endocarditis[++]	• Suspected endocarditis	• Blood culture (BioFire) results an organism for which vancomycin is not the drug of choice

Meningitis	• Suspected meningitis	• CSF fluid analysis normal • If CSF fluid abnormal & BioFire results any organism except *S. pneumoniae* • If CSF fluid suggestive of bacterial meningitis (↑protein, ↓glucose, ↑WBC) & no organism identified on BioFire BUT CSF culture with growth of an organism for which vancomycin is not the drug of choice
Abdominal Infections	• Healthcare-associated secondary peritonitis *Known colonizer of MRSA *Recent abdominal surgery *Recent broad spectrum antibiotic use • Severe secondary peritonitis *Patient hemodynamically unstable • Peritoneal dialysis related peritonitis	• Patient clinically stable & • No microbiologic evidence of drug resistant gram positive infection
Neutropenic fever	Suspected • Catheter-related infection • Skin or soft-tissue infection • Pneumonia Hemodynamic instability	• Patient clinically stable & • No microbiologic evidence of drug resistant gram positive infection
Bone and Joint infections++	• Suspected osteomyelitis or septic arthritis	• Good quality specimen indicates growth of an organism for which vancomycin is not the drug of choice

++Aim for vancomycin dosing frequencies that are easy for transition into outpatient setting (ex: q12, q24)

Acceptable definitive uses of IV vancomycin:

- Proven infection with beta-lactam resistant organisms
    - MRSA
    - Methicillin-resistant coagulase-negative staph
    - Ampicillin-resistant enterococcus
    - Ceftriaxone-resistant Streptococcus spp.
- Treatment of infections caused by gram-positive organisms in patients who have serious allergies to β-lactam agents