Print Name: _____Department: _____ Date:_____

2018 **Vancomycin - Antimicrobial Stewardship for Physicians**	**Initial**

Vancomycin is a bactericidal, glycopeptide antibiotic with penetration into various tissues. Although in use for more than 50 years, it retains sensitivity to most gram-positive organisms. It has poor oral absorption and must be given intravenously for systemic infections (the oral route is only for treatment of *C. difficile*).
 	
Role in Therapy:
• Once culture results are available, vancomycin should be reserved for:
  • infections due to MRSA
  • infections due to Enterococcus spp that are resistant to ampicillin
  • infections due to gram-positive organisms in patients with severe beta-lactam allergies.
• When MSSA is isolated in culture and is sensitive to beta-lactams, vancomycin should be de-escalated, as there is more rapid killing with beta-lactam therapy.	

Minimum Inhibitory Concentration (MIC) and Dose Intensity: • Vancomycin maintains efficacy when the MIC is less than 2. When the MIC reaches 2, it is more difficult to achieve adequate and safe drug levels and patients may fail therapy. When the MIC exceeds 2, an alternate drug will likely be necessary and an ID consult is recommended. • Due to the potential for toxicity and its pharmacokinetic profile, trough levels must be monitored during therapy. • The recommended trough goals for vancomycin are 10-15 mcg/mL for most infections and 15-20 mcg/mL for deep-seated infections (pneumonia, endocarditis, necrotizing fasciitis, meningitis, osteomyelitis). • Physicians can request for vancomycin dosing per pharmacy. Please remember to include the indication in the pharmacy consult detail or in the special instructions of the vancomycin order.	

Nephrotoxicity:
• The risk of nephrotoxicity is associated with:
  ❖ duration of therapy
  ❖ higher target trough levels (15-20 mcg/mL)
  ❖ concomitant therapy with other nephrotoxic drugs or with Zosyn
• Patients who are NPO or those with poor oral intake MAY need maintenance IV fluids to help facilitate clearance and reduce the risk of nephrotoxicity.	

Hemodialysis: • Vancomycin is poorly dialyzed, however intermittent hemodialysis (IHD) with high-flux membranes can increase clearance. • Pre-IHD drug levels are recommended and the same trough goals apply when the MIC is less than 2. • Vancomycin should be administered during the last hour of dialysis, or after if the patient has other IV access.	

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Participant Physician's Signature **Date**

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Provided by: Racquel Sperrazzo, ASP Team Pharmacist **Date**

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