**Background**

* The vancomycin consensus guidelines revised in 2020 cited additional data that support a preference for either estimating or calculating an actual AUC/MIC, as it appears to be a more accurate predictor of vancomycin efficacy and toxicity than a serum trough concentration.
* UConn Health has updated its Vancomycin Collaborative Practice Protocol to reflect this data and will be moving from a trough-based model to an AUC/MIC model in assessing vancomycin levels.

**Loading Dose**

* ALL patients will receive a loading dose of **25 mg/kg** based on total body weight
  + Max Loading Dose: 3000 mg

**Therapeutic Monitoring- When to Draw Levels:**

* Trough values are no longer used to guide therapy. Instead an AUC/MIC range of **400-600 mg-h/L** will be the therapeutic target for ALL PATIENTS.
* **TWO vancomycin serum concentrations are required to calculate the AUC/MIC.** The pharmacist will schedule both a trough and a peak vancomycin level to use to determine the AUC/MIC:
  + The **TROUGH** blood draw will be scheduled to occur **within 1 hour prior to the START of an infusion of a dose**
  + The **PEAK** blood draw will be scheduled to occur **1-2 hours after the END of the same dose infusion**
* If vancomycin is hung late, please wait to draw levels to ensure appropriate timing.
* In some patients, an AUC/MIC of 400-600 mg-h/L may have an associated trough < 10 mg/L. This is still considered therapeutic and the regimen may not be adjusted by the pharmacist.
* Any trough concentration >20 mg/L will be considered supratherapeutic and the regimen will be adjusted by the pharmacist.
* Serum peak and trough vancomycin concentrations will ONLY be ordered/assessed if therapy continues for AT LEAST 72 hours EXCEPT in certain patients/clinical situations:
  + **Critically-ill patients** (ICU patients) with or without hemodynamic instability
  + Patients with a **BMI > 40**
  + Patients with **documented positive blood cultures for gram-positive cocci** and/or patients with suspected pneumonia and a **positive MRSA PCR nasal swab**
  + Any patients with substantial **acute alterations in renal function**
  + Patients on **HD or other continuous renal replacement**
  + Patients with **anticipated hospital discharge prior to 72** hours of therapy who need outpatient vancomycin therapy
* Some patients may still only require **RANDOM** vancomycin levels to be drawn. These patients will only require **ONE** level to be drawn.