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| 3.erwesss  Add dosing interval to time trough was taken          **Assessing Drug Levels**    **Determining Initial Maintenance Regimen** | **Vancomycin Collaborative Practice (VCP)**  **Pocket Guide for**  **Pharmacists**  **Please refer to additional files on the health.uconn.edu/pharmacy website for more detailed information and for all necessary forms.**  **UConn Health Department of Pharmacy & Antimicrobial Stewardship Program** | |  | | --- | |  | |  | |

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| Vancomycin Loading Dose: All Patients   * 25 mg/kg based on total body weight not to exceed 3000 mg   Add dosing interval to trough level was taken  Scheduling Labs   * **Trough**: blood draw should be scheduled 1 hour prior to the start of an infusion of a dose * **Peak**: blood draw should be scheduled to occur 1-2 hours after the end of the same dose infusion * **Example**  |  |  |  | | --- | --- | --- | |  | Time | Level | | Trough | 09:30 | 11 | | Dose: 1000 mg every 12 hours | 10:00 | \_\_ | | Peak | 12:00 | 36 |     Clinical Situations that May Require Monitoring PRIOR TO 72 HOURS   * **Critically-ill patients (ICU patients)** with or without hemodynamic stability * 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** * Patients with **substantial acute alterations in renal function** * Patient on **HD or other continuous renal replacement** * Patients with **anticipated hospital discharge prior to 72 hours of therapy who need outpatient vancomycin therapy**   Therapeutic Monitoring:   * **AUC range of 400-600 mg-h/L** will be used for ALL PATIENTS * Vancomycin levels may **ONLY be assessed if therapy continues for at least 3 days (72 hours)**   Initial Vancomycin Maintenance Regimen   * Dose: 500 mg to 2000 mg   + Maximum initial single administered dose of 2000 mg per dose; maximum total daily dose of 4000 mg per day * Administration Intervals: Every 8, 12, 24, 48, or 72 hours |  | MRSA Nasal Swab   * RPh may order MRSA nasal swab if a patient has documented/suspected pneumonia may discontinue Vancomycin if negative * To order, go to Orders tab in the patient’s chart and type “MRSA” * RPh should contact primary care team to alert of discontinuation  |  |  | | --- | --- | | **Table #3: Infusion Times for Vancomycin Doses** | | | Doses | Infuse Over | | 500-1000 mg | 1 hour | | 1250-1750 mg | 2 hours | | Doses ≥ 2000 mg | 2.5 hours |   \*Doses available at UConn Health: 500, 750, 1000, 1250, 1500, 1750, 2000, 2500, and 3000 mg   |  |  | | --- | --- | | **Table #2: Guidelines for Regimens Adjustments in Hemodialysis Patients** | | | Pre-HD Conc. (mg/L) | Next Vancomycin Dose | | 5-10 | Increase maintenance dose by ~50% | | 10-14 | Increase maintenance dose by ~25% | | 15-20 | No change in maintenance dose | | 21-25 | Decrease maintenance dose by ~25% | | 26-30 | Decrease maintenance dose by ~50 | | >30 | Consider holding next dose or decrease dose by ~75 |  |  |  |  | | --- | --- | --- | | **Table #1: Special Dosing Considerations and Suggested Changes to Vancomycin Dosing** | | | | Special Dosing Considerations | Effect on Vancomycin | Suggested Changes/Notes | | Chronic or Acute Hemodialysis (HD) | Increased Vd  A 3-4h HD session usually eliminate ~30-50% of the serum concentration | -Maintenance dose ~10 mg/kg  -First treatment dose should be administered as soon as possible without regard to the patient’s HD schedule  -All subsequent doses should be administered on HD days after the patient’s HD session is complete  -Once weekly levels are appropriate for patients stable on hemodialysis  -Schedule blood draws with AM labs ONLY on HD days  -Pre-dialysis serum concentration of 15-20 mg/L will assure an AUC/MIC of 400-600 mg-h/L  -Adjust doses based on information in Table #2 | | Continuous Renal Replacement Therapies (CRRT) | Variable | -Regimens often will be similar to those used in patients with “good” renal function  -Maintenance dose 7.5-10 mg/kg q12h  -Since patient on CRRT will be critically ill in the ICU, the pharmacist can order a serum peak and trough as early as the first maintenance dose | | Significant Obesity (BMI >40) | Increased Vd  Increased half-life | -Pharmacist should order the initial peak and tough blood draws within the first 24-48 hours of therapy | | Worsening renal function prior to start of therapy | Increased half-life | -Consider a ~25% dose reduction and/or increase the administration interval  -Acceptable for pharmacists to schedule and order serum vancomycin concentrations prior to 72 hours in patients with large alterations in renal function | | Renal function improving and/or expected to improve during Vancomycin Therapy | Decreased half-life | -Consider a ~25% dose increase and/or decrease the administration interval  -Acceptable for pharmacists to schedule and order serum vancomycin concentrations prior to 72 hours in patients with large alterations in renal function | |