Vancomycin Dosing and Monitoring Guidelines - Adult Patients

Standard vancomycin dosing (target trough 10-15mcg/mL)

1) Determine Dose

Total Body Weight	Dose	Infusion time
50-80 kg	1000mg	Infuse over 60 minutes
> 80 – 100 kg	1250mg	Infuse over 90 minutes
100-120 kg	1500mg	Infuse over 2 hours

2) Determine Dosing Interval

Creatinine Clearance	Dosing Interval
> 50 mL/min	q12h
10- 50 mL/min	q24-48h
< 10 mL/min	Dose intermittently when serum concentration is 10-15 mcg/mL

**for extremes of weight (<50kg, >120kg), seek pharmacist consultation for optimal dose*

High-intensity vancomycin dosing (target trough 15-20mcg/mL)

Vancomycin loading dose of 20mg/kg (rounded to nearest 250mg), then:

CrCl (mL/min)	Weight (kg)			
	≤ 60	61 - 79	80 - 99	≥ 100
≤ 10	Draw level (re-dose when level < 20mcg/mL)			
11 – 29	1.25g q48h	1.5g q48h	1.75g q48h	1g q24h
30 – 49	1g q24h	1.25g q24h	1.5g q24h	1.5g q24h
50 – 69	1.5g q24h	1g q12h	1g q12h	1.25g q12h
> 70	1g q12h	1.25g q12h	1.5g q12h	1.75g q12h
Consider if: > 85mL/min and < 45yrs old	750mg q8h	1g q8h	1.25g q8h	1.25g q8h

**for extremes of weight (<50kg, >120kg), seek pharmacist consultation for optimal dose*

Vancomycin Serum Concentration Monitoring

Indications for serum concentrations:

- **Difficult-to-treat infections (* endocarditis, osteomyelitis, meningitis, hospital acquired pneumonia caused by S. aureus, pathogen MIC ≥1mcg/mL)**
- **Concurrent nephrotoxins (e.g. aminoglycoside)**
- **Poor renal function**

When to draw serum concentrations

- **Patients receiving scheduled doses: Obtain a steady-state, pre-dose ("trough") concentration prior to the 3rd or 4th dose.**
- **Patients with poor renal function:**
  - → **Creatinine Clearance < 10mL/min and/or on hemodialysis (HD): Draw concentration q48h. Establish scheduled dosing based on levels and frequency of re-dosing.**
  - → **Continuous renal replacement (e.g. CVVHD), Hi-flux HD, peritoneal dialysis: Draw concentration q24h. Establish scheduled dosing based on levels and frequency of re-dosing.**
  - → **Rapidly changing renal function: Check trough or random level periodically.**

Target concentrations:

- **Post-dose or "peak" concentrations are NOT indicated.**
- **Minimum acceptable pre-dose ("trough") for any indication is 10mcg/mL.**
- **Trough for most patients: 10-15mcg/mL**
- **Difficult-to-treat infections* : 15-20mcg/mL**