

# Vancomycin Dosing Guidelines

## Antimicrobial Activity

- Staphylococci spp. (i.e. MSSA, MRSA)
- Streptococci spp.
- Enterococci spp.
- Corynebacterium* spp.
- Listeria monocytogenes*
- Clostridium difficile* (oral Vancomycin)

## Dosing

### Empiric Dosing

- All doses should be rounded to the nearest 250 mg increment
- Dosing is based on actual body weight
  - In obese patients (i.e. >30% above IBW), adjusted body weight can be used for dose calculations

### Loading Dose\*

25-30 mg/kg (recommended maximum: 2 g)

\*Recommended for critically ill patients or patients with serious/complicated infections (i.e. osteomyelitis, meningitis, endocarditis)

### Maintenance Dose

15 mg/kg (recommended maximum total daily dose: 4 g)

### Dosing Frequency

SCr (μmol/L)	Age (years)				
	Below 40	40-49	50-59	60-69	70 and Older
40-60	q8h	q8h	q8h	q8-12h	q12h
61-80		q8-12h	q12h	q12h	
81-100	q12h	q12h		q12-24h	q12-24h
101-120		q12-24h	q12-24h		
121-140	q12-24h				
141-160					
161-180		q24h	q24h		
Above 180	Consider Intermittent Dosing				

### Intermittent Dosing (i.e. ESRD, Dialysis)

- Adjust dose based on trough levels and desired trough targets (increased monitoring may be required)
- Doses should be administered on dialysis days, post dialysis

## Therapeutic Drug Monitoring

- Vancomycin TDM **should not** be done if the expected duration of therapy is **less than 5 days**
- Data **do not** support using peak serum vancomycin concentrations
- Target trough levels below 10 mg/L should be avoided as they can lead to the emergence of resistance
- Target trough levels between 15-20 mg/L are recommended for serious or complicated infections (i.e. *S.aureus* infections, bacteremia, endocarditis, osteomyelitis, meningitis, and pneumonia)

### Initial Trough Levels

- Serum trough concentrations should be obtained *30 minutes prior* to next dose at steady state conditions (typically prior to 4<sup>th</sup> dose)
- For patients undergoing hemodialysis, trough levels should be obtained prior to dialysis session
- Patients with fluctuating renal function or ESRD may require initial trough levels within the first 48 hours

### Ongoing Trough Monitoring

- Ongoing monitoring is **only** required if treatment is expected to exceed 7 days; trough levels should be obtained once weekly
- If the vancomycin regimen is changed in a patient with stable renal function, trough levels should be taken prior to the 4<sup>th</sup> dose of the **new** regimen
- Patients receiving intermittent vancomycin (e.g. dialysis) or with unstable renal function may require more frequent trough monitoring

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## Appendix

### Ideal Body Weight

IBW (male) = 50.0 kg + 2.3 kg (each inch > 5 feet)

IBW (female) 45.5 kg + 2.3 kg (each inch > 5 feet)

### Adjusted Body Weight

*Used if actual body weight  $\geq$  30% above IBW*

ABW = IBW + 0.4 (actual body weight – IBW)