SBUH Vancomycin Dosing Guidelines for Adult Patients

Vancomycin Initial Dosing for Patients Less than 60 Years Old

Vancomycin initial dosing for serious MRSA infections (bacteremia, endocarditis, pneumonia, CNS infection, osteomyelitis) in patients less than 60 years old (No prior dosing or measured vancomycin concentrations) If patients had recent vancomycin dosing history and measured levels, consider incorporating patient's previous specific pharmacokinetic parameters in dosing decision	
Therapeutic Window: 24-h AUC between 400 and 600 mg*h/L	
Stable Creatinine Clearance calculated by Cockcroft-Gault formula (mL/min) CrCl (mL/min) = [(140 – age in years) x Ideal Body Weight]/(72 x SCr in mg/dL) For female - Multiply above equation by 0.85 Ideal Body Weight (kg) for male = 50 + [0.91 x (Height in centimeters – 152.4)] Ideal Body Weight (kg) for female = 45.5 + [0.91 x (Height in centimeters – 152.4)]	
First dose	
Actual Weight	**Dose**
70 kg or less	1000 mg
Greater than 70 to 90 Kg	1250 mg
Greater than 90 to 110 Kg	1500 mg
Greater 110 to 130 Kg	1750 mg
Greater than 130 kg	2000 mg
Maintenance Dose	
Creatinine Clearance	**Dose**
Greater than 120 mL/min **(Only for 18 to 30 years old)**	1250 mg q8h
Greater than 110 to 120 mL/min **(Dose cap for 31-59 years old)**	1500 mg q12h
Greater than 90 to 110 mL/min	1250 mg q12h
Greater than 60 to 90 mL/min **(Dose cap for 18-59 years old and weight < 60 kg)**	1000 mg q12h
Greater than 40 to 60 mL/min	500 mg q12h
Greater than 30 to 40 mL/min	750 mg q24h
Greater than 20 to 30 mL/min	500 mg q24h
Less than or equal to 20 mL/min (not on renal replacement therapy)	Maintenance dose subsequent to the first dose is based on PK analysis. Obtain 2 vancomycin random levels at 4 and 24 hours after the first dose (Contact Antimicrobial Stewardship for monitoring)
This dosing table is not intended to be a substitute for independent judgement of the clinician Last reviewed: July 9, 2024	

Last update: 7/9/2024 Approved by SBUH P&T Committee July 2024
Editors: Katherine De Jesus, PharmD, Matthew Unruh, PharmD, Roderick Go, DO
References: Thomson et al. JAC 2009;63:1050-1057, Rybak et al. Am J Health-Syst Pharm 2020;77:836-863

SBUH Vancomycin Dosing Guidelines for Adult Patients

Vancomycin Initial Dosing for Patients 60 Years and Older

Vancomycin initial dosing for serious MRSA infections (bacteremia, endocarditis, pneumonia, CNS infection, osteomyelitis) in patients 60 years and older (No prior dosing or measured vancomycin concentrations) If patients had recent vancomycin dosing history and measured levels, consider incorporating patient's previous specific pharmacokinetic parameters in dosing decision	
Therapeutic Window: 24-h AUC between 400 and 600 mg*h/L	
Stable Creatinine Clearance calculated by Cockcroft-Gault formula (mL/min) **Cr Cl (mL/min) =[(140 – age in years) x Ideal Body Weight]/(72 x SCr in mg/dL)** **For female - Multiply above equation by 0.85** **Ideal Body Weight (kg) for male = 50 + [0.91 x (Height in centimeters – 152.4)]** **Ideal Body Weight (kg) for female = 45.5 + [0.91 x (Height in centimeters – 152.4)]**	
First dose	
Actual Weight	**Dose**
70 kg or less	1000 mg
Greater than 70 to 90 Kg	1250 mg
Greater than 90 to 110 Kg	1500 mg
Greater 110 to 130 Kg	1750 mg
Greater than 130 kg	2000 mg
Maintenance Dose	
Creatinine Clearance	**Dose**
Greater than 70 mL/min **(Only for 60-74 years old and weight ≥ 115 kg)**	1250 mg q12h
Greater than 70 mL/min **(Dose cap for 60-74 years old and weight 60-115 kg)**	1000 mg q12h
Greater than 50 mL/min to 70 mL/min **(Dose cap for 75 years and older OR ANY patient < 60 kg)**	750 mg q12h
Greater than 40 to 50 mL/min	1000 mg q24h
Greater than 30 to 40 mL/min	750 mg q24h
Greater than 20 to 30 mL/min	500 mg q24h
Less than or equal to 20 mL/min (not on renal replacement therapy)	Maintenance dose subsequent to the first dose is based on PK analysis. Obtain 2 vancomycin random levels at 4 and 24 hours after the first dose according to actual weight. (Contact Antimicrobial Stewardship for monitoring)
This dosing table is not intended to be a substitute for independent judgement of the clinician Last reviewed: July 9, 2024	

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Editors: Katherine De Jesus, PharmD, Matthew Unruh, PharmD, Roderick Go, DO
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SBUH Vancomycin Dosing Guidelines for Adult Patients - CRRT

Adult Vancomycin Initial Dosing - Continuous Renal Replacement Therapy (CVVHD/F) (No prior dosing or measured vancomycin concentrations)	
Therapeutic Window: 24-h AUC between 400 and 600 mg*h/L	
Monitoring: Obtaining vancomycin trough concentration prior to the 3rd dose Contact Antimicrobial Stewardship for assistance in monitoring	
First dose	
Weight	**Dose**
70 kg or less	1000 mg
Greater than 70 to 90 Kg	1250 mg
Greater than 90 to 110 Kg	1500 mg
Greater 110 to 130 Kg	1750 mg
Greater than 130 kg	2000 mg
Maintenance Dose	
Weight	**Dose**
50 to 60 kg	500 mg q12h
Greater than 60 to 90 kg	750 mg q12h
Greater than 90 kg	1000 mg q12h
This dosing table is not intended to be a substitute for independent judgement of the clinician Last reviewed: July 9, 2024	

Last update: 7/9/2024 Approved by SBUH P&T Committee July 2024

Editors: Katherine De Jesus, PharmD, Matthew Unruh, PharmD, Roderick Go, DO

References: Thomson et al. JAC 2009;63:1050-1057, Rybak et al. Am J Health-Syst Pharm 2020;77:836-863

SBUH Vancomycin Dosing Guidelines for Adult Patients
Intermittent Hemodialysis

<table>
<tr><th colspan="3">Adult Vancomycin Initial Dosing - ESRD on Intermittent HD (3 time a week)
Contact Antimicrobial Stewardship for assistance in monitoring</th></tr>
<tr><th>First Dose</th><th colspan="2">Maintenance Dose with each hemodialysis session
MWF or TTS</th></tr>
<tr><td rowspan="2">20 - 25 mg/kg based on actual body weight for the first dose (max 2 grams)
First dose can be given before HD session</td><th>If administered after HD is completed</th><th>If administered during the last hour of hemodialysis</th></tr>
<tr><td>7.5 – 10 mg/kg given after HD is completed</td><td>10 -15 mg/kg given during the last hour of hemodialysis</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>Monitoring</td><td colspan="2">Obtain Vancomycin level prior to the third hemodialysis session: adjust vancomycin dose to maintain vancomycin pre-hemodialysis serum concentration between 15 to 20 mcg/mL</td></tr>
<tr><td colspan="3">This dosing table is not intended to be a substitute for independent judgement of the clinician
Last reviewed: July 9, 2024</td></tr>
</table>

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