

VCMC CRRT Antibiotic Dosing Recommendations

	CVVH			CVVHD			CVVHDF
	1 L/h	2 L/h	3-4 L/h	1 L/h	2 L/h	3-4 L/h	
Acyclovir*	5-10 mg q24h	5-10 mg/kg q24h	5-10 mg/kg q12h	5-10 mg q24h	5-10 mg/kg q24h	5-10 mg/kg q12h	5-10 mg/kg q12h
Amikacin*	12 mg/kg LD, then 8 mg/kg q24-48h. Measure peak 2 hrs post dose. Adjust base on target peak concentration 25-30 mcg/mL. Check a 24-hr concentration (redose when Cp<10 mg/L)						
Ampho B Liposomal*	3-5 mg/kg q24h (on adj BMW if obese)						
Ampicillin	2 g q8h			2 gm q6h	2 gm q6h	2 gm q4h	2 gm q6h
Ampicillin-sulbactam	3 g q8h			3 g q8h	3 g q6h	3 g q6h	3 g q6h
Aztreonam	2 g q12h	2 g q12h	2 g q6-8h	2 g q12h	2 g q12h	2 g q8h	2 g q12h
Cefazolin	2 g q12h	2 g q12h	2 g q8h	2 g q12h	2 g q12h	2 g q8h	2 g q12h
Cefepime	2 g q12h	2 g q12h	2 g q8h	2 g q12h	2 g q12h	2 g q8h	2 g q12h
Ceftazidime	2 g q12h	2 g q12h	2 g q8h	2 g q12	2 g q12	2 g q8h	2 g q12h
Ciprofloxacin	400 mg q12h						
Daptomycin	8 mg/kg q24h						
Ertapenem	1 g IV q24h						
Fluconazole	800 mg (12 mg/kg) LD, then 400 mg q24h	800 mg (12 mg/kg) LD, then 400 mg q24h	800 mg q24h	800 mg q24h			
Gentamicin**	Give 3 mg/kg LD, then: Synergy: 1 mg/kg q24-36h (re-dose when Cp < 1 mg/L) Systemic GNR infection: 2 mg/kg q24-48h measure peak 2-hrs post dose, target 7-10 mcg/mL. Check a 24-hr concentration (redose <2 mcg/mL)						
Imipenem-cilastatin	1 g LD, then 500 mg q8h			1 g LD, then 500 mg q6h			
Levofloxacin	750 mg LD, then 500 q24h			750 mg q24h			
Meropenem	2 g q12h	2 g q12h	2 g q8h	2 g q12h	2 g q12h	2 g q8h	2 g q12h
PCN G	4 MU LD, then 2 MU q4h			4 MU LD, then 3 MU q4h			
Piperacillin-tazobactam	4.5 g q8h (extended infusion)						
Tobramycin**	Give 3 mg/kg LD, then: Synergy: 1 mg/kg q24-36h (re-dose when Cp < 1 mg/L) Systemic GNR infection: 2 mg/kg q24-48h measure peak 2-hrs post dose, target 7-10 mcg/mL. Check a 24-hr concentration (redose <2 mcg/mL)						
TMP/SMX	2.5-7.5 mg/kg TMP q12h						
Vancomycin	20 mg/kg LD, obtain random 12 hours later, re-dose when clinically indicated and with changes in CRRT flow rates.						

*Acyclovir – use IBW, adjBW if obese, *Aminoglycosides – use IBW, adjBW if obese, TBW if < IBW, *Amphotericin B Liposomal – use adjBW if obese

***Recommendations from this table should not replace clinical judgement and it should be used as a guide to aid in antibiotic dosing while on CRRT. Dosing regimens should be tailored based on presumed source of infection, MIC data when available and residual renal function.

***Please be attentive to interruptions, changes or discontinuations of CRRT and review medication profile for any drug dose adjustment.

Modes of CRRT

CVVH	CVVHD	CVVHDF
CVVH is a convection-based therapy. A patient's blood is pumped through a filter and a filtrate flow is produced by action of the filtrate pump. Higher molecular weight solutes and lower molecular weight solutes are transported across the membrane until the molecular radius of the solute exceeds the membrane pore size.	CVVHD is a diffusion-based therapy. A patient's blood is pumped through a filter and dialysate flows counter-currently. The counter-current flow optimizes the diffusion gradient which allows lower molecular weight solutes cross the membrane more readily than higher molecular weight solutes.	CVVHDF combines the use of diffusion and convection therapies. A patient's blood is pumped through a filter and dialysate flows counter-currently. The counter-current flow optimizes the diffusion gradient. Concurrently, the filtration of plasma water across the membrane results in convective clearance.

CRRT – Continuous renal replacement therapy

CVVH – Continuous venovenous hemofiltration

CVVHD – Continuous venovenous hemodialysis

CVVHDF – Continuous venovenous hemodiafiltration

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