

Stanford Health Care Antimicrobial Dosing Reference Guide

This document is also located on the SHC Intranet (<http://portal.stanfordmed.org/depts/AntimicrobialStewardshipProgram>) and

<http://bugsanddrugs.stanford.edu> - ABX Subcommittee Approved: December 2022

Formulas for dosing weights: Ideal body weight IBW (male) = 50kg + (2.3 x height in inches > 60 inches) ·

Ideal body weight IBW (female) = 45kg + (2.3 x height in inches > 60 inches) · Adjusted Body Weight ABW (kg) = IBW + 0.4 (TBW – IBW)

Drug	CrCl > 50 mL/min	CrCl 10 – 50 mL/min	CrCl < 10 mL/min	Intermittent Hemodialysis (IHD) <i>Assumes thrice weekly dialysis</i>		CRRT	
Acyclovir (IV) ^{1–7} (Use adjusted BW for obesity)		CrCL > 50	CrCL 25 – 50	CrCL < 25	CrCL < 10	IHD	CRRT
	Prophylaxis						
	BMT	250 mg/m ² IV q12h	125 mg/m ² IV q12h	125 mg/m ² IV q24h	62.5 mg/m ² IV q24h	62.5 mg/m ² IV q24h	125 mg/m ² IV q12h
	Hematology/Oncology	2 mg/kg IV q12h	2 mg/kg IV q12h	2 mg/kg IV q24h	1 mg/kg IV q24h	1 mg/kg IV q24h	2 mg/kg IV q12h
	Treatment						
	General (e.g. mucocutaneous HSV)	5 mg/kg IV q8h	5 mg/kg IV q12h	5 mg/kg IV q24h	2.5 mg/kg IV q24h	2.5 mg/kg IV q24h	5 – 10 mg/kg IV q12h
	Severe (e.g. CNS/ocular/disseminated HSV infections, Zoster)	10 mg/kg IV q8h	10 mg/kg IV q12h	10 mg/kg IV q24h	5 mg/kg IV q24h	5 mg/kg IV q24h	10 mg/kg IV q12h
Acyclovir (PO) ^{1,2,7}		CrCL > 50	CrCL 25 – 50	CrCL < 25	CrCL < 10	IHD	CRRT
	Prophylaxis						
	BMT	800 mg PO BID	400 mg PO BID	200 mg PO BID	200 mg PO daily	200 mg PO daily	No data
	Hematology/Oncology	400 mg PO BID	400 mg PO BID	200 mg PO BID	200 mg PO daily	200 mg PO daily	No data
	Treatment						
	Mucocutaneous HSV	400 mg PO q8h Alt: 200 mg 5x daily		200 mg PO q8h	200 mg PO q12h	200 mg PO q12h	No data
	VZV	800 mg PO q4h (or 5x daily) Consider valacyclovir for less frequent dosing		800 mg PO q8h	800 mg PO q12h	800 mg PO q12h	No data
Amikacin (IV) ^{1,2,5,8,9} (Use adjusted BW for obesity) Refer to Aminoglycoside Dosing Guide		CrCl > 60	CrCl 40 – 60	CrCl 20 – 40	CrCl < 20	5 – 7.5 mg/kg IV post HD only consult pharmacist 10 mg/kg load, then 7.5 mg/kg IV q24–48h <u>Severe/MDR organism:</u> 25 mg/kg IV q48h consult pharmacist	
	Conventional dosing	5 – 7.5 mg/kg IV q8h	5 – 7.5 mg/kg IV q12h	5 – 7.5 mg/kg IV q24h	5 mg/kg IV load, then by level		
	High-dose extended-interval dosing	15 – 20 mg/kg IV q24h	15 mg/kg IV q36h	CrCl > 30: 15 mg/kg IV q48h CrCl < 30: Not recommended	alt: 7.5 mg/kg IV q48–72h		
	Timing of levels: Draw trough 30 min prior to 4 th dose. Draw peak 30 min after infusion ends Once daily dosing: goal peak 35 – 60 mcg/mL; goal trough < 4 mcg/mL Conventional dosing: goal peak 25 – 35 mcg/mL for serious infections; 15 – 20 mcg/mL for UTI; goal trough < 4 – 8 mcg/mL						
Amoxicillin (PO) ^{1,2}	Usual dose: 500 mg PO q8h or 1,000 mg PO q8-12h CAP: 1,000 mg PO q8h H pylori: 1,000 mg PO q12h Procedural ppx: 2,000 mg PO x 1	Normal Dose	CrCL 10-30	CrCL <10	IHD	No data	
		1,000 mg PO q8h	1,000 mg PO q12h	500 mg PO q12h	500 mg PO q12h		
		875 - 1,000 mg PO q12h	500 mg PO q12h	500 mg PO q12-24h	500 mg PO q12-24h		
		500 mg PO q8h	500 mg PO q12h	500 mg PO q12-24h	500 mg PO q12-24h		
Amoxicillin/clavulanate (PO) ^{1,2,10–12}	Usual dose: 500 mg PO q8h or 875 mg PO q12h CAP: 875 mg PO q12h IAI / Uncomplicated GNR bacteremia (oral step-down alternative): up to 875 mg PO q8h	CrCl 10 – 30: 500 mg PO q12h IAI / Uncomplicated GNR bacteremia (oral step-down alternative): up to 875 mg PO q12h	CrCl < 10: 500 mg PO q24h IAI / Uncomplicated GNR bacteremia (oral step-down alternative): up to 875 mg PO q24h	500 mg PO q24h; For q24h regimen, dose after dialysis or administer additional dose at the end of dialysis	No data		
Amphotericin B Liposomal (IV) ^{1,2}	3 – 5 mg/kg/day	No change	No change	No change	No change		
Ampicillin (IV) ^{1–3}	Mild/uncomplicated: 1 – 2 g IV q6h Meningitis/endovascular/PJI: 2 g IV q4h	Mild/uncomplicated: 1 g IV q6–8h Meningitis/endovascular /PJI: 2 g IV q6–12h	Mild/uncomplicated: 1 g IV q12h Meningitis/endovascular /PJI: 2 g IV q12–24h; or 1 g IV q8h	Mild/uncomplicated: 1 g IV q12h Meningitis/endovascular/PJI: 2 g IV q12–24h	CVVH: 2 g IV q8–12H CVVHDF: 2 g IV q6–8h Meningitis/endovascular /PJI: 2 g IV q6h		
Ampicillin/sulbactam (IV) ^{1–3,5,13}		CrCl >30:	CrCl 15-30:	CrCl < 15:	IHD	CRRT	
	Mild/uncomplicated	1.5 g IV q6h	1.5 g IV q12h	1.5 g IV q24h	1.5 g IV q24h	3 g IV q12h	
	Systemic	3 g IV q6h	3 g IV q12h	3 g IV q24h	3 g IV q24h	3 g IV q8h	
	Acinetobacter baumannii For more resistant Acinetobacter baumannii infections, consider higher dosing regimens	3 g IV q4h	3 g IV q8h	3 g IV q12h	3 g IV q12h	3 g IV q6h	
Azithromycin (IV/PO) ^{1,2}	500 mg IV/PO q24h	No change	No change	No change	No change		
Aztreonam (IV) ^{1–3,14}	1 – 2 g IV q8h	CrCl < 30: 1 g IV q8h	500 mg IV q8h	1 g IV q24h	2 g IV load, then 1 g IV q8h – or – 2 g IV q12h		
	Severe/Meningitis: 2 g IV q6–8h	Severe/Meningitis: 1 g IV q6–8h	Severe/Meningitis: 1g IV q12h	Severe/Meningitis: 1 g IV q12h			

Drug	CrCl > 50 mL/min	CrCl 10 – 50 mL/min	CrCl < 10 mL/min	Intermittent Hemodialysis (IHD) Assumes thrice weekly dialysis	CRRT		
Caspofungin (IV) ^{1,2,15,15–17}	70 mg IV x 1, then 50 mg IV q24h 70 mg IV q24h if on phenytoin, rifampin, other strong enzyme inducers Endocarditis/Endovascular: 150 mg IV q24h Dosage adjustments are not required for Child-Pugh B or C cirrhosis			No change	No change		
Cefazolin (IV) ^{1–5,18–20}	CrCl ≥ 35 mL/min: Mild/moderate: 1 g IV Q8H Severe: 2 g IV Q8H	CrCl 10 – 34 mL/min: Mild/moderate: 1 g IV Q12H Severe: 2 g IV Q12H	Mild/moderate: 1 g IV Q24H Severe: 2 g IV Q24H	1 g IV Q24H Dose daily, but after HD on HD days alt: 2g/2g/3g IV post-HD only	2 g IV Q12H		
Cefepime (IV) ^{1–3,5,21–23}	Extended Infusion (4-hour infusion)			0.5 – 1 g IV Q24H Dose daily, but after HD on HD days alt: 2 g IV post-HD only	2 g IV load, then 1 g IV Q8H (4-hour infusion)		
		CrCl > 60	CrCl 30 – 60			CrCl < 11-29	CrCl < 10
	General	1 g IV Q8H or 2 g IV Q12H	1 g IV Q12H or 2 g IV Q24H			1 g IV Q24H	500 mg IV Q24H
	Pulmonary/ Neutropenic Fever/ CNS/ confirmed Pseudomonal infection/ Severe infections	2 g IV Q8H	2 g IV Q12H			1 g IV Q12H	1 g IV q24h
Cefiderocol (IV) ^{1,2} (SHC Restriction)	CrCL> 120: 2 g IV q6h CrCL 60 -120: 2 g IV q8h	CrCL 30 – 60: 1.5 g IV q8h CrCL 15 – 30: 1 g IV q8h	CrCL < 15: 750 mg IV q12h	750 mg IV q12h	Effluent Flow Rate Dose ≤ 2L/hr 1.5 g IV q12h 2.1–3 L/hr 2 g IV q12h 3.1–4 L/hr 1.5 g IV q8h ≥4.1 L/hr 2 g IV q8h Shown as Effluent Dose (mL/kg/hr) in Epic		
Cefpodoxime (PO) ^{1,2}	Uncomplicated cystitis: 100 mg PO q12h CAP/bronchitis: 200 mg PO q12h Skin/soft tissue: 400 mg PO q12h	CrCl < 30: same dose q24h		Same dose, administered post-HD only	No data		
Ceftaroline (IV) ^{1,2,24} (SHC Restriction)		CrCl > 50	CrCl 30 – 50	CrCl 15 – 30	CrCl < 15	200 mg IV q8–12h Endocarditis/S.aureus bacteremia/ SDD: 200 mg IV q8–12h administered over 2-hr No data	
	General	600 mg IV q12h	400 mg IV q12h	300 mg IV q12h	200 mg IV q12h		
	Endocarditis/ S.aureus bacteremia, Susceptible-dose dependent (SDD)	600 mg IV q8h administered over 2-hr	400 mg IV q8h administered over 2-hr	300 mg IV q8h administered over 2-hr	200 mg IV q8h administered over 2-hr		
Ceftazidime (IV) ^{1–3,25}	Usual dose: 1 – 2 g IV q8h Severe: 2 g IV q8h	CrCl 30 – 50: 1 – 2 g IV q12h CrCl 16 – 30: 1 – 2 g IV q24h CrCl 6 – 15: 0.5 – 1 g IV q24h	CrCl < 5: 0.5 g IV q24h	0.5 – 1 g IV q24h Dose daily, but after HD on HD days alt: 1 – 2 g IV q48–72h or 1 g IV post-HD only TIW	2 g IV load, then 1 g IV q8h – or – 2 g IV q12h		
Ceftazidime/avibactam (IV) ^{1,2,26–29} (SHC Restriction)	2.5 g IV q8h	CrCl 31 – 50: 1.25 g IV q8h CrCl 16 – 30: 0.94 g IV q12h CrCl 6 – 15: 0.94 g IV q24h	CrCl < 5: 0.94 g IV q48h	0.94 g IV q24–48h Dose daily, but after HD on HD days	1.25 g IV q8h 2.5g IV q8h if MIC > 4 mcg/mL or deep-seated		
Ceftolozane/tazobactam (IV) ^{1,2,30–33} (SHC Restriction)		CrCl > 50	CrCl 30 – 50	CrCl 15 – 29	CrCl < 15	IHD	CRRT
	Cystitis	1.5 g IV q8h	750 mg IV q8h	375 mg IV q8h	750 mg IV load, then 150 mg IV q8h	750 mg IV load, then 150 mg IV q8h	1.5 g IV q8h
	HAP, VAP, Systemic pseudomonal infection, CF exacerbation	3 g IV q8h	1.5 g IV q8h	750 mg IV q8h	2.25 g IV load, then 450 mg IV q8h	2.25 g IV load, then 450 mg IV q8h	3 g IV q8h
Ceftriaxone (IV) ^{1,2,34}	1 – 2 g IV q24h Endovascular/osteomyelitis/PJ: 2 g IV q24h Meningitis, E. faecalis endocarditis: 2 g IV q12h		No change	No change	No change		
Cephalexin (PO) ^{1,2,35}	250 – 1000 mg PO Q6H Uncomplicated cystitis: 500 mg PO Q12H Complicated cystitis/ Cellulitis/ SSTI: 500 mg PO Q6H	CrCl 15 – 29: 250 mg PO Q8–12H CrCl 5 – 14: 250 mg PO Q24H		500 mg PO Q24H Dose daily, but after HD on HD days	No data		
Ciprofloxacin (IV/PO) ^{1–4,26,36}		CrCl > 50	CrCl 30 – 50	CrCl < 30	200 – 400 mg IV q24h 250 – 500 mg PO q24h Dose daily, but after HD on HD days	400 mg IV q12h 500 mg PO q12h Severe infection with A.baumannii or P.aeruginosa: 400 mg IV q8-12h	
	General infections	400 mg IV q12h 500 mg PO q12h	Same	400 mg IV q24h 500 mg PO q24h			
	Pseudomonas, severe	400 mg IV q8h 750 mg PO q12h	400 mg IV q8–12h 500 mg PO q12h	400 mg IV q24h 500 mg PO q24h			
Clindamycin (IV/PO) ^{1,2}	600 – 900 mg IV q8h 150 – 450 mg PO q6h	No change	No change	No change	No change		

Drug	CrCl > 50 mL/min	CrCl 10 – 50 mL/min	CrCl < 10 mL/min	Intermittent Hemodialysis (IHD) Assumes thrice weekly dialysis	CRRT								
Dalbavancin (IV) ^{1,37} (SHC Restriction)	Indication	CrCl > 30	CrCl < 30	IHD	CRRT								
	Skin/Soft Tissue	<u>Preferred:</u> 1,500 mg IV x 1 <u>Alternative:</u> 1,000 mg IV x 1 followed by 500 mg x1 1-week later	<u>Preferred:</u> 1,125 mg IV x 1 <u>Alternative:</u> 750 mg IV x 1 followed by 375 mg x1 1-week later	<u>Preferred:</u> 1,500 mg IV x 1 <u>Alternative:</u> 1,000 mg IV x 1 followed by 500 mg x1 1-week later	No data								
Daptomycin (IV) ^{1,2,23,38–45} (SHC Restriction) (Use adjusted BW for obesity)	Indication	CrCL > 30	CrCl < 30	IHD	CRRT								
	Skin/Soft Tissue	4 – 6 mg/kg IV q24h	4 – 6 mg/kg IV q48h	6 mg/kg post-HD only or 6/6/9 mg/kg post-HD only <u>alt:</u> 4 – 6 mg/kg IV q48h	6 mg/kg IV q24h								
	Bacteremia/Endovascular	8 mg/kg IV q24h	8 mg/kg IV q48h	8 mg/kg post-HD <u>alt:</u> 8 mg/kg IV q48h	6 – 8 mg/kg IV q24h								
	E. faecium Infection – consult ID	10 – 12 mg/kg IV q24h	10 – 12 mg/kg IV q48h	8 – 10 mg/kg post-HD <u>alt:</u> 8 – 10 mg/kg IV q48h	8 mg/kg IV q24h Doses > 8 mg/kg q24h increase the risk of CPK elevations and myopathy. Caution, clinical judgment, and frequent CPK monitoring, including a baseline value, should be used if pursuing as high as 10 to 12 mg/kg every 24 hours (Hoff 2020)								
Doxycycline (IV/PO) ^{1,2}	Load: 200 mg x 1 for severe infections 100 mg IV/PO q12h	No change	No change	No change	No change								
Ertapenem (IV/IM) ^{1,2,46–48}	1 g IV q24h	<u>CrCl <30:</u> 500 mg IV q24h	500 mg IV q24h	500 mg IV q24h Dose daily, but after HD on HD days <u>alt:</u> 500 - 1000 mg IV post-HD (low vs. high-flux HD, degree of renal failure, residual UOP)	1 g IV q24h								
Ethambutol (PO) ^{1,5,49,50} (Use lean BW for obesity) (See footnote for lean BW equation)	<u>Dose range:</u> 15 – 25 mg/kg/day (max dose: 1,600 mg/day) <table><tr><th>Lean body weight</th><th>Dose</th></tr><tr><td>40 – 55 kg</td><td>800 mg</td></tr><tr><td>56 – 75 kg</td><td>1,200 mg</td></tr><tr><td>76 – 90 kg</td><td>1,600 mg</td></tr></table>	Lean body weight	Dose	40 – 55 kg	800 mg	56 – 75 kg	1,200 mg	76 – 90 kg	1,600 mg	<u>CrCl 10 – 50:</u> 15 – 25 mg/kg PO q24–36h	<u>CrCl < 10:</u> 15 – 25 mg/kg PO q48h	15 – 25 mg/kg PO 3 times per week post-HD Administer after HD only	15 – 25 mg/kg PO q24–36h
Lean body weight	Dose												
40 – 55 kg	800 mg												
56 – 75 kg	1,200 mg												
76 – 90 kg	1,600 mg												
Fidaxomicin (PO) ^{1,2}	200 mg q12h x 10 days	No change	No change	No change	No change								
Fluconazole (IV/PO) ^{1–4,17,28,51}	Indication	CrCL > 50	CrCL ≤ 50	HD	CRRT								
	Mucocutaneous candidiasis (e.g. oropharyngeal, esophageal candidiasis) See below for C. glabrata	200 – 400 mg IV/PO Q24H	100 – 200 mg IV/PO Q24H	200 – 400 mg IV/PO post-HD <u>alt:</u> 200 – 400 mg x 1, then 100 – 200mg IV/PO Q24H	Load 800 mg x 1 dose, then 400mg IV/PO Q24H								
	<u>Severe Candidiasis:</u> Candidemia/CNS/endophthalmitis	Load 800 mg x 1 dose, then 400 – 800 mg IV/PO Q24H	Load 800 mg x 1 dose, then 200 – 400 mg IV/PO Q24H	Load 800 mg x 1 dose, then 400 – 800 mg post-HD <u>alt:</u> 200 – 400 mg IV/PO Q24H	Load 800 mg x 1 dose, then 400 – 800 mg IV/PO Q24H								
	Consider ID consult for cryptococcosis, coccidioidomycosis, etc.	<u>C. glabrata (SDD)*:</u> 800 mg IV/PO Q24H	<u>C. glabrata (SDD)*:</u> Load 800 mg x 1 dose, then 400 mg IV/PO Q24H	<u>C. glabrata (SDD)*:</u> 800 mg post-HD <u>alt:</u> 800 mg x 1, then 400 mg IV/PO Q24H	<u>C. glabrata (SDD)*:</u> 800 mg IV/PO Q24H								
*SDD = susceptible-dose dependent; all C. glabrata isolates are considered SDD or resistant. Limited data on isolates with MIC ≥ 16, consider consultation with ID													
Foscarnet (IV) ^{1,2,52–54} (Use adjusted BW for obesity) Adj CrCl (mL/min/kg) $\left(\frac{140 - \text{age}}{\text{SCr} \times 72}\right) \times (0.85 \text{ if female})$	CrCl (mL/min/kg)	CMV induction		CMV maintenance		HSV							
	> 1.4	60 mg/kg IV q8h	90 mg/kg IV q12h	90 mg/kg IV q24h	120 mg/kg IV q24h	40 mg/kg IV q12h	40 mg/kg IV q8h						
	> 1.0 – 1.4	45 mg/kg IV q8h	70 mg/kg IV q12h	70 mg/kg IV q24h	90 mg/kg IV q24h	30 mg/kg IV q12h	30 mg/kg IV q8h						
	> 0.8 – 1.0	50 mg/kg IV q12h	50 mg/kg IV q12h	50 mg/kg IV q24h	65 mg/kg IV q24h	20 mg/kg IV q12h	35 mg/kg IV q12h						
	> 0.6 – 0.8	40 mg/kg IV q12h	80 mg/kg IV q24h	80 mg/kg IV q48h	105 mg/kg IV q48h	35 mg/kg IV q24h	25 mg/kg IV q12h						
	> 0.5 – 0.6	60 mg/kg IV q24h	60 mg/kg IV q24h	60 mg/kg IV q48h	80 mg/kg IV q48h	25 mg/kg IV q24h	40 mg/kg IV q24h						
	≥ 0.4 – 0.5	50 mg/kg IV q24h	50 mg/kg IV q24h	50 mg/kg IV q48h	65 mg/kg IV q48h	20 mg/kg IV q24h	35 mg/kg IV q24h						
	< 0.4	Not recommended		Not recommended		Not recommended							
	IHD	45 – 60 mg/kg/dose IV post-HD only		No data		No data							
	CRRT			No data									
Ganciclovir (IV) ^{1,2} (Use adjusted BW for obesity)	CMV	CrCl >70*	CrCl >50	CrCl >25	CrCl >10	CrCl <10							
	Induction (I)	5 mg/kg IV q12h	2.5 mg/kg IV q12h	2.5 mg/kg IV q24h	1.25 mg/kg IV q24h	1.25 mg/kg IV 3x/week							
	Maintenance (M)	5 mg/kg IV q24h	2.5 mg/kg IV q24h	1.25 mg/kg IV q24h	0.625 mg/kg IV q24h	0.625 mg/kg IV 3x/week							
*Manufacturer's CrCl cutoffs. Please refer to BMT protocols if applicable						I: 1.25 mg/kg IV post HD only M: 0.625 mg/kg IV post HD only	I: 2.5 mg/kg IV q12–24h M: 1.25 – 2.5 mg/kg IV q24h						

Drug	CrCl > 50 mL/min	CrCl 10 – 50 mL/min	CrCl < 10 mL/min	Intermittent Hemodialysis (IHD) <i>Assumes thrice weekly dialysis</i>	CRRT				
Gentamicin (IV) ^{1,3,55} (Use adjusted BW for obesity) Refer to Aminoglycoside Dosing Guide		CrCl > 60	CrCl 40 – 59	CrCl 20 – 39	CrCl < 20	IHD	CRRT		
	Gram negative	1.7 mg/kg IV q8h or 5 – 7 mg/kg IV q24h (high-dose extended-interval)	1.7 mg/kg IV q12h or 5 – 7 mg/kg IV q36h (high-dose extended-interval)	1.7 mg/kg IV q24h or CrCl > 30: 5 – 7 mg/kg IV q48h CrCl < 30: Not recommended (high-dose extended-interval)	2 mg/kg IV loading dose, then per level	2 mg/kg IV loading dose, then 1.5 mg/kg IV post HD	1.5 – 2.5 mg/kg IV q24–48h		
		Gram positive synergy	1 mg/kg IV q8h**	1 mg/kg IV q12h	1 mg/kg IV q24h	1 mg/kg IV load, then by level	1 mg/kg IV q48–72h; consider redosing when level < 1 mcg/L	1 mg/kg IV q24h, then per level	
	Goal levels: Gram-negative infections: Goal peak for traditional dosing 4 – 8 mcg/mL; goal trough < 1 – 2 mcg/mL Gram-positive synergy: Goal peak 3 – 4 mcg/mL; goal trough < 1 mcg/mL Timing of levels: Draw peak 30 minutes after completion of 3 rd dose. Draw trough 30 minutes prior to 4 th dose (For CrCl < 20 mL/min, may check levels sooner than 3 rd /4 th dose) For 7 mg/kg once-daily dosing, draw a single random level 8 – 12 hours after dose administration. Adjust based on Hartford nomogram For HD, draw trough pre-HD (alternative: draw trough level 4-hr post-HD); and peak 30 minutes after end of each infusion ** Streptococci, <i>Streptococcus gallolyticus (bovis)</i> , <i>Streptococcus viridans</i> endocarditis: optional dosing 3 mg/kg q24h for CrCl > 60 mL/min ** Staphylococci; Enterococcus spp (strains susceptible to PCN and gentamicin) endocarditis: optional dosing 3 mg/kg in 2 or 3 equally divided doses								
Imipenem/Cilastatin (IV) ¹ (SHC Restriction)		CrCL >60	CrCL 30 – 59	CrCL 15 – 29	CrCL < 10	250 – 500 mg IV q12h 1g load, then 500 mg IV q6h			
	General	500 mg IV q6H or 1g IV q8h	500 mg IV q8h	500 mg IV q12h	Not recommended unless dialysis initiated within 48-hrs				
	NTM	1,000 mg IV q12H	750 mg IV q12H	500 mg IV q12H					
Isavuconazole (IV/PO) ^{1,2}	<u>Initial:</u> 372 mg IV/PO q8h x 6 doses <u>Maintenance:</u> 372 mg IV/PO q24h		No change	No change	No change	No change			
Isoniazid (PO) ^{1,2,49,50}	300 mg PO q24h (5 mg/kg/day)		No change	No change	No change	No change			
Levofloxacin (IV/PO) ^{1–4}		CrCl ≥ 50	CrCl 20 – 49	CrCl < 20	See CrCl < 20 ml/min <i>Dose q48h, but after HD on HD days</i>		750 mg load, then 250 – 500 mg IV/PO q24h		
	General	250 – 500 mg IV/PO q24h	250 mg IV/PO q24h - or - 500 mg IV/PO q48h	500 mg x1, then 250 mg IV/PO q48h					
	Severe/PNA/ Pseudomonas/ Stenotrophomonas:	750 mg IV/PO q24h	750 mg IV/PO q48h	750 mg x1, then 500 mg IV/PO q48h					
Linezolid (IV/PO) ^{1,2} (SHC Restriction)	600 mg IV/PO q12h		No change	No change	No change	No change			
Meropenem (IV) ^{1–4,56}		CrCl > 50	CrCl 26 – 50	CrCl 10 – 25	CrCl < 10	500 mg IV q24h <u>CF/CNS:</u> 1 g IV q24h <i>Dose daily, but after HD on HD days</i>			
	Usual dose (FN, PNA, Pseudomonas)	1 g IV q8h	1 g IV q12h	0.5 g IV q12h	0.5 g IV q24h				
	CF/Meningitis	2 g IV q8h	2 g IV q12h	1 g IV q12h	1 g IV q24h				
Administered over a 3-hr extended infusion									
Metronidazole (IV/PO) ^{1,2}	500 mg IV/PO q6–8h		No change Severe hepatic impairment: can consider 500 mg IV/PO q12h		500 mg IV/PO q8h	500 mg IV/PO q6–8h			
Moxifloxacin (IV/PO) ^{1,2}	400 mg IV/PO q24h		No change	No change	No change	No change			
Nafcillin (IV) ^{1,2}	2 g IV q4h Mild infections: 1 g IV q4h		No change for renal impairment. <u>Hepatic Impairment:</u> No specific dose adjustment provided by manufacturer. Dosage adjustment may be necessary in the setting of concomitant renal impairment; nafcillin primarily undergoes hepatic metabolism.						
Oseltamivir (PO) ^{1,2,57}		CrCl ≥ 60	CrCl 30 – 60	CrCl 10 – 30	30 mg PO x 1, then 30 mg PO after every other HD session <u>Treatment:</u> 30 mg PO x 1, then 30 mg PO post-HD only		<u>Prophylaxis:</u> 75 mg PO q24h <u>Treatment:</u> 75 mg PO q12h		
	Prophylaxis	75 mg PO q24h	30 mg PO q24h	30 mg PO q48h					
	Treatment	75 mg PO q12h	30 mg PO q12h	30 mg PO q24h					
Penicillin G (IV) ^{1–3,5}	2 – 4 mu IV q4h <u>Dose range:</u> 12 – 24 million units/day continuous infusion or in divided doses every 4 to 6 hours		2 – 3 mu IV q4h	1 – 2 mu IV q6h	<u>Mild:</u> 0.5 – 1 mu IV q4–6h; or 1 – 2 mu IV q8–12h <u>Severe:</u> 2 mu IV q4–6h; or 4 mu IV q8–12h		4 mu IV q4–6h		
Piperacillin/tazobactam (IV) ^{1–4,58,59}		CrCl > 40	CrCl 20 – 40	CrCl < 20	<u>General:</u> 2.25 g IV q12h <u>Severe infections:</u> 3.375 g IV q12h over 4-hr <u>alt:</u> 2.25 g IV q8h		3.375 g IV q6h over 30-minutes <u>Extended infusion:</u> 3.375 – 4.5 g IV q8h over 4-hr		
	<u>Intermittent Dosing (30-minutes)</u>								
	General	3.375 g IV q6h	2.25 g IV q6h	2.25 g IV q8h					
	Severe/sepsis/CF/ nosocomial PNA	4.5 g IV q6h	3.375 g IV q6h	2.25 g IV q6h					
	<u>Extended-Infusion Dosing (4-hr infusion)</u>								
	General, CF Pseudomonas, nosocomial PNA:	<u>Extended infusion for CrCl > 20:</u> 3.375 – 4.5 g IV q8h over 4h*		3.375 g IV q12h over 4h					
*In select cases, higher piperacillin/tazobactam dosing may be warranted, e.g. sepsis, critically ill patients with severe or deep-seated infections, infections with MIC > 16 mg/L, obesity with weight > 120kg or BMI > 40, CrCl > 120 mL/min, or enhanced drug clearance such as those with cystic fibrosis: consider doses of 4.5 g IV q8h (infused over 4 hours) or q6h.									
Polymyxin B (IV) ^{1,2,60,61} (SHC Restriction) (Use adjusted BW for obesity)	Dosing presented as units (10,000 units = 1 mg) 20,000 – 25,000 units/kg IV load x 1, then 12,500 – 15,000 units/kg IV q12h (maximum: 25,000 units/kg/day)				No data	No change			

Drug	CrCl > 50 mL/min	CrCl 10 – 50 mL/min	CrCl < 10 mL/min	Intermittent Hemodialysis (IHD) <i>Assumes thrice weekly dialysis</i>	CRRT		
Posaconazole (IV/PO) ^{1,2} (SHC Restriction [IV])	Formulation		Dose		No change	No change	
	Oral Suspension (NF) <i>Suspension and Delayed-release tablets are not interchangeable</i>		Prophylaxis: 200 mg PO q8h Treatment: 200 mg PO q6–8h				
	Delayed-release tablet <i>Suspension and Delayed-release tablets are not interchangeable</i>		300 mg PO q12h x 2 doses, then 300 mg PO q24h				
	Intravenous solution		300 mg IV q12h x 2 doses, then 300 mg IV q24h				
	Refer to Antifungal TDM Guide						
Pyrazinamide (PO) ^{1,2,49,50} (Use lean BW for obesity) (See footnote for lean BW equation)	Usual Dose: 25 mg/kg PO q24h (max dose: 2,000 mg/day)		<u>CrCl < 30:</u> 25 mg/kg PO 3 times per week		25 mg/kg PO 3 times per week Administer after HD only	No data	
	Lean body weight	Dose					
	40 – 55 kg	1,000 mg					
	56 – 75 kg	1,500 mg					
	76 – 90 kg	2,000 mg					
Rifampin (IV/PO) ^{1,2,49,50,62–64} Capsule size: 150mg, 300mg	<u>TB:</u> 600 mg IV/PO q24h (≤ 45 kg: 10 mg/kg q24h) <u>Endocarditis:</u> 300 mg IV/PO q8h <u>PJI:</u> 300 – 450 mg IV/PO q12h <u>Vertebral Osteomyelitis:</u> 600 mg IV/PO q24h		No change	No change	No change		
Tedizolid (IV/PO) ^{1,2,65} (SHC Restriction)	200 mg IV/PO q24h	No change	No change	No change	No change		
Tobramycin (IV) ^{1,2,55}	Refer to Gentamicin for dosing. See appendix for complete guidelines.						
Trimethoprim (TMP)/ Sulfamethoxazole (IV/PO) ^{1,2,4,66} (Use adjusted BW for obesity) SS = 80 mg TMP = 10 ml po soln DS = 160 mg TMP = 20ml po soln	<u>Uncomplicated cystitis:</u> 1 DS tab PO BID <u>SSTI:</u> 1 – 2 DS tab PO BID <u>S. aureus (Bone/Joint):</u> 8-10 mg/kg/day TMP in divided doses (2 DS tabs PO BID) <u>Gram-negative bacteremia:</u> 8-10 mg/kg/day TMP in divided doses (2 DS tab PO BID) <u>Stenotrophomonas:</u> 10-15 mg/kg/day TMP divided q8-12h <u>PCP:</u> 15 mg/kg/day TMP divided q8h (~2 DS tab TID)		CrCl 15 – 30: Administer 50% of recommended dose		CrCl < 15: Use is not recommended, but if needed for PCP: 5 – 7.5 mg/kg TMP q24h (25-50% of usual dose)	25-50% of usual dose 2.5 – 5 mg/kg TMP q24h	5 – 10 mg/kg/day TMP divided q12h
						<u>PCP, Stenotrophomonas</u> 5 – 7.5 mg/kg TMP q24h <i>Dose daily, but after HD on HD days</i> <u>alt:</u> 5 – 15 mg/kg TMP post-HD only	<u>Stenotrophomonas</u> 10-15 mg/kg/day TMP divided q8-12h <u>PCP</u> 15 mg/kg/day TMP divided q8h (~2 DS tab TID)
Valacyclovir (PO) ^{1,2} Please refer to transplant protocols if applicable	CrCl > 30		CrCl 10 – 30	< 10	500 mg PO q24h <i>Dose daily, but after HD on HD days</i>	No data	
	VZV	CrCl >50: 1 g PO q8h CrCl 30-50: 1 g q12h	1 g PO q24h	500 mg PO q24h			
	Genital herpes	<u>Initial episode:</u> 1 g PO q12h <u>Recurrent episode:</u> 500 mg PO q12h	<u>Initial episode:</u> 1 g PO q24h <u>Recurrent:</u> 500 mg PO q24h	<u>Initial/recurrent episode:</u> 500 mg PO q24h			
	Herpes labialis	CrCl >50: 2 g PO q12h x 2 doses CrCl 30 – 50: 1 g PO q12h x 2 doses	500 mg PO q12h x 2 doses	500 mg PO x 1 dose			
Valganciclovir (PO) ^{1,2} Please refer to transplant protocols if applicable	CrCl > 60		CrCl 40 – 59	CrCl 25 – 39	CrCl 10 – 24	CrCl < 10; IHD	CRRT
	Induction (14-21 days)	900 mg PO q12h	450 mg PO q12h	450 mg PO q24h	450 mg PO q48h	200 mg PO 3x/week after HD only	No data
	Maintenance/prophylaxis	900 mg PO q24h	450 mg PO q24h	450 mg PO q24h	450 mg twice/week	100 mg PO 3x/week after HD only	No data
Vancomycin (IV) ^{1,2,67,68}	See Vancomycin Dosing Protocol						
Vancomycin PO ^{1,2,69}	Poor systemic absorption- used for the treatment of <i>Clostridium difficile</i> -associated diarrhea <u>Mild/moderate/severe:</u> 125 mg PO q6h <u>Severe complicated (CDI-related septic shock, ileus, toxic megacolon):</u> 500 mg PO q6h			No change	No change		
Voriconazole (IV/PO) ^{1,2,70,71} (Use adjusted BW for obesity)	IV: 6 mg/kg IV q12h x 2, then 4 mg/kg IV q12h PO: 400 mg PO q12h x 2, then 200 mg PO q12h		<ul style="list-style-type: none">IV→PO conversion 1:1 (round to nearest tablet size- available in 200 mg and 50 mg tablets)Caution with IV: accumulation of IV vehicle cyclodextrin occurs. Consider PO if CrCl < 50 mL/min unless benefits justify risks of IV use.Please refer to Antifungal TDM Guide				

Abbreviations: CAP = community acquired pneumonia; CRRT = continuous renal replacement therapy; FN = febrile neutropenia; HD = hemodialysis; LD = loading dose; MU = million units; PCP = pneumocystis jiroveci pneumonia; PNA = pneumonia; SCr = serum creatinine; TB = tuberculosis; TMP = trimethoprim; UF = ultrafiltration

CRRT dosing: doses listed are for CVVHDF and CVVHD modalities, which are the most common modes at SHC. Note that these are generally higher than doses used in CVVH.

LBW (men) = (1.10 x Weight(kg)) - 128 x (Weight²/(100 x Height(m)²))

LBW (women) = (1.07 x Weight(kg)) - 148 x (Weight²/(100 x Height(m)²))

LBW online calculator: <http://www.empr.com/medical-calculators/lean-body-weight-calculator/article/170219/>

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Stanford Antimicrobial Stewardship Safety and Sustainability Program

C. Review and Renewal Requirement

This document will be reviewed every three years and as required by change of law or practice

D. Revision/Review History

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E. Approvals

Antimicrobial Subcommittee 09/2004, 04/2007, 01/2009, 11/2010, 03/2011, 05/2012, 05/2013, 01/2014, 03/2017, 07/2019, 10/2019; 01/2020, 09/2020, 08/2021, 12/2021, 06/2022, 12/2022
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