SHC Antimicrobial Dosing Guidelines in Adults

These are general dosing guidelines. Doses may vary based on indications, severity, and/or patient factors.
Consider adequate loading doses in patients with moderate-severe renal dysfunction to ensure prompt attainment of steady state drug levels.

*Denotes ID restricted antimicrobials

Sections:

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	CrCL ≥50 mL/min	CrCL 49-30 mL/min	CrCL 29-10 mL/min	CrCL <10 mL/min or iHD[1]
ANTIBACTERIALS				
Amikacin IV	**Dosing per pharmacy** to ensure appropriate dosing, serum level targeting and monitoring			
	Refer to P&P 43135 (Pharmacist Management of Aminoglycosides Therapy: Adults) for detailed dosing guidance			
Amoxicillin PO				
Usual dose	500 mg Q8 or 875 mg Q12	500 mg Q8 or 875 mg Q12	500 mg PO Q12	500 mg PO Q24
Pneumonia or bacteremia	1 g PO Q8	1 g PO Q8	1 g PO Q12	500 mg PO Q12
H. pylori	1 g PO Q12	1 g PO Q12	500 mg PO Q12	500 mg PO Q24
Amoxicillin/Clavulanate PO				
Intra-abdominal, Bone/Joint, Bacteremia	875 mg PO Q8	875 mg PO Q8	875/125 mg PO Q12	875/125 mg PO Q24
All other indications	875mg PO Q12 Or 500 PO Q8	875mg PO Q12 Or 500 PO Q8	500 mg PO Q12	500 mg PO Q24
Extended Release dose for CAP, sinusitis, GI infection	2 g ER PO Q12	2 g ER PO Q12	ER tablets not recommended	ER tablets not recommended
Ampicillin IV				
UTI, Mild infection	1 g IV Q6	1 g IV Q8	1 g IV Q12	1 g IV Q12
PPROM,Chorioamnionitis/Endometritis[2]	2 g IV Q6	2 g IV Q8	2 g IV Q12	2 g IV Q24
Moderate-Severe infection, Bacteremia/Endocarditis, Meningitis	2 g IV Q4	2 g IV Q6	2 g IV Q8	2 g IV Q12
Ampicillin PO	Non-formulary. Recommend amoxicillin PO – preferred due to superior absorption/bioavailability			
Ampicillin/Sulbactam IV				
Standard dose	3 g IV Q6	3 g IV Q6	3 g IV Q12	3 g IV Q24
Acinetobacter baumannii (dose based on sulbactam – at least 6g/d)	6g IV Q8 over 8-hr infusion	6g IV Q8 over 8-hr infusion	3 g IV Q8 over 30 min	3 g IV Q12 over 30 min
Atovaquone PO				
PJP Treatment	750 mg PO Q12			
PJP Prophylaxis	1500 mg PO Q24			

[1] Administer post-HD if on Q24+ hour interval.

[2] Ampicillin: PPROM (premature rupture of membranes) – doses applicable in presence/absence of sepsis

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Azithromycin IV/PO	Decreased oral bioavailability compensated by high tissue concentrations			
Treatment	500 mg x 1, then 250 – 500 mg IV/PO Q24 Alternative Dosing for MAC: 500 mg PO TIW			
Px: COPD, CF, bronchiectasis, etc	250 – 500 mg PO TIW			
Aztreonam IV				
Standard dose	2 g IV Q8	2 g IV Q8	1 g IV Q8	CrCL <10: 500 mg IV Q8 iHD: 2g Q24
ICU, Pseudomonas, >100kg	2 g IV Q6	2 g IV Q6	1 g IV Q6	CrCL <10: 500 mg IV Q6 iHD: 2g Q24
*Aztreonam/Avibactam IV	CrCL >50 mL/min	CrCL 50-31 mL/min	CrCL 30-16 mL/min	CrCL ≤15 mL/min or iHD
	2.67 g x once, then 2 g Q6	2.67 g x once, then 1 g Q6	1.8 g x once, then 900 mg Q8	1.33 g x once, then 900 mg Q12
Cefazolin IV				
Cystitis	1 g IV Q8	1 g IV Q8	1 g IV Q12	500 mg IV Q24
All other indications including severe UTIs, >100kg	2 g IV Q8	2 g IV Q8	2 g IV Q12	1 g IV Q24 or 2 g IV TIW post-HD
Severe infection AND >120 kg	2 g IV Q6	2 g IV Q6	2 g IV Q8	2 g IV Q24
Cefdinir PO				
	300 mg PO Q12	300 mg PO Q12	300 mg PO Q24	300 mg PO x1 then 300 mg PO TIW post-HD
Cefepime IV (3-hr infusion)				
UTI, SSTI	1 g IV Q8	1 g IV Q12	1 g IV Q24	500 mg IV Q24
All Other Indications #: susceptible dose-dependent for MICs of 4-8 for certain GNRs. Higher dosing is required for target attainment	2 g IV Q8	2 g IV Q12	1 g IV Q12	1 g IV Q24 or 2 g IV TIW post-HD
*Cefiderocol IV (3-hr infusion)				
	CrCL ≥120: 2 gm IV Q6 **CrCL 50-119:** 2 gm IV Q8	1.5 gm IV Q8	1 gm IV Q8	750 mg IV Q12
Cefoxitin IV				
	2 g IV Q6	2 g IV Q8	2 g IV Q12	1 g IV Q24

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Cefpodoxime PO				
All other indications	200 mg Q12	200 mg Q12	200 mg Q24	200 mg Q24
SSTI and bacteremia	400 mg Q12	400 mg Q12	400 mg Q24	400 mg Q24
*Ceftaroline IV				
Standard dose	600 mg IV Q12	400 mg IV Q12	300 mg IV Q12	200 mg IV Q12
Endocarditis, *S.aureus* bacteremia	600 mg IV Q8	400 mg IV Q8	300 mg IV Q8	200 mg IV Q8
Ceftazidime IV				
Pseudomonas	2 g IV Q8	2 g IV Q12	2 g IV Q24	1 g IV Q24 or 2 g IV TIW post-HD
*Ceftazidime/Avibactam IV				
	2.5 g IV Q8	1.25 g IV Q8	0.94 g IV Q12	0.94 g IV Q24
*Ceftolozane/Tazobactam	3 hr-infusion			
All other indications	1.5 g IV Q8	750 mg IV Q8	375 mg IV Q8	750 mg IV x 1 dose, then 150 mg IV Q8
Severe or Deep Seated or Pneumonia	3 g IV Q8	1.5 g IV Q8	750 mg IV Q8	2.25 g IV x 1 dose, then 450 mg IV Q8
Ceftriaxone IV	*Note: for weight <45 kg with CNS or endocarditis indications refer to ID pharmacist for dosing			
Standard Dose	2 g IV Q24			
Meningitis, Enterococcal endocarditis, Weight > 120 kg with deep-seated infection (e.g. bone/joint)	2 g IV Q12			
Weight <45 kg*	1 g IV Q24			
Cefuroxime IV				
	1.5 g IV Q8	1.5 g IV Q8	1.5 g IV Q12	1.5 g IV Q24
Cefuroxime axetil PO				
	500 mg PO Q12	500 mg PO Q12	250 mg PO Q12	250 mg PO Q24
Cephalexin PO				
Standard dose, including cystitis	500 mg PO Q8-Q6	500 mg PO Q8-Q6	500 mg PO Q12	500 mg PO Q24
High dose for SSTI, Pyelonephritis	1 g PO Q8	1 g PO Q8	1 g PO Q12	1 g PO Q24
Bacteremia, or >80 kg	1 g PO Q6	1 g PO Q6	1 g PO Q8	1 g PO Q24
Ciprofloxacin IV				
Standard dose, UTI	400 mg IV Q12	400 mg IV Q12	400 mg IV Q24	400 mg IV Q24
PNA, PsA, Severe Infection, or >100kg	400 mg IV Q8	400 mg IV Q8	400 mg IV Q12	400 mg IV Q24

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Ciprofloxacin PO				
Standard dose, UTI	500 mg PO Q12	500 mg PO Q12	500 mg PO Q24	500 mg PO Q24
PNA, Bone/Joint, Bacteremia	750 mg PO Q12	750 mg PO Q12	750 mg PO Q24	500 mg PO Q24
Clarithromycin PO				
	500 mg PO Q12 (Alternative MAC dose: 500mg PO BID 3x/wk)	500 mg PO Q12 (Alternative MAC dose: 500mg PO BID 3x/wk)	250 mg PO Q12	250 mg PO Q12
Clindamycin IV				
	600 – 900 mg IV Q8H Use higher end for patients with severe infection and/or > 100 kg			
Clindamycin PO				
	300 – 450 mg PO Q6—8 or 600 mg PO Q8			
*Colistimethate sodium IV	Please see Colistin/Polymyxin B IV Dosing Guideline for additional details. Dose based on IBW or actual if <IBW			
Loading Dose for all patients	300 mg x1			
Maintenance Dose Adjust per 10mL/min per pharmacy	Refer to Polymyxin B and Colistin Dosing Guideline			
*Colistimethate sodium INHALATION	No adjustment needed			
	75 mg nebulized BID (NTE 150 mg nebulized BID)			
*Dalbavancin IV	*Restricted to outpatient infusion*			
Single-dose regimen	1.5 g IV x 1 dose	1.5 g IV x 1 dose	1.125 g IV x 1 dose	CrCL <10: 1.125 g IV x 1 iHD: 1.5 g IV x 1 dose
Osteomyelitis	1.5 g IV on days 1 & 8	1.5 g IV on days 1 & 8	1.125 g IV on days 1 & 8	CrCL <10: 1.125 g IV on days 1 & 8 iHD: 1.5 g IV on days 1 & 8
*Daptomycin IV	Dose based on TBW. Consider adjusted BW if morbidly obese & using 8-12 mg/kg. Round to nearest 50 mg.			
STAPHYLOCOCCUS/STREPTOCOCCUS				
Bacteremia/Endocarditis/Bone/Joint	8-10 mg/kg IV Q24	8-10 mg/kg IV Q24	8-10 mg/kg IV Q48	8-10 mg/kg IV Q48[3]
Other indications (e.g. SSTI)	6-8 mg/kg IV Q24	6-8 mg/kg IV Q24	6-8 mg/kg IV Q48	6-8 mg/kg IV Q48[3]
ENTEROCOCCUS	*SDD=susceptible dose-dependent for MIC=4 for Enterococcus. Dapto dosing of 8-12mg/kg is needed*			
Bacteremia/Endocarditis	10-12 mg/kg IV Q24	10-12 mg/kg IV Q24	10-12 mg/kg IV Q48	10-12 mg/kg IV Q48[3]
UTI	4-6 mg/kg IV Q24	4-6 mg/kg IV Q24	4-6 mg/kg IV Q48	4-6 mg/kg IV Q48[3]
Other indications or SDD	8-12 mg/kg IV Q24	8-12 mg/kg IV Q24	8-12 mg/kg IV Q48	8-12 mg/kg IV Q48[3]

[3] Daptomycin: See Lexi-Comp® for TIW post-HD alternative dosing for outpatient convenience

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Dicloxacillin PO				
	500 mg PO Q6			
Doxycycline IV/PO				
	100 mg Q12			
*Eravacycline IV				
Standard dose	1 mg/kg IV Q12 (or 1.5 mg/kg Q24 ok for outpatient) Child-Pugh C: 1 mg/kg Q12 x2 doses, then 1 mg/kg Q24			
Concomitant strong CYP3A inducers (ex: rifampin)	1.5 mg/kg IV Q12			
Ertapenem IV	Consider meropenem for obese patients (>100kg) WITH severe deep-seated infection			
	1 g IV Q24	1 g IV Q24	500 mg IV Q24	500 mg IV Q24 or 1g TIW post-HD
Ethambutol PO	Round to nearest 200 mg. Do not give doses below 15 mg/kg.			
	CrCL ≥ 30 mL/min		CrCL <30 mL/min or iHD	
	<40 kg	400-600 mg daily or 5x/week	<40 kg	800 mg 3x/week
	40-49 kg	800 mg daily or 5x/week	40-49 kg	1000 mg 3x/week
	50-59 kg	1000 mg daily or 5x/week	50-59 kg	1200 mg 3x/week
	60-69 kg	1200 mg daily or 5x/week	60-69 kg	1400 mg 3x/week
	70-79 kg	1400 mg daily or 5x/week	70-79 kg	1600 mg 3x/week
	>80 kg	1600 mg daily or 5x/week	80-89 kg	1800 mg 3x/week
			>90 kg	2000 mg 3x/week
Fidaxomicin PO				
Standard dose for C. difficile	200 mg PO BID x 10 days. 14 days acceptable if delayed response			
Pulse-taper for recurrence	200 mg PO BID x 5 or 10 days, followed by 200 mg PO QOD x 20 days			
Fosfomycin PO	DO NOT USE FOR PYELONEPHRITIS			
Uncomplicated Cystitis	3 g PO x 1 dose			
Complicated Cystitis	3 g PO Q48 x 3 doses			
Gentamicin IV	**Dosing per pharmacy** to ensure appropriate dosing, serum level targeting and monitoring			
	Refer to P&P 43135 (Pharmacist Management of Aminoglycosides Therapy: Adults) for detailed dosing guidance			
*Imipenem/Cilastatin IV (3hr infusion)	CrCL ≥ 60mL/min	CrCL 59-30 mL/min	CrCL 29-15 mL/min	CrCL <15 or iHD
Standard Dose	500 mg IV Q6 **>100 kg:** 1 g IV Q8	500 mg IV Q8	500 mg IV Q12	500 mg IV Q12 Must institute HD within 48 hrs
Severe infections AND MIC ≥2	1 g IV Q6	500 mg IV Q6	250 mg IV Q6	

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*Imipenem/Cilastatin/Relebactam	CrCL ≥ 60mL/min	CrCL 59-30 mL/min	CrCL 29-15 mL/min	CrCL <15 or iHD
	CrCL ≥90: 1.25 g IV Q6 CrCL 89-60: 1 g IV Q6	750 mg IV Q6	500 mg IV Q6	500 mg IV Q6 Must institute HD within 48 hrs
Isoniazid PO/IM				
	5 mg/kg PO (up to 300 PO mg, round to nearest 50 mg) Q24. Alternative: same dose 5 days/week			
Levofloxacin IV/PO	CrCL ≥50 mL/min	CrCL 49-20 mL/min	CrCL 19-10 mL/min	CrCL <10 mL/min, iHD
All other indications	750 mg Q24	750 mg Q48	750 mg x1, then 500 mg Q48	750 mg x1, then 500 mg Q48
Cystitis or weight <45 kg	500 mg Q24	500 mg Q48	500 mg x1, then 250 mg Q48	500 mg x1, then 250 mg Q48
Linezolid IV/PO				
	600 mg Q12			
Meropenem IV (30min infusion)				
Standard dose	500 mg IV Q6	500 mg IV Q8	500 mg IV Q12	500 mg IV Q24
Meningitis, Cystic Fibrosis, or >100kg	2 g IV Q8	2 g IV Q12	1 g IV Q12	1 g IV Q24
*Meropenem/Vaborbactam IV	**MDRD eGFR** ≥50 mL/min	**eGFR** 49-30 mL/min	**eGFR** 29-15 mL/min	**eGFR** <15 mL/min or iHD
	4 g IV Q8 over 3hrs	2 g IV Q8 over 3hrs	2 g IV Q12 over 3hrs	1 g IV Q12 over 3hrs
Metronidazole IV/PO				
Usual Dose	500 mg Q12 CNS infection or *C. difficile*: 500 mg Q8			500 mg Q12 if HD AND >14 days or Child-Pugh C
Amoebic/Parasitic Infections	500-750 mg Q8			500-750 mg Q12 if HD AND >14 days or Child-Pugh C
H. pylori	500 mg Q6			500 mg Q12 if HD AND >14 days or Child-Pugh C
Minocycline IV*/PO				
MDR Acinetobacter, Steno, Nocardia	200 mg Q12			
Nafcillin IV				
Endocarditis, Meningitis, Bone/Joint	2 g IV Q4			
Nitrofurantoin PO	**CrCL ≥ 30 mL/min**			
MacroBID®	Cystitis: 100 mg PO BID Px: 100 mg PO daily	CrCL <30 mL/min: Use not recommended. Drug will not reach bladder to treat cystitis		

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Furadantin Susp®	50 – 100 mg PO QID Px: 50 - 100 mg PO daily	CrCL <30 mL/min: Use not recommended. Drug will not reach bladder to treat cystitis		
Penicillin G IV				
Standard Dose	2 – **4** mu IV Q4	2 – **4** mu IV Q6	2 – **4** mu IV Q6	1 – **2** mu IV Q6
Penicillin V Potassium PO				
Usual Dose	500 mg PO Q6	500 mg PO Q8	500 mg PO Q8	500 mg PO Q12
Piperacillin/Tazobactam IV	4-hr infusion: CrCL >20 mL/min		4-hr infusion: CrCL ≤20 mL/min	iHD: 4-hr infusion
Standard dose	4.5 g IV Q8	4.5 g IV Q8	4.5 g IV Q12	4.5 g IV Q12
MIC=16 (non-urinary) AND wt >100 kg	4.5 g IV Q6	4.5 g IV Q6	4.5 g IV Q12	4.5 g IV Q12
Patients <45kg	3.375 g IV Q8	3.375g IV Q8	3.375g IV Q12	3.375g IV Q12
Line access / compatibility issues	4.5g IV Q6 over 30min	CrCL 39-20mL/min: 4.5g IV Q8 over 30min	4.5g IV Q12 over 30min	4.5g IV Q12 over 30min
*Polymyxin B	Please see Colistin/Polymyxin B IV Dosing Guideline for additional details. Dose based on TBW, use ABW for obesity. 1mg = 10,000 units			
Loading Dose for all patients	2.5 mg/kg IV x 1 (max 300 mg)			
Maintenance dose	1.25 mg/kg (max 300 mg) Q12. Begin 12-hrs after loading dose			
Pyrazinamide PO	Round to nearest 250 mg. Do not give doses < 20 mg/kg.			
	CrCL ≥ 30 mL/min		CrCL <30 mL/min or iHD	
	<38 kg	750 mg daily	<38 kg	25 mg/kg 3x/week
	38-49 kg	1000 mg daily	38-49 kg	
	50-59 kg	1250 mg daily	50-59 kg	
	60-69 kg	1500 mg daily	60-69 kg	
	70-79 kg	1750 mg daily	70-79 kg	
	>80 kg	2000 mg daily	>80 kg	
Rifampin IV/PO				
TB	10 mg/kg PO daily, up to 600 mg PO daily (or 5 days/week). Round to nearest 150 mg			
MAC	600 mg MWF or daily			
Adjunctive for *S. aureus*	Endocarditis: 300 mg Q8			

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	Others: 600 mg Q24			
*Sulbactam/durlobactam (3-hr infusion)	**CrCL ≥ 45 mL/min**	**CrCL 30-44 mL/min**	**CrCL 15-29 mL/min**	**CrCL <15 mL/min, iHD**
1g of sulbactam and 1g of durlobactam	2g IV Q6H	2g IV Q8H	2g IV Q12H	2g IV Q12h for 3 doses then 2g IV daily
*Tedizolid IV/PO				
	200 mg IV/PO Q24			
Tobramycin IV	**Dosing per pharmacy** to ensure appropriate dosing, serum level targeting and monitoring			
	Refer to P&P 43135 (Pharmacist Management of Aminoglycosides Therapy: Adults) for detailed dosing guidance			
TMP/SMX (Bactrim/Septra) IV Use TBW, for obesity (BMI>30) use AdjBW			Reduce dose by 50%	Reduce dose by 50-75%
UTI	Equivalent to 1 DS tab Q12	Equiv to 1 DS tab Q12	Equiv to 1 SS tab Q12	Equiv to 1 SS tab Q12-24
SSTI or Systemic GNR	4-6 mg/kg of TMP Q12	4-6 mg/kg of TMP Q12	2-3 mg/kg of TMP Q12	2-3 mg/kg of TMP Q24
Stenotrophomonas, Nocardia, Severe MRSA infections	5 mg/kg of TMP Q8	5 mg/kg of TMP Q8	2.5 mg/kg of TMP Q8	5mg/kg of TMP Q24
PJP Treatment	5 mg/kg of TMP Q6-8	5 mg/kg of TMP Q6-8	5 mg/kg of TMP Q12	5 mg/kg of TMP Q24
TMP/SMX PO			Reduce dose by 50%	Reduce dose by 50-75%
UTI	1 DS tab PO Q12	1 DS tab PO Q12	1 SS tab PO Q12	1 SS tab PO Q12-24
SSTI or Systemic GNR	< 80 kg:1 DS tab PO Q12 >80 kg:2 DS tab PO Q12	< 80 kg:1 DS tab PO Q12 >80 kg:2 DS tab PO Q12	< 80 kg:1 SS tab PO Q12 >80 kg:1 DS tab PO Q12	< 80 kg:1 SS tab PO Q12 >80 kg:1 DS tab PO Q12
PJP Prophylaxis	1 DS/SS tab PO Q24 or 1 DS tab PO MWF	1 DS/SS tab PO Q24 or 1 DS tab PO MWF	1 SS tab PO Q24 or MWF	1 SS tab PO Q24 or MWF
PJP Treatment	5 mg/kg of TMP Q8 Or 2 DS tab PO Q8	5 mg/kg of TMP Q8 Or 2 DS tab PO Q8	2.5 mg/kg of TMP Q8 Or 2 DS tab PO Q12	5 mg/kg of TMP Q24 Or 2 DS tab PO Q24
Vancomycin IV	**Dosing per pharmacy** to ensure appropriate dosing, serum level targeting and monitoring			
	Refer to P&P 43134 (Pharmacist Management of IV Vancomycin Therapy: Adults) for detailed dosing guidance			
Vancomycin PO				
Standard dose for C. difficile	125 mg PO QID x 10 days. 14 days acceptable if delayed response			
Fulminant C. difficile	500 mg PO QID			
Pulse-taper for recurrence	125mg PO q6h x2 weeks, then 125mg BID x1 week, then 125mg daily x1 week, then 125mg every other day x1 week, then 125mg every 3rd day for 2 weeks			

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ANTIFUNGALS				
*Amphotericin Liposomal IV	**Dose based on TBW. Use ABW for obesity (>120% of IBW)**			
	3-5 mg/kg IV Q24			
Fluconazole IV/PO for **CANDIDA**	**LOADING DOSE 12mg/kg (round to nearest 200mg, NTE 1600mg). Use actual BW**			
Prophylaxis or Suppression	400 mg daily	200 mg daily	200 mg daily	200 mg daily
Cystitis, Thrush *(LD not required)*	200 mg Q24	100 mg Q24	100 mg Q24	100 mg Q24 Or 200mg TIW post-HD
Systemic Infections or Neutropenia *(round to nearest 200mg, NTE 1600mg)*	6 mg/kg Q24	3 mg/kg mg Q24	3 mg/kg mg Q24	3mg/kg mg Q24 Or 6 mg/kg TIW post-HD
Meningitis or C. glabrata *(round to nearest 200mg, NTE 1600mg)*	12 mg/kg Q24	6 mg/kg Q24	6 mg/kg Q24	6 mg/kg Q24 Or 6 mg/kg TIW post-HD
OTHER FUNGI	***Refer to Lexi-Comp® as dosing varies by fungal pathogen, site of infection, comorbidities, severity, etc.***			
Pulmonary Coccidioidomycosis Tx	400 – 800 mg Q24	200 – 400 mg Q24	200 – 400 mg Q24	200 – 400 mg Q24
Consolidation Tx for Cryptococcal Meningitis	400 – 800 mg Q24	200 – 400 mg Q24	200 – 400 mg Q24	200 – 400 mg Q24
Flucytosine (5-FC)	**CrCL≥40 mL/min**	**CrCL 39-21 mL/min**	**CrCL 20-10 mL/min**	**CrCL<10 mL/min or iHD**
	Dosed on IBW. Consider checking serum levels if patients factors (e.g. obesity, unstable renal/hepatic function, etc.) indicate possible unpredictable PK			
	25 mg/kg PO QID	25 mg/kg PO BID	25 mg/kg PO daily	25 mg/kg PO Q48
Itraconazole PO	PO formulations not bioequivalent. If dosed on Tolsulra® 65 mg capsules (typical dose 130 mg PO Q12-24), interchange to general/Sporanox capsules dosing per protocol → Tolsura 130 mg approx. equiv to 200 mg			
Blastomycosis, Histoplasmosis	200 mg PO Q8 x 3 days, then 200 mg PO Q8-12			
All other indications	Refer to Lexi-Comp but generally 200 mg PO 12-24			
Isavuconazole IV/PO	Expressed as mg of isavuconazole sulfate (372 mg of sulfate = 200 mg isavuconazole)			
Aspergillosis, Mucormycosis, Px	372 mg Q8 x6 doses, then 372 mg Q24			
Refractory esophageal candidiasis	744 mg x 1, then 186 mg Q24			
Micafungin IV				
Standard dose	100 mg IV Q24			
Esophagitis, Pulm Aspergillosis, Endocarditis	150 mg IV Q24			

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	CrCL ≥50 mL/min	CrCL 49-30 mL/min	CrCL 29-10 mL/min	CrCL <10 mL/min or iHD[1]
Prophylaxis	50-100 mg IV Q24			
Posaconazole PO				
Prophylaxis	DR Tablet: 300 mg PO BID x 2 doses, then 300 mg PO Q24 IR PO Suspension: 200 mg PO Q8			
*Treatment	DR Tablet: 300 mg PO BID x 2 doses, then 300 mg PO Q24 IR PO Suspension: 200 mg PO Q6-8 or 400 mg PO Q12			
Voriconazole IV/PO	IV for CrCL <50 mL/min: assess benefits versus risk of potential accumulation/toxicity of SBECD vehicle. Not a contraindication for use in HD or CrCL<50			
Prophylaxis	200 mg Q12			
*Treatment	6 mg/kg Q12 x 2 doses followed by 4 mg/kg Q12 (target trough 1.5-5 mcg/mL) Use Adjusted BW if patient is >120% ideal BW. Round to nearest 50 mg			

	CrCL ≥50 mL/min	CrCL 49-26 mL/min	CrCL 25-10 mL/min	CrCL <10 mL/min or iHD[1]
ANTIVIRALS				
Acyclovir[4] IV				
Genital / Oral HSV	5 mg/kg IV Q8	5 mg/kg IV Q12	5 mg/kg IV Q24	2.5 mg/kg IV Q24
HSV Zoster (shingles), VZV, CNS disease	10 mg/kg IV Q8	10 mg/kg IV Q12	10 mg/kg IV Q24	5 mg/kg IV Q24
Acyclovir PO				
HSV Suppression / Prophylaxis	400 mg PO Q12	400 mg PO Q12	400 mg PO Q12	200 mg PO Q12
Genital / Oral HSV	400 mg PO Q8	400 mg PO Q8	400 mg PO Q12	200 mg PO Q12
Bells Palsy (severe)	400 mg PO 5x/day PLUS steroids & within 3 days of sx onset	400 mg PO 5x/day	400 mg PO Q8	400 mg PO Q12

[4] Use lesser of actual or ideal body weight. Use adjusted body weight if patient is > 120% ideal body weight or life-threatening illness. Round to the nearest 50 mg.

SHC Antimicrobial Dosing Guidelines in Adults

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*Denotes ID restricted antimicrobials

	CrCL ≥50 mL/min	**CrCL 49-26 mL/min**	**CrCL 25-10 mL/min**	**CrCL <10 mL/min or iHD[1]**
HSV/VZV Zoster (shingles)	800 mg PO 5x/day	800 mg PO 5x/day	800 mg PO Q8	CrCL <10: 400 mg PO Q12 HD: 400 mg PO x1, then 200 mg PO Q12 PLUS 400 mg post each HD session
*Cidofovir[5] IV	Unless inappropriate, premedicate with probenecid and NS (refer to Lexi-Comp®) for details			
Other dosing schemes may be acceptable. See Lexi-Comp®	5 mg/kg IV Induction: Q week Maintenance: Q2 weeks	Pre-existing renal impairment: Contraindicated for Scr >1.5 mg/dL, CrCL <55 mL/min, or urine protein ≥100 mg/dL (≥2+) If SCr ↑ by 0.3-0.4 mg/dL or >30% of baseline, reduce cidofovir dose to 3 mg/kg; discontinue therapy if SCr ↑ ≥0.5 mg/dL or development of ≥3+ proteinuria		Use not recommended
*Foscarnet IV	Varies based on indication, renal function by CrCL, etc.			
	Consult pharmacy / manufacturer's package insert / Lexi-Comp®			
*Ganciclovir IV[6]	**CrCL ≥50 mL/min**	**CrCL 49-26 mL/min**	**CrCL 25-10 mL/min**	**CrCL <10 mL/min or iHD[1]**
CMV Induction	**CrCL ≥70:** 5 mg/kg IV Q12 **CrCL 50-69:** 2.5 mg/kg IV Q12	2.5 mg/kg IV Q24	1.25 mg/kg IV Q24	1.25 mg/kg IV Q48 or TIW post-HD
Maintenance Tx or Px	**CrCL ≥70: 5** mg/kg IV Q24 **CrCL 50-69:** 2.5 mg/kg IV Q24	1.25 mg/kg IV Q24	0.625 mg/kg IV Q24	0.625 mg/kg IV Q48 or TIW post-HD
Oseltamivir PO	**CrCL ≥60 mL/min**	**CrCL 59-31 mL/min**	**CrCL 30-11 mL/min**	**CrCL <10 mL/min or iHD**
Treatment (Typical duration 5 days)	75 mg PO Q12	75 mg PO x once, then 30 mg PO Q12	30 mg PO Q24	30 mg PO x 1, then 30 mg PO post-HD
Prophylaxis	75 mg PO Q24	30 mg PO Q24	30 mg PO Q48	30 mg PO x 1, then 30 mg PO post every other HD
Remdesivir				
Treatment, Inpatient	200 mg x1 IV, then 100 mg IV Q24 Duration: 5 days total if increased O2 requirement vs 3 days if no additional O2 requirement			
Paxlovid® (Nirmatrelvir/ritonavir)	**eGFR (CKD-EPI) ≥60 mL/min**	**eGFR 59-30 mL/min**	**eGFR <30mL/min**	**eGFR <10 or iHD**

[5] Use total body weight. Consult ID or ID pharm for alternative dosing regimens. Pre-med: IV hydration, probenecid.
[6] Use adjusted body weight if patient is >120% ideal body weight

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	CrCL ≥50 mL/min	**CrCL 49-26 mL/min**	**CrCL 25-10 mL/min**	**CrCL <10 mL/min or iHD[1]**
Initiate w/in 5 days of sx onset	300/100 mg PO BID x5 days	150/100 mg PO BID x5 days	300/100 mg PO x1 then 150/100 mg daily x 4days	300/100 mg PO x1 then 150/100 mg daily x 4days
*Peramivir IV *Restricted to ID or ICU. Courses >5 days restricted to ID*	**CrCL ≥50 mL/min**	**CrCL 49-30 mL/min**	**CrCL 29-10 mL/min**	**CrCL <10 mL/min or iHD[1]**
Single dose	600 mg IV x 1 dose	200 mg IV x 1 dose	100 mg IV x 1 dose	100 mg IV x 1 dose post HD
Daily regimen	600 mg IV Q24	150 mg IV Q24	100 mg IV Q24	**CrCL <10:** 100 mg IV on day 1, then 15 mg IV Q24 **HD:** 100 mg IV on day 1, then 100 mg IV 2hrs post each HD
Valacyclovir PO	**CrCL ≥50 mL/min**	**CrCL 49-30 mL/min**	**CrCL 29-10 mL/min**	**CrCL <10 mL/min or iHD[1]**
HSV Suppression	500mg PO BID	500mg PO BID	500 mg PO 24	500 mg PO Q24
Genital/Oral herpes	1 g PO Q12	1 g PO Q12	1 g PO Q24	500 mg PO Q24
HSV/VZV Zoster (shingles), Meningitis	1 g PO Q8	1 g PO Q12	1 g PO Q24	500 mg PO Q24
Valganciclovir PO	**CrCL ≥60 mL/min**	**CrCL 59-40 mL/min**	**CrCL 39-10 mL/min**	**CrCL <10 mL/min or iHD[1]**
*CMV Induction	900 mg PO Q12	450 mg PO Q12	CrCL 39-25: 450 mg PO Q24 CrCL 24-10: 450 mg PO Q48	Not recommended. Consider Ganciclovir IV. May consider 200 mg (induction) or 100 mg (MD/Px) of oral solution PO TIW (pls discuss with MD)
CMV Maintenance / Px	900 mg PO Q24	450 mg PO Q24	CrCL 39-25: 450 mg PO Q48 CrCL 24-10: 450 mg PO twice weekly	

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Considerations for Dose Selection	Acute Kidney Injury (AKI)	General Guidelines
- Indication - Severity of illness and clinical progress - Renal function +/- presence of renal replacement therapy - Weight/Height For critically ill patients, medication dosing can be particularly complex given acute physiologic changes that accompany multi-system organ failure, which can be further complicated by any renal replacement therapies.	Function Criteria for AKI i. ↑ SCr by 50% within 7 days OR ii. ↑ SCr by 0.3 mg/dL within 2 days OR iii. Oliguria (UOP <0.5mL/kg/hr) Changes in pharmacokinetics/pharmacodynamics i. ↑ Vd of hydrophilic drugs, alters protein binding, alters tissue penetration, ↓ systemic clearance ii. ↑ non-renal clearance that is often not measurable	1. No adjustment for initial dose often needed (e.g. loading dose) 2. Limit nephrotoxins, if possible 3. Renal replacement therapy may be initiated for: a. severe Acidosis (A) b. Electrolyte abnormalities c. Intoxicates (I) d. refractory volume Overload (O) e. Uremia (U)

Comparison of Renal Replacement Therapies

Modality		Clinical Utility	Factors ↑ Drug Removal		Calculation of CrCL	Estimation of CrCl
Conventional HD Traditional HD Circuit	IHD	▪ Diffusion ▪ Rapid & efficient solute removal ▪ 3-4 hour sessions, usually 3x/week ▪ Advantage: rapid & large drug/toxins removal ▪ Can also be used for ultrafiltration	MW <500 kDa Low protein binding (PB) Vd <0.8-1 L/kg		Assumed	<10mL/min
	SLED	▪ Diffusion ▪ Gradual solute & volume removal ▪ Typically 8-12 hour sessions; may be continuous for 24 hours/day ▪ Advantage over IHD: ↑ hemodynamic control ▪ Advantage over CRRT: allows "time away" for procedures, no need for specialized solutions			Unknown – varies with dialysis time. Clearance may be greater than with CVVHD due to higher dialysate flow rates	~30-50 mL/min
Peritoneal Dialysis	PD	▪ Diffusion, osmolar gradient ▪ Home modality, patient convenience ▪ Available as CAPD and APD	N/A (minimal drug removal – dependent on non-renal clearance)		Assumed	<10 mL/min
Continuous Renal Replacement Therapies (CRRT)	CVVH	▪ Diffusion and convection ▪ Gradual solute removal with multiple modes ▪ Runs continuously ▪ Advantage: minimizes fluid shifts in hemo-dynamically unstable patients	Convection	MW <15,000 kDa Low PB (<80%) Small Vd (<0.6 L/kg)	CVVH = UF x SC (mL/min)	~30 mL/min
	CVVHD		Diffusion	MW <500 kDa Low PB Small Vd (<0.6 L/kg)	CVVHD = Qd x SA	
	CVVHDF		Convection & Diffusion		CVVHDF = (UF +Qd) x SA	
	SCUF	▪ Fluid removal only (no solute removal, cannot correct electrolyte abnormalities)	Ultrafiltration		No drug clearance	CG calculated CrCL

Definitions: Diffusion=solutes move from high concentration to low; removes low MW solutes. Convection=solute-drag; removes small and large MW solutes.

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Consider adequate loading doses in patients with moderate-severe renal dysfunction to ensure prompt attainment of steady state drug levels.

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Abbreviations: IHD=intermittent hemodialysis, SLED=sustained low efficiency dialysis, PD=peritoneal dialysis, CAPD=continuous ambulatory peritoneal dialysis; APD=automated peritoneal dialysis, CVVH=continuous veno-venous hemofiltration, CVVHD=continuous veno-venous hemodialysis, CVVHDF=continuous veno-venous hemodiafiltration, SCUF=slow continuous ultrafiltration, MW=molecular weight, Da=Dalton, PB=protein binding, Vd=volume of distribution, UF=ultrafiltration rate, SC=sieving coefficient, Qd=dialysis flow rate, SA=saturation coefficient

Dosing Recommendations for Patients Receiving Renal Replacement Therapy

Drug	IHD	PD (IV or PO)	SLED¥ <24 hrs/day
Acyclovir (IV)	2.5 – 5 mg/kg IV Q24	2.5 – 5 mg/kg IV Q24	£5 – 10 mg/kg IV Q12-24
*Amikacin (IV)	Refer to Aminoglycoside P&P	5 mg/kg IV x 1, then dose by levels	15 – 20 mg/kg IV Q48 Monitor levels and adjust dose
Ampicillin (IV)	1 – 2 g IV Q12	250 – 500 mg IV Q12	£1 – 2 g IV Q6-8
Ampicillin/sulbactam (IV)	3 g IV Q24	No data	£3 g IV Q8-12
Aztreonam (IV)	1 – 2 g IV Q24 500 mg IV Q6-8	1 – 2 g IV Q24	£1 – 2 g IV Q8-12
Cefazolin (IV)	500 mg – 2 g IV Q24 OR 2 g IV TIW post-HD	500 mg IV Q12	£1 – 2 g IV Q8-12
Cefepime (IV)	500 mg – 1 g IV Q24 OR 2 g IV TIW post-HD	1g IV Q24	£1 g IV Q8-12
Ceftaroline (IV)	200 mg IV Q12 (Standard Dose) 200 mg IV Q8 (Endocarditis, S. aureus bacteremia)	200 mg IV Q12 (Standard Dose) 200 mg IV Q8 (Endocarditis, S. aureus bacteremia)	200 mg IV Q12 (Standard Dose) 200 mg IV Q8 (Endocarditis, S. aureus bacteremia)
Ciprofloxacin (IV)	400 mg IV Q24	400 mg IV Q24	400 mg IV Q12-24
Ciprofloxacin (PO)	500 mg PO Q24	500 mg PO Q24	500 mg PO Q12-24
*Daptomycin (IV)	4-10 mg/kg IV Q48	4-10 mg/kg IV Q48	6 mg/kg IV Q24
Ertapenem (IV)	500 mg IV Q24	500 mg IV Q24	1 g IV Q24
Fluconazole (IV/PO)	100-600 mg Q24	No recommendation	£200 – 400 mg IV Q24
Gentamicin (IV)	Refer to Aminoglycoside P&P	2 mg/kg IV x 1, then dose by levels	6 mg/kg IV Q48 Monitor levels and adjust dose
*Imipenem/cilastatin (IV)	500 mg IV Q12	250 mg IV Q12	500 mg IV Q6
Levofloxacin (IV/PO)	750 mg x 1 dose, then 500 mg Q48 500 mg x 1 dose, then 250 mg Q48	750 mg x 1 dose, then 500 mg Q48 500 mg x 1 dose, then 250 mg Q48	£500 – 750 mg Q48
Linezolid (IV/PO)	600 mg Q12	600 mg BID for 48 hrs, then 300 mg BID	£600 mg Q12
Meropenem (IV)	500-1000 mg IV Q24	500-1000 mg IV Q24	1 g IV Q8
Oseltamivir (PO)	Treatment: 30 mg x 1, then 30 mg post HD Prophylaxis: 30 mg x1, then 30 mg post every other HD	Treatment: 75 mg x 1 dose only Prophylaxis: 30 mg x 1, then 30 mg once weekly for duration of prophylaxis	Treatment: £30 mg PO BID Prophylaxis: £30 mg PO daily
Penicillin G (IV)	1 – 2 MU IV Q6	No data	£2 – 4 MU IV Q6
Piperacillin/Tazobactam (IV)	4.5 g IV Q12 over 4 hours	4.5 g IV Q12 over 4 hours	£4.5 g IV Q8 over 4 hours
TMP/SMX PO	Refer to dosing on page 8	1 DS tab PO BID	
Tobramycin (IV)	Refer to Aminoglycoside P&P	2 mg/kg IV x 1, then dose by levels	6 mg/kg IV Q48

			Monitor levels and adjust dose
Vancomycin (IV)	Load with 15-25 mg/kg and maintain with 5-10 mg/kg Monitor levels and adjust dose	Load with 15-20 mg/kg IV Monitor levels and adjust dose	15-20 mg/kg IV Q24 Monitor levels 12-18 hours after dose and adjust dose
¥Drug clearance, and therefore drug dosing, varies by number of hours per day patient is dialyzed. Literature reports frequent under-dosing. More aggressive dosing is recommended for patients being dialyzed longer hours/day and/or for severe infections. For patients on continuous SLED, dose as CrCL >50mL/min. Monitor patients closely for therapeutic failure and drug toxicity. £No clear recommendation in literature. Recommendations based on estimated CrCL 15-50mL/min, depending on hours per day of dialysis			

IntraPERITONEAL (IP) Administration of Antibiotics

- Intended only for local peritoneal infections (peritonitis) only.
- For systemic infections or intravenous administration of antibiotics, please refer to "Dosing Recommendations for Patients Receiving Renal Replacement Therapy"

Peritoneal dialysis (PD)-associated peritonitis is the most common type of PD-related infection.

- **Initial Empiric Treatment**: Start broad-spectrum antibiotics to cover both gram positive and gram-negative organisms (common pathogens: *Staphylococcus aureus*, coagulase-negative staphylococci, and gram-negative bacteria)
    - Preferred empiric regimen at Sharp: vancomycin + aminoglycoside (tobramycin preferred if high suspicion for *Pseudomonas aeruginosa*)

Antibiotic Administration

- Current guidelines recommend intraperitoneal (IP) antibiotics be the preferred route of administration, due to higher drug exposure at the site of infection. If there are signs/symptoms of sepsis, (other) systemic infection, or a foreseeable delay in IP administration, IV is the preferred route.[3]
    - For patients with both IV/PO and IP antibiotic orders, the pharmacist should clarify on the appropriate route based on the patient's clinical scenario to avoid duplication, supra-therapeutic levels, and increased risk for toxicity. Patients on systemic IV/PO antibiotics do not need intra-PD antibiotics as IV antibiotics will still adequately concentrate in the peritoneal space.
- Intraperitoneal antibiotics should be allowed to dwell for at least 6 hours.
- Daily intermittent dosing of antibiotics is generally preferred, especially for vancomycin and aminoglycosides, due to the risk of accumulation and toxicity with continuous administration. Ceftazidime given intermittently may result in a higher production of pyridine byproduct than with continuous dosing, although clinical impact unclear (may be used at physician's discretion). [4-5]
- Antibiotics administered via IP route will be added to the dialysate bag(s) in the pharmacy cleanroom prior to the initiation of peritoneal dialysis.
    - Pharmacists should check for compatibility of any antibiotic combinations to be sure they can all be added to the same dialysate bag together (see Table on compatibility below for commonly administered antibiotic combinations)
    - After antibiotics are added, do not use dialysate bags beyond 24 hours to ensure adequate concentration levels throughout the dosing interval

Antibiotic Dosing

- Please refer to Intraperitoneal Antibiotic Dosing table below for antibiotic dosing recommendations for both intermittent and continuous administration
- To determine the dose that is added to the dialysate bag, pharmacists should check the following:
    - Patient weight
    - Size/volume and type of the dialysate bag

- Exchange rate and duration
- If patient will require a dwell with last exchange (for intermittent dosing)
- Presence of residual renal function/urine output
  - For patients with residual renal function (i.e. CrCl >10 ml/min), may consider increasing beta-lactam doses by 25% (pharmacist to discuss with provider)

Monitoring and Adjustment

- Monitor clinical response and peritoneal fluid culture results.
- Modify antibiotics based on culture results and sensitivity patterns.

IntraPERITONEAL Antibiotic Combination Compatibility	Dianeal	Extraneal
Cefazolin + Gentamicin/Tobramycin	Y	Y
Cefazolin + Ceftazidime	Y	Y
Vancomycin + Gentamicin/Tobramycin	Y	Y
Vancomycin + Ceftazidime	Y	Y

IntraPERITONEAL Antibiotic Dosing Recommendations for treatment of Peritonitis[1]

- The most common inpatient PD modality is continuous cyclic peritoneal dialysis (CCPD). Continuous ambulatory peritoneal dialysis (CAPD) may be used initially followed by conversion to CCPD. Intermittent antibiotic administration during the last dwell of PD (for at least 6 hours) is used at SHC over continuous administration due to risk of accumulation/toxicity.

Drug	Intermittent[2] - PREFERRED (dosed per exchange, give once daily unless specified)			Continuous[3] (dosed per mg/mL, give in all exchanges)
	Dose per 2L	Dose per 3L	Concentration	
Cefazolin	15 mg/kg	22.5 mg/kg	7.5 mg/kg/L	LD 500 mg/L, MD 125 mg/L
Cefepime	1 g	1.5 g	500 mg/L	LD 500 mg/L, MD 125 mg/L
Ceftazidime[4]	1 to 1.5 g	1.5-2.25 g	500-750 mg/L	LD 500 mg/L, MD 125 mg/L
Gentamicin	0.6 mg/kg	0.9 mg/kg	0.3 mg/kg/L	Not advised
Meropenem	500 mg	750 mg	250 mg/L	MD 125 mg/L
Tobramycin[5]	0.6 mg/kg	0.9 mg/kg	0.3 mg/kg/L	Not advised
Vancomycin[5,6]	15 mg/kg q4 days for CCPD 15-30 mg/kg q5-7 days for CAPD	22.5 mg/kg q4 days for CCPD 22.5-45 mg/kg q5-7 days for CAPD	7.5 mg/kg/L 7.5-15 mg/kg/L	LD 20–25 mg/kg, MD 25 mg/L

[1] For patients with residual renal function, defined as (>100 mL/day of urine output), dose should be empirically increased by 25%

[2] Intermittent dosing: Intraperitoneal antibiotics given once daily. Antibiotic-containing peritoneal dialysate should be allowed to **dwell for at least 6 hours** to allow adequate absorption

[3] Continuous dosing: Intraperitoneal antibiotics given in each exchange. Dosed by mg per L of dialysate (unless otherwise specified)

[4] Ceftazidime given intermittently may result in a higher production of pyridine byproduct than with continuous dosing, although clinical impact unclear (may be used at physician's discretion).

[5] Monitor serum levels to ensure drug is not accumulating and contributing to toxicity

Dosing Recommendations for Patients Receiving Continuous Renal Replacement Therapy (CRRT)

- Recommendations assume that patients have minimum residual renal function, normal hepatic function, and CRRT circuit is running continuously.
- Currently, there is no standardized approach to delivering CRRT at SHC. The dosing recommendations provided below are based on high flux dialyzers and effluent flow rates for CVVH/CVVHD/CVVHDF of 20-25mL/kg/hr (or 1.5 – 3 L/hr) which approximates a CrCL of 30-50 mL/min. Close monitoring of clinical response and adverse drug reactions due to accumulation is important.
    - For flow rates >3L, consider extended infusion or continuous for beta-lactams for higher flow rates if stability and line-access allows for severe infections
    - For flow rates <1.5L, use the lower end of any dosing range recommendations and monitor closely for signs/symptoms of toxicity. For narrow therapeutic drugs with high toxicity, discuss with MD if alternative agent is feasible, increasing flow rates, and/or lower dosing based on patient's clinical picture
- Monitor patients for changing filtration rates or interruptions (e.g. clotting). When CRRT is off, adjust dose based on residual renal function
- *Volume of Distribution (Vd):* May be increased in CRRT patients. Loading dose is recommended, especially in patients with severe sepsis/septic shock. Also consider higher doses in the first 24-48 hrs in those patients.
- *Time-To-Steady-State Concentration*: Prolonged in renal failure. Monitor closely, especially for agents with narrow therapeutic windows
- Acute/chronic abnormalities such as hypoalbuminemia, liver failure, obesity, volume overload, and mechanical sequestration (i.e., presence of extracorporeal membrane oxygenation) can also affect therapeutic drug concentration and dosing
- Provided recommendations should not replace clinical judgement and individualized, patient-centered decision-making. Doses outside of the recommendations below should be discussed with the provider and are not covered by any P&P.

Antimicrobials that DO NOT REQUIRE DOSE ADJUSTMENT during CRRT			
Amphotericin B	Eravacycline	Micafungin	Remdesivir
Azithromycin	Itraconazole	Moxifloxacin	Rifampin
Ceftriaxone	Linezolid	Nafcillin	Voriconazole PO (see below for IV)
Clindamycin	Metronidazole	Posaconazole	
Doxycycline	Minocycline	Polymyxin B	

CRRT Dosing Recommendations:

DRUG	**Loading Dose**	**CRRT** *CVVH/CVVHD/CVVHDF (effluent rate 1,500 - 3,000 mL/hr)*	**Standard Anephric Dose**
ANTIBACTERIALS			
Aminoglycosides			
Gram-negative infections		Refer to Aminoglycoside P&P	
Amikacin (IV)	10 mg/kg		
Gentamicin/Tobramycin (IV)	3 mg/kg		
Gram-positive synergy			
Gentamicin (IV)	2 mg/kg		
Ampicillin (IV)			

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Cystitis, Mild infection	2 g	2 g Q8-12				1 g Q12-24
Bacteremia, Endocarditis, Meningitis, Prosthetic Joint, Osteomyelitis, Intra-abdominal		2 g Q6-8				2 g Q12
Ampicillin/Sulbactam (IV) [a]						
Systemic infections	3 g	3 g Q8				3 g Q24
Acinetobacter infection		Limited data. Consider alternative agent				3 g Q12 over 30min
Aztreonam (IV)						
Mild-Mod infection	2 g	1 g Q8 or 2 g Q12				1 g Q24
Severe infection						2 g Q24
Cefazolin (IV)						
Mild-Mod infection	2 g	1 g Q8 or 2 g Q12				500 mg Q24
Severe infection						1 g Q24
Cefepime (IV)						
Standard Dose	2 g	2 g Q12				500 mg Q24
Neutropenic fever, Meningitis, CF, Pseudomonas, Sepsis		2 g Q8				1 g Q24
Cefiderocol (IV)*		*≤ 2,000 mL/hr*	*2,100 - 3,000 mL/hr*	*3,100 - 4,000 mL/hr*	*> 4,100 mL/hr*	
	2 g	1.5 g Q12	2 g Q12	1.5 g Q8	2 g Q8	750 mg Q12
Cefotetan (IV)						
	2 g	2 g Q24				500 mg Q24
Cefoxitin (IV)[17]						
	2 g	1-2 g Q8				1 g Q24
Ceftaroline (IV)*						
SSTI, w/o indication for MRSA	400 mg	400 mg Q12				200 mg Q12
Bacteremia/endocarditis, infections with known or suspected MRSA	600 mg	400mg Q8				200 mg Q8
Ceftazidime (IV)						
Empiric or pathogen directed therapy (*Pseudomonas aeruginosa*)	2 g	2 g Q8				1 g Q24
Ceftazidime/Avibactam (IV)*						
Empiric or pathogen directed therapy (*Multi-Drug Resistant Organisms*)	2.5 g	1.25 g Q8				0.94 g IV Q24
Ceftolozane/Tazobactam (IV)*						
	3 g	750mg Q8				150-300 mg IV Q8
Cefuroxime (IV)						
	NA	1.5 g Q12				1.5 g Q24

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Ciprofloxacin (IV)				
Standard Dose	400 mg	400 mg Q12		400 mg Q24
Pneumonia, Severe Infection, *Pseudomonas aeruginosa*		400 mg Q8		
Ciprofloxacin (PO) [a]				
Mild-Mod infection	750 mg	500 mg Q12		500 mg Q24
Pneumonia, Severe Infection		750 mg Q12		750mg Q24
Colistin base (IV) [a*]				
	300 mg	220 mg Q12		See Polymyxin B & Colistin IV Dosing Guideline
Daptomycin (IV) [b*]				
	No Load	mg/kg dose based on indication *(see above dosing recs)* Q24		__ mg/kg Q48
Ertapenem (IV)				
	1 g	1 g Q24		500 mg Q24
Imipenem/Cilastatin [*]				
	1 g	500mg Q6-8		250 mg Q12H
Imipenem/Cilastatin/Relebactam (IV) [c*]				
Refer to Dosing Considerations for more detail		1.25 g Q6		N/A
Levofloxacin (IV/PO)				
All other indications	750 mg	750 mg Q48 or 500 mg Q24		500 Q48
Cystitis or weight <45kg	500 mg	500 mg Q48 or 250 mg Q24		250 Q48
Meropenem (IV)				
Standard Dose	1 g	500 mg Q8		500 mg Q24
Meningitis, Cystic Fibrosis	2 g	1 g Q8		1 g Q24H
Meropenem/VABORBACTAM (IV)*				
	No Load	2 g Q8		1g Q12
Penicillin G (IV)				
	4 MU	2-3 MU Q6		1-2 MU Q6
Piperacillin/Tazobactam (IV)		**4-hr infusion (Extended Interval)**		
Standard dose	4.5 g	4.5 g Q8		4.5 g Q12
If <45 kg		3.375 g Q8		3.375 g Q12
Sulbactam/Durlobactam (IV)		**<2500 mL/hr**	**≥2500 mL/hr**	
3-hr infusion (Extended Interval)	N/A	2g Q8	2g Q6	N/A
TMP/SMX (IV/PO)				
UTI	No Load	**No dosage adjustment necessary**		1 SS tab Q12-24
Mild-Mod Infection		Sulfamethoxazole and trimethoprim are substantially removed by CRRT		2-3 mg/kg Q24

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Severe Infections, PCP			5 mg/kg Q24
Vancomycin (IV)			
	15-25 mg/kg	Refer to Vancomycin P&P	
ANTIFUNGALS			
Fluconazole (IV/PO)		Fluconazole clearance during CRRT is 1.5-2.3x that of normal healthy patients	
If recommended dose if 200 mg Q24H	400 mg	400 mg Q24	100 mg Q24
If recommended dose if 400 mg Q24H	800 mg	400 mg Q12	200 mg Q24
If recommended dose if 800 mg Q24H	1.2 g	600 mg Q12	400 -600 mg Q24
Flucytosine (PO) [a, 16]			
Recommend early and frequent serum level monitoring given limited data	No Load	25 mg/kg Q12-24	25 mg/kg Q48
Voriconazole (IV/PO)			
	No Load	**No dose adjustment necessary. Use of oral route is preferred.** IV formulation may be considered if benefit exceeds risks – SBECD (the carrier excipient in the IV formulation) is removed via CRRT.	N/A
ANTIVIRALS			
Acyclovir (IV)			
Genital HSV	No Load	5 mg/kg Q12	2.5 mg/kg Q24
HSV CNS Disease, VZV, Shingles		10 mg/kg Q12	5 mg/kg Q24
Ganciclovir (IV)			
Induction	No Load	2.5 mg/kg Q12	1.25 mg/kg 3x/wk
Maintenance		2.5 mg/kg Q24	0.625 mg/kg 3x/wk
Oseltamivir (PO)			
Treatment	No Load	75 mg Q24	30 mg Q-HD
Prophylaxis		N/A	30 mg QO-HD

[a] Use ideal body weight in obesity.
[b] Use actual body weight.
[c] Limited data. Dosing based on an *Ex Vivo* study that found similar probability of MIC target attainment when comparing 1.25 g Q6 vs 1.5 g Q6. CRRT flow rates were assess from range 30-50 mL/min
[d] Due to high hydrophilicity, flucytosine is not well distributed through adipose tissue. Additionally, flucytosine is minimally protein bound. These factors increase the risk of harmful drug concentrations in patients undergoing CRRT. Therefore, recommend a conservative approach to dosing, and obtaining earlier peak/trough levels. Flucytosine goal ranges of 30-80 mcg/mL (2 hours post dose).

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