

Department of Pharmacy/Antimicrobial Stewardship Program (August 2026)			
Antimicrobial Renal Dosing Guideline			
Antibiotic	Usual Dose (Normal Renal Function)	CrCl (ml/min)	Dosage Adjustment
Acyclovir IV 500 mg/vial	5 (10*) mg/kg IV q8h Treatment of Severe HSV/VZV Infections *Use 10 mg/kg for CNS infection or herpes zoster Dose based on ideal body wt (not actual body wt), use adjusted body wt for BMI>30 ^Ensure adequate hydration to prevent AKI	25-50	5 (10*) mg/kg IV q12h
		10-24	5 (10*) mg/kg IV q24h
		<10 or HD	2.5 (5*) mg/kg IV q24h (give after HD on dialysis days, e.g. 10PM)
		CRRT	5 (10*) mg/kg IV q12-24h
	250 mg IV q12h • HSV/VZV Prophylaxis in Immunocompromised Patients	<30	250 mg IV q24h
		HD	250 mg IV q24h (dosed after HD)
		CRRT	250 mg IV q12h
Aminoglycosides IV (Gentamicin, Tobramycin, Amikacin) Please see Aminoglycoside Dosing Guidelines for full recommendations (e.g. conventional dosing in special populations, dosage adjustments for renal replacement therapy, peak and trough monitoring, etc.) on Sanford Guide via intranet.	• Dosed based on ideal body wt • Use adjusted body wt if total body wt > 1.2 * ideal body wt	Gentamicin/Tobramycin	
		Amikacin	
	CrCl (ml/min)	For all infections except UTI or synergy in staphylococcal/enterococcal infection	
	>60	5-7 mg/kg IV q24h	15-20 mg/kg IV q24h
	>30-59	5-7 mg/kg IV q48h	15-20 mg/kg IV q48h
	≤30	1.5-2 mg/kg IV q24h	5 mg/kg IV q24h
	HD	1.5-2 mg/kg IV after HD	5-7.5 mg/kg IV after HD
		For UTI	
	>30	3 mg/kg IV q24h	10 mg/kg IV q24h
	≤30	1.5 mg/kg IV q24h	5 mg/kg IV q24h
	HD	1-1.5 mg/kg IV after HD	5-7.5 mg/kg IV after HD
		For synergy in staphylococcal or enterococcal infections (gentamicin only)	
	>60	1 mg/kg IV q8h	N/A
	>30-59	1 mg/kg IV q12h	
	20-30	1mg/kg IV q24h	
	<20	1 mg/kg IV (Dose by level)	
	HD	1 mg/kg IV after HD	
Amoxicillin/Clavulanate Tablet: 500 mg/125 mg, 875 mg/125 mg	875mg PO q12h	10-30	500 mg q12h
		<10 or HD	500 mg q24h (give after HD on dialysis days, e.g. 10PM)
Ampicillin IV 1 gm, 2 gm	1-2 gm IV q6h	10-30	Normal dose IV q8h
		<10 or HD	Normal dose IV q12h
		CRRT	Normal dose IV q8-6h
	*2 gm IV q4h for Listeria meningitis, Enterococcal endocarditis	30-<50	2 gm IV q6h
		10-<30	2 gm IV q8h
		<10 or HD	2 gm IV q12h
		CRRT	2 gm IV q4-6h

Ampicillin/Sulbactam IV 1.5 gm, 3 gm	3 gm IV q6h	15-29	3 gm IV q12h
		<15 or HD	3 gm IV q24h (give after HD on dialysis days, e.g. 10PM)
		CRRT	3 gm IV q8h
	3 gm IV q4h Carbapenem-resistant <i>Acinetobacter baumannii</i> infections (intermittent infusion dosing)	15-29	3 gm IV q8h
		<15 or HD	3 gm IV q12h
		CRRT	3 gm IV q6h
	9 gm IV q8h <i>infused over 4 hours</i> Carbapenem-resistant <i>Acinetobacter baumannii</i> infections (extended infusion dosing)	60-89	6 gm IV q8h <i>infused over 4 hours</i>
		30-59	3 gm IV q6h <i>infused over 4 hours</i>
		15-29	3 gm IV q8h <i>infused over 4 hours</i>
		<15 or HD	3 gm IV q12h <i>infused over 4 hours</i>
		CRRT	3 gm IV q6h <i>infused over 4 hours</i>
Amphotericin B Liposomal (Ambisome) , 50 mg/vial, \$74/vial	All doses based on actual body wt , use adjusted body wt for BMI >30 <u>3 mg/kg IV daily</u> • Non-CNS invasive candidiasis or mold infection • Cryptococcal meningitis <u>5 mg/kg IV daily</u> • CNS invasive candidiasis or mold infection • Non-CNS invasive mucormycosis <u>10 mg/kg IV daily</u> • CNS mucormycosis • Cryptococcal meningitis as a single dose x1	<10	Normal dose IV q48h
		HD	No dose adjustment
Artemether/Lumefantrine (Coartem) Tablet: Artemether 20 mg/ Lumefantrine 120 mg	4 tablets (total artemether 80 mg/lumefantrine 480 mg ORALLY), 4 tablets again after 8 hours, then 4 tablets q12h for the next 4 days (total course is 10 doses=40 tablets)		No renal adjustment necessary
Artesunate IV	Please contact ID pharmacist ASAP if you are requesting Artesunate IV. Please see Malaria Treatment Guidelines for indication, dosing, and monitoring.		
Aztreonam IV 1 gm, 2 gm	1-2 gm IV q8h	10-30	Normal dose IV q12h
		<10 or HD	Normal dose IV q24h (give after HD on dialysis days, e.g. 10PM)
		CRRT	Normal dose IV q12h
Aztreonam/Avibactam (Emblaveo) 2 gm, \$317/vial	2g IV q6h	30-50	2g IV x1 → 1g IV q6h
		15-29	1.8g IV x1 → 0.9g IV q8h
		≤15 or HD	1.33g IV x1 → 0.9g IV q12h
Cefazolin IV 1 gm, 2 gm	2 gm IV q8h	10-35	2 gm IV q12h
		<10	1 gm IV q24h
		HD	1 gm IV q24h (give after HD on dialysis days, e.g. 10PM) or 2 gm/2 gm/3 gm IV after HD (M/W/F or T/Th/Sat)
		CRRT	2 gm IV q12h

	2 gm IV q6h *CNS infections, augmented renal clearance (CrCl ≥ 130), obesity	31-50	2 gm IV q8h
		10-30	2 gm IV q12h
		<10	1 gm IV q24h
		HD	1 gm IV q24h (give after HD on dialysis days, e.g. 10PM) or 2 gm/2 gm/3 gm IV after HD (M/W/F or T/Th/Sat)
		CRRT	2 gm IV q12h
Cefdinir PO Capsule: 300 mg Suspension: 50 mg/ml	**NOT RECOMMENDED for the treatment of UTI or intra-abdominal infections (use cefuroxime PO as an alternative) 300 mg PO q12h	<30 or HD	300 mg PO q24h (give after HD on dialysis days, e.g. 10PM)
Cefepime IV IV: 1 gm, 2 gm	2 gm IV q8h (Neutropenic Fever, Pseudomonas, HECK-Yes*, CNS Infection) *Severe infections caused by <i>E. cloacae</i> , <i>C. freundii</i> or <i>K. aerogenes</i>	30-60	2 gm IV q12h
		10-29	1 gm IV q12h or 2 gm IV q24h
		<10 or HD	1 gm IV q24h (give after HD on dialysis days, e.g. 10PM) Or 2 gm/2 gm/2 gm IV after HD (M/W/F or T/Th/Sat)
		CRRT	2 gm IV q12h
		30-60	2 gm IV q24h
	2 gm IV q12h (non-severe infections, including cystitis)	10-29	1 gm IV q24h
		<10 or HD	1 gm IV q24h (give after HD on dialysis days, e.g. 10PM) Or 2 gm/2 gm/2 gm IV after HD (M/W/F or T/Th/Sat)
		CRRT	2 gm IV q12h
Cefiderocol IV 1 gm, \$228/vial	2 gm IV q8h	>120	2 gm IV q6h
		30-60	1.5 gm IV q8h
		15-30	1 gm IV q8h
		<15	750 mg IV q12h
		HD	750 mg IV q12h
		CRRT	2 gm IV q12h
Cefoxitin IV 1 gm, 2 gm	1-2 gm IV q8h	10-29	1-2 gm IV q12h-q24h
		<10	1 gm IV q24h
		HD	1 gm after HD (give after HD on dialysis days, e.g. 10PM)
Ceftaroline IV 400 mg, 600 mg, \$173/vial	600 mg IV q8h	30-49	400 mg IV q8h
		15-29	300 mg IV q8h
		<15 or HD	200 mg IV q8h
		CRRT	400 mg IV q8h

Ceftazidime/Avibactam IV (Avycaz) 2.5 gm, \$410/vial	2.5 gm IV q8h	31-50	1.25 gm IV q8h
		<30, HD	0.94 gm IV q12h
		CRRT	1.25-2.5 gm IV q8h
Ceftolozane/Tazobactam IV (Zerbaxa) 1.5 gm, \$177/vial	3 gm IV q8h	30-50	1.5 gm IV q8h
		15-29	750 mg IV q8h
		HD	2.25 gm IV x 1, then 450mg IV q8h
		CRRT	1.5 gm IV q8h
Cefuroxime PO (Ceftin) Tablet: 250 mg, 500 mg	500 mg PO q12h	10-30	500 mg PO q24h
		<10	500 mg PO q48h
		HD	500 mg after HD (give after HD on dialysis days, e.g. 10PM)
Cephalexin PO Capsule: 250 mg, 500 mg Suspension: 50 mg/ml	500 mg PO q6h or 1 gm PO q8h	10-29	500 mg PO q8h or 1 gm PO q12h
		<10	500 mg PO q12h
		HD	500 mg PO q24h (give after HD on dialysis days, e.g. 10PM)
Cidofovir IV 375 mg/vial, \$441/vial	5 mg/kg IV once weekly x 2 weeks, then 5 mg/kg IV every other week and give with saline hydration and probenecid 2 gm PO 3 hrs before and 1 gm at 2 hrs and 8 hrs after (total 4 gm) Low dose: 0.5-1 mg/kg IV weekly (BK virus), probenecid is optional Dose based on actual body wt , use adjusted body wt for BMI>30	CKD or ESRD	3 mg/kg IV every other week
	Intravesicular instillation: 5mg/kg once a week in 60 ml normal saline instill through a foley catheter over 15 min and clamp for 1 hr.	No renal adjustment needed	
Ciprofloxacin IV, PO Tablet: 250 mg, 500 mg IV: 200 mg, 400mg	400 mg IV q12h (q8h-Pseudomonas)	<30 or HD	400 mg IV q24h
		CRRT	400 mg IV q8-12h
	500 mg PO q12h (750mg-Pseudomonas)	<30 or HD	500 mg PO q24h (give after HD on dialysis days, e.g. 10PM)
		CRRT	500 mg PO q12h
Daptomycin IV IV: 500 mg/vial, \$15/vial	8-12 mg/kg IV q24h (serious infections excluding uncomplicated SSTI/UTI) <i>*Enterococcal bacteremia/endocarditis: start 10-12 mg/kg IV q24h</i> 6 mg/kg IV q24h (SSTI, UTI) Dose based on actual body wt , use adjusted body wt for BMI>30	<30	Normal dose IV q48h
		HD	Normal dose IV q48h after HD (give after HD on dialysis days, e.g. 10PM)
		CRRT	Normal dose IV q24h

Ertapenem IV, IM IV: \$10/vial	1 gm IV/IM q24h	<30	500 mg IV/IM q24h	
		HD	1 gm IV/IM three times weekly after dialysis OR 500 mg IV/IM q24h (give after HD on dialysis days, e.g. 10PM)	
		CRRT	1 gm IV/IM q24h	
Fluconazole IV, PO Tablet: 50 mg, 100 mg, 200 mg; IV: 100 mg, 200 mg, 400 mg	100-400* mg IV/PO q24h C. glabrata infections: 800 mg IV/PO q24h *Consider giving loading dose (2 x normal dose) as first dose if severe infection (max dose 800 mg)	<50	50% of normal dose IV/PO q24h	
		HD	50% of normal dose IV/PO q24h (give after HD on dialysis days, e.g. 10PM)	
		CRRT	400 mg IV/PO q24h	
		Note: 150 mg x 1 dose for vaginal candidiasis or 100 mg/day – no renal adjustment necessary		
Flucytosine PO Capsule: 250mg, 500mg	25 mg/kg PO q6h Dose based on ideal body wt	20-40	Normal dose PO q12h	
		10-20	Normal dose PO q24h	
		<10	Normal dose PO q48h	
		HD	25-50 mg/kg/dose PO q48h	
Foscarnet IV 6 gm/vial, \$221/vial	Induction: 90 mg/kg IV q12h Maintenance: 90 mg/kg IV q24h Dose based on actual body wt, use adjusted body wt for BMI>30 ^Ensure adequate hydration to prevent AKI	CrCl (ml/min/kg)	Induction	Maintenance
		>1-1.4	70 mg/kg IV q12h	70 mg/kg IV
		>0.8-1	50 mg/kg IV q12h	50 mg /kg IV
		>0.6-0.8	80 mg/kg IV q24h	80 mg/kg IV
		>0.5-0.6	60 mg/kg IV q24h	60 mg/kg IV
		≥0.4-0.5	50 mg/kg IV q24h	50 mg/kg IV
		<0.4	No data	No data
		HD	45-60 mg/kg/dose after HD days	
Ganciclovir IV 500 mg/vial	Induction: 5 mg/kg IV q12h* Maintenance or Prophylaxis: 5 mg/kg IV q24h *High dose induction: 10 mg/kg IV q12h for low level CMV resistant strain with UL97 mutation, EC 50 < 5 x normal Dose based on actual body wt, use adjusted body wt for BMI>30		Induction	Maintenance or Prophylaxis
		50-69	2.5 mg/kg IV q12h	2.5 mg/kg IV
		25-49	2.5 mg/kg IV q24h	1.25 mg/kg IV
		10-24	1.25 mg/kg IV q24h	0.625 mg/kg IV q24h
		HD	1.25 mg/kg IV after HD	0.625 mg/kg IV after HD
		CVVH	2.5 mg/kg IV q24h	1.25 mg/kg IV
		CVVHD, CVVHDF	2.5 mg/kg IV q12h	2.5 mg/kg IV q24h
Imipenem/Cilastatin/ Relebactam IV 1.25 gm, \$301/vial	1.25 gm IV q6h	60-89	1 gm IV q6h	
		30-59	750 mg IV q6h	
		15-29	500 mg IV q6h	
		<15 on HD	500 mg IV q6h	

IVIG 2.5 g, 5 g, 10 g, 20 g, 40 g \$77/g (i.e. \$2000-5500/dose for a 70kg patient)	Toxic shock (GAS, MRSA): 1 g/kg IV on day 1, 0.5 g/kg IV on days 2 and 3 Last resort <i>C. difficile</i> colitis: 400 mg/kg IV once Measles post-exposure for high-risk patient: 400 mg/kg IV once (Use ideal body wt for dosing, use adjusted body wt for BMI>30; round the dose to the nearest 5 g)			
Levofloxacin IV, PO Tablet: 500 mg, 750mg IV: 500 mg, 750mg	750 mg IV/PO q24h ** 500mg IV/PO q24h (if CrCl<20, use q48h) for prophylaxis regimens **	20-49	750mg IV/PO q48h	
		10-19, HD	750 mg IV/PO x1, then 500mg IV/PO q48h	
		CRRT	750mg IV/PO q48h	
Meropenem IV 500 mg, 1 gm	500 mg IV q6h	26-49	500 mg IV q8h	
		10-25	500 mg IV q12h	
		<10 or HD	500 mg IV q24h (give after HD on dialysis days, e.g. 10PM)	
		CRRT	1 gm IV q12h	
	2 gm IV q8h (Meningitis, intermediate susceptibility to carbapenems)	26-49	1 gm IV q8h	
		10-25	1 gm IV q12h	
		<10 or HD	1 gm IV q24h (give after HD on dialysis days, e.g. 10PM)	
		CRRT	1 gm IV q8h	
Meropenem/Vaborbactam 2 gm, \$222/vial	4 gm IV q8h **DOSE USING eGFR INSTEAD OF CrCl**	eGFR 30-49 or CRRT	2 gm IV q8h	
		eGFR 15-29	2 gm IV q12h	
		eGFR <15 or HD	1 gm IV q12h	
Oseltamivir PO Capsule: 75 mg, 30 mg Suspension: 6 mg/ml	Treatment: 75 mg PO q12h Prophylaxis: 75 mg PO daily		Treatment	Prophylaxis
		30-60	30 mg PO q12h	30 mg PO daily
		<30	30 mg PO daily	30 mg PO q48h
		HD	30 mg PO after HD	30 mg PO after every other HD session
Penicillin G IV	3-4 million units IV q4h	10-50	Normal dose IV q8h-q6h	
		<10 or HD	Normal dose IV q12h	
		CRRT	4 million units IV x1, then normal dose IVq4-6h (Maximum dose: 20 million units)	
Piperacillin/Tazobactam IV 4.5 gm	Standard 4-hour Extended Infusion (Preferred for all indications) 4.5 gm IV q8h	<20 or HD	4.5 gm IV q12h	
		CRRT	4.5 gm IV q8h	
	Limited IV Access: 30-minute Infusion (<i>Pseudomonas</i> , nosocomial pneumonia, or organism MIC 16) 4.5 gm IV q6h	20-40	4.5 gm IV q8h	
		<20 or HD	4.5 gm IV q12h	
		CRRT	4.5 gm IV q8h	
	Limited IV Access: 30-minute Infusion (All other indications) 4.5 gm IV q8h	<20 or HD	4.5 gm IV q12h	
CRRT		4.5 gm IV q8h		

Polymyxin B IV 500,000 units/vial	12,500 units/kg IV q12h (Use total body wt if < 100 kg or adjusted body wt if > 100 kg) Single maximum dose: 1.5 million units		No renal adjustment necessary Monitor Cr, urine output
Ribavirin for RSV, PO Capsule: 200 mg	10 mg/kg PO q8h Maximum dose: 1800 mg/day (Monitor Hgb closely)	30-50	200 mg PO q8h
		10-30	200 mg PO daily
Sulbactam/Durlobactam 2 gm \$525/dose	2 g IV q6h (1 g sulbactam + 1 g durlobactam) *with meropenem IV for carbapenem-resistant <i>Acinetobacter baumannii</i> infections	≥130	2 g IV q4h
		30-44	2 g IV q8h
		15-29	2 g IV q12h
		<15 or HD	2 g IV q12h x3 doses → 2 g IV daily
Sulfamethoxazole/ Trimethoprim IV, PO SS: trimethoprim 80 mg DS: trimethoprim 160 mg	Dose based on trimethoprim component UTI/SSTI: 1DS (160 mg) - 2DS (320mg) PO q12h PJP: 15 mg/kg/day IV/PO divided in q8-6h Serious systemic infection/ <i>S. maltophilia</i> infections outside of urinary tract: 5 mg/kg IV/PO q12h	10-30 or HD	UTI/SSTI: 1DS (160 mg) PO q24h PJP: 5-7.5 mg/kg/day IV/PO divided in q12-24h Others: 5 mg/kg/day IV/PO q24h
		CRRT	No dosage adjustment required
Valacyclovir (Valtrex) Tablet: 500 mg, 1 g	2 g PO q8h <u>Indication:</u> • CNS infection – VZV	30-50	2 g PO q12h
		10-29	2 g PO q24h
		<10	1 g PO q24h
		HD	2 g PO post-HD
		CRRT	2 g PO q12h
	1 g PO q8h <u>Indications:</u> • CNS infection – HSV • Herpes zoster/Varicella zoster infections	30-50	1 g PO q12h
		10-29	1 g PO q24h
		<10	500 mg PO q24h
		HD	1 g PO post-HD
		CRRT	1 g PO q12h
	1 g PO q12h <u>Indications:</u> • HSV mucocutaneous infections (orolabial, genital)	10-29	1 g PO q24h
		<10	500 mg PO q24h
		HD	1 g PO post-HD
		CRRT	1 g PO q12h
	500 mg PO q12h <u>Indications:</u> • HSV/VZV Prophylaxis in Immunocompromised Patients	<30	500 mg PO q24h
		HD	500 mg PO q24h (dose after HD)
		CRRT	500 mg PO q12h

Valganciclovir tablet: 900 mg, 450 mg	Induction: 900 mg PO q12h		Induction	Maintenance or Prophylaxis
	Maintenance: 900 mg PO q24h Prophylaxis: 450 mg PO q12h or 900 mg PO q24h	40-59	450 mg PO q12h	450 mg PO q24h
		25-39	450 mg PO q24h	450 mg PO q48h
		10-24	450 mg PO q48h	450 mg PO twice
		HD	450 mg PO after	450mg PO after HD

Montefiore Medical Center Department of Pharmacy

Vancomycin Dosing Guidance

Vancomycin Dosing Table					
Select Initial Dose Based on Patient's Weight		Goal	Monitoring		
<50 kg	500 mg IV		Trough level: 10-15 ug/ml	Obtain trough level prior to the 4 th dose Refer to ' Dose Modifications for Standing Regimens ' for adjustments	
50-64.9 kg	750 mg IV				
65-84.9 kg	1000 mg IV				
85-99.9 kg	1250 mg IV				
100-130 kg	1500 mg IV				
Select Initial Interval Based on CrCl and Patient Age					
	Age ≤ 50	Age 50 – 80			Age ≥ 80
≥100 ml/min	Q8H*-Q12H	Q12H			Q12H*-Q24H
60-99 ml/min	Q12H	Q12H			Q24H
30-59 ml/min	Q24H				
AKI or <30 ml/min	Dose by random level; Re-dose when level <15				
* Reserve this empiric dosing frequency in septic shock on pressors or CNS infection, otherwise use lower frequency					
Trough levels must be checked for patients on standing vancomycin regimens					
• Must be obtained at steady state (within 30 minutes before 4th or 5th dose) • If already at steady state and dose is adjusted, obtain new trough before 3rd dose of new regimen					
Therapeutic Trough Target: 10-15 ug/ml for all infection types					
• We no longer endorse targeting trough goals of 15-20 ug/ml • 10-15 ug/ml correlates to an AUC:MIC goal of 400-600 and is associated with less nephrotoxicity					
Random levels are checked for patients:					
• On dialysis • With renal insufficiency (CrCl <30 ml/min) but not on dialysis, or • With elevated vancomycin trough levels >15 ug/ml					
Intermittent Hemodialysis (iHD)	Initial Dose	Maintenance Dose		Random pre-HD level: <20 ug/mL	Obtain random level PRIOR to HD
	Dose based on weight as above	Weight (kg)	Post-HD Dose		
		< 70	500 mg IV		
		70 – 100	750 mg IV		
	≥ 100	1000 mg IV			
Continuous Renal Replacement Therapy (CRRT)	10-15 mg/kg Q24H – round to the nearest 250 mg increment		Random pre-HD level: <15 ug/mL	Obtain random level within 12-24 hours	
		For morbidly obese patients, consider Q12H			

Peritoneal Dialysis (PD) (Max dose is 2000 mg)	Intermittent IP	30 mg/kg IP every 5-7 days	Random level: 10-15 ug/ml	Obtain random level every 3-5 days
	Continuous IP (all exchanges)	Load: 1000 mg IP		
		Maintenance: 25 mg/L IP		
	Intermittent IV	15 mg/kg IV x1 dose		

Antibiotic that Do NOT Require Renal Dose Adjustment

- Azithromycin
- Ceftriaxone
- Chloramphenicol
- Clindamycin
- Dicloxacillin
- Doxycycline
- Eravacycline
- Linezolid
- Metronidazole
- Micafungin
- Nafcillin
- Omadacycline
- Oxacillin
- Remdesivir
- Posaconazole
- Voriconazole

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