

## HMC Antimicrobial Renal Dosing Guidelines

(All doses are listed for IV, unless otherwise stated)

Drug	Dose for Normal Renal Function	CrCl (mL/min) 10 - 50	CrCl (mL/min) <10	Hemodialysis
Acyclovir	<b>Herpes simplex</b> 5mg/kg q8h  200-400mg 5X/daily (PO) <b>Herpes zoster / encephalitis</b> 10mg/kg q8h  800mg q4h (PO)	<b>Herpes simplex</b> 25-50: 5mg/kg q12h 10-25: 5mg/kg q24h 10-25: 200-400mg q8h (PO) <b>Herpes zoster / encephalitis</b> 25-50: 10mg/kg q12h 10-25: 10mg/kg q24h 10-25: 800mg q8h (PO)	<b>Herpes simplex</b> 2.5mg/kg q24h  200mg q12h (PO)  <b>Herpes zoster / encephalitis</b> 5mg/kg q24h  800mg q12h (PO)	Give same dose as CrCl<10; however, give dose after HD [A]
Aminoglycoside	Please refer to pharmacy aminoglycoside dosing card.			
Amphotericin B	0.5 - 1.5mg/kg qd	No Changes*	No Changes*	No Changes*
	* Depending on the severity of the infection, a dosage reduction, extending the dosing interval, holding the drug, or a lipid formulation of amphotericin B may be warranted in the setting of a rising Scr.			
Ampicillin	1 – 2g q4-6h	1 – 2g q6-12h	1 – 2g q12-24h	1 – 2g q24h [A]
Ampicillin / Sulbactam (Unasyn)	1.5 – 3g q6h	31-50: 1.5 – 3g q8h <30: 1.5 – 3g q12h	1.5 – 3g q24h	1.5 - 3g q24h [A]
Amoxicillin (PO)	250 – 500mg q8h	<30: 250-500mg q12h	250 – 500mg q24h	250 – 500mg q24h [A]
Amoxicillin/Clav. (Augmentin) (PO)	875mg q12h	<30: 500mg q12h *Augmentin XR not given for SCr <30*	500mg q24h	500mg q24h [A]
Azithromycin (IV/PO)	LD= 500mg X1, then 250mg q24h X 4d	No changes	No changes	No changes [D]
Aztreonam	LD= 1-2g (for all pts.) 1 – 2g q6-8h	30-60: 0.75-1.5g q8h <30: 0.5-1g q8h	500mg q8h	500mg q8h (500mg suppl. after HD) [B]
Caspofungin	LD= 70mg X1, then 50mg qd (hepatic failure 35mg qd)	No changes	No changes	No changes
Cefazolin	1g q6-8h	<30: 1g q12h	0.5 – 1g q24h	0.5 – 1g q24h [A]
Cefepime	1 – 2g q12h  <i>Febrile neutropenia:</i> 2g q8h	30-60: 1-2g q24h 10-30: 0.5-1g q24h <i>Febrile neutropenia:</i> 30-60: 2g q12h 10-30: 2g q24h	500mg q24h  <i>Febrile neutropenia:</i> 1g q24h	LD= 1g, then 500mg q24h [A]  <i>Febrile neutropenia:</i> 1g q24h
Cefotaxime	1 – 2g q6-8h	1 – 2g q8-12h	1 – 2g q24h	1 – 2g q24h (1g suppl. after HD) [B]
Cefotetan	1 – 2g q12h	<30: 0.5-1g q12h	250-500mg q12h	250-500mg on days between HD (0.5-1g after each HD)
Ceftazidime	1 – 2g q8h	31-50: 1g q12h <30: 1g q24h	1g q48h	1g q48h [A]
Ceftriaxone	1 – 2g q12-24h <i>Meningitis:</i> 2g q12h	No change	No change	1g q24h [A]
Cefuroxime	0.75 – 1.5g q8h	10-20: 750mg q12h	750mg q24h	750mg q24h (750mg suppl. after HD) [B]
Cephalexin (PO)	250 - 500mg q6h	250 – 500mg q12h	250 – 500mg q12h	250-500mg q12h [A]
Ciprofloxacin (IV)	200 – 400mg q12h	<30: 200mg q12h	200mg q12h	200mg q12h [A]
Ciprofloxacin (PO)	250 – 500mg q12h	<30: 250mg q12h	250mg q12h	250mg q12h [A]
	* Note: higher doses may be necessary for treatment of serious pseudomonas infections			
Clindamycin (PO)	600 – 900mg q8h 150 – 450mg q6h	No changes No changes	No changes No changes	No changes No changes [D]
Dalfopristin – Quinupristin (Synercid)	VRE: 7.5mg/kg q8h <i>Skin infection:</i> 7.5mg/kg q12h	No changes	No changes	No changes [A]
Ethambutol (PO)	15-25mg/kg q24h	15-25mg/kg q24-36h	15-25mg/kg q48h	15-25mg/kg after each HD [A]
Doxycycline	100mg q12h	No changes	No changes	No changes
Ertapenem	1g qd	<30: 500mg qd	500mg qd	500mg qd [A] (if dose given within 6h of HD, then give 150mg after HD)
Fluconazole (IV/PO)	100 – 400mg q24h	50 – 200mg q24h	50 – 200mg q24h	50-200mg q24h [A]
Flucytosine (PO)	12.5-37.5mg/kg q6h	25-50: 12.5-37.5mg/kg q12h 10-25: 12.5-37.5mg/kg q24h	12.5-25mg/kg q24h	12.5-25mg/kg q24h [A]

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Ganciclovir (I = induction dose) (M = maintenance dose)	>70: 5mg/kg q12h (I); q24h (M) 50-69: 2.5mg/kg q12h (I); q24h (M)	25-49: 2.5mg/kg q24h (I); 1.25mg/kg q24h (M) 10-24: 1.25mg/kg q24h (I); 0.625mg/kg q24h (M)	See HD dosing	1.25mg/kg 3X/week after HD (I); 0.625mg/kg 3X/week after HD (M) [C]
Gentamicin	Please refer to pharmacy aminoglycoside dosing card			
Imipenem/cilastatin	500mg q6h	<30: 500mg q8-12h	250-500mg q12h	250-500mg q12h [A]
Isoniazid (IV/PO)	300mg q24h	No changes	No changes	300mg q24h [A]
Levofloxacin (IV/PO)	LD= 500mg X1, then 250 – 500mg q24h	LD= 500mg X1, then 250mg q24h	LD= 500mg X1, then 250mg q48h	LD= 500mg X1, then 250mg q48h [A]
Linezolid (IV/PO)	600mg q12h	No changes	No changes	No changes [A]
Meropenem	1g q8h	26-50: 1g q12h 10-25: 500mg q12h	500mg q24h	500mg q24h [A]
Metronidazole (IV/PO)	500mg q6-8h	No changes	500mg q8 - 12h	500mg q8 - 12h [A]
Moxifloxacin (IV/PO)	400mg qd	No changes	No changes	No changes
Nafcillin	1-2g q4-6h	No changes	<b>hepatic failure and CrCl&lt;10:</b> 0.5–1g q4-6h	No changes [D]
Penicillin G	2 – 4 mU q4-6h (max 24 mU/day)	1 – 2 mU q4-6h	1 mU q6h (max dose 6mU/day in ESRD)	1 mU q6h [A]
Piperacillin / Tazobactam (Zosyn)	3.375 – 4.5g q6h	3.375g q8h or 2.25g q6h	2.25g q8h	2.25g q8h (0.75g supplemental after HD) [B]
Pyrazinamide (PO)	15 – 30mg/kg q24h (max 2g/dose)	15mg/kg q24h	15mg/kg q24h	15 – 30mg/kg 3X/week after HD [C]
Rifampin (PO)	600mg qd	No changes	No changes, <i>unless hepatic failure and CrCl&lt;10:</i> 300mg q24h	See dosing for CrCl <10
Ticarcillin / Clavulanic acid (Timentin)	3.1g q6h	30-60: 2g q6h 10-30: 2g q8h	2g q12h	2g q12h (3.1g supplement after HD) [B]
Trimethoprim/sulfamethoxazole (TMP/SMX)	10mg TMP/kg/day divided q6-8h  <b>PCP</b> 15-20mg TMP/kg/day divided q8-6h <b>PCP Prophylaxis</b> 1 SS or 1 DS tab qd	5-7.5mg TMP/kg/day divided q12h  <b>PCP</b> 10-15mg TMP/kg/day divided q12h <b>PCP Prophylaxis</b> 50-80: 1 SS tab qd 10-50: 1 SS tab qd-qod	2.5-5mg TMP/kg q24h  <b>PCP</b> 5-10mg TMP/kg q24h  <b>PCP Prophylaxis</b> 1 SS tab qod	10mg TMP/kg before HD and 5mg TMP/kg after HD [C]  <b>PCP</b> 15-20mg TMP/kg before HD and 7-10mg TMP/kg after HD [C]  <b>PCP Prophylaxis</b> 1 SS tab qod [A]
Valacyclovir (PO)	<b>Herpes zoster</b> 1g q8h  <b>Genital herpes (initial)</b> 1g q12h <b>(recurrent)</b> 500mg q12h	<b>Herpes zoster</b> 30-50: 1g q12h 10-29: 1g q24h  <b>Genital herpes (initial)</b> <30: 1g q24h <b>(recurrent)</b> <30: 500mg q24h	<b>Herpes zoster</b> 500mg q24h  <b>Genital herpes (initial)</b> 500mg q24h <b>(recurrent)</b> 500mg q24h	See dosing for CrCl <10 [A]
Vancomycin	Please refer to pharmacy vancomycin dosing card			
Voriconazole	LD= 6mg/kg q12h x2 doses, then 4mg/kg q12h	50<: use oral tablets due to accum. of IV vehicle SBEC >40kg: 200mg q12h *(or 300mg q12h) <40kg: 100mg q12h *(or 150mg q12h) *if response is inadequate may increase dose		

$$\text{CrCl (mL / min)} = \frac{(140 - \text{age}) \times \text{IBW (kg)}}{72 \times \text{SCr (mg/dL)}} \dots\dots\dots \text{(for females multiply by 0.85)}$$

- A** = Give dose(s) daily and schedule dose(s) after hemodialysis on days of dialysis.
- B** = Give dose(s) as scheduled with a supplemental dose after each hemodialysis.
- C** = Schedule dose after hemodialysis only on days of dialysis.
- D** = Schedule dose(s) as indicated, regardless of hemodialysis schedule.

\*\*\*The dosing recommendations presented are based on published literature and clinical experience. The data should be utilized as initial "guidelines". If your patient requires more or less aggressive antimicrobial therapy, please dose the drug(s) as you feel appropriate.