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: January 2025
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)
Obesity: BMI ≥ 30 kg/m^2

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Acyclovir (IV) [1–7]
(Use adjusted BW for obesity)</td><td colspan="5">
<table>
<tr><th></th><th>CrCL > 50</th><th>CrCL 25 – 50</th><th>CrCL < 25</th><th>CrCL < 10</th><th>IHD</th><th>CRRT</th></tr>
<tr><td colspan="7">Prophylaxis</td></tr>
<tr><td>BMT</td><td>250 mg/m^2 IV q12h</td><td>125 mg/m^2 IV q12h</td><td>125 mg/m^2 IV q24h</td><td>62.5 mg/m^2 IV q24h</td><td>62.5 mg/m^2 IV q24h</td><td>125 mg/m^2 IV q12h</td></tr>
<tr><td>Hematology/Oncology</td><td>2 mg/kg IV q12h</td><td>2 mg/kg IV q12h</td><td>2 mg/kg IV q24h</td><td>1 mg/kg IV q24h</td><td>1 mg/kg IV q24h</td><td>2 mg/kg IV q12h</td></tr>
<tr><td colspan="7">Treatment</td></tr>
<tr><td>General (e.g. mucocutaneous HSV)</td><td>5 mg/kg IV q8h</td><td>5 mg/kg IV q12h</td><td>5 mg/kg IV q24h</td><td>2.5 mg/kg IV q24h</td><td>2.5 mg/kg IV q24h</td><td>5 – 10 mg/kg IV q12h</td></tr>
<tr><td>Severe (e.g. CNS/ ocular/disseminated HSV infections, Zoster)</td><td>10 mg/kg IV q8h</td><td>10 mg/kg IV q12h</td><td>10 mg/kg IV q24h</td><td>5 mg/kg IV q24h</td><td>5 mg/kg IV q24h</td><td>10 mg/kg IV q12h</td></tr>
</table>
</td></tr>
<tr><td>Acyclovir (PO) [1,2,7]</td><td colspan="5">
<table>
<tr><th></th><th>CrCL > 50</th><th>CrCL 25 – 50</th><th>CrCL < 25</th><th>CrCL < 10</th><th>IHD</th><th>CRRT</th></tr>
<tr><td colspan="7">Prophylaxis</td></tr>
<tr><td>BMT</td><td>800 mg PO BID</td><td>400 mg PO BID</td><td>200 mg PO BID</td><td>200 mg PO daily</td><td>200 mg PO daily</td><td>No data</td></tr>
<tr><td>Hematology/Oncology</td><td>400 mg PO BID</td><td>400 mg PO BID</td><td>200 mg PO BID</td><td>200 mg PO daily</td><td>200 mg PO daily</td><td>No data</td></tr>
<tr><td colspan="7">Treatment</td></tr>
<tr><td>Mucocutaneous HSV</td><td>400 mg PO q8h
Alt: 200 mg 5x daily</td><td>200 mg PO q8h</td><td>200 mg PO q12h</td><td colspan="2">200 mg PO q12h</td><td>No data</td></tr>
<tr><td>VZV</td><td>800 mg PO q4h (or 5x daily)
Consider valacyclovir for less frequent dosing</td><td>800 mg PO q8h</td><td>800 mg PO q12h</td><td colspan="2">800 mg PO q12h</td><td>No data</td></tr>
</table>
</td></tr>
<tr><td>Amikacin (IV)[1,2,5,8,9]
(Use adjusted BW for obesity)</td><td colspan="5">See Aminoglycoside Dosing Protocol</td></tr>
<tr><td>Amoxicillin (PO)[1,2]</td><td>Usual dose:
500 mg PO q8h or
1,000 mg PO q8-12h

CAP: 1,000 mg PO q8h

Procedural ppx: 2,000 mg PO x 1</td><td colspan="3">
<table>
<tr><th>Normal Dose</th><th>CrCL 10-29</th><th>CrCL <10</th><th>IHD</th></tr>
<tr><td>1,000 mg PO q8h</td><td>1,000 mg PO q12h</td><td>500 mg PO q12h</td><td>500 mg PO q12h</td></tr>
<tr><td>875 - 1,000 mg PO q12h</td><td>500 mg PO q12h</td><td>500 mg PO q12-24h</td><td>500 mg PO q12-24h</td></tr>
<tr><td>500 mg PO q8h</td><td>500 mg PO q12h</td><td>500 mg PO q12-24h</td><td>500 mg PO q12-24h</td></tr>
</table>
</td><td>No data</td></tr>
<tr><td>Amoxicillin/clavulanate (PO)[1,2,10–12]
(See obesity dosing guide)</td><td>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</td><td>CrCl 10 – 30:
500 mg PO q12h

IAI / Uncomplicated GNR bacteremia (oral step-down alternative):
up to 875 mg PO q12h</td><td>CrCl < 10:
500 mg PO q24h

IAI / Uncomplicated GNR bacteremia (oral step-down alternative):
up to 875 mg PO q24h</td><td>500 mg PO q24h;
For q24h regimen, dose after dialysis or administer additional dose at the end of dialysis</td><td>No data</td></tr>
<tr><td>Amphotericin B Liposomal (IV)[1,2]
(See obesity dosing guide)</td><td>3 – 5 mg/kg/day</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Ampicillin (IV)[1–3]
(See obesity dosing guide)</td><td>Mild/uncomplicated:
1 – 2 g IV q6h

Meningitis/endovascular/PJI:
2 g IV q4h</td><td>Mild/uncomplicated:
1 g IV q6–8h

Meningitis/endovascular /PJI:
2 g IV q6–12h</td><td>Mild/uncomplicated:
1 g IV q12h

Meningitis/endovascular /PJI:
2 g IV q12–24h; or 1 g IV q8h</td><td>Mild/uncomplicated:
1 g IV q12h

Meningitis/endovascular/PJI:
2 g IV q12–24h</td><td>CVVH: 2 g IV q8–12H
CVVHDF: 2 g IV q6–8h

Meningitis/endovascular /PJI:
2 g IV q6h</td></tr>
<tr><td>Ampicillin/sulbactam (IV)[1–3,5,13]</td><td colspan="5"><table>
<tr><th></th><th>CrCl >30:</th><th>CrCl 15-30:</th><th>CrCl < 15:</th><th>IHD</th><th>CRRT</th></tr>
<tr><td>Mild/uncomplicated</td><td>1.5 g IV q6h</td><td>1.5 g IV q12h</td><td>1.5 g IV q24h</td><td>1.5 g IV q24h</td><td>3 g IV q12h</td></tr>
<tr><td>Systemic</td><td>3 g IV q6h</td><td>3 g IV q12h</td><td>3 g IV q24h</td><td>3 g IV q24h</td><td>3 g IV q8h</td></tr>
<tr><td>Acinetobacter baumannii
For more resistant Acinetobacter baumannii infections, consider higher dosing regimens</td><td>3 g IV q4h</td><td>3 g IV q8h</td><td>3 g IV q12h</td><td>3 g IV q12h</td><td>3 g IV q6h</td></tr>
</table></td></tr>
<tr><td>Azithromycin (IV/PO)[1,2]</td><td>500 mg IV/PO q24h</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Aztreonam (IV)[1–3,14]
(See obesity dosing guide)</td><td>1 – 2 g IV q8h

Severe/Meningitis:
2 g IV q6–8h</td><td>CrCl < 30: 1 g IV q8h

Severe/Meningitis:
1 g IV q6–8h</td><td>500 mg IV q8h

Severe/Meningitis:
1g IV q12h</td><td>1 g IV q24h

Severe/Meningitis:
1 g IV q12h</td><td>2 g IV load, then 1 g IV q8h
– or –
2 g IV q12h</td></tr>
<tr><td>Caspofungin (IV)[1,2,15,15–17]
(See obesity dosing guide)</td><td colspan="3">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</td><td>No change</td><td>No change</td></tr>
<tr><td>Cefazolin (IV)[1–5,18–20]
(See obesity dosing guide)</td><td>CrCl ≥ 35 mL/min:

Mild/moderate:
1 g IV Q8H

Severe: 2 g IV Q8H</td><td>CrCl 10 – 34 mL/min:

Mild/moderate: 1 g IV Q12H

Severe: 2 g IV Q12H</td><td>Mild/moderate:
1 g IV Q24H

Severe:
2 g IV Q24H</td><td>1 g IV Q24H
Dose daily, but after HD on HD days
alt: 2g/2g/3g IV post-HD only</td><td>2 g IV Q12H</td></tr>
<tr><td>Cefepime (IV)[1–3,5,21–23]
(See obesity dosing guide)</td><td colspan="3"><table>
<tr><td colspan="4">Extended Infusion (4-hour infusion)</td><td></td></tr>
<tr><td></td><td>CrCl > 60</td><td>CrCl 30 – 60</td><td>CrCl < 11-29</td><td>CrCl < 10</td></tr>
<tr><td>General</td><td>1 g IV Q8H or
2 g IV Q12H</td><td>1 g IV Q12H or
2 g IV Q24H</td><td>1 g IV Q24H</td><td>500 mg IV Q24H</td></tr>
<tr><td>Pulmonary/ Neutropenic Fever/ CNS/ confirmed Pseudomonal infection/ Severe infections</td><td>2 g IV Q8H</td><td>2 g IV Q12H</td><td>1 g IV Q12H</td><td>1 g IV q24h</td></tr>
</table></td><td>0.5 – 1 g IV Q24H
Dose daily, but after HD on HD days

alt: 2 g IV post-HD only</td><td>2 g IV load, then 1 g IV Q8H
(4-hour infusion)</td></tr>
<tr><td>Cefiderocol (IV)[1,2]
(SHC Restriction)</td><td>CrCL> 120: 2 g IV q6h

CrCL 60 -120: 2 g IV q8h</td><td>CrCL 30 – 60: 1.5 g IV q8h

CrCL 15 – 30: 1 g IV q8h</td><td>CrCL < 15:
750 mg IV q12h</td><td>750 mg IV q12h</td><td><table>
<tr><th>Effluent Flow Rate</th><th>Dose</th></tr>
<tr><td>≤ 2L/hr</td><td>1.5 g IV q12h</td></tr>
<tr><td>2.1–3 L/hr</td><td>2 g IV q12h</td></tr>
<tr><td>3.1–4 L/hr</td><td>1.5 g IV q8h</td></tr>
<tr><td>≥4.1 L/hr</td><td>2 g IV q8h</td></tr>
</table>Shown as Effluent Dose (mL/kg/hr) in Epic</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Cefpodoxime (PO)[1,2]</td><td>Uncomplicated cystitis:
100 mg PO q12h

CAP/bronchitis:
200 mg PO q12h

Skin/soft tissue:
400 mg PO q12h</td><td colspan="2">CrCl < 30: same dose q24h</td><td>Same dose, administered post-HD only</td><td>No data</td></tr>
<tr><td>Ceftaroline (IV)[1,2,24]
(SHC Restriction)</td><td colspan="4"><table><tr><th></th><th>CrCl > 50</th><th>CrCl 30 – 50</th><th>CrCl 15 – 30</th><th>CrCl < 15</th></tr><tr><td>General</td><td>600 mg IV q12h</td><td>400 mg IV q12h</td><td>300 mg IV q12h</td><td>200 mg IV q12h</td></tr><tr><td>Endocarditis/ S.aureus bacteremia, Susceptible-dose dependent (SDD)</td><td>600 mg IV q8h administered over 2-hr</td><td>400 mg IV q8h administered over 2-hr</td><td>300 mg IV q8h administered over 2-hr</td><td>200 mg IV q8h administered over 2-hr</td></tr></table></td><td>200 mg IV q8–12h

Endocarditis/S.aureus bacteremia/ SDD:
200 mg IV q8–12h administered over 2-hr</td><td>No data</td></tr>
<tr><td>Ceftazidime (IV)[1–3,25]</td><td>Usual dose:
1 – 2 g IV q8h

Severe:
2 g IV q8h</td><td>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</td><td>CrCl < 5:
0.5 g IV q24h</td><td>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</td><td>2 g IV load, then 1 g IV q8h
– or –
2 g IV q12h</td></tr>
<tr><td>Ceftazidime/avibactam (IV) [1,2,26–29]
(SHC Restriction)</td><td>2.5 g IV q8h</td><td>CrCl 31 – 50: 1.25 g IV q8h
CrCl 16 – 30: 0.94 g IV q12h
CrCl 6 – 15: 0.94 g IV q24h</td><td>CrCl < 5: 0.94 g IV q48h</td><td>0.94 g IV q24–48h
Dose daily, but after HD on HD days</td><td>1.25 g IV q8h
2.5g IV q8h if MIC > 4 mcg/mL or deep-seated</td></tr>
<tr><td>Ceftolozane/tazobactam (IV)[1,2,30–33]
(SHC Restriction)</td><td colspan="5"><table><tr><th></th><th>CrCl > 50</th><th>CrCl 30 – 50</th><th>CrCl 15 – 29</th><th>CrCl < 15</th><th>IHD</th><th>CRRT</th></tr><tr><td>Cystitis</td><td>1.5 g IV q8h</td><td>750 mg IV q8h</td><td>375 mg IV q8h</td><td>750 mg IV load, then 150 mg IV q8h</td><td>750 mg IV load, then 150 mg IV q8h</td><td>1.5 g IV q8h</td></tr><tr><td>HAP, VAP, Systemic pseudomonal infection, CF exacerbation</td><td>3 g IV q8h</td><td>1.5 g IV q8h</td><td>750 mg IV q8h</td><td>2.25 g IV load, then 450 mg IV q8h</td><td>2.25 g IV load, then 450 mg IV q8h</td><td>3 g IV q8h</td></tr></table></td></tr>
<tr><td>Ceftriaxone (IV)[1,2,34]</td><td colspan="2">1 – 2 g IV q24h
Endovascular/osteomyelitis/PJI: 2 g IV q24h
Meningitis, E. faecalis endocarditis: 2 g IV q12h</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Cephalexin (PO)[1,2,35]</td><td>250 – 1000 mg PO Q6H

Uncomplicated cystitis:
500 mg PO Q12H

Complicated cystitis/ Cellulitis/ SSTI:
500 mg PO Q6H</td><td colspan="2">CrCl 15 – 29: 250 mg PO Q8–12H

CrCl 5 – 14: 250 mg PO Q24H</td><td>500 mg PO Q24H
Dose daily, but after HD on HD days</td><td>No data</td></tr>
<tr><td>Ciprofloxacin (IV/PO)[1–4,28,36]
(See obesity dosing guide)</td><td colspan="3"><table><tr><th></th><th>CrCl > 50</th><th>CrCl 30 – 50</th><th>CrCl < 30</th></tr><tr><td>General infections</td><td>400 mg IV q12h
500 mg PO q12h</td><td>Same</td><td>400 mg IV q24h
500 mg PO q24h</td></tr><tr><td>Pseudomonas, severe</td><td>400 mg IV q8h
750 mg PO q12h</td><td>400 mg IV q8–12h
500 mg PO q12h</td><td>400 mg IV q24h
500 mg PO q24h</td></tr></table></td><td>200 – 400 mg IV q24h
250 – 500 mg PO q24h
Dose daily, but after HD on HD days</td><td>400 mg IV q12h
500 mg PO q12h

Severe infection with A.baumannii or P.aeruginosa:
400 mg IV q8-12h</td></tr>
<tr><td>Clindamycin (IV/PO)[1,2]
(See obesity dosing guide)</td><td>600 – 900 mg IV q8h
150 – 450 mg PO q6h</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Dalbavancin (IV)[1,37]
(SHC Restriction)</td><td colspan="5">
<table>
<tr><th>Indication</th><th>CrCL > 30</th><th>CrCl < 30</th><th>IHD</th><th>CRRT</th></tr>
<tr><td>Skin/Soft Tissue</td><td><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</td><td><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</td><td><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</td><td>No data</td></tr>
</table>
</td></tr>
<tr><td>Daptomycin (IV)[1,2,23,38–45]
(SHC Restriction)
(Use adjusted BW for obesity)</td><td colspan="5">
<table>
<tr><th>Indication</th><th>CrCL > 30</th><th>CrCl < 30</th><th>IHD</th><th>CRRT</th></tr>
<tr><td>Skin/Soft Tissue</td><td>4 – 6 mg/kg IV q24h</td><td>4 – 6 mg/kg IV q48h</td><td>6 mg/kg post-HD only or
6/6/9 mg/kg post-HD only
<u>alt</u>: 4 – 6 mg/kg IV q48h</td><td>6 mg/kg IV q24h</td></tr>
<tr><td>Bacteremia/Endovascular</td><td>8 mg/kg IV q24h</td><td>8 mg/kg IV q48h</td><td>8 mg/kg post-HD
<u>alt</u>: 8 mg/kg IV q48h</td><td>6 – 8 mg/kg IV q24h</td></tr>
<tr><td>E. faecium Infection – consult ID</td><td>10 – 12 mg/kg IV q24h</td><td>10 – 12 mg/kg IV q48h</td><td>8 – 10 mg/kg post-HD
<u>alt</u>: 8 – 10 mg/kg IV q48h</td><td>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)</td></tr>
</table>
</td></tr>
<tr><td>Doxycycline (IV/PO)[1,2]</td><td>Load: 200 mg x 1 for severe infections

100 mg IV/PO q12h</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Ertapenem (IV/IM)[1,2,46–48]</td><td>1 g IV q24h</td><td><u>CrCl <30</u>: 500 mg IV q24h</td><td>500 mg IV q24h</td><td>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)</td><td>1 g IV q24h</td></tr>
<tr><td>Ethambutol (PO)[1,5,49,50]
(Use lean BW for obesity)
(See footnote for lean BW equation)</td><td><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></td><td><u>CrCl 10 – 50</u>:
15 – 25 mg/kg PO q24–36h</td><td><u>CrCl < 10</u>:
15 – 25 mg/kg PO q48h</td><td>15 – 25 mg/kg PO 3 times per week post-HD
Administer after HD only</td><td>15 – 25 mg/kg PO q24–36h</td></tr>
<tr><td>Fidaxomicin (PO)[1,2]</td><td>200 mg q12h x 10 days</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Fluconazole (IV/PO)[1–4,17,28,51–53]
(See obesity dosing guide)</td><td colspan="5">
<table>
<tr><th>Indication</th><th>CrCL > 50</th><th>CrCL ≤ 50</th><th>HD</th><th>CRRT</th></tr>
<tr><td>Oropharyngeal candidiasis, Candida peritonitis</td><td>Load 200 mg x1, then 100-200mg Q24H</td><td>Load 200 mg x1, then 100mg Q24H</td><td>Load 200 mg x 1 dose,
Then 200mg Q48H
Dose q48h, but after HD on HD days</td><td>Load 400 mg x1, then 100 – 200mg Q24H‡</td></tr>
<tr><td>Esophageal, osteoarticular candidiasis, Candida pyelonephritis)

See below for C. glabrata</td><td>400 mg (or 6 mg/kg) Q24H</td><td>400 mg (or 6 mg/kg) IV/PO x1, then 200 mg (or 3 mg/kg) Q24H</td><td>Load 400 mg (or 6 mg/kg) x 1 dose, then 400 mg (or 6 mg/kg) post-HD or 200mg (or 3 mg/kg) Q24H
Dose q24h, but after HD on HD days</td><td>Load 800 mg (or 12mg/kg) x 1 dose,
then 400mg (or 6mg/kg) Q24H‡</td></tr>
<tr><td rowspan="2">Severe Candidiasis: Candidemia/CNS/ endophthalmitis/endovascular/ intra-abdominal

Strongly recommend ID consult for cryptococcosis, coccidioidomycosis, severe candidiasis, etc.</td><td>Load 800 mg (or 12 mg/kg) x 1 dose, then 400 – 800 mg* IV/PO Q24H</td><td>Load 800 mg (or 12 mg/kg) x 1 dose, then 200 – 400 mg* IV/PO (or 3 – 6 mg/kg) Q24H</td><td>Load 800 mg (or 12 mg/kg) x 1 dose, then 400 – 800 mg* post-HD or 200 – 400 mg* (3 – 6 mg/kg) Q24H. Dose q24h, but after HD on HD days</td><td>Load 800 mg (or 12 mg/kg) - 1200 mg* x 1 dose,
then 400 – 800 mg (or 6 – 12 mg/kg) IV/PO daily*‡; 1200 mg given in 2 divided doses</td></tr>
<tr><td>C. glabrata (SDD)†:
800 mg (or 12 mg/kg) Q24H</td><td>C. glabrata (SDD)†:
Load 800 mg (or 12 mg/kg) x 1 dose, then 400 mg (or 6 mg/kg) Q24H</td><td>C. glabrata (SDD)†:
Load 800 mg (or 12 mg/kg) x 1, then 800 mg (or 12mg/kg) post-HD
or 400 mg (or 6 mg/kg) Q24H
Dose q24h, but after HD on HD days</td><td>C. glabrata (SDD)†‡:
Load 800 mg (or 12 mg/kg) - 1200 mg* x 1 dose, then 800 mg (or 12 mg/kg) daily‡; 1200mg given in 2 divided doses</td></tr>
</table>
* Consider higher end of dose range for MIC = 4 (SDD) for C.albicans, C.tropicalis, C, parapsilosis, CrCl > 130 ml/min. Endophthalmitis, endocarditis/endovascular- consult ID.
†SDD = susceptible-dose dependent; all C. glabrata isolates are considered SDD or resistant. Limited data on isolates with MIC ≥ 16, consider consultation with ID
‡Some experts recommend doubling the dose (up to max dose 1200mg) for CRRT based on high-flux dialyzers and effluent flow rates of 20 to 25 mL/kg/hour
Weight-based dosing may be used for extremes of weight and in consideration of dose-related ADRs e.g. QTc prolongation.
</td></tr>
<tr><td>Foscarnet (IV)[1,2,54–56]
(Use adjusted BW for obesity)
Adj CrCl (mL/min/kg)
$\left(\frac{140 - age}{SCr \times 72}\right)$ x (0.85 if female)</td><td colspan="5">
<table>
<tr><th>CrCl (mL/min/kg)</th><th colspan="2">CMV induction</th><th colspan="2">CMV maintenance</th><th colspan="2">HSV</th></tr>
<tr><td>> 1.4</td><td>60 mg/kg IV q8h</td><td>90 mg/kg IV q12h</td><td>90 mg/kg IV q24h</td><td>120 mg/kg IV q24h</td><td>40 mg/kg IV q12h</td><td>40 mg/kg IV q8h</td></tr>
<tr><td>> 1.0 – 1.4</td><td>45 mg/kg IV q8h</td><td>70 mg/kg IV q12h</td><td>70 mg/kg IV q24h</td><td>90 mg/kg IV q24h</td><td>30 mg/kg IV q12h</td><td>30 mg/kg IV q8h</td></tr>
<tr><td>> 0.8 – 1.0</td><td>50 mg/kg IV q12h</td><td>50 mg/kg IV q12h</td><td>50 mg/kg IV q24h</td><td>65 mg/kg IV q24h</td><td>20 mg/kg IV q12h</td><td>35 mg/kg IV q12h</td></tr>
<tr><td>> 0.6 – 0.8</td><td>40 mg/kg IV q12h</td><td>80 mg/kg IV q24h</td><td>80 mg/kg IV q48h</td><td>105 mg/kg IV q48h</td><td>35 mg/kg IV q24h</td><td>25 mg/kg IV q12h</td></tr>
<tr><td>> 0.5 – 0.6</td><td>60 mg/kg IV q24h</td><td>60 mg/kg IV q24h</td><td>60 mg/kg IV q48h</td><td>80 mg/kg IV q48h</td><td>25 mg/kg IV q24h</td><td>40 mg/kg IV q24h</td></tr>
<tr><td>≥ 0.4 – 0.5</td><td>50 mg/kg IV q24h</td><td>50 mg/kg IV q24h</td><td>50 mg/kg IV q48h</td><td>65 mg/kg IV q48h</td><td>20 mg/kg IV q24h</td><td>35 mg/kg IV q24h</td></tr>
<tr><td>< 0.4</td><td colspan="2">Not recommended</td><td colspan="2">Not recommended</td><td colspan="2">Not recommended</td></tr>
<tr><td>IHD</td><td colspan="2">45 – 60 mg/kg/dose IV post-HD only</td><td colspan="2">No data</td><td colspan="2">No data</td></tr>
<tr><td>CRRT</td><td colspan="6">No data</td></tr>
</table>
</td></tr>
<tr><td>Ganciclovir (IV)[1,2]
(Use adjusted BW for obesity)</td><td colspan="3">
<table>
<tr><th>CMV</th><th>CrCl >70*</th><th>CrCl >50</th><th>CrCl >25</th><th>CrCl >10</th><th>CrCl <10</th></tr>
<tr><td>Induction (I)</td><td>5 mg/kg IV q12h</td><td>2.5 mg/kg IV q12h</td><td>2.5 mg/kg IV q24h</td><td>1.25 mg/kg IV q24h</td><td>1.25 mg/kg IV 3x/week</td></tr>
<tr><td>Maintenance (M)</td><td>5 mg/kg IV q24h</td><td>2.5 mg/kg IV q24h</td><td>1.25 mg/kg IV q24h</td><td>0.625 mg/kg IV q24h</td><td>0.625 mg/kg IV 3x/week</td></tr>
</table>
*Manufacturer's CrCl cutoffs. Please refer to BMT protocols if applicable
</td><td>I: 1.25 mg/kg IV post HD only
M: 0.625 mg/kg IV post HD only</td><td>I: 2.5 mg/kg IV q12h
M: 2.5 mg/kg IV q24h</td></tr>
<tr><td>Gentamicin (IV)[1,3,57]
(Use adjusted BW for obesity)</td><td colspan="5">Refer to Aminoglycoside Dosing Guide</td></tr>
<tr><td>Imipenem/Cilastatin (IV)[1]
(SHC Restriction)</td><td colspan="3">
<table>
<tr><th></th><th>CrCL >60</th><th>CrCL 30 – 59</th><th>CrCL 15 – 29</th><th>CrCL < 10</th></tr>
<tr><td>General</td><td>500 mg IV q6H
or
1g IV q8h</td><td>500 mg IV q8h</td><td>500 mg IV q12h</td><td rowspan="2">Not recommended unless dialysis initiated within 48 hrs</td></tr>
<tr><td>NTM</td><td>1,000 mg IV q12H</td><td>750 mg IV q12H</td><td>500 mg IV q12H</td></tr>
</table>
</td><td>250 – 500 mg IV q12h</td><td>1g load, then 500 mg IV q6h</td></tr>
<tr><td>Isavuconazole (IV/PO)[1,2]</td><td>Initial: 372 mg IV/PO q8h x 6 doses
Maintenance: 372 mg IV/PO q24h</td><td colspan="2">No change</td><td>No change</td><td>No change</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Isoniazid (PO)[1,2,49,50]</td><td>300 mg PO q24h
(5 mg/kg/day)</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Levofloxacin (IV/PO)[1–4]</td><td colspan="5"><table>
<tr><th></th><th>CrCl ≥ 50</th><th>CrCl 20 – 49</th><th>CrCl < 20</th><th>IHD</th><th>CRRT</th></tr>
<tr><td>Cystitis</td><td>250 mg q24h</td><td>No change</td><td>No change</td><td>No change; give dose after HD on HD days</td><td>No change</td></tr>
<tr><td>Mild to moderate diabetic foot infection (DFI)(non-Pseudomonal), prostatitis</td><td>500 mg q24h</td><td>500mg x1 then 250 mg q24h</td><td>500 mg x1,
then 250 mg q48h</td><td>See CrCl < 20 ml/min
Dose q48h, but after HD on HD days</td><td>500 mg x1,
then 250 mg q24h or
500mg q48h</td></tr>
<tr><td>Severe/PNA/complicated UTI/osteomyelitis/PJI/ moderate to severe DFI /intra-abdominal/Pseudomonas/ Stenotrophomonas:</td><td>750 mg q24h</td><td>750 mg q48h</td><td>750 mg x1,
then 500 mg q48h</td><td>See CrCl < 20 ml/min
Dose q48h, but after HD on HD days</td><td>750 mg x1,
then 500 mg q48h or
750mg q48h</td></tr>
</table></td></tr>
<tr><td>Linezolid (IV/PO)[1,2]
(SHC Restriction)</td><td>600 mg IV/PO q12h</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Meropenem (IV)[1–4,58]
(See obesity dosing guide)</td><td colspan="5"><table>
<tr><th></th><th>CrCl > 50</th><th>CrCl 26 – 50</th><th>CrCl 10 – 25</th><th>CrCl < 10</th></tr>
<tr><td>Usual dose*
(FN, PNA, Pseudomonas)</td><td>1 g IV q8h</td><td>1 g IV q12h</td><td>0.5 g IV q12h</td><td>0.5 g IV q24h</td></tr>
<tr><td>CF/ CNS infections</td><td>2 g IV q8h</td><td>2 g IV q12h</td><td>1 g IV q12h</td><td>1 g IV q24h</td></tr>
</table>
Administered over a 3-hr extended infusion
* 2g q8h extended infusion may be considered in life-threatening infections with resistant organisms with MIC = 2mg/L, patients with CrCl ≥130 mL/minute/1.73 m^2, and some obese patients.</td><td>500 mg IV q24h

CF/CNS: 1 g IV q24h

Dose daily, but after HD on HD days</td><td>1 g IV q8h

CF/CNS: 2 g IV q12h</td></tr>
<tr><td>Metronidazole (IV/PO)[1,2]</td><td colspan="5">CNS infections, C.difficile, SSTI/necrotizing infection: 500 mg IV/PO q8h
Intra-abdominal: 500mg q 8 – 12 h
Severe hepatic impairment: 500 mg IV/PO q12h
Caution with accumulation if CrCl < 30 particularly if used > 1-2 weeks</td></tr>
<tr><td>Moxifloxacin (IV/PO)[1,2]</td><td>400 mg IV/PO q24h</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Nafcillin (IV)[1,2]</td><td colspan="5">2 g IV q4hHepatic Impairment: No specific dose adjustment provided by manufacturer. Dosage adjustment may be necessary in the setting of concomitant renal impairment; nafcillin primarily undergoes hepatic metabolism.</td></tr>
<tr><td>Oseltamivir (PO)[1,2,59]</td><td colspan="3"><table>
<tr><th></th><th>CrCl ≥ 60</th><th>CrCl 30 – 60</th><th>CrCl 10 – 30</th><th>CrCl ≤ 10</th></tr>
<tr><td>Prophylaxis</td><td>75 mg PO q24h</td><td>30 mg PO q24h</td><td>30 mg PO q48h</td><td>Not recommended in ESRD not on dialysis</td></tr>
<tr><td>Treatment</td><td>75 mg PO q12h</td><td>75mg x1, then 30 mg PO q12h</td><td>30 mg PO q24h</td><td>Not recommended in ESRD not on dialysis</td></tr>
</table></td><td>Prophylaxis:
30 mg PO x 1, then 30 mg PO after every other HD session

Treatment:
30 mg PO x 1, then 30 mg PO post-HD only</td><td>Prophylaxis: 75 mg PO q24h

Treatment: 75 mg PO q12h</td></tr>
<tr><td>Penicillin G (IV)[1–3,5]</td><td>2 – 4 mu IV q4h

Dose range: 12 – 24 million units/day continuous infusion or in divided doses every 4 to 6 hours</td><td>2 – 3 mu IV q4h</td><td>1 – 2 mu IV q6h</td><td>Mild: 0.5 – 1 mu IV q4–6h;
or 1 – 2 mu IV q8–12h

Severe: 2 mu IV q4–6h;
or 4 mu IV q8–12h</td><td>4 mu IV q4–6h</td></tr>
<tr><td>Piperacillin/tazobactam (IV)[1–4,60,61]</td><td colspan="3"><table>
<tr><th></th><th>CrCl > 40</th><th>CrCl 20 – 40</th><th>CrCl < 20</th></tr>
<tr><td colspan="4">Extended-Infusion Dosing (4-hr infusion)</td></tr>
<tr><td>General, CF, Pseudomonas, nosocomial PNA</td><td colspan="2">Extended infusion for CrCl > 20:
3.375 – 4.5 g IV q8h over 4h*

SDD: 4.5g IV q8h (4-hr infusion)</td><td>3.375 g IV q12h over 4h</td></tr>
<tr><td colspan="4">Intermittent Dosing (30-minutes)</td></tr>
<tr><td>General</td><td>3.375 g IV q6h</td><td>2.25 g IV q6h</td><td>2.25 g IV q8h</td></tr>
<tr><td>Severe/sepsis/CF/ nosocomial PNA</td><td>4.5 g IV q6h</td><td>3.375 g IV q6h</td><td>2.25 g IV q6h</td></tr>
</table>
*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.</td><td>General: 2.25 g IV q12h

Severe infections:
3.375 g IV q12h over 4-hr

alt: 2.25 g IV q8h</td><td>3.375 g IV q6h over 30-minutes

Extended infusion:
3.375 – 4.5 g IV q8h over 4-hr</td></tr>
<tr><td>Polymyxin B (IV)[1,2,62,63]
(SHC Restriction)
(Use adjusted BW for obesity)</td><td colspan="3">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</td><td>No data</td><td>No change</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Posaconazole (IV/PO)[1,2]
(SHC Restriction [IV])</td><td colspan="3"><table><tr><th>Formulation</th><th>Dose</th></tr><tr><td>Oral Suspension (NF)
Suspension and Delayed-release tablets are not interchangeable</td><td>Prophylaxis: 200 mg PO q8h
Treatment: 200 mg PO q6–8h</td></tr><tr><td>Delayed-release tablet
Suspension and Delayed-release tablets are not interchangeable</td><td>300 mg PO q12h x 2 doses, then 300 mg PO q24h</td></tr><tr><td>Intravenous solution</td><td>300 mg IV q12h x 2 doses, then 300 mg IV q24h</td></tr></table>Refer to Antifungal TDM Guide</td><td>No change</td><td>No change</td></tr>
<tr><td>Pyrazinamide (PO)[1,2,49,50]
(Use lean BW for obesity)
(See footnote for lean BW equation)</td><td colspan="2">Usual Dose:
25 mg/kg PO q24h<table><tr><th>Lean body weight</th><th>Dose</th></tr><tr><td>40 – 55 kg</td><td>1,000 mg</td></tr><tr><td>56 – 75 kg</td><td>1,500 mg</td></tr><tr><td>76 – 90 kg</td><td>2,000 mg</td></tr></table>(max dose: 2,000 mg/day)</td><td>CrCl < 30:
25 mg/kg PO 3 times per week</td><td>25 mg/kg PO 3 times per week
Administer after HD only</td><td>No data</td></tr>
<tr><td>Rifampin (IV/PO)[1,2,49,50,64–66]
Capsule size: 150mg, 300mg</td><td colspan="2">TB: 600 mg IV/PO q24h (≤ 45 kg: 10 mg/kg q24h)

Endocarditis: 300 mg IV/PO q8h

PJI: 300 – 450 mg IV/PO q12h

Vertebral Osteomyelitis: 600 mg IV/PO q24h</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Tedizolid (IV/PO)[1,2,67]
(SHC Restriction)</td><td>200 mg IV/PO q24h</td><td>No change</td><td>No change</td><td>No change</td><td>No change</td></tr>
<tr><td>Tobramycin (IV)[1,2,57]</td><td colspan="5">Refer to Gentamicin for dosing. See appendix for complete guidelines.</td></tr>
<tr><td>Trimethoprim (TMP)/ Sulfamethoxazole (IV/PO)[1,2,4,68]

(Use adjusted BW for obesity)
SS = 80 mg TMP = 10 ml po soln
DS =160 mg TMP = 20ml po soln</td><td>Uncomplicated cystitis:
1 DS tab PO BID

SSTI: 1 – 2 DS tab PO BID

S. aureus (Bone/Joint):
8-10 mg/kg/day TMP in divided doses
(2 DS tabs PO BID)

Gram-negative bacteremia: 8-10 mg/kg/day TMP in divided doses
(2 DS tab PO BID)

Stenotrophomonas:
10-15 mg/kg/day TMP divided q8-12h

PCP: 15 mg/kg/day TMP divided q8h (~2 DS tab TID)</td><td>CrCl 15 – 30:
Administer 50% of recommended dose</td><td>CrCl < 15:
Use is not recommended, but if needed for PCP:
5 – 7.5 mg/kg TMP q24h

(25-50% of usual dose)</td><td>25-50% of usual dose

2.5 – 5 mg/kg TMP q24h

PCP, Stenotrophomonas
5 – 7.5 mg/kg TMP q24h

Dose daily, but after HD on HD days

alt: 5 – 15 mg/kg TMP post-HD only</td><td>5 – 10 mg/kg/day TMP divided q12h

Stenotrophomonas
10-15 mg/kg/day TMP divided q8-12h

PCP
15 mg/kg/day TMP divided q8h
(~2 DS tab TID)</td></tr>
</table>

<table>
<tr><th>Drug</th><th>CrCl > 50 mL/min</th><th>CrCl 10 – 50 mL/min</th><th>CrCl < 10 mL/min</th><th>Intermittent Hemodialysis (IHD)
Assumes thrice weekly dialysis</th><th>CRRT</th></tr>
<tr><td>Valacyclovir (PO)[1,2]

Please refer to transplant protocols if applicable</td><td colspan="3"><table>
<tr><th></th><th>CrCl > 30</th><th>CrCl 10 – 30</th><th>< 10</th></tr>
<tr><td>VZV</td><td><u>CrCl >50</u>: 1 g PO q8h

<u>CrCl 30-50</u>: 1 g q12h</td><td>1 g PO q24h</td><td>500 mg PO q24h</td></tr>
<tr><td>Genital herpes</td><td><u>Initial episode</u>:
1 g PO q12h

<u>Recurrent episode</u>:
500 mg PO q12h</td><td><u>Initial episode</u>:
1 g PO q24h

<u>Recurrent</u>:
500 mg PO q24h</td><td><u>Initial/recurrent episode</u>:
500 mg PO q24h</td></tr>
<tr><td>Herpes labialis</td><td><u>CrCl >50</u>:
2 g PO q12h x 2 doses

<u>CrCl 30 – 50</u>:
1 g PO q12h x 2 doses</td><td>500 mg PO q12h x 2 doses</td><td>500 mg PO x 1 dose</td></tr>
</table></td><td>500 mg PO q24h
Dose daily, but after HD on HD days</td><td>No data</td></tr>
<tr><td>Valganciclovir (PO)[1,2]

Please refer to transplant protocols if applicable</td><td colspan="5"><table>
<tr><th></th><th>CrCl > 60</th><th>CrCl 40 – 59</th><th>CrCl 25 – 39</th><th>CrCl 10 – 24</th><th>CrCl < 10; IHD</th><th>CRRT</th></tr>
<tr><td>Induction
(14-21 days)</td><td>900 mg PO q12h</td><td>450 mg PO q12h</td><td>450 mg PO q24h</td><td>450 mg PO q48h</td><td>200 mg PO 3x/week after HD only</td><td>No data</td></tr>
<tr><td>Maintenance/
prophylaxis</td><td>900 mg PO q24h</td><td>450 mg PO q24h</td><td>450 mg PO q48h</td><td>450 mg twice/week</td><td>100 mg PO 3x/week after HD only</td><td>No data</td></tr>
</table></td></tr>
<tr><td>Vancomycin (IV)[1,2,69,70]</td><td colspan="3">See Vancomycin Dosing Protocol</td><td></td><td></td></tr>
<tr><td>Vancomycin PO[1,2,71]</td><td colspan="3">Poor systemic absorption- used for the treatment of Clostridium difficile-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</td><td>No change</td><td>No change</td></tr>
<tr><td>Voriconazole (IV/PO)[1,2,72,73]

(Use adjusted BW for obesity)</td><td><u>IV</u>: 6 mg/kg IV q12h x 2, then 4 mg/kg IV q12h

<u>PO</u>: 400 mg PO q12h x 2, then 200 mg PO q12h</td><td colspan="3">• 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</td></tr>
</table>

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 (Weight^2/(100 x Height(m))^2)

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

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

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Deepak Sisodiya, PharmD; 04/2005

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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, 1/2025
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