

**University of California Davis Health**  
**EMPIRIC ANTIBIOTIC GUIDELINES FOR ED PATIENTS: PEDIATRICS**  
**(Less than or equal to 18 years of age)**

Pre-approval of restricted antibiotics not required for initial “one time” dose in the ED **provided drug and indication are listed** in this table.

CONDITION	ADMIT OR DISCHARGE	CULTURE NEEDED?	1 <sup>ST</sup> CHOICE	ALTERNATIVES (intolerant to 1 <sup>st</sup> choice) Severe Penicillin Allergy: Concern for anaphylaxis
<b>Cellulitis</b> Mild	D/C	No	Cephalexin PO 15mg/kg/dose Q8H <b>MAX</b> of 500mg per dose  Treat for 5 days	Clindamycin PO 10mg/kg/dose Q8H <b>MAX</b> : 450mg/dose  Treat for 5 days
Moderate  Consider Dalbavancin Pathway for patients ≥12 years of age as an alternative to hospitalization.	A	No	Cefazolin IV 50mg/kg/dose Q8H <b>MAX</b> 2,000mg/dose  Cephalexin PO 15mg/kg/dose Q8H <b>MAX</b> of 500mg/dose	Clindamycin IV 10mg/kg/dose Q8H <b>MAX</b> : 900mg/dose  Clindamycin PO 10mg/kg/dose Q8H <b>MAX</b> : 450mg/dose
Severe or Necrotizing soft tissue infection	A Necrotizing Call ID + Surgery	Yes Blood	Clindamycin IV 10mg/kg/dose Q8H <b>MAX</b> : 900mg/dose  <b>and</b> Vancomycin IV 15mg/kg/dose Q6H <b>MAX</b> : 1500mg/dose	If penicillin allergic okay to give 1 <sup>st</sup> choice  Rule out necrotizing process – emergency surgical debridement. Consult General Surgery
<b>Abscess or risk for MRSA – Skin</b> Mild: less than 5 cm Moderate: greater than 5 cm  Consider Dalbavancin Pathway for patients ≥12 years of age as an alternative to hospitalization.	D/C	Yes Send syringe	TMP-SMX 4-6 mg/kg PO Q12H <b>MAX</b> : 320mg of TMP/dose  <b>or</b> Clindamycin PO 10mg/kg/dose Q8H <b>MAX</b> : 450mg/dose  Treat for 5 – 7 days	TMP-SMX 4-6 mg/kg PO Q12H <b>MAX</b> : 320mg of TMP/dose  or Clindamycin PO 10mg/kg/dose Q8H <b>MAX</b> : 450mg/dose  Treat for 5 – 7 days
<b>Moderate to Severe</b>	A	Yes Send syringe	Vancomycin IV 15mg/kg/dose Q6H <b>MAX</b> : 1500mg/dose  or Clindamycin IV 10mg/kg/dose Q8H ( <b>MAX</b> : 900mg/dose)	If penicillin allergic okay to give 1 <sup>st</sup> choice
<b>Dog, Cat &amp; Human Bites</b> Prophylaxis of “high risk” bites: cat bites, bites to face, hands/feet, genital area, immunocompromised or asplenic patients, puncture wounds, significant edema or crush injury	D/C	No	Amoxicillin/Clavulanate PO 25mg/kg/dose Q12H <b>MAX</b> : 875mg/dose  Duration 3 – 5 days	TMP-SMX 4-6 mg/kg PO Q12H <b>MAX</b> : 320mg of TMP/dose  <b>and</b> Clindamycin PO 10mg/kg/dose Q8H <b>MAX</b> : 450mg/dose
Low risk infections (discharge home)	D/C	Yes	Amoxicillin/Clavulanate PO 25mg/kg/dose Q12H <b>MAX</b> : 875mg/dose  Treat 5 – 7 days	TMP-SMX 4-6 mg/kg PO Q12H <b>MAX</b> : 320mg of TMP/dose  <b>and</b> Clindamycin PO 10mg/kg/dose Q8H <b>MAX</b> : 450mg/dose
High risk infections (admit)	A	Yes	Ampicillin/sulbactam 50mg/kg Q6H <b>MAX</b> : 3,000mg/dose	TMP/SMX 4-6 mg/kg PO Q12H <b>MAX</b> : 320mg of TMP per dose  <b>and</b> Clindamycin IV 10mg/kg/dose Q8H <b>MAX</b> : 900mg/dose
<b>Open fractures:</b>	See open fracture guideline			
<b>Pneumonia:</b> CAP Send home (low risk)	D/C	No	Amoxicillin PO 30mg/kg/dose TID <b>MAX</b> : 1mg/dose  <b>If atypical suspected (greater than 5 years old)</b>  <b>add</b> Azithromycin PO 10mg/kg Day 1 <b>MAX</b> : 500mg/dose 5mg/kg QD Day 2-5 <b>MAX</b> : 250mg/dose	Doxycycline 1-2mg/kg/dose Q12H <b>MAX</b> : 200mg/day <b>Note: only for patients greater than 8 years old</b>  <b>Severe beta-lactam allergy:</b> <u>Less than 5 years old</u> Levofloxacin PO 8-10mg/kg/dose Q12H <b>MAX</b> : 750mg/day  <u>Greater than 5 years old</u> Levofloxacin PO 8-10mg/kg/dose QD <b>MAX</b> : 750mg/day

Admit CAP	A	Yes: Blood Yes: Sputum	<p>Age appropriate immunizations and healthy: <b>Ampicillin 50 mg/kg/dose IV Q6H</b> MAX: 1,000mg/dose</p> <p>Immunizations not age appropriate <b>Ceftriaxone 50 mg/kg/dose IV QD</b> MAX: 2,000mg/dose</p> <p><b>For positive MRSA or recent influenza with concern for super-infection: add clindamycin or vancomycin</b></p> <p>Clindamycin IV 10mg/kg/dose Q8H (MAX: 900mg/dose)</p> <p>Vancomycin 10-15mg/kg/dose Q6-8H MAX: 1500mg</p> <p>If atypical suspected (greater than 5 years of age) <b>Add</b></p> <p>Azithromycin IV 10mg/kg Day 1 MAX: 500mg/dose 5mg/kg QD Day 2-5 MAX: 250mg/dose</p>	<p><b>Severe beta-lactam allergy:</b></p> <p>Less than 5 years old Levofloxacin PO/IV 8-10mg/kg/dose Q12H MAX: 750mg/day</p> <p>Greater than 5 years old Levofloxacin PO/IV 8-10mg/kg/dose QD MAX: 750mg/day</p>
Empyema or complicated parapneumonic effusion			<p><b>Ceftriaxone 75 mg/kg/dose IV QD</b> MAX: 2,000mg/dose</p> <p>and</p> <p>Clindamycin IV 10mg/kg/dose Q 6-8H (MAX: 600mg/dose)</p>	<p><b>Severe beta-lactam allergy:</b></p> <p>Less than 5 years old Levofloxacin PO/IV 8-10mg/kg/dose Q12H MAX: 750mg/day</p> <p>Greater than 5 years old Levofloxacin PO/IV 8-10mg/kg/dose QD MAX: 750mg/day</p> <p><b>And</b></p> <p>Clindamycin IV 10mg/kg/dose Q8H (MAX: 900mg/dose)</p>
Sepsis from Community-acquired Pneumonia			<p><b>Ceftriaxone and Vancomycin</b></p>	<p>Levofloxacin and vancomycin</p>
Meningitis	A	Yes: CSF Yes: Blood	<p><b>0 – 2 months</b></p> <p>Ampicillin IV 300mg/kg/day divided q6-q8h</p> <p>+</p> <p>Ceftazidime IV 50mg/kg/dose Q8H</p> <p><b>Consider</b></p> <p>Acyclovir IV 20mg/kg/dose Q8H (see Meningitis guidelines)</p> <p><b>2 months – 18 years of age</b></p> <p>Ceftriaxone IV 50mg/kg Q12H MAX: 2,000mg/dose</p> <p>+</p> <p>Vancomycin IV 15-20mg/kg Q6H MAX: 1,500mg/dose</p> <p><b>Greater than 2 months old:</b></p> <p>Consider addition of corticosteroids if CSF suggestive of bacterial meningitis (give before or concurrently with 1<sup>st</sup> dose of antibiotics). Dexamethasone 0.15mg/kg/dose Q6H x 2 days</p>	<p>Call Peds ID Attending</p>
Cystitis (uncomplicated)	D/C	Yes: Urine	<p>Cephalexin PO 12.5 to 25mg/kg/dose Q8H MAX: 500mg/dose</p> <p>Treat 5-7 days</p>	<p>Trimethoprim-sulfamethoxazole (TMP-SMX) 4-6 mg/kg PO Q12H MAX: 320mg of TMP/dose</p> <p>OR</p> <p>Cefixime PO 4mg/kg/dose Q12H MAX: 200mg/dose</p> <p>OR</p> <p>For children &gt;=13 years old, Nitrofurantoin PO suspension 1.25-1.75mg/kg/dose Q6H MAX: 100mg/dose</p> <p><b>OR</b></p> <p>Nitrofurantoin PO tablet 100mg Q12H (for patients greater than 15kg <b>and</b> able to swallow tablets)</p> <p>Treat 5-7 days</p>

<b>Pyelonephritis</b> (Stable to be treated outpatient)	D/C	Yes: Urine	Cephalexin PO 75-100 mg/kg/day divided TID or QID <b>MAX: 500mg/dose</b>  Or Trimethoprim-sulfamethoxazole (TMP-SMX) 4-6 mg/kg PO Q12H <b>MAX: 320mg of TMP/dose</b>  Or Cefixime PO 4mg/kg/dose Q12H <b>MAX: 200mg/dose</b>  Treat 10-14 days	Less than 5 years old Levofloxacin PO 8-10mg/kg/dose Q12H <b>MAX: 750mg/day</b>  Greater than 5 years old Levofloxacin PO 8-10mg/kg/dose QD <b>MAX: 750mg/day</b>  Treat 7 days
<b>Complicated cystitis/pyelonephritis</b> (requiring admission)	A	Yes: Urine	Ceftriaxone IV 50mg/kg Q24H <b>MAX: 2,000mg/dose</b>  (if multiple recurrent infections call Peds ID)	Less than 5 years old Levofloxacin PO/IV 8-10mg/kg/dose Q12H <b>MAX: 750mg/day</b>  Greater than 5 years old Levofloxacin PO/IV 8-10mg/kg/dose QD <b>MAX: 750mg/day</b>  OR  Aztreonam IV 30mg/kg Q8H Max 2,000mg per dose
<b>Appendicitis</b>	A		Ceftriaxone IV 50mg/kg Q24H <b>MAX: 2,000mg/dose</b>  AND  Metronidazole IV 30mg/kg Q24H Max 1,500mg per dose	Less than 5 years old Levofloxacin IV 8-10mg/kg/dose Q12H <b>MAX: 750mg/day</b>  Greater than 5 years old Levofloxacin IV 8-10mg/kg/dose QD <b>MAX: 750mg/day</b>  OR  Aztreonam IV 30mg/kg Q8H Max 2,000mg per dose  AND  Metronidazole 30mg/kg Q24H Max 1,500mg per dose
<b>Sinusitis</b> >10 days symptoms <i>OR</i> fever with purulent discharge >3 days	D/C	No	Amoxicillin/clavulanic 45mg/kg/dose Q12H <b>MAX: 875mg/dose</b>  Treat 7 days	Greater than 8 years old Doxycycline 2mg/kg/dose Q12H <b>MAX: 100mg/dose</b>  <b>OR</b> Less than 5 years old Levofloxacin PO 8-10mg/kg/dose Q12H <b>MAX: 750mg/day</b>  Greater than 5 years old Levofloxacin PO 8-10mg/kg/dose QD <b>MAX: 750mg/day</b>  Treat 7 days

<b>Otitis Media</b>	D/C	No	<p>High dose amoxicillin PO 45mg/kg/dose Q12H  <b>MAX: 2,000mg/dose</b></p> <p><b>OR</b></p> <p>If recent failure, within 30 days consider:  Amoxicillin/clavulanate PO  45mg/kg/dose Q12H  <b>MAX: 875mg/dose</b></p> <p>If less than 2 years old treat for 10 days  Greater than 2 years old treat 5 – 7 days</p>	<p>Cefdinir 7mg/kg/dose q12h  <b>MAX: 300mg/dose</b>  If less than 2 years old treat for 10 days  Greater than 2 years old treat 5 – 7 days*</p> <p><b>OR</b></p> <p>Ceftriaxone 50mg/kg IM/IV x 1-3 doses q24h  <b>MAX: 1000mg</b>  (Could follow up with PCP for 2<sup>nd</sup> and 3<sup>rd</sup> doses if needed)*</p> <p>*Only if mild penicillin allergy</p> <p>If severe penicillin allergy consider:</p> <p>Azithromycin 10mg/kg day 1, then 5mg/kg days 2-5  Max 500mg on day 1, max 250mg on days 2-5</p>
<b>Septic Joint</b>	A Call Peds ID + Ortho	Yes	<p>Vancomycin IV 15mg/kg/dose Q6H  <b>MAX: 1,500mg/dose</b></p> <p>IF Less than 4 years of age  consider <i>Kingella</i> ADD</p> <p>Cefazolin IV 50mg/kg/dose Q8H  <b>MAX 2,000mg/dose</b></p> <p>If sexually active, consider:  <i>N. gonorrhoeae.</i></p> <p>ADD  Ceftriaxone IV 50mg/kg Q24H  <b>MAX: 2,000mg/dose</b></p>	<p>Vancomycin IV 15mg/kg/dose Q6H  <b>MAX: 1,500mg/dose</b></p>
<b>Osteomyelitis</b>	A Call Peds ID + Ortho	Yes	<p>Please collect cultures prior to starting  antibiotic therapy</p>	

Neonate (otherwise healthy <28 days old) ampicillin + gentamicin + acyclovir +/- cefotaxime^ -- ^consider addition of cefotaxime if CNS infection Infection source unknown and/or non-specific ceftriaxone\*\* + vancomycin --Severe □-lactam allergy\*: Levofloxacin + Vancomycin. Febrile Neutropenia (ANC<500) cefepime^ + vancomycin + tobramycin -- Severe □-lactam allergy\*: levofloxacin + vancomycin + tobramycin ^consider meropenem in place of cefepime if know history of ESBL pathogen Presence of Central Line ceftriaxone\*\* + vancomycin -- Severe □-lactam allergy\*: levofloxacin + vancomycin

Please write diagnosis (condition) in order sent to pharmacy.  
The above table provides guidelines and does not impose rigid restrictions.  
The clinical presentation of individual patients may require use of different antibiotics.

Approved by Pharmacy and Therapeutics Committee 4/19/2023