Harbor-UCLA Medical Center Empiric Pediatric Inpatient Antibiotic Guide Chart

Antibiotic	MRSA	MSSA	VRE	Entero-coccus	Strep	GNR	ESBL GNR	Pseudo-monas	Anaerobes
Amp/Amoxicillin			±	+	+	resp flora			oral flora
Amp-Sulbactam		+	±	+	+	±			+
Oxacillin		+			+				
Pip-Tazobactam		+	±	+	+	+		+	+
Cefazolin		+			+	±			
Cefoxitin		+			+	+			+
Ceftriaxone		±			+	+			
Ceftazidime						+		+	
Cefepime		+			+	+		+	
Aztreonam						+		+	
Gentamicin			+			+	±	+	
Meropenem		+		+	+	+	+	+	+
Ciprofloxacin		+				+		+	
Levofloxacin		+			+	+		+	
Azithromycin					resp flora	resp flora			
TMP-SMX	+	+			±	+			
Clindamycin	+	+			+				oral flora
Doxycycline	+	+			resp flora	resp flora			oral flora
Linezolid	+	+	+	+	+				
Daptomycin	+	+	+	+	+				
Vancomycin	+	+		+	+				

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+ Susceptible
± Partial susceptibility
flora Only for specific flora listed
No coverage

Restricted Antibiotics

Contact abx pager at **(310) 501-1521** for approval

- Acyclovir IV
- Amikacin
- Amphotericin B
- Aztreonam
- Cefepime
- Ceftaroline
- Ceftazidime
- Daptomycin
- Fosfomycin
- Fluconazole IV
- Ganciclovir
- Linezolid
- Meropenem
- Micafungin
- Piperacillin-Tazobactam
- Posaconazole
- Tobramycin
- Vancomycin
- Voriconazole

Consider ID consult for the following diagnoses

- Kawasaki disease
- CNS infections
- Neutropenic fever
- Bloodstream infection
- Suspected or proven hospital-acquired infx
- Orbital cellulitis
- Rule-out endocarditis
- Complicated pneumonia
- Osteomyelitis
- Septic joint

Severe Sepsis/Septic Shock

Vancomycin* IV **15**mg/kg q8h (max dose 2gm)

plus one of the following:

Ceftriaxone 50mg/kg q24h (max dose 2gm)

or if concerned about Pseudomonas or other HAI

Cefepime 50mg/kg q8h (max dose 2gm)
or **Meropenem 20**mg/kg q8h (max dose 2gm)

*discontinue vancomycin if stable and BCx negative >48h

Neutropenic Fever

Cefepime 50mg/kg q8h (max dose 2gm)

± if critically ill, central line infection, PNA, SSTI, or mucositis

Vancomycin* IV **15**mg/kg q8h (max dose 2gm)

*discontinue vancomycin if stable and BCx negative >48h

Bacterial Meningitis

Ceftriaxone 50mg/kg q12h (max dose 2gm)
± **Vancomycin*** IV **15**mg/kg q6-8h (max dose 2gm)

*if concerned for pneumococcal disease

Pyelonephritis

Ceftriaxone IV **50**mg/kg q24h (max dose 1gm)

Intra-Abdominal Infection

Ceftriaxone 50mg/kg q24h (max dose 1gm)
+ **Metronidazole** IV **15**mg/kg q8h (max dose 0.5gm)

Periorbital Cellulitis

Amp-Sulbactam 50mg/kg q6h (max dose 3gm)
± **Vancomycin*** IV **10**mg/kg q8h (max dose 2gm)

or

Clindamycin IV **13**mg/kg q8h (max dose 600mg)

*if concerned for MRSA

Cellulitis

Mild-moderate

TMP-SMX PO **5**mg/kg q12h (max dose 2 DS tabs)
or **Clindamycin** IV/PO **13**mg/kg q8h (max dose 600mg)
or **Cephalexin** PO **20**mg/kg q8h (max dose 1gm)

Severe

Vancomycin IV **10**mg/kg q8h (max dose 2gm)

Note: for abscesses, do not use cephalexin.
Please drain and perform gram stain & culture.

Community-Acquired PNA

Mild-moderate

Amoxicillin 15mg/kg q8h (max dose 875mg)

Severe

Ampicillin IV **50**mg/kg q6h (max dose 2gm)
or **Ceftriaxone** IV **50**mg/kg q24h (max dose 1gm)

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Cefepime 50mg/kg q8h (max dose 2gm)
or **Pip-Tazo 100**mg/kg q8h (max dose 3.375gm)

±

Vancomycin IV **10**mg/kg q8h (max dose 2gm)

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Odontogenic Infection

Mild-moderate

Amox-Clav PO 22.5mg/kg q12h (max dose 875/125mg)
or **Clindamycin** PO **13**mg/kg q8h (max dose 600mg)

Severe

Amp-Sulbactam 50mg/kg q6h (max dose 3gm)
or **Clindamycin** IV **13**mg/kg q8h (max dose 600mg)

Febrile Infant or "ROS"

Less than 6 weeks old

Cefotaxime 50**mg/kg**
± **Acyclovir** IV **20**mg/kg q8h (max dose 400mg)

Greater than 6 weeks old

Ceftriaxone 50mg/kg q24h (max dose 1gm)

Neonatal Early-Onset Sepsis**

Ampicillin 50-100mg/kg plus **Gentamicin**

Neonatal Meningitis**

Ampicillin 100mg/kg plus **Cefotaxime 50**mg/kg
± **Acyclovir** IV **20**mg/kg q8h

Necrotizing Enterocolitis**

Ampicillin 50-100mg/kg plus **Gentamicin**

± **Metronidazole** load **15**mg/kg
followed by maintenance dose **7.5mg/kg**

**refer to Neofax for specific dosing and frequency

Sepsis

Liang SY, Kumar A. Empiric antimicrobial therapy in severe sepsis and septic shock: optimizing pathogen clearance. Curr Infect Dis Rep. 2015;17(7):493-516.

Neutropenic fever

Freifeld AG, Bow EJ, Sepkowitz KA, Boeckh MJ, Ito JI, Mullen CA, Raad II, Rolston KV, Young JH, Wingard JR. Clinical practice guideline for the use of antimicrobial agents in neutropenic patients with cancer: 2010 update by the Infectious Diseases Society of America. Clin Infect Dis. 2011;52(4):56-93.

Lehrnbecher T, Robinson P, Fisher B, Alexander S, Ammann RA, Beauchemin M, Carlesse F, Groll AH, Haeusler GM, Santolaya M, Steinbach WJ, Castagnola E, Davis BL, Dupuis LL, Gaur AH, Tissing WJE, Zaoutis T, Phillips R, Sung L. Guideline for the management of fever and neutropenia in children with cancer and hematopoietic stem-cell transplantation recipients: 2017 update. J Clin Oncol. 2017;35(18):2082-2094.

Meningitis

Mann K, Jackson MA. Meningitis. Pediatr Rev. 2008;29(12):417-430.

Tunkel AR, Harman BJ, Kaplan SL, Kaufman BA, Roos KL, Scheld WM, Whitley RJ. Practice guidelines for the management of bacterial meningitis. Clin Infect Dis. 2004;39(9):1267-1284.

Pyelonephritis

Stein R, Dogan HS, Hoebeke P, Kocvara R, Nijman RJM, Radmayr C, Tekgul S. Urinary tract infections in children: EAU/ESPU guidelines. Eur Urol. 2015(67)3:546-558.

Subcommittee on urinary tract infection and steering committee on quality improvement and management. Urinary tract infection: clinical practice guideline for the diagnosis and management of the initial UTI in febrile infants and children 2 to 24 months. Pediatrics. 2011;128:595-610.

Intra-abdominal infection

Solomkin JS, Mazuski JE, Bradley JS, Rodvold KA, Goldstein EJC, Baron EJ, O'Neill PJ, Chow AW, Dellinger EP, Eachempati SR, Gorbach S, Hilfiker M, May AK, Nathens AB, Sawyer RG, Bartlett JG. Diagnosis and management of complicated intra-abdominal infection in adults and children: guidelines by the Surgical Infection Society and the Infectious Diseases Society of America. Clin Infect Dis. 2010;50(2):133-164.

Periorbital cellulitis

Wald ER. Periorbital and orbital infections. Infect Dis Clin North Am. 2007;21(2):393-408.

Cellulitis

Miller LG, Daum RS, Creech CB, Young D, Downing MD, Eells SJ, Pettibone S, Hoagland RJ, Chambers HF. Clindamycin versus trimethoprim-sulfamethoxazole for uncomplicated skin infections. N Engl J Med. 2015;372(12):1093-1103.

Stevens DL, Bisno AL, Chambers HF, Dellinger EP, Goldstein EJC, Gorbach SL, Hirschmann JV, Kaplan SL, Montoya JG, Wade JC. Practice guidelines for the diagnosis and management of skin and soft tissue infections: 2014 update by the Infectious Diseases Society of America. Clin Infect Dis. 2014;59(2):147-159.

Talan DA, Mower WR, Krishnadasan A, Abrahamian FM, Lovecchio F, Karras DJ, Steele MT, Rothman RE, Hoagland R, Moran GJ. Trimethoprim-sulfamethoxazole versus placebo for uncomplicated skin abscess. N Engl J Med. 2016;374(9):823-832.

Community acquired PNA

Bradley JS, Byington CL, Shah SS, Alverson B, Carter ER, Harrison C, Kaplan SL, Mace SE, McCracken GH, Moore MR, St Peter SD, Stockwell JA, Swanson JT. The management of community-acquired pneumonia in infants and children older than 3 months of age: clinical practice guidelines by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America. Clin Infect Dis. 2011;53(7):e25-76.

HAP & VAP

Kalil AC, Metersky ML, Klompas M, Muscedere J, Sweeney DA, Palmer LB, Napolitano LM, O'Grady NP, Bartlett JG, Carratala J, El Solh AA, Ewig S, Fey PD, File TM, Restrepo MI, Roberts JA, Waterer GW, Cruse P, Knight SL, Brozek JL. Management of Adults With Hospital-acquired and Ventilator-associated Pneumonia: 2016 Clinical Practice Guidelines by the Infectious Diseases Society of America and the American Thoracic Society. Clin Infect Dis. 2016 Sep 1;63(5):e61-e111.

Odontogenic infection

Tancawan AL, Pato MN, Abidin KZ, Asari AS, Thong TX, Kochhar P, Muganurmath C, Twinholm M, Barker K. Amoxicillin/Clavulanic Acid for the Treatment of Odontogenic Infections: A Randomised Study Comparing Efficacy and Tolerability versus Clindamycin. Int J Dent. 2015:472470.

Zirk M, Buller J, Goeddertz P, Rothamel D, Dreiseidler T, Zoller JE, Kreppel M. Empiric systemic antibiotics for hospitalized patients with severe odontogenic infections. J Craniomaxillofac Surg. 2016; 44(8):1081-1088.

Febrile infant

Byington CL, Rittichier KK, Bassett KE, Castillo H, Glasgow TS, Daly J, Pavia AT. Serious bacterial infections in febrile infants younger than 90 days of age: the importance of ampicillin-resistant pathogens. Pediatr. 2003;111(5):964-968.

Scarfone R, Gala R, Murray A, Funari MK, Lavelle J, Bell L. Febrile infant clinical pathway. 2010 August. Retrieved from http://www.chop.edu/clinical-pathway/febrile-infant-emergent-evaluation-clinical-pathway on 10/19/2017.

Neonatal early-onset sepsis

Polin RA, Committee on Fetus and Newborn. Management of neonates with suspected or proven early-onset bacterial sepsis. Pediatr. 2012;129(5):1006-1015

Neonatal meningitis

Mann K, Jackson MA. Meningitis. Pediatr Rev. 2008;29(12):417-430.

Tunkel AR, Harman BJ, Kaplan SL, Kaufman BA, Roos KL, Scheld WM, Whitley RJ. Practice guidelines for the management of bacterial meningitis. Clin Infect Dis. 2004;39(9):1267-1284.

NEC

Kanto WP, Hunter JE, Stoll BJ. Recognition and medical management of necrotizing enterocolitis. Clin Perinatol. 1994;21(2):335-346.

Shah D, Sinn JK. Antibiotic regimens for the empirical treatment of newborn infants with necrotising enterocolitis. Cochrane Database Syst Rev. 2012;15(8):CD007448.