



UMass Memorial Children's Medical Center

Pediatric Emergency Medicine

Medication Dosing Card 2026-2027

Adult = standard adult dose; Max = maximum dose for all ages

Dosage recommendations based on usual dosing in patients with normal renal/hepatic function

Please refer to Lexi-Comp or NeoFax for all Neonatal dosing

Anti-Infectives

Acyclovir
Meningitis:
 <4 months: 20 mg/kg/dose Q8H
 4 months to <12 yrs: 10-15 mg/kg/dose Q8H
 ≥12 yrs: 10 mg/kg/dose IV Q8H
Mucocutaneous: 5-10 mg/kg/dose IV Q8H

Amoxicillin
Low dose: 25 mg/kg/dose PO Q12H (Adult: 500 mg/dose)
High dose: 45 mg/kg/dose PO Q12H (Max 2000 mg/dose)

Amoxicillin/clavulanic acid (Augmentin)
Low dose: 25 mg/kg/dose PO Q12H (use **400 mg/5 mL** concentration)
High dose: 45 mg/kg/dose PO Q12H (use **600 mg/5 mL** concentration)

Ampicillin
25-50 mg/kg/dose IV Q6H (Adult: 1-2 g/dose)
Meningitis: 75-100 mg/kg/dose IV Q6H (Adult: 2 g/dose)
See Epic order set [ED Pediatric Fever Neonate](#) for neonatal dosing

Ampicillin/sulbactam combination (Unasyn)
37.5-100 mg ampicillin/kg/dose IV Q6H (Adult: 1.5 or 3 g Unasyn/dose)

Azithromycin
10 mg/kg/dose IV/PO on day 1 (Max 500 mg/dose), 5 mg/kg/dose PO days 2 through 5 (Max 250 mg/dose) OR 10 mg/kg/dose IV/PO daily x 3 days (Max 500 mg/dose)
Strep pharyngitis: 12 mg/kg/day PO x 5 days (Max 500 mg/dose)

CeFAZolin
25-50 mg/kg/dose IV Q8H (Adult: 1-2 g/dose)

Cefdinir
14 mg/kg/dose PO Q24H (Adult: 600 mg/day)

Cefepime
50 mg/kg/dose IV Q8H (Max 2 g/dose)

CefOXitin
40 mg/kg/dose IV Q6H (Max 2 g/dose)

Cefpodoxime
5 mg/kg/dose PO Q12H (Max 200 mg/dose)

CeftAZidime
30-50 mg/kg/dose IV Q8H (Adult: 1-2 g/dose)
See Epic order set [PED/GEN Cystic Fibrosis Admission](#) for CF Dosing

CeFTRIAXone (*contraindication*: age <21 days use Amp/Gent)
50 mg/kg/dose IM/IV Q24H (Adult: 1 g; [Sickle Cell/Onc: 2 g](#))
100 mg/kg/dose IV Q24H for meningitis (Max 4 g/day)

CephaLEXin
12-25 mg/kg/dose PO Q6-8H (Adult: 500 mg/dose)

Clindamycin
7.5-10 mg/kg/dose IM/IV/PO Q6-8H (Adult: 600 or 900 mg/dose)

Fluconazole
6-12 mg/kg/dose IV/PO x1, followed by 3-12 mg/kg/dose IV/PO daily (Max 200 mg/dose)

Gentamicin
See Epic order set [ED Pediatric Fever Neonate](#) for neonatal dosing

Metronidazole
10 mg/kg/dose IV/PO Q8H (Adult/Max: 500 mg/dose)

Nystatin oral (100,000 units/mL)
Neonates: 1 mL PO, 4 times/day; Infants: 2 mL PO, 4 times/day
Children/Adults: 5 mL PO, 4 times/day

Oseltamivir
Treatment (duration 5 days):
1-8 months: 3 mg/kg/dose PO Q12H
9-11 months: 3.5 mg/kg/dose PO Q12H
≥12 months:
 ≤15 kg: 30 mg PO Q12H
 >15-23 kg: 45 mg PO Q12H
 >23-40 kg: 60 mg PO Q12H
 >40 kg: 75 mg PO Q12H

Prophylaxis (duration 7-10 days):
<3 months: not recommended unless situation is judged critical
3-11 months: 3 mg/kg/dose PO once daily
≥12 months:
 ≤15 kg: 30 mg PO once daily
 >15-23 kg: 45 mg PO once daily
 >23-40 kg: 60 mg PO once daily
 >40 kg: 75 mg PO once daily

Penicillin G benzathine
Strep pharyngitis:
 ≤27 kg: 600,000 units IM x 1 dose
 >27 kg: 1.2 million units IM x 1 dose (Adult: 1.2 million units)

Penicillin VK
Strep pharyngitis: ≤27 kg 250 mg PO TID; >27 kg 500 mg PO TID

Piperacillin/tazobactam combination (Zosyn)
75-100 mg piperacillin/kg/dose IV Q6H (Adult: 4.5 g Zosyn/dose)

Sulfamethoxazole/trimethoprim (Bactrim)
4–6 mg/kg/dose IV/PO trimethoprim component (40 mg TMP/5 mL) Q12H (Adult: 1 DS tab PO BID, TMP =160 mg)

Vancomycin
Refer to UMMMC Vancomycin Guidelines for empiric dosing recommendations based on indication and patient age

Anaphylaxis

EPINEPHrine (INTRAMUSCULAR) 1 mg/mL concentration
0.01 mg/kg IM (Max 0.5 mg), repeat Q5-15 minutes
For outpatient use:
 <30 kg: EpiPen Jr® 0.15 mg
 ≥30 kg: EpiPen 0.3 mg

EPINEPHrine (IV INFUSION) 4 mg/250 mL NS
Continuous IV Infusion: start at 0.1 mcg/kg/min IV, titrate to response

Diphenhydramine
1-1.25 mg/kg/dose IM/IV/PO (Max 50 mg)

Cetirizine (Zyrtec)
≥6 months and <2 yrs: 2.5 mg PO once daily
2-5 yrs: 2.5-5 mg PO once daily
>5 yrs and adolescents: 5-10 mg PO once daily (Adult: 10 mg)

Loratadine (Claritin)
≥2 yrs and <6 yrs: 5 mg PO once daily
≥6 yrs and adolescents: 10 mg PO once daily (Adult: 10 mg)

Famotidine
0.5 mg/kg/dose PO Q12H (Adult: 20 mg)
0.25 mg/kg/dose IV Q12H (Adult: 20 mg)

MethyIPREDNISolone
(*If giving PO meds, use Dex/Pred*)
2 mg/kg/dose IV (Max 125 mg), then 0.5 mg/kg/dose IV Q6H

Dexamethasone
0.6 mg/kg/dose PO daily (Max 16 mg/dose)

PredniSONE (tablets)/PrednisolONE (3 mg/mL liquid)
1-2 mg/kg/day PO daily or Q12H (Max 60 mg/day)

Gastrointestinal Agents

Famotidine
0.5 mg/kg/dose PO Q12H (Adult: 20 mg Q12H)
0.25 mg/kg/dose IV Q12H (Adult: 20 mg Q12H)

GI cocktail
15 mL viscous 2% lidocaine + 15 mL Maalox

Maalox
0.5-2 mL/kg/dose PO up to 4x per day (Adult: 15-30 mL/dose)

Metoclopramide
0.1 mg/kg/dose IV/PO Q8H (Max 10 mg)

Omeprazole oral suspension
Infants: 0.7-1.5 mg/kg/day PO Q24H or Q12H
Children: 0.5-1 mg/kg PO (Max 20 mg/dose) Q24H or Q12H

Ondansetron
0.1-0.15 mg/kg/dose IM/IV/PO (Adult: non-chemo 4 mg)

Pantoprazole
<20 kg: 0.5-1 mg/kg IV/PO daily; 20-40 kg: 20 mg IV/PO daily; (Adult: 40 mg)

Polyethylene glycol 3350 (MiraLAX)
0.2-0.8 g/kg/day PO (maintenance); 1 g/kg/day PO (fecal impaction)

ProchlorPERAZINE
0.1 mg/kg/dose IM/IV/PO/PR Q6-8H (Max 10 mg)

Rapid Sequence Intubation

Pretreatment
Atropine IV/IO: 0.02 mg/kg (No minimum dose) (Max dose 0.5 mg)

Sedatives
Etomidate 0.3 mg/kg IV push
Ketamine 1-2 mg/kg IV push
Midazolam 0.3 mg/kg IV push (Adult: 10 mg)

Paralytics
Rocuronium 1 mg/kg IV
SUCCINYLcholine Infants: 2 mg/kg IV; Children/Adults: 1-2 mg/kg IV

Pain

Acetaminophen
PO/PR: 15 mg/kg/dose Q4H (Max 90 mg/kg/day or 4 g/day, 975 mg/dose)
IV: 15 mg/kg/dose Q6H (Max 60 mg/kg/day)

Fentanyl
IV: 0.5-1 mcg/kg IV initial dose, repeat Q2-4H PRN (Adult: 25-100 mcg)
*Intranasal**: (for ≥10 kg) 1.5 mcg/kg IN x 1 dose (Max 100 mcg); Repeat at 0.3-0.5 mcg/kg every 5 minutes as needed (not to exceed a total dose of 3 mcg/kg); Onset: <10 minutes, Duration: 30 minutes

HYDROmorphine
PO: 0.03-0.06 mg/kg/dose (Adult: 2-4 mg/dose)
IV: 0.015 mg/kg/dose (Adult: 0.2-0.6 mg/dose)

Ibuprofen
≥6 months: 10 mg/kg/dose PO Q6-8H (Max 800 mg/dose, 40 mg/kg/day)

Ketamine
*Contraindicated in < 3 months old
IV: 0.1-0.3 mg/kg (Max 30 mg)
*Intranasal**: 0.5-1.5 mg/kg once (usual 1 mg/kg, Max 100 mg)
*Use 100 mg/mL concentration for IN route

Ketorolac
≥6 months: 0.5 mg/kg/dose IM/IV Q6-8H (Max 15 mg/dose)

Morphine
IV: 0.05-0.1 mg/kg/dose Q2-4H PRN (Adult: 2-4 mg/dose)
PO: 0.2-0.5 mg/kg/dose Q2-4 PRN (Max 20 mg)

Oxycodone IR
0.05-0.15 mg/kg/dose PO Q4-6H PRN (Adult: 5 mg/dose)

Pain/Sedation Continuous Infusions

Fentanyl
0.5-1 mcg/kg/h IV; (>50 kg: start 25-50 mcg/hr, titrate as needed)

Midazolam
0.05-0.1 mg/kg/h IV; (>50 kg: 1-2 mg/hr)

Morphine
0.05-0.1 mg/kg/h IV; (>50 kg: 2-4 mg/hr)

Propofol
5-65 mcg/kg/min IV; (start at 5-10 mcg/kg/min and titrate as needed)

Dexmedetomidine
0.2 mcg/kg/hr IV; titrate as needed by 0.1-0.3 mcg/kg/hr (usual dose 0.2-2 mcg/kg/hr)

PALS/Resuscitation Meds

Amiodarone
IV/IO: 5 mg/kg, bolus for VF/pulseless VT or infuse over 20-60 minutes for perfusing tachycardias (Max: 300 mg)

Atropine (*bradycardia dosing*)
IV/IO: 0.02 mg/kg, (Min 0.1 mg/dose, Max 0.5 mg/dose)

Calcium
Calcium Gluconate 10%: 60-100 mg/kg (Max 2000 mg/dose)
Calcium Chloride 10%: 20 mg/kg (Max 2000 mg/dose)

Dextrose
D50W: 1-2 mL/kg/dose
D25W: 2-4 mL/kg/dose
D10W: 5-10 mL/kg/dose

EPINEPHrine 0.1 mg/mL concentration
IV/IO: 0.01 mg/kg (Max 1 mg/dose)

Lidocaine
IV/IO: 1 mg/kg bolus

Magnesium Sulfate (Torsades)
IV/IO: 25-50 mg/kg/dose (Max 2 g/dose)

Sodium Bicarbonate
1 mEq/kg IV; children <2 yo: use 4.2% (0.5 mEq/mL), ≥2 yo: use 8.4% (1 mEq/mL)

Vasopressor Agents (central line preferred)

DOBUTamine (500 mg/250 mL D5W)
Infusion: 5-20 mcg/kg/min IV

DOPamine (400 mg/250 mL D5W)
Infusion: 5-20 mcg/kg/min IV

EPINEPHrine (4 mg/250 mL NS)
Infusion: 0.05-1.5 mcg/kg/min IV

NorEPINEPHrine (4 mg/250 mL NS)
Infusion: 0.05-1.5 mcg/kg/min IV

Phenylephrine (10 mg/250 mL NS)
Infusion: 0.1-2 mcg/kg/min IV

Cardiovascular Agents

Adenosine
0.1 mg/kg rapid IV bolus (Max 6 mg first dose)
May repeat at 0.2 mg/kg IV (Max 12 mg subsequent doses)

Alprostadil (prostaglandin)
Infusion: 0.05-0.1 mcg/kg/min IV initial rate, titrate to effect
Mix bedside using 500 mcg ampule and 50 mL NS bag

HydrALAZINE
0.1-0.2 mg/kg/dose IV Q4-6H (Adult: 10-20 mg/dose)

Labetalol
Bolus: 0.2-1 mg/kg/dose IV (Adult: 20 mg/dose, Max 40 mg/dose)
Infusion: 0.25-3 mg/kg/h IV, start at low end and titrate slowly

Procedural Sedation
Fentanyl 0.5-1 mcg/kg/dose IM/IV may repeat 1/2 original dose every 3 to 5 minutes, if necessary, for prolonged procedures <i>Intranasal</i> *: (≥10 kg) 1.5 mcg/kg/dose IN, may repeat 0.3-0.5 mcg/kg every 5 minutes as needed (not to exceed a total dose of 3 mcg/kg)
Ketamine *Contraindicated in < 3 months old <i>IV</i> : 1-2 mg/kg initial, follow with 0.5 mg/kg/dose every 5-15 minutes until desired sedation <i>Intranasal</i> *: 3-6 mg/kg once, may repeat 1-2 mg/kg every 5-15 minutes as needed (not to exceed a total cumulative dose of 9 mg/kg) *Use 100 mg/mL concentration for IN route
Midazolam <i>IV</i> : 0.05-0.1 mg/kg (Adult: 4-8 mg) may repeat in 5-10 minutes for prolonged procedures <i>IM</i> : 0.1 to 0.15 mg/kg (Max 10 mg) <i>PO</i> : 0.25-0.5 mg/kg (Max 20 mg); onset 10-20 minutes <i>Intranasal</i> *: 0.5 mg/kg (Max 10 mg); may repeat x 1 in 5 to 15 minutes *Use 5 mg/mL concentration for IM and IN route
Propofol 1 mg/kg IV initial dose, follow with 0.5 mg/kg until desired sedation (Onset is 30 seconds after 30 second IV push)

Respiratory Agents
Albuterol Nebulized 0.083% solution <20 kg: 2.5 mg/dose; ≥20 kg: 5 mg/dose Continuous nebulizer: 0.3-0.5 mg/kg/hr (Dose in 2.5 mg increments, Max 20 mg/hr)
Dexamethasone 0.6 mg/kg/dose IM/IV/PO daily for 1-2 days (Max 16 mg/dose)
EPINEPHrine (INTRAMUSCULAR) 1 mg/mL concentration 0.01 mg/kg IM (Max 0.5 mg/dose)
lpratropium 0.5 mg nebulized every 20 min for 3 doses (Max 1.5 mg total)
Magnesium Sulfate 50 mg/kg/dose IV (Max 2 g) over 20 minutes
MethylPREDNISolone 2 mg/kg/dose IV (Max 60 mg)
PredniSONE (tablets)/PrednisoLONE (3 mg/mL liquid) 1-2 mg/kg/day PO daily or Q12H (Max 60 mg/day)
Racemic EPINEPHrine 2.25% (Nebulized in 2.5 mL saline) ≤5 kg: 5.625 mg (0.25 mL)/dose nebulized >5 kg: 11.25 mg (0.5 mL)/dose nebulized
Terbutaline Bolus: 4-10 mcg/kg IV x1 followed by continuous infusion Infusion: 0.1-0.2 mcg/kg/min IV. Titrate Q30 min to effect (Max 6 mcg/kg/min)

Anesthetics, Topical
LET solution (lidocaine 4%, racepinephrine 0.05%, tetracaine 0.5%) Dose: (usual) 3 mL; soak cotton ball, pack in wound; use on BROKEN skin Onset: 15-20 minutes, Duration: 45-60 minutes
LMX (lidocaine 4%) Dose: (variable) Max 4.5 mg/kg; use on INTACT skin Onset: 30 minutes, Duration: 60 minutes

Seizure/Status Epilepticus
DiazePAM <i>IV</i> : 0.2 mg/kg/dose (Max 10 mg/dose), may repeat once in 5 minutes <i>PR</i> : 0.5 mg/kg/dose (Max 20 mg)
FosPHENytoin Load: 20 mg PE /kg IV x1 (Max dose 1500 mg)
Levetiracetam (Keppra) Load: 20-60 mg/kg IV x1 (Max 4500 mg) Maintenance: 10 mg/kg/dose IV/PO Q12H (Adult: 500 mg/dose)
LORazepam 0.05-0.1 mg/kg/dose IM/IV may repeat Q5 minutes (Max 4 mg/dose)
Midazolam <i>IV</i> : 0.2 mg/kg/dose (Max 10 mg/dose), may repeat once in 5 minutes <i>IM</i> : 0.2 mg/kg/dose (Max 10 mg/dose), may repeat in 5-15 minutes <i>Intranasal</i> *: 0.2 mg/kg/dose; (Adult dose: 5-10 mg; Max 10 mg/dose) *Use 5 mg/mL concentration for IM and IN route
PHENobarbital Load: 15-20 mg/kg/dose IV x1 (Max 1000 mg/dose)
Pyridoxine Neonatal and infantile refractory seizures: 100 mg IM/IV/PO
Valproic acid (Depakote) Refractory status epilepticus loading dose: 40 mg/kg IV as a single dose – infuse dose at 2-6 mg/kg/min (Max 3000 mg)

STIs
<u>Sexual Assault (Female)</u> CefTRIAxone >45 kg: 500 mg IM x 1 dose, (≥150 kg: 1 g) <i>Plus</i> Doxycycline 100 mg PO BID x 7days (use Azithro if allergic to Doxy and/or pregnant) <i>Plus</i> Metronidazole ≥45 kg: 500 mg PO BID x 7 days
<u>Sexual Assault (Male)</u> CefTRIAxone >45 kg: 500 mg IM x 1 dose, (≥150 kg: 1 g) <i>Plus</i> Doxycycline 100 mg PO BID x 7 days (use Azithro if allergic to Doxy)
<u>Chlamydia Treatment (Adolescents and Adults)</u> Doxycycline 100 mg PO BID x 7days (Alternates: Azithromycin or Levofloxacin)
<u>Gonorrhea Treatment (Adolescents and Adults)</u> CefTRIAxone >45 kg: 500 mg IM x 1 dose, (≥150 kg: 1 g) (Alternates: Gentamicin plus Azithromycin OR Cefixime)
<u>Other</u> Azithromycin (use only if allergic to Doxycycline and/or pregnant) Weight ≥45 kg: single 1 g PO dose Ulipristal (Ella) 30 mg PO single dose

Toxicology/Reversal Agents
Activated Charcoal 1-2 g/kg PO (Max 100 g)
Glucagon (<i>beta blocker toxicity</i>) 0.05 mg/kg IV bolus (Max dose 5 mg)
Flumazenil Initial dose: 0.01 mg/kg IV (Max 0.2 mg) given over 15 seconds; may repeat after 45 seconds; Max total cumulative dose of 0.05 mg/kg or 1-3 mg for large adolescents
Naloxone 0.01-0.1 mg/kg IM/IV; up to 2 mg/dose repeat every 2-3 minutes PRN Partial reversal: 0.01 mg/kg initial dose Complete reversal: 0.1 mg/kg initial dose

Trauma
Tetanus (booster administration) *For dirty wounds & ≥5 yrs since last immunization *For unimmunized, consider TIG Age ≥10 yrs: Tdap @ age 11/12, then booster with either Tdap or Td Age 7-9 yrs: Td Age 2 mo-6 yrs: Pediarix (2 nd choice: Td may be given in all patients ≥ 2 months of age)
Tranexamic acid (TXA) ≤50 kg: 15 mg/kg IV bolus followed by 16 mg/kg over 8 hrs >50 kg: 1 g IV bolus followed by 1 g over 8 hrs

Head Injury
Mannitol 0.5-1 g/kg IV over 15 minutes; <u>must use 5-micron filter</u>
Sodium Chloride 3% 2-5 mL/kg IV over 15 minutes; central line <u>preferred</u>

Agitation, Child
Mild LORazepam 0.5-1 mg PO -OR- Diphenhydramine 12.5-25 mg PO/IM/IV- OR HydrOXYzine 10-50 mg PO/IM
Moderate to Severe Olanzapine ODT 2.5-5 mg PO -OR- Haloperidol 2.5 mg IM
Severe [Haloperidol 2.5 mg IM -OR- olanzapine 2.5-5 mg IM] AND LORazepam 0.5-1 mg IM +/- diphenhydramine 25 mg IM

Agitation, Adolescent
Mild LORazepam 1-2 mg PO -OR- Diphenhydramine 25-50 mg PO
Moderate Olanzapine ODT 5-10 mg PO -OR- Haloperidol 5-10 mg IM
Severe [Haloperidol 5 mg IM -OR- olanzapine 5-10 mg IM] AND LORazepam 1-2 mg IM +/- diphenhydramine 25 mg IM
-OR- Ketamine 2-4 mg/kg IM (onset is 2-4 minutes, Max 150 mg/dose) *Use 100 mg/mL concentration for IM administration

Other
Dexamethasone (<i>for meningitis prior to abx administration</i>) 0.15 mg/kg/dose IV Q6H (Max 10 mg/dose)
Hydrocortisone (stress dose or for fluid-refractory hypotension in sepsis) 1 mg/kg/dose IV (Adult: 100 mg/dose)

EPIC Order Sets & Panels
<i>Please use the following order sets when ordering medications:</i>
- ED Pediatric Asthma Medications - ED Pediatric DKA - ED Pediatric Eating Disorder Order Set - ED Pediatric Fever & Neutropenia - ED Pediatric Fever Neonate - ED Pediatric Hyperbilirubinemia - ED Pediatric Post-Exposure Prophylaxis (PEP) - ED Peds Post-Intubation Care Management - ED Pediatric Sickle Cell - ED/PED Suspected Child Physical Abuse FOCUSED - ED/PED Suspected Child Sexual Abuse FOCUSED - PED Hypoglycemia Critical Sample and Dextrose FOCUSED - Pediatric tranexamic acid for Massive Transfusion Protocol (aka TXA) - Pediatric Flush and Line Management Panel

*Note: Additional 0.1 mL required to prime Medication Atomizer Device for intranasal dosing. Max 1 mL per nare.

Contact the ED Pharmacy Office (508-441-1040) for medication questions
<i>Last Reviewed by:</i> Michael DiNapoli, PharmD, BCCCP Irene Li, PharmD, BCPS Frank Szczerbe, PharmD, BCPS, BCPPS Tessa Wicks, PharmD Madeline McCarthy, MD, MSc

For copies/edits/questions, please email:
Madeline.McCarthy@umassmemorial.org

Last Reviewed: June 2026